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PHILADELPHIA MEDICAL JOURNAL

A WEEKLY JOURNAL OWNED AND PUBLISHED BY THE PHILADELPHIA MEDICAL PUBLISHING COMPANY, AND CONDUCTED EXCLUSIVELY IN THE INTERESTS OF THE MEDICAL PROFESSION.

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The Philadelphia Medical Journal

A Weekly Journal Owned and Published by The Philadelphia Medical Publishing Company and Conducted Exclusively in the Interests of the Medical Profession

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Scientific Articles, Clinical Memoranda, News Items, etc., of interest to the profession are solicited for publication. Reprints (250) of Original Articles will be furnished gratis to Authors making the request.

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See Advertising Page 8.

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A New Department for the New Year.—With the present number of the Journal there is issued in the form of a supplement, the first part of a new department in the Magazine. The object of this department is to place before the medical profession, as soon as possible, all that is new in medical literature and medical work, and, as far as possible, to indicate by critical comment the proper value of this work. The present instalment does not fairly represent what it is hoped to make this department; but the plan which we have in view requires time for its execution, and the creation of facilities that do not yet exist. Therefore for the present it will contain chiefly critical summaries of the most recent literature in medicine. Such summaries will always be an important, and perhaps the most important, portion of the supplement. As a general rule they will include the literature of the past 3 months, and in certain cases, for even briefer periods. Therefore on each subdivision at least 4 critical summaries will appear every year, and whenever particularly active interest is manifested in any special subject, a critical summary will be published on it every month. Each summary will be written by a man whose tastes or opportunities have made him thoroughly familiar with the particular subject which he treats, so that his critical comments may be regarded as authoritative.

If this department fulfills all the functions for which it is intended it may in the future aid medical research in part by avoiding repetition, in part by suggesting accurate and uniform methods of experimentation, and in part by aiding the collection of medical statistics from many sources under as nearly as possible similar conditions. The realization of any such plan is difficult, and we do not expect to attain success for a long time. In the meantime it is hoped that, as a critical summary of recent literature, it will prove of value to all those who desire to keep thoroughly abreast of what is being done in the world, and to enable those searching for the literature of any particular subject to find it completely and accurately recorded.

The Counterfeits of Rheumatism.—We take great pleasure in presenting to our readers this week a clinical lecture by an eminent London physician, Sir Dyce Duckworth, on Rheumatism and its Counterfeits. The lecture was specially reported for this Journal and revised by the author. There is probably no diagnosis (unless it be that of "malaria") that is more frequently abused than that of "rheumatism." Any pain or affection of a joint, without clearly assignable cause, is too frequently and too hastily diagnosed by too many practitioners as "rheumatism." The fault has been committed so often by so many even expert clinicians that few will probably be inclined to claim exemption, or fail to derive profit from Sir Dyce Duckworth's clear and able exposition of the subject. In this age of clinical bacteriology there is no excuse for any practitioner pleading ignorance of the numerous infections which may seize upon one or more of the large joints and simulate rheumatism. With care and study these affections may usually be differentiated, but with haste and ignorance the gravest injury may result to the welfare of the patient and the reputation of the practitioner. We do not recall ever having published a more practically valuable paper than this admirable clinical lecture. The lecturer lets us see his own mental processes as he attempts to unravel the mysteries of the case; his own doubts are for the enlightenment of the reader; his own questionings are fully answered in the gradual unfolding of his diagnosis. The paper is a model of what a clinical lecture should be, and doubtless reads as well as it must have sounded in the ears of his pupils.

No Yellow Fever in Havana.—The latest official statement on this subject is of extraordinary interest. According to a bulletin of the War Department, U. S. A., the capital of Cuba has practically been freed from the infection of yellow fever.

"For the past century," says this statement, "there has never been a day during October and November when there were not many cases in Havana, and very few years can be picked out in all this time in

which the record for each day during these months does not show several deaths."

It is claimed that since the statistics of yellow fever began to be kept, the average number of deaths in Havana during November has been 48. The minimum was 13 in 1893; the maximum 244 in 1898. But for this year not a case of yellow fever has occurred in Havana since September 28, although in past years October and November have been the months in which the disease has been most rife in that city. We quote and condense these statements as they are issued by the War Department; but the proper commentary is probably found in Major Gorgas' letter which we publish to-day in another column. We call special attention to this letter for several reasons. Major Gorgas is the Health Officer of the city of Havana and is doubtless the best living authority on the health problems of that city. In his letter he presents an able defence of the "mosquito theory" that is all the more significant from the fact that he was himself at one time sceptical about this theory, and has been converted by an actual study of the conditions as they have presented themselves most intimately to him in his capacity as Health Officer. Surely no one can know the conditions more intimately or is better qualified to speak of them. This letter of Major Gorgas has special significance from another aspect of this great subject. It forcibly reminds us of what the United States Government has done to clean Havana and to keep it from being the pest center that it has been for more than a century and a constant menace to our shores. This good work alone would be enough to justify the part which this country took in the Spanish-American war; and it is more than enough to cause every thoughtful American to trust and pray that the control of this country over Cuba may not be relaxed for many a day yet to come.

The Significance of Dr. Finlay's Discovery of the Mosquito Transmission of Yellow Fever.—The special article by Dr. W. C. Gorgas, Chief Sanitary Officer of Havana, Cuba, to which we referred above, appears in the form of a reply to a letter from Dr. John H. Purnell who assumes that yellow fever is spread more commonly by fomites than by mosquitoes. We wish to direct the attention of our readers to this most important and interesting communication of Dr. Gorgas. He points out the significance of Dr. Finlay's discovery, which has been tested so thoroughly by the Havana sanitary authorities with most satisfactory results.

The death-rate of Havana during the first two years of American occupation (1899 and 1900) fell from 91.30 in 1898 to 24.40. This was due to the great success of our sanitary measures. In spite of our stringent sanitary regulations, there occurred in the winter of 1899 one of the severest epidemics of yellow fever ever known in Havana, which continued in 1900.

Influenced by the conclusion of the Army Board that the only method of propagation of yellow fever is by mosquitoes, the sanitary officers of Havana decided to screen the houses in which cases of suspected yellow fever occurred, as well as to continue to observe the general preventive measures of isolation, quarantine and disinfection that had been followed vigorously since the time of American occupation. Immediately the spread of yellow fever appeared to be under control. In June, 1901, isolation and rigid quarantine were abandoned and disinfection of clothing was stopped. Careful screening was the only preventive measure insisted upon. Since September, 1901, not a single case of yellow fever has been reported in Havana where the disease has been epidemic for the past 150 years—not a month going by without more or less yellow fever.

From the evidence at hand it appears conclusive that we are indebted to Dr. Finlay for a remarkable discovery, to the Army Board for its demonstration, and to the sanitary officers of Havana for its practical application in the field of preventive medicine.

The Right Man in the Right Place.—It seems to be generally conceded that Mayor Low of New York has done the proper thing in appointing Dr. John McGaw Woodbury to be Street-cleaning Commissioner of that city. The fact that the appointee is a physician is of special importance. The healthfulness and hygiene of a great city are closely related to its cleanliness, and therefore this latter is not inappropriately committed to the charge of a physician. Dr. Woodbury has now a splendid opportunity to identify not only himself but also his profession with the reform government and administration which Mayor Low will doubtless give to the city of New York.

In this connection we may again point out how desirable it is that physicians should pay more attention to public and political questions as affected by and affecting their profession. The opportunities for public service that come to physicians are very great, and will doubtless continue in this country to grow greater. We should never cease to scout the idea that the doctor has no business in politics; the doctor has business everywhere. Only recently we called attention to the relatively large number of medical men serving in both chambers of the French Parliament. In this country the idea has not always been popular, and it is time the prejudice were eradicated. As to Dr. Woodbury, he may reflect that like Epaminondas of old his

greatest claim to distinction may yet be that he cleaned his city.

The French Commission on Tuberculosis.—The French Parliament, in a recent session, constituted a commision of thirty-two members to investigate the causes and prevalence of pulmonary tuberculosis in France and the progress that has been made toward its cure. Mr. Covert, the United States Consul at Lyons, France, has sent an abstract of the report of this commission to the State Department, which is published in *Public Health Reports*. The work of this commission is one of the recent exhaustive investigations of pulmonary tuberculosis and the conclusions are worth noting. In the first place, the commission finds that the disease is a real national peril to France, because the population is almost at a standstill. Furthermore, the disease seems to be on the increase both in the Army and in the Navy as well as among the civilian population. The great source of the spread of the disease is the dried sputum of tuberculous patients, although it may also be disseminated by the milk and perhaps by the meat of tuberculous animals. In this respect the recent pronouncement of Koch is, we think rightly, ignored.

Alcohol, overcrowding and overwork are predisposing causes of the disease. The commission recommends that people be prohibited from spitting on floors and upon the street. In this matter the French are behind us, and it is gratifying to read that America is considered an example in regard to this sanitary measure. The open-air treatment is advocated and the report declares that by this means consumption is curable. The construction of sanatoria for consumptives is recommended. The commission believes that the children of consumptives, by the mere fact of their birth in a state of organic weakness, are predisposed to the bacilli. This raises the point, recently made by Flick, that the children of tuberculous parents are to a certain extent immune to tuberculous infection; a subject upon which a special study would be of great value.

Polychromatophilia.—The past year has witnessed controversies between the surgeon and hematologist, regarding the value of blood examinations in various surgical procedures. The exposition of differences of opinion, when the latter are the results of careful and thorough scientific experiments, is always commendable and wholesome. A youthful science is not always satisfied to give vent to its enthusiasm by a precocious attack upon its elders, but often engages in a civil strife. Thus in the hematological world many battles have been fought, a great part of which are still raging. The classification of the various leukocytes, the accurate estimation of hemoglobin, the identification of human and animal blood, the existence and significance of bacterial hemolysins, and anti-hemolysins, especially the hemolytic influence of human blood serum, the origin and significance of various granules together with their tinctorial peculiarities, the specific cause of progressive pernicious anemia, the morphological transition of erythrobalsts to erythrocytes, and many others are still taxing the resources of the microscopist. Since Jawein of St. Petersburg has somewhat revolutionized the subject of polychromatophilia in the red blood cells and the origin and significance of the basophilic granules the time has ripened for further investiagtion and discussion of the subject. Jawein recently expounded his views at the association of Russian physicians in St. Petersburg, and is himself connected with the clinic of Janowsky. The literature upon the subject is so extensive, that it is not available for editorial comment, but it must be stated that we have found that the pioneer Ehrlich is frequently the Prophet of Hematologists, and it still remains to be seen whether Ehrlich, who is of the opinion that polychromatophilia is a sign of degeneration, will hold the fort against Gabritschewski and his followers, who declare that polychromatophilia is a sign of regeneration. A brief recapitulation of Jawein's investigation shows that in a case of bothriocephalus anemia, with the characteristic blood changes, the anemia progressed after the expulsion of the parasite, the erythrocytes falling as low as one-half million per cubic mm. After the occurrence of a catarrhal pneumonia, a blood crisis occurred (von Noorden) after which the erythrocytes increased in three days, and one-third of all the blood cells showed polychromatophilia. Many nuclei showed kariollysis and kariorhexis, and all varieties of granules were present from the normal ones to the finest basophilic granules. All these phenomena disappeared as soon as the erythrocytes reappeared. It will be remembered that Engel, while examining embryonal blood, showed that the presence of polychromatophilia in the erythroblasts was not always to be considered as a sign of degeneration, but rather as a physiological antecedent stage of development. Ehrlich himself admits the existence of a physiological polychromatophilia in embryonal blood (*Ehrlich and Lazarus, Die Anämie, 1900*), but does not seem to change the opinion as to it being a sign of degeneration in the adult. One of the apparent advantages to be derived in definitely deciding the subject, as claimed by Jawein himself, is, that the appearance of such phenomena in the blood may constitute an indication for the withdrawal of drugs

like arsenic, iron and phosphorus, which may be stopped in the presence of blood regeneration, and particularly when the bone-marrow is already stimulated to its full functional activity.

How Great Britain will Deal with the Invalid Soldier.—Great Britain in the midst of a war drawing on her virile blood and her treasure, is confronted by many problems of gravity. One of these is of especial interest from the sociological and medical points of view and deals with the disposition of invalided soldiers who are discharged as unfit for duty and thrown upon their own resources. Dr. Alfred Hillier contributes an interesting paper dealing with this question to the *Practitioner* for December, 1901. He quotes from the Annual Report of the Army Medical Department for 1899, which states that 1876 men were discharged in the course of the year on account of medical unfitness for service. This was in the ratio of 18.12 per thousand. Every year a large number of men whose earning power is distinctly limited if not destroyed by their physical states, are thrown upon the community and a double problem has to be faced by the Government in dealing with them. In the first place, it is manifestly unfair that these men who have incurred their disability in the service, should not be cared for by the nation. And it is hardly fitting and proper that they should become the inmates of almshouses as has heretofore too often been the case. The other side of the problem is of perhaps greater importance. A large number of these men suffer from tuberculosis and syphilis, and each may become a possible focus for widespread infection when turned adrift without any supervision whatever upon the community. Many of these cases are distinctly curable, and Dr. Hillier makes a plea for the establishment of a sanatorium, which he suggests might be divided into three departments: the first in which tuberculous patients should receive the modern open-air treatment; the second, wards for syphilitic cases, and the third, wards for other medical and surgical cases. He suggests that the founding of such an institution at this time would be an eminently fitting memorial to the late Queen Victoria, and in this the *Practitioner* concurs editorially and suggests the Isle of Wight as a suitable site for such an institution.

Two Remarkable Cases of Abdominal Injury.—To the extensive bibliography bearing on the case of the late President McKinley, discussed in the editorial columns of the **Philadelphia Medical Journal**, may be added the following two cases of intestinal surgery, reported by A. P. Dalinger in the *Medicinskoie Obosrenie* of September, 1901. Case 1. A man of 22, while in a state of intoxication, received a stab wound in the abdomen, resulting in a protrusion of a portion of the small intestine. The patient wrapped up the bowels in his dirty shirt and walked about one-half mile to the hospital. The protruding intestine was found covered with blood and feces and perforated in five places, each perforation, about 1 cm. long, permitting the escape of a good deal of intestinal contents. Owing to the intoxicated condition, the patient took the anesthetic very badly; he struggled, jumped up a number of times and vomited, the vomited matter finding its way to the intestines and the abdominal cavity. After complete narcosis was obtained, the parts were washed and the wounds closed by the usual methods. The patient made an uneventful recovery. The highest temperature elevation occurred on the following evening, when it reached 38.40°. It came down to normal in the morning and remained so during convalescence in spite of the fact that suppuration occurred in the abdominal wound on the seventh day. The patient was discharged fully recovered on the eighteenth day. The second case is very similar to the above, except that it occurred during a frosty winter night, the patient, a peasant of 39, being but lightly clad. In this case the omentum protruded together with a long loop of the small intestine. The patient was not discharged until the thirty-seventh day, owing to considerable suppuration which had taken place during the first eight days. These cases certainly prove that, all things being equal, the condition of the tissues, which we call "vital resistance," forms the most important factor in determining the progress and outcome of a given injury or disease. With the "vital resistance" below par, an otherwise trivial injury will prove fatal despite all efforts on the part of the attending physician or surgeon. To blame the latter for the fatal termination is to display woeful ignorance, superabundance of stupidity or unpardonable malice, or all three combined.

If reports are accurate the inquiry now in progress in St. Louis into the source of the tetanus following the use of diphtheria antitoxin is developing some strange contradictions. Last week the janitor, who seems to have conducted the work, admitted that he sent out the poisonous serum. He did not think "it was bad enough to kill children". He is alleged to have testified on a previous occasion that this serum had been destroyed. This is a sad business all through, and we trust the exact truth will yet be ascertained.

The report by Dr. MacDonald and Mr. Spitzka on the case of Czolgosz is the final presentation of that

case to the world of science. In the shape in which it has now left their hands it will stand for future reference. It was proper in every respect that the case should receive the accurate and exhaustive treatment to which they have subjected it. That the findings are practically negative does not detract in the slightest degree from its value and significance. Dr. MacDonald speaks with the authority of an experienced expert and Mr. Spitzka has concluded a study of the brain that must be commended for its scientific accuracy and completeness. In medico-legal annals the report will take high rank as a scientific and unprejudiced pronouncement; and its example will not be without force and value in the future course of medical jurisprudence in this country especially.

Dr. William M. Welch, Chief Physician to the Municipal Hospital in Philadelphia, made the statement recently in a published interview that "No person who has been vaccinated recently in a successful manner has been admitted to the Municipal Hospital suffering from smallpox since the outbreak of the present epidemic". Of 980 cases of smallpox that have come under Dr. Welch's observation during this epidemic, not one was in a person who had recently been vaccinated successfully. "Anyone thus treated," he says, "may sleep in a smallpox hospital, mix with the patients, take every risk." With such truths staring it in the face, the world is probably old enough and wise enough not to stop to argue this question with the little coterie of obstructionists who call themselves antivaccinationists.

Current Comment.

CONGRESS AND THE DOCTORS.

Up to the present date nothing has been done by Congress to pay the doctors who attended President McKinley after he was shot down by the assassin Czolgosz. The matter seems to be waiting for somebody to take the initiative. In the meantime the executors of the dead President's will have asked the doctors to state their charges, and have received no answer, which seems entirely proper.

The killing of the President by an assassin was distinctly a national affair. He would not have been shot if he had been a private citizen. The assassin's pistol was aimed at the head of the nation. It is entirely proper that the nation should see to it that all was done that could be done, as it was, to save the President's life, and that the cost of all such efforts should be the people's cost. It is not altogether or mainly a question whether the McKinley family could pay such bills as might seem suitable in such a case. It is a question whether that burden should be added at all, be it large or small, to the infinitely greater burden the afflicted family must bear because one of its members was the nation's martyr. Surely there can be but one answer to such a question.

—*The Buffalo Evening News and Telegraph.*

AN AMERICAN INTERNATIONAL HEALTH SERVICE.

For the prevention of the spread of yellow fever and other infectious diseases originating in insanitary cities in America, Dr. Walter Wyman, Supervising Surgeon-General of the Marine Hospital Service, proposes the election of an International Sanitary Commission of five members, to be appointed by the Bureau of the American Republics. Of these members, one shall be a diplomat, one shall be learned in the law, one shall by a physician and sanitarian, one shall be a sanitary engineer, and one shall be a representative of commerce. To these five members there shall be temporarily added two to represent the National Government in whose domain the seaport city or town to be investigated or to be subjected to sanitary requirements is situated. The suggested duties of the International Sanitary Commission are: "First, by an inquiry of a commercial and statistical character, to determine upon and prepare a list of the seaport cities or towns necessary to be visited, with a view to sanitary improvements, as heretofore stated. This will be done by a commission of five. Secondarily, to visit said cities or towns in the order of greatest commercial necessity, and with the two additional commissioners, to make a thorough sanitary inspection of the port and city or town, and make a formal report upon the sanitary measures deemed necessary, keeping within the limits of this convention. Thirdly, this report shall be in duplicate, signed by seven members of the Commission. One copy shall without delay be transmitted to the President of the Republic, within whose domain the town or city inspected is located, and the other copy sent for file to the Bureau of American Republics."

—*The British Medical Journal.*

Correspondence.

THE ADMINISTRATION OF ANESTHETICS.

By B. M. RANDOLPH, Jr., M. D., of Philadelphia.

To the Editor of the **Philadelphia Medical Journal**:

In the **Philadelphia Medical Journal** of November 30th, 1901, is an editorial urging the importance of recognizing the gravity of general anesthesia, and placing its administration in the hands of a skilful person. Much has been written on this subject in the past few years, but anesthetics are still being administered in hospitals by junior residents, and outside by almost anyone that happens to be around. The attention given the subject in the medical press has not, however, been without results. Instruction in anesthesia, didactic and clinical, is given graduates in medicine in the Polyclinic Hospital, Philadelphia, by an experienced anesthetist, so that physicians who feel their deficiencies in this line can remedy their previous lack of opportunity. Instruction is also given in the Baltimore Medical College to undergraduates in the pharmacological department. If the surgeons demand expert anesthetists, they can get them, for where there is demand the supply will be forthcoming, a principle that applies in science as well as in commerce.

Reviews.

Lessons on Massage. By Margaret D. Palmer, William Wood & Co. New York.

This is an elementary work written chiefly for trained nurses who desire to study massage as a part of their professional duties. It contains a description of the different methods and movements employed, and a brief account of the anatomy of the human body, together with a description of the movements applicable for each particular part. Four brief chapters at the end describe certain special procedures for diseased conditions. The book is clearly written;

the descriptions of the more technical part are full and explicit, and the hints as to conduct, methods, etc., are likely to prove very useful. The section on anatomy seems to be rather unsatisfactory. It is a little bit too technical for a person who understands nothing about the subject, and likely to be of very little use to anyone else. For instance, we cannot see the advantage to the masseuse of knowing the names of the ligaments or of the various joints and synchondroses, without any information regarding their position and function. In the description of the abdominal contents no mention is made of the frequent anomalies in the position of the intestinal viscera, and it is very obvious that massage for the transverse colon in its normal position would be utterly inadequate in a case of severe splanchnoptosis,. We think a chapter might well have been added upon massage in this condition, because not infrequently it is a valuable adjunct to other methods of treatment. Aside from these two points, however, the book is worthy of great praise. It fulfills the object for which it was prepared, and will contribute to the increase of the usefulness of that most useful person, the trained nurse. Of course no one can learn massage from books alone. [J. S.]

Transactions of the American Microscopical Society.

The 22nd volume of the Transactions of the American Microscopical Society is a most creditable publication. In addition to the ordinary business transactions of the Society 14 articles on various subjects are given. One of the most interesting of these is the address of President Bleile upon the method of detecting the presence of blood in small quantities. This, as the author says, and as, curiously enough, is true of many of the other papers presented, is not strictly a microscopical subject. Some of the articles deviate as far from the strict limitations that would be supposed to be enjoined as to discuss Photo-Spectography of Colored Fluids; a paper was read by Moses C. White. The microscopists have apparently devoted themselves almost exclusively to the study of the minuter forms of life, and have abandoned the field of staniing and section cutting to a large extent, to the embryologists, histologists and pathologists, that is to say, to the workers in those subjects more closely allied to medicine.

The paper of greatest interest to the medical profession is the description of a new parasite from the human ear, found by Roscoe Pound. This is the Sterigmatocystis Candida, a mould belonging to the group of the aspergillacae. The illustrations include landscapes and pictures and plans of laboratories; and some very excellent plates of microscopical forms of life. [J. S.]

A Text-Book of Obstetrics. By Barton Cooke Hirst, M. D., Professor of Obstetrics in the University of Pennsylvania. *Third Edition, Thoroughly Revised and Enlarged.* Royal octavo, 873 pages, with 704 illustrations, many of them in colors. Philadelphia and London. W. B. Saunders & Co., 1901. Cloth, $5.00 net.

This well-known text-book needs nothing further in the way of endorsement to enhance its already great popularity. The clear, terse style of the author is further elucidated by numerous new and instructive illustrations, many of them from original drawings and photographs taken from the large and unique collection of the author. In this, the third edition, the subject matter has been thoroughly revised and enriched from the current literature of the world for the past three years.

Much new matter has been inserted, and obstetrics in its most modern form has been presented to the medical student. The chapters on the diagnosis and pathology of pregnancy, dystocia, and obstetric operations have received special attention and have been considerably enlarged. The extensive practice of the author has thrown into his hands an almost inexhaustible stock of material from which to draw; hence, both in this country and in England it is recognized as one of the most satisfactorily written and clearly illustrated works on obstetrics in the English language. The author is to be congratulated on the success of his labors and the public on receiving so excellent a work. [W. A. N. D.]

Syphilis and Other Venereal Diseases. By H. De Méric. William Wood & Co.

This little work of 126 pages is written in an entertaining style, approaches the subject from a purely objective and scientific standpoint and avoids the unpleasant details and stories to which writers on this subject, for some reason or other, appear to be particularly prone. In the 15 chapters he discusses syphilis and its various manifestations, simple local sores, and gonorrhea. There is little that is new on the suoject, and the book cannot lay claim to having advanced materially our knowledge of the diseases of which it treats. It contains a table upon the differential diagnosis of gumma of the penis, phagedenic primary syphilitic chancre, and phagedenic simple or soft sores. Considerable stress is laid upon the fact that primary sores may sometimes be multiple, as the result of multiple simultaneous infection.

For a syphilographer the stand De Méric takes regarding the foolish tendency of modern times to regard all obscure diseases as of syphilitic origin, and to consider the diagnosis confirmed when potassium iodide and mercury prove beneficial to the patient, is worthy of praise. Particularly in regard to obscure brain disease is this tendency manifest, and it is a pity in this case that the admonition that "it is well not to ascribe cases to syphilis unless absolute proof be forthcoming of the existence of that disease in the system" and the additional statement that "the mere fact of patients having had syphilis does not always warrant the sweeping manner in which all obscure symptoms in after life are sometimes put down to that disease," is not more generally heeded.

The book concludes with a chapter upon the serum treatment of syphilis, and another upon the Contagious Diseases Acts, a subject in which De Méric as an Englishman, is greatly interested. [J. S.]

Atlas and Epitome of Labor and Operative Obstetrics. Saunder's Question Compounds. By Schaeffer. 14 Lithographic Plates in Colors and 139 other illustrations. Publishers, W. B. Saunders & Co., Phila.

This Hand Atlas supplements the volume on Diagnosis and Treatment by entering into the detailed study of labor, and dealing with operative obstetrics, such as the induction of premature labor, the use of the forceps and Cesarean section. The graphic treatment of labor is elaborated by several long series of pictures which admirably show stages of the various processes. The text aims only to present the subjects treated in an epitomized form, but from a practical standpoint. Decided emphasis is placed upon the advice always to try first the most conservative and least dangerous procedure, as it is the one which offers the best hope of success in by far the greatest majority of cases.

These books bring before the American student in an available form the teachings of masters of the obstetric art. They present in a certain sense clinical material from such obstetric centers as Munich and Heidelberg. [G. E. S.]

Proceedings of the New York Pathological Society.— Years 1899 and 1900.

This is a description of specimens presented before the Society, and the papers read at the meetings for the years 1899 and 1900. They cover almost the entire domain of pathological chemistry. The Middleton-Goldsmith lecture by Professor Simon Flexner was a discussion of the Etiology of Tropical Dysentery, a subject with which he has been closely identified for some time.

The report is very admirably illustrated and is a commendable example of the excellent scientific work being done on this side of the Atlantic. [J. S.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA NEWS.

Temple College Medical Department.—The medical department of Temple College will soon have a building set apart exclusively for the instruction of its students. Plans have been approved by the trustees for a new building at the Samaritan Hospital, which will afford exceptional opportunities for study. In a course of six years young men, compelled to work during the day for the support of themselves and others, will be given an opportunity to become physicians. The college will not issue diplomas until students have passed the examination of the State Board. This new building will be completed in time for the opening of the next term. The building is to be 50 feet square, and will be connected with the present hospital by a corridor. A similar corridor will connect it with a new wing which is to be constructed at the same time. This wing will be 42 by 85 feet, and three stories high. The central building will contain a lecture hall and clinical amphitheatre, operating rooms, offices, reception rooms and surgeons' rooms. In time, the present hospital buildings will be torn down and a new wing constructed in their place, to match the north wing, which is to be built at once.

Society Meetings Next Week.—The following societies hold their meetings next week at the College of Physicians, Philadelphia, at 8.15 P. M. Monday evening, January 6, Academy of Surgery; Wednesday evening, January 8, County Medical Society, and Thursday evening, January 9, Pathological Society.

Smallpox in Philadelphia.—Seventy-nine new cases of smallpox and nineteen deaths were reported during the week ending December 28, against 76 cases and ten deaths the week previous. In all, there have been 1200 cases and 156 deaths from the disease in Philadelphia during the year, 377 being now under treatment. Smallpox has also appeared in Perkiomenville, Pa. Every precaution has been taken to prevent the spread of the disease.

The Cost of the Smallpox Outbreak in Philadelphia.—The hundreds of men who have been employed by the city to guard quarantined houses infected by smallpox were paid $2 a day, a few days before Christmas. This used up $19,000 out of the fund of $63,000 appropriated for this purpose. The remainder was paid for groceries. The nurses in the Municipal Hospital, who received from $25 to $40 per month, will not receive their salaries until after the New Year, from the appropriation to be made for 1902.

Changes Suggested by Dr. Shoemaker.—Dr. John V. Shoemaker, president of the Bureau of Charities and Correction, suggests that the control of the Municipal Hospital be transferred from the Bureau of Health to his bureau, the transfer of the House of Correction to the Department of Public Safety and the building of a city hospital for contagious diseases only. Dr. Shoemaker says that many officials favor the change, which they believe would be beneficial. It seems only proper that the department should deal with law and order and crime, and the bureau, with charity, the sick, and the needy. At Boston the hospital for all contagious diseases is built close against the general city hospital. The same could be done in this city, even if it had to be erected in West Philadelphia. Nothing is more easy than isolation, where there are proper facilities.

In memory of Dr. Wilson.—A marble tablet in memory of Dr. Charles Meigs Wilson was unveiled at the Philadelphia Lying-in Charity and Nurses' Training School, Eleventh and Cherry streets, Decemer 28. The tablet was erected by the nurses who studied under Dr. Wilson when he was physician-in-chief at the school. Dr. Wilson was chiefly instrumental in having erected the building which now stands at Eleventh and Cherry streets. He first came to the institution in 1884 and remained until 1890. During that time he did much to elevate the school with which he was connected. It is in appreciation of his services that the tablet was erected. He died ten years ago.

NEW YORK AND NEW JERSEY.

Metropolitan Medical Society.—At the last meeting, the following officers were elected for the ensuing year: President, Dr. W. M. Leszynsky; vice-president, Dr. F. L. Wachenheim; recording secretary, Dr. W. H. Brickner; corresponding secretary, Dr. S. Yankauer; treasurer, Dr. I. Pierce Oberndorfer.

Pan-American Exposition Hospital.—More than 6,000 patients were treated in the Pan-American Hospital during the Exposition.

Diet for Lunatics.—The Board of Managers of the Hudson River State Hospital have protested against the new diet schedule prepared by the State Commissioner of Lunacy, to go into effect January 1, eliminating meat. Two hundred of the 2,100 patients do all the laborious work about the institution. It was first announced that potatoes would also be cut from the patients' fare, but the new order provides for each patient eight and three-quarter ounces of potatoes a day. The managers say that this is not enough.

The New York Academy of Medicine.—At a meeting held December 18, Dr. Emil Mayer was elected chairman, and Dr. Z. L. Leonard, secretary of the Section on Laryngology and Rhinology for the ensuing year.

Smallpox in New York.—The report of the surgeon general of the Marine Hospital service at Washington shows that, despite the reports of a smallpox epidemic in Philadelphia, the deaths have averaged fully two-thirds less than in New York city. In New York, from June 23 to December 7, a period of twenty-four weeks, there were 587 cases and 164 deaths. Philadelphia reported, between February 1 and October 31, a total of 433 cases with only 59 deaths.

A Christmas Gift.—The Nassau Hospital, at Mineola, N. Y., established but a few years ago, has received $6,000 as a Christmas gift from W. C. Whitney.

Hospital Quarantined.—The Elizabeth General Hospital, containing over 50 patients, was quarantined December 26, for at least two weeks. A colored woman, who had been sent in with a diagnosis of typhoid fever, turned out to have smallpox. As there is only one other hospital in Elizabeth, to which men alone are admitted, future women patients will be transported to Newark, N. J.

A New Fever Cure.—A New York physician has constructed a rubber refrigerator bag into which patients with high fever are placed. The bag contains auxiliary pockets, into which ice is packed, the patient being wrapped in a wet sheet and a blanket. The doctor claims to reduce temperature to normal by gradually reducing the temperature of the bag from 70° to 40°.

Smallpox in Jersey City.—Five cases of smallpox were discovered last week in the family of a spiritualist in Jersey City. Attention was called to this state of affairs by the death of a daughter. The mother and three sons were then removed to the Municipal Hospital. The father developed smallpox the next day. The three members of the family who escaped contagion were the three daughters who attend school, the only members of the family to have been vaccinated.

Smallpox in Camden.—Acting upon information that letters had been received at and sent from houses where there had been smallpox, the president of the Camden Board of Health has asked the Postmaster if all mail matter could not be fumigated. The postmaster replied that if the Board of Health could show that the fumigation of the mail was expedient to the public health, the postal regulations provided for such action. Camden has now had over 80 cases of smallpox since the outbreak of the disease, 34 of these are in the Isolation Hospital which is full; the others are quarantined at their homes pending the completion of the annex of the hospital. The 24 physicians appointed by the Camden Board of Health began a canvas of the city December 30, offering to vaccinate free all those who had not been vaccinated.

NEW ENGLAND.

Smallpox in Boston.—The number of cases of smallpox during the last week in Boston has diminished considerably when compared with those previously reported, the number no longer passing five new cases daily. To stamp out smallpox, which has been epidemic for several months, the Board of Health has issued an order making vaccination compulsory, which will affect about one hundred and

seventy thousand persons. The order requires that all inhabitants of Boston who have not been vaccinated since January 1, 1897, "shall be vaccinated or re-vaccinated forthwith." When smallpox appeared about four months ago and spread until as many as twenty cases were reported, free vaccination stations were opened in all sections of the city. The Chairman of the Board of Health estimates that 400,000 persons have already been vaccinated. In 1721, when Boston was a town of only 11,000 people, 6000 of its population, or more than one-half, were taken sick with smallpox, and 850 of these died, nearly 8 per cent. of the whole population. Again, in 1730, 4000 were taken sick with smallpox, and 500 of them died. In 1752, 7669 were taken sick, and 569 died. What would be said if there were 275,000 sick with smallpox in Boston to-day, with 30,000 or 40,000 deaths from the same cause? Yet this would be the case if the old proportion were maintained.

Beverly Doctors' Trust.—The common council of Beverly, Mass., has voted to concur with the aldermen in increasing the salary of the city physicians to $600. Local physicians have agreed not to take the place for less than $800. Last year the city physicians averaged 12 cents a visit.

Osteopathy gets a setback by the decision in the New York courts that an osteopathist is not entitled to recover payment from a patient to whom he represents himself as a medical practitioner. According to this judgment, osteopathy is not of itself entitled to rank as a healing art. Quite likely this judgment might not be considered good law everywhere. It all depends on the State laws relating to the practice of medicine. In Massachusetts, for instance, one pathy is as good as another in the eyes of the law.—*Boston Herald.*

Smallpox in New Hampshire.—Two new cases and one death from smallpox were reported last week at New Lisbon, near Concord.

The Vanderbilt Hospital.—The building that Mrs. Vanderbilt will have erected at Newport, R. I., for the Newport Hospital in memory of her husband, the late Cornelius Vanderbilt, will cost $200,000. It will be used for out-patients and for a ward and rooms for patients who are able to pay something. The building will be 134 feet long and 65 feet wide, built of sandstone, with trimmings of white marble. The front of the building will be embellished with marble pillars. The building will be three stories high, and of a massive style of architecture. Work will be begun in the spring and will be finished in the autumn. In his will Cornelius Vanderbilt gave the hospital $10,000.

A Bequest.—The sum of $95,000 has been left to the hospitals and charitable institutions of New Bedford, Mass., by the late Francis Billings, of Boston.

A New School for Crippled Children.—Land for the proposed new School for Crippled Children, to cost about $100,000, has been purchased on St. Botolph street, near Massachusetts avenue, Boston, and when the entire fund shall have been collected, work upon the building will be commenced. The present quarters of the institution on Newbury street are so overcrowded that more than 40 crippled children are kept upon the waiting list. Subscriptions are continually coming in.

WESTERN STATES.

Detroit Clinical Laboratory.—A clinical laboratory is now being established in connection with the Detroit College of Medicine for the examination of specimens, clinically, histologically, pathologically, and bacteriologically. In addition, it is designed to afford post-graduate instruction, to provide facilities for original research, and to prepare, maintain, and supply macroscopic and miscroscopic specimens. In the Board of Directors and Laboratory Staff are included the best men in Detroit.

Experiments to Ascertain Whether Human Tuberculosis Infects Animals.—Dr. V. C. Vaughan, of the University of Michigan, recently visited the laboratories of Parke Davis & Co., in Detroit, where he inoculated seven cows and several calves with germs taken from a human being afflicted with tuberculosis. These animals were placed in special stalls and will be watched with care. Dr. Vaughan will follow these inoculations with others on horses and other animals.

The Coming Race.—Professor Henry L. Brunner [illegible] of the [illegible] makes a startling prediction as to human development. He sees in the future man a being in whom strange transformations shall have taken place; a being in whom brain is master, ruling a body much larger than that of the present man; a body which has lost its floating ribs, its vermiform appendix, and its little toes, and in which many other changes have taken place. He believes the chest and upper and lower limbs will be larger, and that the future man will be much taller than his prototype of today.

The New Germicide.—Last week occurred the premature announcement of the discovery of an extraordinary germicide by Prof. Frederick G. Novy and Prof. C. Freer, members of the faculty of the University of Michigan. Prof. Novy will not talk about the matter, maintaining that publicity must come through the usual channels, which means by way of medical and scientific journals. Scientifically speaking, the antiseptic is an organic acid hyperoxide. The formation of an organic hyperoxide is due to active oxygen on the surface of solids and the oxidizing power of oxygen varies with the nature of the surface. Thus, organic acid peroxides can be made in large quantities. Peroxides decomposed by water, giving solutions which, even when containing about 5-1000 of 1 per cent. of active oxygen derived from the hyperoxide, are fatal to bacteria, and a solution of ten times the above strength will destroy spores. The hyperoxide used by Dr. Novy in his discovery is benzozolacityl hyperoxide and can be taken internally without poisonous effect.

Chicago's Low Death-Rate.—With ten days remaining to round out the first year of the new century a total of 2[illegible] deaths had been recorded up to last week by the bureau of vital statistics of the health department. At this rate the total mortality of 1901 will not exceed 24,300 and, figured on the minimum midyear population of the United States census [illegible] the annual rate per 1,000 will be about 13.8, the lowest ever recorded for this or any other city of more than [illegible] population. The lowest previous rate, based on the United States census figures of population, was 14.36 per 1,000 in 1897. For the previous ten years, 1890-1900, the average mortality rate was [illegible] or nearly [illegible] per cent. higher than the probable rate for 1901.

Berkeley Deaf, Dumb and Blind Institute.—The directors of the Deaf, Dumb and Blind Institute at Berkeley, Cal., have decided to build a hospital for the institution without waiting for an appropriation from the State Legislature. They have sufficient money for the purpose under their control, and will leave the question of [illegible] to the next Legislature. The hospital will cost about $10,000. There are 400 children at the institute. The new building will be 60 by 100 feet in dimensions, and will contain a ward for boys, one for girls, an accident ward, operating-room, and a department fully equipped with fumigating and other appliances necessary for the efficient handling of an epidemic of any kind. The hospital will be ready for occupancy in about six months.

SOUTHERN STATES.

Tri-State Medical Association of the Carolinas and Virginia.—The fourth annual meeting of the Tri-State Medical Association of the Carolinas and Virginia will be held in Asheville, N. C., February 25, 1902.

A Physician's Taxes in Virginia.—Virginia still requires a special State license tax from physicians. At the recent Constitutional Convention, a committee from the Medical Society of Virginia showed that physicians, after having been [illegible] five years pay a State tax of $[illegible] a county tax from $30 to $100, and an income tax on all receipts over $[illegible]. Practicing physicians and editors are the only [illegible] State that persistently [illegible] their year's work done, have this triple burden to bear.

A New Hospital. A hospital is to be established at [illegible] Wetzel county, W. Va., with Drs. Cole and Ern[illegible] in charge.

Johns Hopkins Hospital.—It is said that Johns Hopkins Hospital [illegible] and yet has a larger per cent. of cures than any other hospital in the country.

A New Medical Ordinance. An ordinance recently [illegible] Kansas City, Kansas, that the

license to practice medicine in the city will only be granted to physicians holding a certificate from the State Board of Health, which certificate is given to graduates of medical schools in recognized good standing. This will make the various schools graduate only men well equipped to practice medicine. It is expected that the results by this method will equal, if not surpass, the custom now in vogue in other States, of having a State Board of Medical Examiners.

The Rappahannock Valley Medical Asociation met at Fredericksburg, Va., December 27. Appendicitis was discussed, and resolutions were passed in memory of the late Dr. T. O. Lintnicum.

North Carolina Board of Public Charities.—The State Board of Public Charities of North Carolina has just held its annual session. The new buildings of the Soldiers Home in Raleigh were inspected, as was also the Institution for the Blind. There is great need of more room in the hospitals for the insane both at Raleigh and at Goldsboro.

Richmond Academy of Medicine and Surgery.—The officers of the Richmond Academy of Medicine and Surgery for the ensuing year are: President, Dr. L. C. Bosher; secretary, Dr. M. W. Peyser, and treasurer, Dr. E. J. Moseley.

Against Free Samples.—The Commissioners of the District of Columbia are preparing two new health regulations to prevent the promiscuous distribution of samples of patent medicine. One of the proposed regulations will forbid any person to leave any medicinal or toxic substance, either in package or bulk, upon any public highway, except officers of the District of Columbia and Federal Governments, who may do so for purposes of disinfecting or cleansing. The second proposed regulation provides that medicinal or toxic substances must not be left in or upon any premises in the District of Columbia without the consent of the owner or occupant.

Cancer Increasing in Baltimore.—The statistics of the Health Department of Baltimore show that cancer is increasing largely, there having been between 400 and 500 fatal cases during the current year.

Smallpox Prophylaxis in Baltimore.—Dr. Bosley, Commissioner of Health, proposes, during the next three months, to ask the cooperation of the police and transportation officials to prevent the introduction of smallpox into Baltimore. During the past 50 years Baltimore has had epidemics of smallpox every ten years. The last epidemic was in 1891. Dr. Bosley blames the occurrence of these epidemics upon the expiration of the immunity produced by vaccination. So far Baltimore has been singularly free from smallpox, but the Health Department, realizing the situation, will redouble its efforts after the first of the year.

The Government Insane Asylum Overcrowded.—The United States supports one large lunatic asylum located in the District of Columbia, known as St. Elizabeth's. It costs $220 a year to maintain a patient in this hospital, and there are over 2000 there. Many of these are persons who have been stranded here, coming from foreign countries or from various parts of the United States. The asylum is intended for the insane from the army and navy, and from various branches of the Government service. It was recently decided to weed out the patients not properly regarded as the charges of the general Government, and the process of tracing out the former homes of all who come under this head has begun. This week a man who has been in the asylum for years was found to belong in Santa Lucia, British West Indies. An old Italian, who has been in the asylum many years, was discovered to have money owing him, enough of which has been collected to pay his passage back to Italy. The work of removing the hundreds of patients at St. Elizabeth's who do not properly belong there will be continued systematically..—*Phila. Public Ledger.*

MISCELLANY.

Health in the Philippines.—The Taft Report on the Philippine Islands was made public December 21. It begins with the assertion that the Philippine Islands are unusually healthful for a tropical country, as shown by the low sick rate among the troops during the year. The large majority of cases of insanity among the soldiers have been produced by drinking "vino," which contains as high as seventeen per cent. of fusel oil, a deadly poison. Although the climate must be considered good, the presence of bubonic plague in the city of Manila and in several adjacent towns; the fact that smallpox still prevails in many provinces, and will continue until a general system of public vaccination has been inaugurated; the occurrences of scattered groups of lepers, many living without medical assistance or control; the necessity of combating malaria and several varieties of dysentery, together with "rinderpest" among cattle; and, lastly, the absolute ignorance of or disregard for the most axiomatic hygienic laws which prevails in the municipalities combine to cause abundant need of an insular board to have general charge of the health interests of the archipelago. Such a board was created and was given wide powers. The sanitary condition of Manila makes an efficient local health board most necessary. The city stands on low and flat ground, it has never had sewers, and the soil has become infiltrated with impurities. The tidal streams which branch out through the city from the Pasig River form a constant menace to the public health. Many buildings are improperly constructed and badly overcrowded. Since August 1st the board has been engaged in improving the health conditions of Manila and in drafting sanitary laws. A vigorous campaign against bubonic plague has been inaugurated, and as a result this disease has almost completely disappeared. A system of inspection has been put in force so complete as to render it impossible for a case of plague to occur without the knowledge of the Board of Health. A war of extermination is being waged against rats, which are known to play an important part in propagating plague. The greatest source of mortality is pulmonary tuberculosis, which has caused 168 deaths during two months. It is most prevalent among the very poor, who live crowded together under very unsanitary conditions. Measures are now being taken to ascertain the exact whereabouts of all persons in Manila with pulmonary tuberculosis, with a view to the possible establishment of a consumptive colony outside of the city. The commissioner of public health has taken charge of the leper hospitals. A leper census of the islands is being taken, with a view to the eventual segregation of all persons suffering from this disease on the isolated but healthful island of Cagayan de Jolo, where they can be given better care, allowed greater liberty, and made more contented than in hospitals. It is believed that with the income derived from property already set aside for the support of lepers, and with the agricultural work which those in the early stages of the disease would be glad to perform, a leper colony might be established at comparatively little expense to the government. The number of lepers in the archipelago is less than 10,000.

Rabies in Morocco.—Raynaud has described the treatment of hydrophobia in Morocco. The hair of the dog, burned to ashes, is applied to the wound; tincture cantharidis is given in pill form; or sulphur is applied to the top of the head of the patient, who is kept in a dark room and fed upon sweets; or a gram of the liver of the dog that bit the patient is taken raw.—*La Presse Medicale.*

Baldness in Man.—In his volume on diseases of the hair, Sabouraud refutes some popular errors regarding the cause of baldness. Baldness is usually considered an infirmity of old age, and when it takes place in early life all sorts of explanations are invoked, one as baseless as another. As a matter of fact, the critical age for baldness in men is from 20 to 30 years. Women are less open to attacks of the microbe of this disease. The earliest baldness occurs in men of from 16 to 18 years, and the skull is often bare at 22. The most common age for the beginning of the disease is 23, and it is usually complete at 50. The latest age for the beginning is about 40, and in such cases the denudation of hair proceeds with extreme slowness. The younger the subject the quicker the disease attains its complete effect. It is not a malady of the aged, but rather of the young.—*New York Sun.*

Japan has only one orphanage, yet in no other land are fatherless children better cared for. Every family cares

for the sick, destitute or orphans nearest to it. There is a superstition that a childless house is accursed.

Speed of a Wink.—A German professor, by means of a photographic apparatus, has measured the amount of time consumed by the eyelid in the act of winking. His investigations proved that the eyelid descends more quickly than it rises, and that an appreciable pause takes place when the upper and lower lids come into conjunction. The exact measurements, obtained by a special photographic apparatus, are as follows: Downward movement from .075 to .091 of a second: the pause from .15 to .17 of a second, while the rising of the lid takes about .17 of a second, the wink being completed in about .4 of a second.—*Jewellers' Review.*

Illegitimate Births in Cities.—The following are the statistics showing the percentage of illegitimate births in the 15 great cities in which they most frequently occur:

City	Population	Per Cent.
Vienna	1,656,662	32
Prague	389,521	32
Stockholm	297,148	30
Paris	2,511,629	29
Bordeaux	256,906	27
Munich	490,606	26
Copenhagen	360,500	25
St. Petersburg	1,132,677	24
Madrid	516,428	22
Dresden	393,500	20
Rome	467,236	18
Berlin,	1,864,203	15
Buenos Ayres	808,308	15
Hamburg	699,489	13
Naples	562,827	11

Something About Salt.—According to the census report, 15,187,819 barrels of salt were harvested in 1899, 5,206,510 barrels of which came from Michigan, the first in the list of salt-producing States; New York stands second, with 4,894,852 barrels; Kansas third with 1,645,250, and Ohio fourth with 1,460,516. California, Texas, Utah, West Virginia, Louisiana, Pennsylvania, Illinois, Oklahoma and Massachusetts follow in the order named, none reaching a million barrels. The value of the product was $7,966,897, or about 50 cents a barrel, a barrel holding five bushels or 280 pounds. This salt, something over four and a half billion pounds, was consumed among something over seventy-six millions of people, about sixty pounds per person. The first attempt to make salt was at Plymouth, Mass., in 1624, the material being sea water, but it was not successful, and until the Revolution we brought our salt from over the sea, instead of out of it. Up to 1812 we made most of our salt out of sea water about New Bedford and Cape Cod. The three kinds of salt produced are rock salt, mined from the veins in the ground; solar salt produced by running the brine into pools where it is evaporated by the sun: and the boiling process, where the brine is boiled in pans and vats; this is by far the most in use, 11,733,166 barrels being produced in this way to 910,974 solar and 2,543,679 rock. The brine used in boiling comes from springs, or wells. The amount of imported salt used in 1899 was only 8.3 per cent. Not included in the productions cited are about four and a half million barrels as intermediate product used in the manufacture of chemicals, not properly marketable salt. If every other source were to stop producing salt, there is still enough in the waters of the Great Salt Lake in Utah to supply the world with salt for thousands of years.

Obituary.—Dr. Alexander Jackson, at Boston, Mass, December 12, aged 83 years—Dr. Albert E. Underhill, at Brooklyn, N. Y., December 19, aged 28 years—Dr. Thomas Waterman, at Boston, Mass., December 14, aged 61 years—Dr. Alfred Soule Wiley at Newton Highlands, Mass., December 20, aged 31 years—Dr. F. J. Perry, at Fort Atkinson, Wis., December 19, aged 36 years—Dr. James P. Lewis, at Washington, D. C., December 23.—Dr. J. C. Malcolm, at Hutchinson, Kan., December 24, aged 71 years—Dr. George C. Devine, at Philadelphia, Pa., December 26, aged 43 years—Dr. Amos B. Lewis, at New York City, December 28, aged 59 years—Dr. James M. Wallis at Philadelphia, Pa., December 28, aged 77 years.

CONTINENTAL EUROPE.

University Notes.—Paris: Dr. Albert Josias, physician to the Bretonneau Hospital, has just been elected member of the French Academy of Medicine.—Yves Delage, professor of zoology has just been elected a member of the Paris Academy of Sciences.—At Easter 1902, Dr. Alfred Fournier, professor of dermatology and syphilography, will be retired. A medallion, for which subscriptions are now being collected, will then be presented to him.—**Bordeaux:** A superbly equipped new hospital has been opened, under the direction of Dr. Demons, exclusively for poor patients who need grave surgical operations. The hospital was erected by the Tastet family, and is called the Tastet-Girard Hospital.—**Marseilles:** Dr. Boinet, professor of pathology, has been appointed professor of clinical medicine, in the place of the late Dr. Villard.—Professor Livon has been appointed director of the medical school.—**Rouen:** Dr. Brunon, professor of pathology, has been appointed director of the medical school.—**Berlin:** Dr. von Leuthold, Surgeon General of the German Army, has been appointed honorary professor in the Medical Faculty.—Prof. Landolt, of the second Chemical Institute, celebrated his 70th birthday December 5th, while Dr. Ferdinand Trautmann, professor of otology, celebrated the completion of twenty-five years in teaching, December 6th.—The number of female students enrolled for the winter session has already passed the six hundred mark, while last winter but 439 matriculated. A large number of these are taking the medical course.—**Hamburg:** Hamburg intends to group all the scientific institutions of the city into a university. The directors of these institutions will form a professorial college to elect its own president yearly. The programme for the current winter term includes courses by 117 lecturers. It is expected that this will lead eventually to a fully equipped Hamburg University.—**Halle:** For the winter session 192 students have matriculated, 49 of them female, mainly Russians.—**Heidelberg:** Prof. A. Rossel has recently been elected member of the Royal Society of Scientists in Upsala, Sweden.—**Breslau:** An otological clinic, to contain 25 beds, is soon to be erected.—**Munich:** Dr. von Ranke, professor of pediatrics, has just celebrated his 50th year in the practice of medicine.—On November 14, the University of Munich was seventy-five years old.—**Warsaw:** Dr. M. G. Tschernjachowski has been appointed professor of surgery.—**Madrid:** Dr. Forns, with Prof. Granell, subdirector of the Spanish National Deaf and Dumb Institution, opened an orthoponic institute November 15, for the treatment of deaf-mutism, vices of pronunciation, etc.

A Bequest.—Mme. Monchel, who died recently at Saint-Mandé, left $60,000 to the City of Cherbourg for the erection of a hospital.

The Yellow Fever Expedition in Brazil.—The scientific expedition recently sent to Brazil from France for the study of yellow fever is now installed in Petropolis. Unfortunately there is at present no yellow fever in Brazil. But a few cases of the plague have broken out which are being studied instead. Dr. Salimbent, who stopped in Italy to study the transmission of malaria by mosquitoes, will soon leave for Brazil to join his colleagues, Drs. Marchoux and Simon. All three were sent out by the Pasteur Institute, Paris.

The Sixth French Medical Congress will be held at Toulouse during the Easter holidays, 1902, under the presidency of Dr. Lemoine, of Lille.

The Population of France.—The report for the year 1900 shows the unsatisfactory state of the French population. While 827,297 children were born alive, 83,285 were still-born. The striking increase in the number of still-born children in 1899 was supposed to be due to the prevalence of influenza and typhoid fever. The total population last year was 38,517,975. There were during the year 834,285 deaths. The excess of births over births of nearly 29,000 causes great alarm. There were 299,084 marriages during 1900.

Divorce in France. The statistics of divorces in France during the last civil year yield some curious results. During the year the courts received 3050 requests for [illegible]

and 471 to make a previous decree of separation absolute; so that 9,521 cases were considered. Demands for simple separation to the number of 2859 were also received. The following tables relate to the 12,380 cases in question:

	For Divorce.	*For Separation.*
Demand by husband	43 per cent.	15 per cent.
Demand by wife	57 per cent.	85 per cent.
Couple had Children	49 per cent.	68 per cent.
Married one year	5 per cent.	3 per cent.
Maried 1 to 5 years	32 per cent.	24 per cent.
Married 5 to 10 years	38 per cent.	36 per cent.
Married 10 to 20 years	19 per cent.	25 per cent.
Married 20 to 30 years	5 per cent.	9 per cent.

Eighty-five per cent of the demanded divorces were granted, as well as 75 per cent. of the demanded separations. The proportion of marriages dissolved to marriages contracted was 28 in 1000 during the year, and during the past ten years this proportion has nearly doubled.—*New York Sun*.

The Illness of Dr. Javal.—It has been rumored for some time that Dr. E. Javal, the foremost French ophthalmologist, whose work upon the ophthalmometer is well known, has been suffering from glaucoma. This news has lately been confirmed, Dr. Javal having unfortunately become totally blind. He was educated as an engineer, but becoming interested in optics, later studied medicine. Though already 62 years of age, he is still directing a number of scientific researches.

Tuberculosis in France.—Amodru, in his report, says that 150,000 people die of consumption in France yearly. The breath of the consumptive does not transmit the disease; the air expelled does not contain the germs; it is the saliva, dried and reduced to dust, that is generally the agent of contagion. It is demonstrated that this dried saliva clings to the walls, furniture and floor of the patient's room for years. Sunlight in a few hours destroys the bacilli. Alcohol makes the best bed for tuberculosis, Professor Landouzy said. The Departments of France which are the greatest centres for tuberculosis are those in which there is the greatest consumption of alcohol. Among the precautions urged is the prevention of expectoration and the compulsion of profuse sprinkling before sweeping. The report declares that consumption is curable at all stages. Pure air, as on the seashore and high mountains, is the best remedy for consumption. In order that this remedy be effective, it should be continuous; the patient should not only keep his windows and doors open night and day, but should persevere in this air cure a long time.

A Review of 117 Cases of Lithotripsy Performed by V. V. Irschik (75 cases) and T. P. Krasnobaieff (42 cases), in Children.—T. P. Krasnobaieff (*Medicinskoie Obosrenie*, July, 1901) gives the following conclusions drawn by himself and Irschik from an extensive experience in the operative treatment of vesical calculus in children: (1) The mortality was very slight (1.7%). Yet, as a rule, with the present method of operating, **lithotripsy should accomplish a cure in all cases**; (2) with possibly few rare exceptions, **lithotripsy has no contraindications** if it is possible to grasp the stone with the instrument, and the urethera is sufficiently spacious, or if contracted, is sufficiently dilated; (3) **lithotripsy gives the most rapid recovery**, which is impossible to achieve by means of lithotomy. In hospitals it shortens the time during which the patient must remain in the institution and thus cheapens the cost of maintaining each individual patient; (4) lithotripsy does not create conditions for relapses. As shown by the authors cases, relapses are extremely rare, and at all events not more frequent than in cases of lithotomy; (5) **lithotripsy should replace lithotomy**, the latter being applicable only to exceptional cases. [A. R.]

The Latest Literature.

BRITISH MEDICAL JOURNAL.

December 14, 1901.

1. The Bradshaw Lecture on Nephrectomy, Nephrolithotomy and Lithotomy. T. R. JESSOP.
2. An Address on the Sanatorium Treatment of Pulmonary Tuberculosis. R. W. PHILIP.
3. An Electro-Thermal Paraffine Bath. R. H. STEEN.
4. Prolonged Action of the Heart Maintained by Artificial Respiration without other Signs in a New Born Infant. JOHN H. REDFERN.
5. Hernia of Diverticulum, a True Littre's Hernia. T. RUDOLPH SMITH.

1.—Jessop reviews his experiences with **nephrectomy, nephrolithotomy, and lithotomy.** The appalling mortality of nephrectomy for sarcoma of the kidney in children together with the hopelessness of permanent cure raises the question as to whether it is worth while to interfere in these cases at all or not. The longest survivor of 11 children on whom he has operated for malignant disease of the kidney died within two and a half years. He points out the danger, when performing nephrectomy on the right side, of including in the ligature a portion of the vena cava, this accident having occurred once in his own series of cases. The prognosis concerning the permanency of cure of "tumor of the kidney" after operation is much more favorable in adults. Of 6 nephrectomies for tumor in adults, 4 died soon after operation, and 2 recovered; one lived nine years, dying of cardiac disease and the second is living at the end of 18 months. The amount of suffering in nephrolithiasis bears an inverse relation to the size of the stone. Jessop mentions two cases of nephrolithotomy in which alarming hemorrhage followed an incision into the anterior surface of the kidney, one necessitating nephrectomy which was, however, followed by sepsis and death. Since 1896 he has incised the kidney along the convex border, thus diminishing the danger of bleeding and lessening the likelyhood of urinary fistula. Attention is directed to the possibility of tearing the pelvis or detaching the ureter during the delivery of the organ outside the loin. At the present time there are only two methods of treating bladder stones, litholapaxy and suprapubic cystotomy. The mortality of either operation depends less upon the nature of the procedure than upon the character of the complications. Litholapaxy is the operation of election unless there be distinct contraindications. There are some calculi too large and others too hard to be crushed. A narrow urethra, an enlarged prostate, an encysted stone, and the presence of cystitis call for suprapubic lithotomy. [F. T. S.]

2.—Philip contributes a paper on the **sanatorium treatment of pulmonary tuberculosis.** Hyperaeration is the major agent in the treatment. It is not necessary to be careful as to the temperature of the surrounding air whether the patient is in doors or out of doors, provided he is kept comfortably warm by means of clothing and, if necessary, by hot bottles. Indeed, there seems to be a disadvantage in endeavoring to combine free exposure of the patient out of doors with his occupancy of rooms, the temperature of which is maintained constant or which may become overheated. Nearly all patients require rest when the treatment is commenced, particularly if the temperature oscillates above 100.5° F. or if the pulse rate is maintained above 90 per minute. As improvement proceeds, as shown by reduction of the temperature and lowering of the pulse rate, the necessity for complete rest is removed. Exercise should be begun on a level and gradually allowed on an incline until even hill climbing becomes possible. The patients should be induced to take a sufficient quantity of suitable food, and, if physiological conditions are fulfilled, the patient generally eats of his own accord. In order to reach this desirable condition, the patient must rest sufficiently both before and after meals and his bowels must be

regulated with care. The clothing should be sufficiently warm but preferably of light weight and of porous material. Chest protectors of all kinds are wrong. The regular use of the rapid cold bath is, in the majority of cases, not only possible but highly beneficial. The results obtained by sanatorium regime, whether actually at a sanatorium or otherwise, are much in advance of the results that used to obtain in the more or less protective system. It is, however, in the recovery of incipient and comparatively early cases that the curative significance of the method is especially witnessed. Under this open air system the aspect of the patient rapidly changes from the worn, discolored look to the appearance of ruddy health. The temperature gradually approaches normal and the rapid, soft and wavering pulse is replaced by a slow and comparatively resistant beat. The author regards the degree to which this latter feature is established of great prognostic value. Alimentary disturbances are reduced to a minimum, night sweats disappear entirely and cough, expectoration and dyspnea gradually disappear. The conception of pulmonary tuberculosis in the past has been too much that of a localized lung disease, while the constiutional disease has been insufficiently considered. So far as treatment is concerned, the constitutional rather than the local disorder should be kept in view. The sanatorium regime may be practiced at home, provided there is sufficient accommodation, a sufficient appreciation of what is necessary, and a sufficient determination to carry this out at all costs. A grave difficulty in the way of home treatment commonly exists in the patient's relatives and friends, who, in the name of kindness or on the plea of common sense, are apt to come between the patient and his cure. In all cases, but more especially among the working classes, the question of after life becomes one of pressing moment. It is disappointing to find a patient, who has recovered and who has retained recovered ground so long as he is able to lead a physiological life, return to his former state simply because by force of habit or necessity he fell from the physiological path. In view of this tendency, the establishment of some system of tuberculous colony should be seriously considered, in which the convalescent patient may contribute by work, according to his physical capacity, toward the common good, while, for his own benefit, he remains under suitable medical supervision. Philip's experience includes the observation of 700 patients and he thinks the percentage of satisfactory recoveries may be expected to range from 50 to 60. [J. M. S.]

3.—Steen describes an electrical apparatus by which a paraffine bath may be kept at a constant temperature. [J. M. S.]

4.—Redfern and Newby report the case of a male child who was delivered with forceps. **Respiration was not established,** and for two hours and a half, during which time artificial respiration was carried out, the **heart beat continued good.** The increased use of the bellows, which were used for producing artificial respiration, markedly accelerated the heart beat. The child gave no other sign of life than action of the heart and lungs, and clonic spasms of the right hand. The failure of respiration may have been due to strangulation by the umbilical cord, to the action of the chloroform inhaled by the mother or to injury to the respiratory centers from the pressure of the forceps. [J. M. S.]

5.—Smith reports an instance of a strangulated, left femoral, **diverticular hernia** occurring in a female, aged 34 years. The diverticulum was 6 inches long, about the calibre of the ileum, and was strangulated about three-fourths of an inch from its origin from the small intestine. It was reduced and the ring closed with sutures. [F. T. S.]

LANCET.

December 14, 1901.

1. The Bradshaw Lecture on Personal Experiences in the Surgical Treatment of Certain Diseases. T. R. JESSOP.
2. An Address on a Model Hospital. THOMAS BRYANT.
3. On Duodenal Ulcer and its Surgical Treatment. B. G. A. MOYNIHAN.
4. Experimental Hemoglobinuria caused by a Bacterial Toxin. CHARLES TODD.
5. Movable or Floating Kidney a Cause of Acute and Chronic Painful Dyspepsia, etc. ALEX. MACGREGOR.
6. Chronic Epistaxis (? Vicarious Menstruation), etc. BERNARD E. MYERS.
7. A Case Illustrating the Relief of Severe Headache by Correction of Refraction Error, etc. SIMEON SNELL.
8. The Plague in India. ALEX. GRAHAM-SIMPSON.

1.—See abstract of *British Med. Journal* in **Philadelphia Medical Journal** for Dec. 28, 1901.

2.—Bryant, in an address entitled A Model Hospital, describes the manner in which the Bolingbroke Hospital is conducted. [F. J. K.]

3.—Moynihan discusses duodenal ulcer and its surgical treatment. This form of ulceration may be either acute or chronic. The ulcer is situated most frequently in the first portion of the duodenum. Men are more often sufferers from this condition than are women, and patients of all ages may be affected. He mentions that the three cardinal symptoms are pain, hematemesis and melena. Pain, referred to the epigastrium, to the right hypochondrium or to the upper portion of the abdomen is generally experienced one hour or more after the taking of food. Its intensity varies from the dull ache to very severe persistent pain. Vomiting, which is observed in about one third of the cases, set in about two hours or more after taking food. Hematemesis is an occasional symptom. He thinks that entorrhagia is sometimes overlooked. The chief complications of duodenal ulcer are: Profuse hemorrhage, perforation, cicatricial contraction and induration, periduodenitis and cancer. Surgical treatment is indicated under the followng circumstances: 1. when an ulcer perforates; 2. when subacute or chronic perforation leads to periduodenal or subphrenic abscesses. 3. in chronic ulcer when pain, gastrorrhagia, or enterorrhagia are persistent and disabling, and, 4. when cicatricial contraction and induration or periduodenitis have caused narrowing of the calibre of the gut and dilatation of the stomach or of the stomach and that part of the duodenum behind the stricture. The author gives a report of two cases of perforating duodenal ulcer, which he operated upon. One resulted fatally, the other made an uneventful recovery. The article includes a table of 51 cases of operations for acute perforating duodenal ulcer, and another of four cases of chronic ulceration with their surgical treatment. [F. J. K.]

4.—Todd has contributed **an article on "experimental hemoglobinuria caused by a bacterial toxin."** The bacillus megatherium when grown in suitable media produces certain substances which have a very powerful hemolytic action on the corpuscles of certain animals without causing death or serious illness or other pathogenic effects. This hemolytic substance or lysin is in the main an extra-bacillary product. A strong lysin can be isolated by growing the bacillus in shallow layers of broth in Erlenmeyer flasks, at a temperature of from 35-37° C. The cultures are filtered through a Pasteur-Chamberland filter. He found the lysin more powerful when the bacteria were cultivated in highly alkaline broth. He tested the lysin on the corpuscles of various animals and found that those of the guinea pigs were the most sensitive of all the corpuscles tried. The erythrocytes of man and those of the monkey were also

highly sensitive, those of the sheep, goat, pig, and bullock only moderately so, while those of the dog, rat, rabbit, and sparrow, were slightly sensitive, and finally those of the donkey and horse were practically unaffected by the lysin. Megartheriolysin is a very unstable body. A temperature of 56° C. for 30 minutes destroys the hemolytic action of filtered cultures. Various normal sera exercise a considerable anti-hemolytic action on megatheriolysin. The anti-hemolytic action of normal sera is increased by heat. The explanation of this phenomenon is difficult. The subcutaneous injection of filtered cultures of bacillus megatherium into guinea pigs in doses of as large as 20 cc. does not produce death. Intravenous injections of filtered cultures in guinea pigs are followed by hemoglobinuria and sometimes by hematuria and epistaxis. The author suggests that "the fact that a widely distributed organism, which has hereto been regarded as practically nonpathogenic is capable of forming products which are strongly hemolytic is suggestive in connection with the pathology of such diseases as blackwater fever, paroxysmal hemoglobinuria, and pernicious anemia." [F. J. K.]

5.—Macgregor has found acute and chronic indigestion, especially in women, not infrequently due to the wanderings of a floating kidney interfering with the function of the stomach. He suggests that when in apparently ordinary cases of dyspepsia medical treatment fails, movable or floating kidney ought to be suspected and examined for. He has never found it necessary to recommend operation for floating kidney accompanied by dyspeptic symptoms. [F. J. K.]

6.—Myers reports a case of chronic epistaxis (? vicarious menstruation) occurring in a woman, 23 years of age. At the age of 5 years she first bled from the nose. Bleeding continued very frequently, sometimes as often as nine times per day until she was 13 years of age, when she first menstruated and then saw nothing again for 5 years. During this period she complained of great pain in the pelvic region every three or four weeks, lasting for about a day. At these times profuse nose bleeding occurred, and between these periods the ordinary frequent nose bleeding took place. When Myers first saw the patient she was suffering from severe secondary anemia and he also elicited signs of old quiescent mischief of the apex of the right lung and gastric ulcer. By gently touching the septum of the nose with cotton-wool on a probe, oozing of blood occurred. Various methods of treatment failed to check the nasal hemorrhages, except cauterization, which seemed to have produced a cure. The secondary anemia rapidly disappeared. [F. J. K.]

7.—Snell reports a case, illustrating the relief of severe headache by correction of refraction error, occurring in a man aged 32 years. The headaches began on the left side and were chiefly confined to this area. Under the action of homatropine and cocaine, vision in each eye =6-6, or with +5D. cyl 6-5, axis horizontal. Muscle balance appeared normal. Cylinders were ordered for general use with a very favorable result. The headache rapidly disappeared. [F. J. K.]

MEDICAL RECORD.

December 28, 1901.

1. The Neurotic Indications of Pre-senility. ALLAN McLANE HAMILTON.
2. Clinical Report of a Second Series of Twelve Cases Benefited by Bottini's Prostatotomy. RAMON GUITERAS.
3. On the Transmission of Yellow Fever by Vessels, and its Bearing upon Quarantine Regulations. EDWARD SOUCHON.

1.—Allen McLane Hamilton, after studying a large number of cases of pre-senility, has come to the conclusion that there are many symptoms, especially disturbances of the nervous system, which are often unrecognized and which invariably indicate commencing disturbances due to vascular degeneration. He does not believe that sufficient attention has been paid to the study of the pulse and heart in arteriosclerosis in connection with mental variation and deterioration. He does not believe that the importance of vertigo as an indication of progressive arterial occlusion has received due attention. There can be no question but that a "pre-senile," so far as the matter of disturbances are concerned, is likely to be influenced greatly by excesses in diet or by the indulgence in alcohol, tobacco or venery. [T. L. C.]

2.—Ramon Guiteras reports the second series of twelve cases benefited by Bottini's prostatotomy. Patients are not always incapacitated for sexual life by the operation. The contractile power of the vesical sphincters seems to be greatly improved after the operation. The notes of his twelve cases are given. The operation was followed by a reaction in 8 of the 12 patients, 5 of whom had nephritis. All the patients operated upon, with one exception, were benefited. [T. L. C.]

3.—Edmond Souchon contributes an article in reply to one by Albah H. Doty, published in the *Medical Record*, October 26, 1901. The array of cases which Souchon presents was gathered to demonstrate the danger resulting from vessels from infected ports which, although having developed no yellow fever in transit for many days, yet at the last moment and after disinfection had developed infection. He presents data of several such instances. [T. L. C.]

MEDICAL NEWS.

December 28, 1901. (Vol. LXXIX, No. 26).

1. Some Surgical Tendencies from a Medical Point of View. REGINALD H. FITZ.
2. Treatment of Lobar Pneumonia. CHARLES G. STOCKTON.
3. On the Role of the Prostate Gland in Gonorrhea. FREDERIC BIERHOFF.
4. The Neurotic Element in Infantile Eczema. JEROME KINGSBURY.

2.—C. G. Stockton tates that the treatment of lobar pneumonia requires different management in every case and in a greater degree than most diseases. The use of calomel in the early stage of the disease is universal. Enough should be given to empty promptly the alimentary tract and to increase the activity of the liver and kidneys. This congestion can also be relieved by the use of magnesium or sodium sulphate. Another important procedure is to see that the skin is acting freely. The method varies with the physician, but the author's method is to give a hot mustard footbath followed by sponging. This bath is to be given every two or six hours, according to indications. This not only produces diaphoresis, but stimulates the cutaneous circulation and thereby increases the efficiency of the heart. If the bath is given promptly there is very little fatigue resulting. Other important symptoms are high blood pressure and an exaggerated heart action which are likely to do harm. The purge and the footbath usually control excessive circulatory activity and drugs are rarely needed. Ice bags over the chest when the temperature is high are beneficial and even the cold bath after the manner of the Brand treatment has been employed without harm. Depression of the heart or lowering of the blood pressure and adynamia are treated with strychnine. It is necessary to begin the drug early in full doses hypodermically. The only limit to the dose is the physiological effect. Begin with 1-30 of a grain, repeated every two or four hours, increasing to 1-20, 1-15 or even 1-10 of a grain if condition of circulation demands it. It has often been found necessary to give opium in small doses to counteract the unpleasant effect of the strychnine. These large doses of strychnine assist elimination; the purgatives and diuretics thus become more effectual. Rest is very important and the baths, the nourishment and medication should be administered as near as possible at the same time. Sleep may be produced by an ice bag or Dover's powder. As a rule patients should not be awakened, but as soon as they do awake, prompt administration of nourishment, strychnine and if necessary other stimulants should follow. In regard to the antitoxic serum in counteracting the toxemia, the author is inclined to think that it possesses some value. The question of retarding the consolidation of the second lung and the limitation of the pulmonary area in-

volved in the process is important, and he believes that this can be accomplished by pushing the constitutional methods. Give an additional dose of calomel, use the footbaths and increase the amount of strychnine. For decreasing the pulmonary congestion the most useful measures are to withdraw from four to six ounces of blood from the arm. If the congestion is sudden and intense, the withdrawal of from twelve to sixteen ounces of blood is advised, and also the use of dry cupping very thoroughly over the threatened area. If bloodletting is not desired, the use of leeches (8 to 10) applied closely together along the posterior axillary line is quite as good. Counterirritation is not very much used, although in cases in which there is delayed resolution it is advised. [T. M. T.]

3.—F. Bierhoff states that there is no other condition so frequently responsible for the persistence of a **gonorrheal urethritis** as an involvement of the prostatic gland. Out of 151 cases of posterior urethritis the author found the prostate involved in every case. This complication is said to occur usually about the third week of a gonorrhea. The causes are divided into two divisions: (1) Exciting; (2) predisposing. In the former the causes are due to the entrance of the gonococcus into the posterior urethra and prostate; in the predisposing, any condition of these parts which favors the development and multiplication of those germs which have entered them, with the causes which brought this condition about. The infection may spread either by a direct extension of the inflammation to the posterior urethra, and thence, by way of the ducts of the prostate, to the gland itself, or by way of the circulation and through the lymphatic system. The first is considered by far the most frequent. The progress of the infection is as follows: Involvement of the anterior urethra; spread of the infection past the compressor through direct extension along a chronically congested mucous membrane of the bulbous, membranous and prostatic urethra; involvement by direct extension of the ducts of the previously congested prostate; extension to the walls of the gland or to the interstitial connective tissue separating the individual lobes, or even to the periglandular connective tissue. The varieties are: (1) Catarrhal; (2) follicular; (3) parenchymatous; (4) prostatic phlegmon of the acute type; further, chronic prostatitis. In the greater proportion of cases the onset is insidious. The first symptom in most cases will be more or less marked turbidity of the last portion of the urine. In others the turbidity will be so slight as to escape all but the most careful scrutiny. On examination the turbidity will be found to be due to pus, and microscopic examination reveals extracellular and intracellular gonococci. On rectal examination the gland will be more or less changed. It was found that the left was more frequently involved. The consistence of the gland may be changed. In the catarrhal type there were found areas of distinct softening in an otherwise apparently normal organ. In the follicular parenchymatous type there are likewise softened areas, but they are surrounded by an area of thickening and infiltration. The intestinal type is usually marked by an appreciable symmetrical enlargement of the entire gland which feels tense and elastic and is sensitive to the touch. Treatment may be divided into: (1) Prophylactic; (2) curative. In the former the most valuable and reliable method is the irrigation of, first the anterior, then the entire urethra; at first twice, later once a day with a warm one per cent. solution of protargol, without the use of a catheter. In addition rest in bed, attention to the bowels, avoidance of alcohol and sexual excitement. In the latter irrigation alone will not cure, and massage of the prostate gland in addition to irrigation must be employed. The finger is used for massage rather than any instrument for the following reasons: (1) The author finds it preferable to locate the foci of the disease and massage there rather than to apply the treatment indiscriminately to the entire gland and the surrounding parts; (2) the amount of pressure to be applied can be gauged better with the finger; (3) he believes the danger of injury to the patient to be less. The prognosis is generally favorable in the long run. [T. M. T.]

4.—J. Kingsbury gives Unna's division of **eczema in children** as follows: (1) Tubercular; (2) seborrheic; (3) neurotic. A sharp line of demarcation cannot always be drawn between these varieties. One often laps over upon the other. In regard to the neurotic type the author is not inclined to admit of its existence, although it is admissible for clinical convenience. The neurotic element that goes to make infantile eczema is caused by reflex neuroses and can be divided into gastrointestinal, sexual and local nerve irritation. Of nerve irritation teething is the most important, but this is not near as important as a catarrhal condition of the entire gastrointestinal tract caused by imperfect and faulty food. Pin worms in the rectum and occasionally in the vagina should be considered. The influence exerted upon the eruption by a phimosis or by masses of calcified smegma that bind the prepuce tightly to the glands must e taken into consideration. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

December 28, 1901.

1. The Prevention of Laceration of the Perineum in Labor. GEORGE B. TWITCHELL.
2. The Prevention of Laceration of the Perineum in Labor. MAURICE A. WALKER.
3. The Prevention of Laceration of the Perineum in Labor. J. L. ANDREWS.
4. A Retrospective Survey of some of the Essential and Vital Principles pertaining to Ano-rectal Anatomy, Physiology, Pathology, and Nomenclature: In an Effort against the Present Attempts to Radically Change and Subvert them.
   WILLIAM BODENHAMER.
5. Indications of Treatment in Cases of Uterine Myomata.
   GEORGE TUCKER HARRISON.

1.—Twitchell believes that only in very slight **tears of the perineum** does the split occur from the fourchette backward. In serious cases the whole perineum gives way practically at once. The vulva is dilated by the child's head by having the lower end pushed away from the upper. If the head slides on the perineum, the space between the pubis and the fourchette will increase; if the head does not slide, the opening will not increase and the perineum will follow the motion of the head. This causes a decided stretching of the perineum but no increase in the size of the vulvar opening, and tears result. Twitchell favors external palpation in preference to digital examination. [W. A. N. D.]

2.—Walker remarks that in the **prevention of laceration of the perineum** during labor there are three elements to be considered. The passage should be made as large or as distensible as possible; the fetus should be presented in the smallest diameter; and it should be directed in the axis of the passage. Before the beginning of the second stage the bladder and rectus must always be emptied. Both subjective and objective measures are useful in retarding the descent of the head. Pressure applied directly on the presenting part will retard the advance of the frontal segment, tend to increase flexion, and tend to retard the entire head, while it allows of anterior or pubic motion of that part, thus presenting the smallest diameter. In multigravidae and women with relaxed abdominal walls the recumbent position is best. Complete flexion of the head is necessary until its largest diameter has escaped from under the arch. The posterior shoulder must also be guarded from lacerating the perineum as it descends. [W. A. N. D.]

3.—Andrews remarks that in the **prevention of perineal lacerations** the two forces furnishing the *vis a tergo* must be kept constantly in mind. As the head approaches the vulvar outlet the resistance is gradually overcome. The necessity for the powerful force is gone, but the force is still present; hence the tear. A most frequent cause of laceration is imperfect flexion of the fetal head. It must not be forgotten that a former unrepaired laceration tends greatly to more severe laceration in the next labor. The ideal emergence of the head is between pains. It is possible to shell out the head at this time, and this is the safest method of delivery. Properly used the forceps constitute an excellent safeguard for the integrity of the perineum.
[W. A. N. D.]

5.—In speaking of the **indications for treatment of uterine myomata** Harrison remarks that it is necessary to consider

the circumstances of each individual case in order to determine the proper action. He remarks that an operation for a myomata at an early period may be a slight affair, while if we wait until a later period the complications may be such as to render such an operation excessively difficult and dangerous. Menorrhagia and metrorrhagia may exhaust the patient and lead to thrombosis. The peritoneum covering the myomatous uterus may become inflamed and cause dangerous peritonitis and intestinal adhesion. Phenomena of incarceration may appear in the pelvis, the myoma may undergo degenerative changes or even become sarcomatous or carcinomatous. Marked anemia may result from the repeated hemorrhages, and a disastrous consequence of the impoverished blood is that pathological condition of the muscular tissue of the heart known as *brown atrophy*. The treatment when possible is prophylactic. Curettage of the uterine mycosa may relieve the hemorrhage. Ascites may furnish an indication for the performance of myomotomy as will any of the forms of degeneration of the tumor. Peritonitis furnishes an indication for a radical operation, especially when it has occurred several times. Leukorrhea, if excessive, may necessitate the operation, and when pregnancy is associated, operation either early or late in the course of gestation must be performed. [W. A. N. D.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

December 26, 1901.

1. Some Surgical Tendencies from a Medical Point of View. REGINALD H. FITZ.
2. Successful Operation upon a Case of Brain Abscess Following Suppurative Ear Disease. FREDERICK L. JACK.
3. Study of the Aphasia Persisting During Convalescence After Evacuation of Brain Abscess. GEORGE L. WALTON.
4. Congenital Elevation of the Shoulder, etc. JOEL E. GOLDTHWAIT and CHARLES F. PAINTER.
5. Tubal Pregnancy with Double Pyosalpinx. C. H. HARE.
6. Plea for Pain and Patient. EDMOND R. MORAS.

1.—Fitz addressed the New York Academy of Medicine **on some modern surgical procedures as seen from a medical viewpoint.** Exploratory laparotomies, he believes, are too frequently done; they are not without considerable danger and often disclose conditions that cannot be relieved and that might have been appreciated without operation. They lead the surgeon to act too rapidly upon the opinion of incompetent diagnosticians. Each case should be carefully scrutinized by botn physician and surgeon before the operation is undertaken and it should, as far as possible, be undertaken for the purpose of curing disease or of relieving suffering and not simply for the purpose of diagnosis. During the past 10 years the number of exploratory celiotomies done in the Massachusetts General Hospital increased from 10, in 1890, to 30, in 1899. The author criticizes the present tendency to operate in cases of malignant disease of the alimentary canal, of tumors of the kidney, of tumors of the thyroid gland and of malignant lymphoma. He gives statistics to show that these operations usually fall short of prolonging life or of relieving suffering. The advance of knowledge in the future should be in the direction of limiting these unnecessary and harmful operations. [J. M. S.]

2.—Jack reports a case of successful operation in a case of **brain abscess following suppurative middle ear disease.** [J. M. S.]

3.—Walton contributes an article in which he studies **the aphasia that persisted in the foregoing case after the abscess had been opened.** [J. M. S.]

4.—Goldthwait and Painter contribute a paper on **congenital elevation of the shoulder,** in which a report of 2 cases that were successfully operated upon, is included. [J. M. S.]

5.—Hare reports a case of **tubal pregnancy with double pyosalpinx.** The patient was an unmarried woman, aged 26 years, who was supposed to be suffering from double pyosalpinx only. When the abdomen was opened, it was found to contain some fresh blood and ruptured tubal pregnancy was diagnosed. The patient died. There was no autopsy. [J. M. S.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

December 28, 1901.

1. Food Products from Diseased Animals. D. E. SALMON.
2. Tuberculosis in the Middle States and its Curability. JOHN A. ROBINSON.
3. The Biologic Test for Semen. C. G. FARNUM.

1.—Salmon believes that the inspection of food products has been sadly neglected. This author gives a brief outline of some of the diseases common to animals which render them unfit as food products. He states that unquestionably the products of many badly diseased animals get upon the market and are consumed. This is largely due to the fact that, since the establishment of federal inspection, diseased animals are taken to slaughter-houses which kill for local trade and have little if any inspection. [F. J. K.]

2.—Robinson discusses **tuberculosis in the Middle States and its curability.** This author gives an account of the climate of Michigan, Ohio, Indiana, Illinois, Connecticut, Wisconsin, Minnesota, Iowa, Missouri, North and South Dakota, Nebraska and Kansas. He thinks that there are many reasons why tuberculosis should be less prevalent in the Middle States than in the East or West. The relative mortality from tuberculosis in the Middle States' region in the list of states is as follows: Ohio third, Illinois fifth, Tennessee sixth, Missouri seventh, Kentucky eighth, Indiana ninth, Michigan thirteenth, Wisconsin eighteenth, Texas nineteenth, Iowa twentieth, Minnesota twenty-first, and Mississippi twenty-fourth. The states which contain large cities have a high mortality rate from this disease. He thinks that the problem of treating tuberculosis is working out its own solution in a practical way and that is by the establishment of sanatoria. The climate in the Middle States offers much in the curability of consumption. [F. J. K.]

3.—Farnum has applied to semen the biologic test for blood. This test is based upon the fact that when certain substances such as bacterial filtrates, albuminous urine, blood serum, etc., are injected into animals for a period of time, they produce in the blood of these animals substances which form specific precipitates with the substance injected. He found that when rabbits were injected with dog's semen, the rabbit's blood serum gave a distinct precipitate with an emulsion of dog's semen. With an emulsion of bull's testicle no precipitate was produced. He thinks it safe to conclude "that blood sera of animals treated with different semens and testicular emulsions contain precipitins, which probably are specific." [F. J. K.]

AMERICAN MEDICINE.

December 28, 1901.

1. Massive Infiltration Anesthesia with Weak Analgesia Solution, etc. RUDOLPH MATAS.
2. Technic of Fixation of Prolapsed Kidney. AUGUSTIN H. GOELET.
3. Trophoneurosis Affecting the Hair, with photographs of a Case. F. SAVARY PEARCE.
4. Observations on Tuberculosis. HENRY B. DUNHAM.
5. Nephritis in Malaria. John T. MOORE.
6. Ludwig's Angina Complicating Typhoid Fever. WILLIAM E. ROBERTSON and CHARLES E. [illegible]RT.

1.—Rudolph Matas publishes a paper in the **Philadelphia Medical Journal,** Nov. 3, 1901, in which he describes and illustrates a simple apparatus for the purpose of **inducing local and regional anesthesia,** with weak solution by the Schleich method. In the present paper Matas describes an improvement in the apparatus which consists in a polished copper cylinder in place of the heavy glass bottle originally

used. The method of inducing anesthesia by his method is given in detail. He states that apparatus is practically an adaptation of the Potain aspirator. The chief advantages claimed for it are that it allows the operator to infiltrate and edematize large areas rapidly, continuously or interruptedly without the delay caused by recharging or exchanging syringes; and that by the use of a long needle it tends to diminish the traumatism caused by frequent punctures made necessary by the shorter needles used with the ordinary quickly exhausted syringes. [T. L. C.]

2.—A. H. Goelet describes the **technique of the operation for fixation of prolapsed kidney.** The patient is placed on the table on the side opposite to that on which is the kidney to be fixed, with the under arm drawn out behind and the thighs flexed. A pad is placed under the lower loin on the table to increase the costo-iliac space of the upper side, and it must be so adjusted as to push the abdomen up and replace the kidney. An incision is made on the outer border of the erector spinae muscle beginning just below the twelfth rib and extending downward parallel with the spine for about three inches. The superficial fascia is divided with scissors to the extent of the wound above and below. The underlying muscles down to the erector spinae are then separated in the direction of their fibres with blunt round-pointed scissors. Broad strong retractors are then inserted and an assistant forcibly retracts the margins of the wound including all of the separated muscles. Minute details are given as to the manner of retracting the erector spinae. The fatty capsule is now drawn down and opened with scissors to the extent of the wound, and immediately the fatty capsule of the kidney beneath will bulge up into the opening. Goelet does not believe it is necessary to strip off the fibrous capsule and bring the kidney structure into contact with the muscles to secure adhesion. Two fixation sutures are to be inserted upon the lower half of the kidney so that the upper part may be drawn up into place under the rib. Minute directions are given as to the insertion of these sutures. Before closing the wound a long strip of gauze is carefully packed under and along the lower pole of the kidney, filling completely the space occupied by the kidney before it is drawn up into position, and the end is brought out at the lower angle of the wound. The margins of the skin are approximated with narrow, interrupted strips of aseptic ZO adhesive plaster. The patient should be kept in bed for at least three weeks, and kept on her back during this period, or she may be permitted to turn on the side of the attached kidney. To turn on the opposite side would put an undesirable strain on the attached kidney. [T. L. C.]

3.—F. S. Pearce reports a case of **trophoneurosis affecting the hair.** The patient noticed on combing her hair a bare spot on the vertex the size of a twenty-five cent piece. The night before she was sure no such spot existed. The hair now fell out rapidly and in three weeks she was completely bald with the exception of a few hairs which remained in the temporal and occipital region. The remaining hairs were then shaved off and massage and electricity were applied to the scalp. The case continued to progress unfavorably and in fifteen months the eyelashes, eyebrows, and hair of the pubis had disappeared. Also the hair on the arms below the elbow and the hair on the side of the face. Two months after the initial alopecia the hair on the scalp began to grow in, but very sparsely and the new growth was snow white. Interesting photographs of the case are given, as well as other features of the patient's condition. [T. L. C.]

4.—H. B. Dunham contributes **observations on tuberculosis,** in connection with the work at the Massachusetts State Sanatorium. He discusses the remedial agents employed, the question of out of door sleeping, the significance of increase in weight under the open air treatment, and the subject of exercise, especially the influence of exertion upon the temperature. The significance of chest capacity is given as well as the result of physical examination. He also deals with the significance of ulceration and excavation in hemoptysis. [T. L. C.]

5.—John T. Moore concludes a paper on **nephritis in malaria** as follows: 1. Nephritis is not likely to occur in a single tertian infection for a short interval, say, of five days; 2. a double tertian infection will produce a nephritis in a large percentage of cases if it runs for only a short time; 3. the more chronic the case becomes of any infection the more likely is it to produce nephritis; 4. malaria of long duration or often repeated attacks will produce chronic renal disease as shown by continuous presence of albumin and casts. 5. Estivo autumnal malaria probably gives the greatest percentage of cases of nephritis. (In his series 68.7%). 6. The age of the patient, height of temperature or specific gravity of the urine showed no relation to the presence of albumin and cast in his series of cases. [T. L. C.]

6.—W. E. Robertson and C. C. Biedert report a case of **Ludwig's angina complicating typhoid fever.** The typhoid pursued a moderately severe course for about two weeks, the patient then complained of difficulty in getting his breath, and a swelling developed rapidly on the left side of the neck just below the angle of the jaw. This was tender on pressure and of a board-like hardness. Six hours after the onset the dyspnea had grown so severe, and the larynx being almost entirely closed, that a low tracheotomy was performed. The patient died suddenly ten hours after the onset. The necropsy showed that the tissues of the neck were edematous and swollen, but they presented no evidence of breaking down. The mucous membrane of the larynx, particularly about the left vocal cord, and that of the epiglottis were edematous, greatly swollen and almost purple in color. Cultures in the spleen showed the Eberth bacillus, and a microscopic section of the swollen laryngeal tissues showed a pure streptococcus infection. [T. L. C.]

VRATCH.

October 13, 1901. (Vol. XXII, No. 41).

1. Deforming Spondylitis (Spondylitis defermans). A. I. KUDRIASCHOFF.
2. Relative Insufficiency of the Tricuspid Valve. A. F. EKKERT
3. On the Question of Catheterization of the Ureters; Its Application in Cases of Tuberculosis of the Kidneys and Inflammation of the Renal Pelvis Dependent on the Presence of Calculi. N. E. GAGEN-TORN.
4. On the Occurence of a Retro-Uterine Hematoma Which Formed an Obstacle to Delivery. IA. E. SCHOSTAK.
5. Sexual Abuses Among School-Children. A. S. VIRENIUS.

1.—Kudriaschoff presents a critical review of the literature on the subject, reports a case of **spondylitis deformans** under his observation and describes the number of museum specimens, showing various stages of the disease. (The descriptions are illustrated). [A. R.]

2.—Will be abstracted when concluded.

3.—Gagen-Torn reports a number of cases of **renal disease** observed at Guyon's clinics in Paris, demonstrating **the value of catheterization of the ureters both for diagnostic and therapeutic purposes.** Case 1 was one of tuberculosis of the right kidney in a laborer 47 years old. About six months prior to admission the patient passed at one time bloody urine. After that, urination became frequent and the urine cloudy. Analysis of the urine upon admission showed the presence of albumin, red and white blood corpuscles and **tubercle bacilli.** Physical examination showed the lungs to be normal, the left kidney was found enlarged and the bladder free from disease. A catheter was introduced into the left ureter and left there for 12 hours, the urine being collected every ½ to 2 hours. A subcutaneous injection of **methylene blue** was also made. The urine from the left kidney was markedly colored ½ hour after the injection, while that of the right, obtained

from the bladder, showed **a slight coloration only 6 hours later.** Analysis of the urine from each kidney showed the following:

Urine from the left kidney:	Urine from right kidney:
Amount 300 c.c. (in 4 hours);	750 c.c.;
reaction acid;	slightly alkaline;
Specific gravity 1.029;	1.005;
urea 30.3 grms per liter;	0.8 grms. per liter;
chlorides 11.50 grms. per liter	5.70 " " " ;
phosphates 2.20 " " "	0.07 " " " ;
albumin 0.50 " " "	7.0 " " " ;

Catheterization of the **right** ureter 6 days later showed similar conditions, except that the urine from the left kidney was found free from albumin. The urine from the right kidney was found to contain red and white blood corpuscles and **tubercle bacilli.** A diagnosis of **tuberculosis of the right kidney** was established and the organ removed. In case 2, the patient, a woman of 31, presented symptoms of **renal calculi,** but the urine was found to contain **tubercle** bacilli, and a unilateral infection (right) was established only by means of catheterization of the ureters. In case 4, one of **renal tuberculosis** in a woman 38 years old, ureteral catheterization revealed affection of both kidneys, thus contraindicating operation. In case 5, **pyelonephritis** of the right kidney was diagnosed largely by the aid of **catheterization,** while in case 6, in which an operation for **pyelonephritis** of the right kidney was performed, the ureteral catheter served as a drain to carry off the urine from the kidney, thus preventing the urine from coming in contact with the wound. The author has witnessed a large number of catheterizations with and without anesthetic, and even in ambulatory cases, and claims that the method presents no difficulties, is perfectly harmless and painless, and failure is encountered in a few rare instances. A description of Albarran's cystoscope (with illustrations) and the method of employment is given. [A. R.]

4.—Schostak reports the case of a pregnant woman, 43 years old, in whom a violent connection with a drunken husband a week before labor resulted in a **retro-uterine hematoma which rendered normal delivery impossible.** The tumor was evacuated through an incision through the rectum, and a dead child delivered with forceps. The woman made a good recovery, but on returning from the hospital she again had connection with her libidinous husband who was in a state of intoxication, and sustained an injury to the anterior vaginal wall, resulting in a **vesico-vaginal fistula** from which she was cured by an operation. [A. R.]

5.—Virenius prefaces his paper by citing a conversation he had in Paris with the director of a *pension* and an American visitor. It appears from the conversation that there are no definite data with regards to the extent of **masturbation** in boys, and that those who should know better entertain vague ideas concerning the extent and the best method of treating this evil. For a number of years, the author, in making a physical examination of the boys of high-schools, paid particular attention to the **sexual organs,** which he inspected without attracting the attention of the person examined. As evidences of sexual indulgence, either in the form of masturbation, pederasty, natural intercourse or so-called psychical masturbation, he considers 3 physical signs: (1) Undue development of the sexual organ, the latter being out of proportion to the age; (2) extreme relaxation of the scrotum, and (3) an uncovered glans, the latter being of secondary importance, as it may occur under conditions which do not imply sexual indulgence. He observed that boys with a small organ and a firmly contracted scrotum display unusual vigor and energy; they have a fresh look about them, an erect posture, a self-reliance, an open, fearless gaze and a wise expression of the face. The author's observations embrace 2228 boys coming from so-called middle-schools (corresponding to American high-schools. A. R.) Of the 7 schools I, II and III had dormitories in which part of the students lived, while IV, V, VI, and VII had none. Excessive development of the sexual organ was observed in the following percentage of pupils:

Institution:	VI	I	VII	V	IV	II	III
Per cent.	24	29.8	35.7	45	45.5	48.7	58.2

The existence of a relaxed scrotum was observed in the following:

Institution:	VI	I	IV	VII	V	II	III
Per cent.:	13.2	20.6	42.5	47.5	51.2	62.5	76.

An uncovered glans was found in the following:

Institution	VI	I	VII	V	II	III	IV
Per cent.:	4.3	10.3	13.44	16.25	16.8	17.27	17.7

The following were suspected of masturbation:

Institution	VI	I	II	VII	IV	V	III
Per cent.:	0.98	3	3.7	13.75	25.3	26.1	51.36

According to age, the students were distributed as follows:

Age	Increased size of organ	Relaxed scrotum	Uncovered glans	Masturbation
11	4.52	6.33	2.26	1.35
12	8.57	24.3	5.35	7.85
13	24.4	44	9.3	16.5
14	58.8	61.7	12.8	34.2
15	68.8	61.5	14.8	31.2
16	69.4	60.8	25	35.8
17	72.5	59.9	26.9	30.5
18	62.7	58.5	31.7	27.5
19	57.2	61.9	26.7	18
20	54.4	55	26	15.2
21	66.7	50	33.3	11
Average	49.8	49.44	19.46	20.18

The root of this widespread evil the author sees in our **educational system,** characterized by mental overwork, lack of healthy recreation and disregard of moral and physical training. The life of the students is made dull and uninteresting, and he seeks excitement and momentary pleasures in smoking, drinking and sexual abuses. The remedy, therefore, lies in the improvement of the defective educational system. [A. R.]

October 20, 1901. (Vol. XXII, No. 42.)

1. On the Influence of Various Heavy Metals on the Morphological Composition of the Blood and the Formation of Hemoglobin. M. A. ILIASCHEFF.
2. Relative Insufficiency of the Tricuspid Valve. A. F. EKKERT.
3. A Case of Hereditary Syphilitic Affection of the Eyes in the Second Generation. I. I. STRZSEMINSKI.
4. "Drop" Narcosis. A Flask for It. A. M. KULAGIN.
5. The Status of the Question of Sterilization of Milk in Artificial Feeding of Infants. N. DANILOFF.
6. On the Employment of Atropine in the Treatment of Intestinal Obstruction. O. IAKOVLEVA.

1.—Iliascheff points out that within the last ten years experiments established the fact that **iron,** when administered internally, **is absorbed and contributes towards the regeneration of the red blood corpuscles.** Already in the stomach a combination of the inorganic salts of iron with albumins and carbohydrates takes place. Absorption, however, takes place in the duodenum, whence the iron, in the form of albuminates, enters the blood stream through the lymphatics and is rapidly seized by the liver and spleen, being deposited in the liver in the form of nucleoalbuminates and combinations of the nature of ferratine. The excretion of iron takes place largely through the mucous membrane of the large intestine, in part by the diapedesis of the leukocytes containing iron or the extrusion of the iron granules through the epithelium. According to v. Noorden, the action of iron depends on the stimulation of the bone-marrow, and in this respect it is not superior to the other heavy metals which exert the same influence. Cervello arrived at the same conclusions after considerable experimentation, and he includes manganese, copper, mercury, zinc, nickel, cobalt and iron in the same group of "blood regeneratives." The author's experiments were intended to **establish the effect of iron on the blood and whether the other heavy metals have a similar effect.** The experiments were conducted as follows: Pups 1½-2 months old were kept on an exclusive milk diet with a slight admixture of white bread. Only the animals which thrived on this diet were selected, inasmuch as the various gastro-intestinal disturbances produced by the exclusive diet in some of the pups would *per se* cause a relative increase of hemoglobin. The animals then received various doses of iron and the other metals, and weekly determinations were made of the number of red blood corpuscles and the percentage of

hemoglobin. The following conclusions were reached: 1. The salts of Cu, Hg and Mn administered in small amounts by the mouth have no appreciable effect on the amount of red blood cells and hemoglobin. 2. The salts of iron, under the same conditions, invariably produce an increase in the number of red blood corpuscles and the amount of hemoglobin. 3. Consequently, the salts of iron are not only absorbed, acting as stimulants to the hemopoietic organs, but are also utilized in the construction of hemoglobin. 4. The increase in the number of red blood corpuscles and the amount of hemoglobin takes place in such a manner that the maximum increase of the corpuscles is reached first, the maximum increase of the hemoglobin appearing later. 5. The administration of iron always causes a marked increase of the eosinophiles. This is not observed under other conditions in the same animals. 6. The eosinophile granules contain iron, and apparently in a stable organic combination, for they, like Bunge's hematogen, give the ferric reaction with ammonium sulphate only after 12-24 hours. [A. R.]

2.—Ekkert gives an exhaustive review of the **pathology, symptomatology and the literature of insufficiency of the tricuspid valve.** The paper contains also a summary of 84 cases of this affection observed at the Obuchoff's Women's Hospital in St. Petersburg for a period of 10 years. 81 of these cases occurred as complications among 2188 cases of diverse **cardiac affections,** or in 3.6%. Of the 84 patients 34 left the hospital (20 with some improvement) and 50 died. Of the objective symptoms, marked **pulsation of the liver and the blood vessels of the neck was present in all; a systolic murmur** in the region of the **tricuspid valve** only in 29 and an increase of the second sound of the pulmonary artery in 29, the latter having occasionally occurred **simultaneously** with the pulsation of the liver and the murmur. Pulmonary infarcts were found in 37 cases. Ascites and hydrothorax were present in all. The urine invariably contained albumin, but casts were rare. As to treatment Kernig's method was employed, which consists essentially in complete rest in bed and exclusive milk diet. Of drugs, **digitalis** gave the best results. In the acute stage, the infusion (0.5÷100) was administered in tablespoonful doses every 2 hours. After the subsidence of the acute manifestations, the heart's action was kept up by the following pill taken 3 times daily, for months: Powdered digitalis and hydrochlorate of quinine, each 1. grm., extract of valerian, enough to make 20 pills (Kernig). **Diuretin** was also found useful. [A. R.]

3.—Strzseminski reports a case of **hereditary syphilitic affection of the eyes in a boy,** 12 years old, whose father was afflicted with **hereditary syphilis.** Careful investigation excluded the possibility of acquired syphilis in either father or son. 3 similar cases, previously reported, are briefly described. From the literature and his own observations the author draws the conclusion that in **hereditary syphilis of the second generation** miscarriages are less frequent than in hereditary syphilis of the first generation. The offsprings either die soon after birth with manifestations of general atrophy of the organs and tissues or show various dystrophies, or appear normal at birth, but in a few months begin to emaciate and show lack of physical and mental development. In some cases the manifestations are the same as in the first generation, affections of the eyes being of frequent occurrence, but these yield more readily to specific treatment. However, in the majority of children of hereditary syphilitics there are no evidences of hereditary syphilis. [A. R.]

4.—Kulagin suggests for **chloroform anesthetization** the use of an apparatus by means of which drops of chloroform of equal size could be delivered with a regularity not equaled by any other apparatus generally employed. The author's device is practically a **globular separating funnel** with a glass stopper perforated at the side to admit the air when in use. The frequency with which the drops are delivered is regulated by means of the glass stopcock. [A. R.]

5.—Daniloff reviews the subject of **artificial feeding** and shows by collated statistics and citations of various authorities that neither does sterilization of the milk solve the difficult problem, nor is artificial feeding at best adapted to replace mothers milk. He concludes by saying that in artificial feeding the thing of supreme importance is not the sterilization of the milk, but the **rigorous observance of all the rules of hygiene and asepsis at the time the milk is obtained and from that time until it reaches the consumer.** "How to feed" is just as important as "what to feed on." [A. R.]

6.—Iakovleva reports a case of **intestinal obstruction** in a man, 40 years old, who was received at the hospital in a **condition approaching collapse.** An operation, which seemed indicated, was refused by the patient and his friends, and **hypodermic injections of atropine** were resorted to. Temporary relief followed each injection, but the obstruction was not relieved and **the patient died.** [A. R.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

September 12, 1901.

1. The Excretion of Potassium and Sodium Salts in Carcinoma, Cachexia, and Phthisis. R. MEYER.
4. The Presence of Mould Fungi in the Stomach, and their Clinical Importance. M. EINHORN.
5. Concerning Nucleoproteids and Nucleinic Acid. I. BANG.
6. A Case of Late Apoplexy Following Trauma. C. BURNS.
7. A Case of True Metatarsalgia. A. BLANCKE.

1.—It has for a long time been known that in health the chlorides excreted in the urine are chiefly sodium chloride, and potassium chloride, and of these two the quantity of sodium chloride is about double that of potassium chloride. In conditions in which there is marked muscular wasting, potassium chloride is relatively much increased, and its amount may even exceed that of the sodium chloride. The subject has not been thoroughly studied. Meyer presents a few observations. **In 3 cases of carcinoma**—2 of the œsophagus and one of stomach—**he found that the quantity of potassium chloride was from two to three times as great as that of the sodium chloride,** a condition exactly contrary to that seen in health. In 2 cases of very advanced phthisis similar conditions were observed, while in one case of moderately advanced phthisis and one of incipient phthisis the potassium chloride was to the sodium chloride as 1 to 5, and 1 to 3, respectively. The importance of these observations is at present unknown, because of the little work that has been done along associated lines. It would, however, be of importance to know whether in the early stages of carcinoma there is a relative increase of the potassium salts, as it would then be of some importance in diagnosing carcinoma from other conditions which resemble it. [D. L. E.]

4.—Einhorn gives a review of the literature concerning **the presence of moulds in the stomach,** and refers to the few cases which have been reported. He then describes 4 cases which he has observed himself. The occasion for looking for moulds microscopically was the observation of small particles in the stomach contents, which oftentimes looked like bile-stained food remnants, and were usually of a brownish color. These were, however, on microscopic examination, found to consist of large masses of fungi and spores, occasionally mixed with microscopic food remnants and epithelial cells. Three of the cases were instances of hyperchlorhydria; the fourth was one of chronic gastritis with gastric erosions. **The actual clinical importance of these fungi is difficult to estimate.** The presence of a small number in the stomach can scarcely be considered to be of any real importance. They would probably be simply passed on into the intestine, and would have

no opportunity to gain a foothold in the stomach. From this point they may spread over a very large portion of the mucous membrane and may, as in the case which Einhorn reports, be found in very great numbers in the stomach contents, particularly after washing the stomach. It is hard to believe that such a growth could take place in the stomach without doing damage, chiefly in causing irritation or inflammation. As yet, however, we cannot state what relation they have to any symptoms, as all the symptoms that have been observed when these fungi were present, have also been observed when they were absent, and they have been present when there were practically no symptoms. There should, however, be an endeavor to get rid of them, which may probably be most satisfactorily done by using the stomach douche, and by spraying the organ with some antiseptic solution such as silver nitrate. [D. L. E.]

5.—Bang gives a general **brief discussion of nucleoproteids and nucleinic acid.** The interesting new facts which he states are as follows: Lilienfeld stated that the nucleoproteids of the leukocytes consisted of nucleohiston, which was composed of histon and leukonuclein, the latter again being composed of an albuminous body and nucleinic acid. Bang's recent investigations (not thoroughly completed) lead him to believe that Lilienfeld's view, which has been generally accepted, is erroneous. Bang believs that the leukocytes are composed of various combinations of nucleinic acid and proteids, and that nucleohiston as such does not exist at all. Contrary to Lilienfeld's view one may find a number of nucleoproteids containing much albumen. There is also a good deal of nucleinic acid, which is but loosely combined, but combined with protemin-like bodies, and he has other reasons for his belief. He also states that after splitting up the nucleoproteid of the pancreas he has found glycerin, an entirely new observation under these circumstances. This is combined with phosphoric acid, and makes glycero-phosphoric acid, hence its constitution closely resembles that of lecithin. Lecithin is believed to be of great importance in building up cells, and it is not at all improbable that the neucleoproteid of the pancreas is also important in the construction of cells. Bang has also investigated the effects of injection of nucleoproteids and nucleinic acid into the circulation. Guanylic acid and nucleoproteid both cause marked symptoms, chiefly consisting of a marked decrease in the rapidity of coagulation of the blood or its complete absence, superficial breathing, rapid and marked reduction of blood pressure; with guanylic acid there is also albuminuria and alkaline reaction of the urine. Nucleoproteids very frequently cause glycosuria. This, however, was not present when the animals were already in a condition of inanition, hence the glycosuria was due to something which caused an increased production of sugar from glycogen. [D. L. E.]

6.—The case reported was that of a man of 41, who 4 days before his illness began received a blow on the head. He did not lose consciousness and worked quietly afterwards. He had been in perfect health before, and was not an alcoholic. Afterward he complained of some headache, and was unusually quiet. **On the 4th day after he was injured** he suddenly sneezed 6 or 8 times and immediately afterward had vertigo, nausea, vomiting and partial loss of consciousness. The latter soon became complete. He was found in complete coma. There was no paralysis, the reflexes were still present, though weak. The limbs were, however, relaxed; the pupils were very narrow and did not react. Breathing was slow and labored and soon became of the Cheyne-Stokes type. The pulse became rapid, the temperature rose, and on the next day the man died. Postmortem examination showed hemorrhages in the pia, and in the superficial portions of the cortex. The vessels at the base were perfectly normal, and there was no sign of any degenerative change in the vessels, with the exception of one small area. The right lateral ventricle was found filled with blood, and the corpus striatum and anterior half of the optic thalamus were completely destroyed. After washing away the blood, **a small artery was found which had ruptured through a minute aneurysm.** No other arteries could be found which showed any changes. There was slight atheroma of the aorta; otherwise the heart and vessels, as well as the other organs were normal, with the exception of a recent broncho-pneumonia of the right lung. The explanation given for the hemorrhage is that, through *contre coup*, the blow on the head injured the right side of the brain, and this resulted in a localized area of necrosis (softening); by this occurrence the support of the small artery was weakened and the artery was probably already diseased at that spot, or it may have been injured at the time of the accident. An aneurysm was formed at that time, or had existed for a short period before, and the result of the injury was to allow of its rupture. [D. L. E.]

7.—Blancke reports the case of a woman who complained of pain in her foot, which made him believe at first that she had flat-foot. On examination, however, it was discovered that she had not flat-foot, but presented all the symptoms of metatarsalgia (Morton's disease). He does not agree with Hoffa, who considers that the neuralgia is only one of the collateral symptoms of the valgus position of the foot. In this case there was no valgus. He considers that the opinion that a subluxation is always present as the cause of the disease, is also wrong, and that subluxation is not necessarily present. He agrees with other authors in general in the statement that **the neuralgia is due to compression of the external plantar nerve between the heads of the metatarsal bones.** [D. E.]

NORDISKT MEDICINSKT ARKIV.

1901. (Afd. 2, N. 2.)

8. Tuberculous and Syphilitic Strictures of the Small Intestine. JOHANNES FIBIGER.
9. The So-called Newly Formed Bile Ducts. MAX BJŒRKSTEN.
10. The Etiology of Acute Primary Cerebro-spinal Meningitis. I. JUNDELL.
11. The Distribution of Cancer in Norway. M. GEIRSVOLD.

8.—**Tuberculous stricture of the intestine** may be hypertrophic, forming a tumor in the ileo-cecal region, or cicatricial, when it is most frequently found in the jejunum and ileum. Generally but one stricture occurs, though many cases of multiple stricture have been published. Fibiger reports two cases of multiple tuberculous strictures of the small intestine in women of 60 and 36. The presence of giant cells, typical tubercles, and tubercle bacilli made the cause plain. Besides, inoculation caused localized tuberculosis in animals. These strictures may be so well healed that no signs of their tubercular origin are found. Thus the diagnosis of tuberculous stricture is often impossible. A table of twelve cases of supposed **syphilitic stricture** of the small intestine follows. Then Fibiger reports another case of tuberculous stricture, which closely resembled some of those described in the literature as syphilitic. In two years at Copenhagen, seven cases of tuberculous stricture of the intestine were found post-mortem. A study of the literature shows but two cases which were surely syphilitic in origin, the majority of the so-called cases of syphilitic stricture of the small intestine being most probably tuberculous in nature. For Fibiger believes all cases of intestinal stricture to be tuberculous unless miscroscopic examination shows that the intestine, the mesenteric glands, and the liver contain no tubercle bacilli or tubercular changes, and inoculation in guinea pigs gives no results. [M. O.]

9.—Björkstén reports three experiments upon rabbits, into whose common bile ducts staphylococcus toxin was injected. The rabbits were later killed. In a former experiment with a stronger streptococcus toxin, newly formed bile ducts were found. They possessed a distinct epithelium and looked like ducts which had existed previously. In the rabbit killed four days after injection, the theory of the disappearance of the liver parenchyma will alone explain this appearance. In the later experiments the epithelium

of the bile ducts was markedly irritated. It rose in folds which approximated one another, and thus new cavities were cut off. These newly formed bile ducts vary in length, and are found only in the interlobular connective tissue. Diagrams illustrate this fully. [M. O.]

11.—Geirsvold has collected the statistics of **cancer in Norway.** In 1865 two people out of every 10,000, while in 1897 eight people out of every 10,000 died of cancer. Though the number of physicians has more than doubled, and diagnoses are more trustworthy, the number of deaths from cancers in Norway has steadily increased. More cases occur upon the coast than inland, more in the cities than in the country; while less cancer is found in the colder districts. As a cause of death, however, cancer is relatively more frequent in the country. A poor water supply and fish diet may have some influence in the coast towns; while the thickly massed population of the cities is a decided factor in the increase of cancer. Cancer seems often localized to certain streets or houses. It is almost equally divided among males and females, being most frequent from 60 to 80 years of age. Women predominate before 50, men after 50. Workmen are affected more often than the middle or higher classes. Yet the higher class shows a relatively higher mortality from cancer, while, in the middle class, cancer is but seldom the cause of death. Most cases occur in the gastro-intestinal canal; in women cancer of the genitalia and mammary gland is less frequent even than that of the alimentary tract. That 80% of deaths from cancer are due to cancer of the gastro-intestinal tract seems to point to the nourishment of the individual as an etiological factor. [M. O.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

No. 42.

1. Why Does Gelatine Act as a Hemostatic? ZIBELL.
2. Casuistry and Treatment of Gastro Colic Fistula. A. LABHARDT.
3. Infantile Pseudo-Bulbar Paralysis and the Chief Disturbances of Motion. T. ZAHN.
4. A Remarkable Case of Tuberculosis of the Trachea and Simultaneous Formation of Varices with Fatal Termination. GIDIONSEN.
5. The Treatment of Congenital Torticollis with Open Section of the Muscles Bending the Head, and Bandaging with Cotton. A. SHANZ.
6. A Sterilization Apparatus for Local Anesthetic Solutions. E. RIECKE.
7. Two Cases of Foreign Bodies in the tympanum. HOELSCHER.
8. Contribution to the Credé Silver Therapy in Gynecology and Obstetrics. G. WOYER.
9. The Value of Methodical Deep Inspiration Particularly in Seasickness. M. KAUFMANN.
10. Subcutaneous Traumatic Hemorrhage of the Abdomen. OBERSTABSARZT.
11. Remarks Upon the Contents of the Broschüre of Professor Adolf van Strümpell in Erlangen, and upon the Medical Clinical Instruction in Universities. A. RIEDEL.

1.—Zibell in view of the undoubted **hemostatic qualities of gelatine,** has undertaken to find out upon what constituent these qualities depend. As it has been proven that the addition of calcium salts to the blood increases the coagulability, he made careful quantitative estimations of the amount of calcium in 4 specimens of gelatine such as are ordinarily used. He found that ordinarily gelatine contains about .6% of calcium, an almost incredible amount, so that 100 cm. of a 5% solution would contain .03 grms. a very respectable dose. Gelatine also contains quantities of maganese, iron, and phosphorus. He believes that in the absence of a better explanation we are compelled to suppose that the activity of gelatine depends upon the amount of calcium it contains. [J. S.]

2.—Labhardt reports 4 cases of **gastro colic fistula.** In the first case, a man of 41, there was pain in the stomach, especially after meals, and occasional vomiting. These attacks gradually increased in severity, the patient became emaciated, and finally a tumor appeared just beneath the border of the ribs. The stomach contents showed the characteristics of carcinoma; inflation of the colon failed to show any communication between it and the stomach, and from time to time there was fecal vomiting. Jejunostomy was performed and the patient improved considerably. The second case, a man of 51, also had pain in the stomach after eating; he emaciated, and developed a tumor just above the umbilicus. There was fecal vomiting and in the stomach contents, removed by washing, there were always feces. At the operation the colon was found adhering to the stomach by a tumor, and the 2 portions on either side were united by operation. The 3d case, a man of 40, had had almost daily vomiting, fecal in character, and had emaciated severely. There was a distinct tumor just beneath the umbilicus. The stomach contents were mixed with feces and showed the ordinary characteristics of carcinoma. No operation was performed and the patient left the hospital unimproved. The 4th case, a man of 56, also had pain after eating and fecal vomiting. No tumor could be felt. The patient developed profuse diarrhea and died of exhaustion. In these cases the most characteristic symptom was the fecal vomiting, persisting for long periods; later the diarrhea indicating the passage of the stomach contents into the colon. The most interesting case was the second, in which the opening of the colon was eliminated by the operation uniting the two portions of the colon on either side. This operation appears to be most suitable for those cases in which the small intestine continues its functional activity. [J. S.]

3.—Zahn reports 2 cases. A girl of 15, in the second year of her life, developed cramps, then failed to walk or speak and was transferred to the hospital. She was well nourished; there was spasticity of nearly all the muscles: some athetoid movements, and intelligence was good. She was able to write and to run errands. About once a year there was an epileptic attack. Speech was markedly disturbed; she was able to pronounce H and a rather nasal A, but no other intelligible sound. Nevertheless, when she read it was possible to recognize that there was an effort to pronounce the words properly, and that the patient evidently had a clear conception of them. The second patient, a girl of 14, developed very slowly; the first tooth appeared at the age of 3 years. She appeared to be paralyzed in the lower extremities. Her intelligence, however, was good. In the hospital she lay upon the bed quietly, unless interested in conversation, when there was a swaying motion of the head from side to side, which became more severe when she was excited. She was unable to turn by herself or to sit up. Even the arms were practically powerless. Her intelligence was remarkable, considering the fact that she was almost entirely blind and completely paralyzed. The movements of the eyes were only moderately impaired. There was, however, a horizontal nystagmus. Speech was greatly impaired and very weak, the disturbance being due to the loss of power in the muscles. The reflexes were lost; the electrical reactions of the muscles were normal. [J. S.]

4.—Gidionsen reports an interesting case of **tuberculosis of the larynx** in the course of which a severe hemoptysis occurred, causing death in 20 minutes. At the autopsy no lesions were found in the lungs, but in the trachea numerous varicose and dilated veins were found, together with a small ulcer which evidently had eroded one of the veins and produced hemorrhage. This is a condition which has rarely been noted in the literature. [J. S.]

5.—Shanz discusses the difficulty in curing **congenital torticollis,** in which condition the simple elongation of the muscle such as is performed for the cure of club foot, fails, as a rule, to produce adequate and permanent effect. He believes that this is due not so much to the failure to produce adequate elongation in the muscle involved, as it is to the formation of contracting scars in the muscle substance itself. As it is impossible to obviate this scar formation, it is perhaps better to over-correct the deformity, but the difficulty consists in maintaining this over-correction after the operation. A plaster bandage is not satisfactory because it does not keep the head in a fixed position, therefore Shanz is in the habit of employing a bandage consisting of alternate layers of absorbent cotton, and a gauze bandage which forms a firm elastic mass, maintaining the head in a fixed position. Through its

elasticity it gradually produces elongation of the neck, and adds to the over-correction. In order to obtain the full effects it is necessary to wear the dressing for a long time, at least 6 weeks. The only disadvantage is that the elastic pressure may produce a pressure paralysis in the brachial plexus. This can readily be avoided by slightly loosening the dressing upon this part. [J. S.]

6.—Riecke describes a simple apparatus for the sterilization of the solutions used in local anesthesia. This consists essentially of a vessel with a top in which the various vessels containing the anesthetic solutions can be conveniently placed. By means of a controlling apparatus the gas is turned off as soon as the internal temperature reaches 100°. Of course this apparatus can be used for the purpose of sterilizing all forms of solutions. [J. S.]

7.—Hölscher reports 2 cases of **foreign body in the tympanum.** First, a girl of 5 had placed a cherry stone in the internal ear, and the local physician in an attempt to remove it had broken his instrument behind it. When brought to the hospital there was considerable laceration of the internal meatus, and only a few remnants of the tympanic membrane could be seen. The foreign body could be easily inspected in the tympanic cavity. It was necessary to chisel away a considerable part of the bony portion of the external meatus before the cherry-stone and the fragment of the instrument could be removed. The vesicles of the ear were apparently completely destroyed. The patient recovered satisfactorily. The second patient, a boy of 5, had placed a small stone in the left ear. Various attempts on the part of the mother and the physician to extract it, were without result. There was some suppuration from the ear, and a large tear in the tympanic membrane, together with some tenderness over the mastoid process. A radical operation was also performed in this case, involving some chiselling away of the bone. The stone was then readily extracted and the recovery was uninterrupted. In both cases a mistake had been made to attempt to remove the foreign body with an instrument, particularly on the part of a physician who was not skilled in these manipulations. Moreover, it was obvious that a considerable amount of force had been employed. He concludes that it is better in all cases of foreign body in the ear, not to attempt to remove it by instruments excepting under the most favorable conditions at a special clinic. It is preferable in most cases to attempt the removal by syringing. [J. S.]

8.—Woyer reports the case of a woman who on the 4th day after delivery had a severe chill. On the 6th day there was evidently **septic infection,** and therefore an attempt was made to control the condition by **inunctions of soluble silver according to Crede.** At intervals of 10 hours inunctions were made upon the thighs, arms and thorax, 3 grms. of the ointment in each part. Patient rapidly recovered. The second patient after an abortion in the 4th month, developed fever, chills and a slight discharge. On the 12th day inunctions were employed, and after the 3rd one, improvement commenced which was persistent. Third case, a woman of 28 had a severe hemorrhage after birth. She developed chills and fever, but recovered promptly after the silver inunctions. Woyer admits that puerperal septicemia has a very irregular course, and often improves without treatment when the worst is to be expected. However, the rapid improvement after the inunctions allows him to believe that probably they were of value. [J. S.]

9.—Kaufmann describes his trip from Hoek to Harwich, and his success in combating nausea and vomiting by deep inspirations. He also calls attention to the fact that if in epistaxis the patient takes deep inspirations through the nose and expires vigorously throug the mouth, the bleeding will often stop. This method is also of value in hiccoughing, and in various forms of nausea. [J. S.]

10.—Oberstabsarzt, in continuation of his paper on **abdominal hemorrhage,** states his belief that the only form of treatment is operative, and it is probably the best to commence with a median incision. When the source of bleeding is found it is usually best to attempt to control it temporarily by a tampon. If this is successful there is often some doubt as to whether it is to be left *in situ* or removed. This is particularly true of ruptures of the liver. In one of his own cases he operated without narcosis, and the patient suffered very little, probably as the result of shock. Often after the operation has been successfully completed the patients will die of collapse as a result of the hemorrhage. Otherwise, if the operation has been aseptic and the patient has recovered from the anemia, there is rarely any danger of peritonitis as a complication. He reports the following 3 cases: A man of 20 was run over by an artillery wagon, the wheel passing over the abdomen. He was profoundly shocked, there was dulness in the left lumbar region, and the urine was bloody. A diagnosis of hemorrhage in the abdominal cavity was made, and as the patient did not improve upon expectant treatment an operation was performed. A small opening was made into the peritoneal cavity, through which about 2 litres of blood were discharged. The abdomen was then opened, and the source of the bleeding determined to be the spleen, in which a long laceration was found in the substance of the spleen. It eration, but died 12 hours later in collapse. The second patient, also a soldier, was kicked in the abdomen by a horse. There was slight dulness in the left abdominal cavity; the urine was free from blood, and an operation was performed after expectant treatment had failed to improve the condition. The intestines were greatly distended; a rupture was found in the liver, and the bleeding was checked by a tampon. The patient made an uninterrupted recovery. The third case was thrown from his horse, which fell upon him. He was brought to the hospital in a state of shock; the abdomen was tender, and there was dulness in the left lumbar region. At the operation a considerable quantity of blood was found in the peritoneal cavity, and a laceration was found. The patient recovered from the op- was decided to extirpate this organ, which was accordingly done, and the patient, after a rather prolonged convalescence, ultimately recovered. [J. S.]

11.—Riedel replies vigorously to Strümpell's suggestion that the so-called practical year in the German Universities should be discarded and the medical course increased to 6 years. He believes with Strümpell that a better preliminary preparation is necessary, and in addition to the 5 subjects recommended by the latter, to be studied in the first year, that is history, physiology, psychology, sociology, technique and practice in drawing, adds the higher mathematics and modern languages. He believes that the study of languages is quite indispensable for medical men. [J. S.]

JOURNAL DES PRATICIENS.

October 12, 1901. (15me. Année, No. 41).

1. The Extirpation of Tubercular Lymph Glands. A. BROCA.
2. Glycosuria in Life Insurance. A. SIREDEY.

1.—Will be abstracted when concluded.

2.—Siredey has studied the question of life insurance for patients with glycosuria, reporting his results at the recent congress held in Amsterdam. (*Medecine Moderne,* October 2 and 9, 1901). He states that simple glycosuria is often but the beginning of diabetes, and diabetic patients frequently void urine which contains no sugar. Glycosuria may be hepatic, pancreatic, nervous. traumatic, toxic, infectious, arthritic, etc. Clinically, diabetes is divided into acute or "lean" diabetes, and chronic or "fat" diabetes. Nervous or traumatic diabetes may come under either of these types. Death in diabetes occurs with secondary infection, as tuberculosis, pneumonia, and other infectious diseases; concomitant affections, as arteriosclerosis, gout, etc.; or diabetic coma. The last-named is seen mainly in young subjects. Siredey concludes that patients under 35 with diabetes, no matter how good their health may be, should not be accepted for life insurance; that all cases of "lean" diabetes should also be refused; that such cases, when due to emotion, worry, or traumatism, may be put off six months, and then admitted, perhaps, should later examination be favorable; and that cases of "fat" diabetes of 35 or less, whose organs are found healthy upon thorough examination, should be accepted, the annual premium to be slightly raised year by year. [M. O.]

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

November, 1901.

1. An Epidemic of Noma; Report of Sixteen Cases. G. BLUMER and A. McFARLANE.
2. Some New Points in Regard to Raynaud's Disease. C. BECK.
3. Frequency and Diagnosis of the Flint Murmur in Aortic Insufficiency. W. THAYER.
4. Osteitis Deformans. F. PACKARD, J. D. STEELE, T. KIRKBRIDE.
5. Asymmetry of the Nasal Cavities. A. COOLIDGE.
6. A Case of Acute Leukemia Presenting Some Interesting Features. D. STEWART.
7. Typhoid Cholecystitis With Observations Upon Gall Stone Formation. J. PRATT.
8. The Operative Treatment of Paralytic Talipes of the Calcaneous Type. R. WHITMAN.
9. The Difficulties in Making a Diagnosis in the Bone Lesions of Nurslings. R. T. TAYLOR.
10. Three Noteworthy Cases of Brain Injury. G. VAUGHAN.
11. Tuberculosis of the Portio Vaginalis and Cervix Uteri. H. BEYEA.
12. Remarks on the Diagnosis of Some Forms of Ophthalmoplegia. L. ADT.
13. Management of the Pregnant and Puerperal Patient. W. NICHOLSON.
14. Fibroma of the Nose, with a Report of a Case. W. LINCOLN.
15. The Clinical Value of Blood Examinations in Appendicitis. J. C. DA COSTA, JR.
16. The Blood Count at High Altitudes. W. CAMPBELL and H. HOAGLAND.
17. Diagnosis and Treatment of Contusions of the Abdomen. F. STEWART.

1.—Blumer and McFarlane report an **epidemic of noma** occurring at the Albany Orphan Asylum, and following an epidemic of measles. Eleven cases had noma, 5 noma and gangrene, and 4 lesions which were considered to be beginning noma, but in which the progress was stopped by cauterization. Of the 16 cases of typical noma the mouth was affected in 4; the mouth, ear and vulva in 3; the vulva alone in 2; and the vulva with other parts in 7. The gangrene also involved the rectum only in 3 children, and the rectum and other parts in 5. The mortality was only 7, 5 fatal cases being complicated by pneumonia, and 2 not complicated. The predisposing cause was not clear. The building is well arranged, well ventilated, and the food, though lacking in variety, was ample in quantity and quality. The mortality has always been low, and the general condition of the children excellent. Girls were more affected than boys, in the proportion of 14 to 2, and the latter were in the infirmary ward where other cases of gangrene were being treated, indicating the infectious nature of the process. The disease apparently ran a typical course, commencing with slight ulceration, with induration of the surrounding tissues, changing to a dark red color, and then breaking down. Treatment consisted of stimulation, douching with strong boric acid solution, and hydrogen dioxide, dressings with Labarraques solution, and, where possible, cauterization with the Paquelin cautery. A few typical histories are cited. Bacteriological examinations showed the presence, in the deeper parts of the process in almost pure cultures, of a long, slender, thread-like bacterium decolorizing rather easily by Gram, and not growing on ordinary media, either aerobically or anaerobically. They conclude that this was the exciting cause of the disease, and of course the fact of an epidemic shows that the disease is contagious. [J. S.]

2.—Beck describes 2 cases of **Raynaud's disease;** the first in a woman of 42, which affected the three outer fingers of the left hand and the little finger of the right hand, and later, the other fingers of the right hand. By the skiagraph the hands showed atrophy of the upper ends of the third phalanges and osseous proliferation at the ends of all the second phalanges, with some changes in the metacarpel bones. The second patient, a feeble man of 30 years, had gangrene of the right foot, necessitating amputation a few months after the onset. Subsequently the disease appeared in the fingers, the tips becoming gangrenous, and a skiagraph showed similar changes in the bones. [J. S.]

3.—Thayer calls attention to the fact that the **Flint murmur** is of far more frequent occurrence than is commonly supposed. He has analyzed the statistics of 74 cases of aortic insufficiency, in 45 of which, at some time during the observation, a diastolic murmur was heard, limited to the apex, and exactly similar to the murmur characteristic of stenosis of the mitral valve. In 12 of these cases the autopsies showed the presence of stenosis of the mitral valve; in 33 it was of normal or increased size. In 16 of the 33 cases there were slight changes in the mitral valve, such as thickening of the edge of the leaflet or small vegetations, which Thayer does not believe would be sufficient to produce the diastolic murmur. His results therefore showed that in 38 cases of aortic insufficiency in which mitral stenosis did not exist Flint's murmur was heard. The differential diagnosis he believes can easily be made. In mitral stenosis the pulse is small, the impulse is sharp and deep, there is distinct thrill, diastolic in kind and limited to the apex; hypertrophy of the right side of the heart, and an accentuated second pulmonic sound. The murmur is usually the same in both. The first sound is exaggerated in mitral stenosis, and it occurs very infrequently in connection with Flint's murmur. In aortic regurgitation the pulse is large and collapsing; a presystolic thrill is sometimes present; and there is a tapping systolic shock in less than one half of the cases. Nevertheless, the characteristics are not absolutely distinct. The most important point of difference is the pulse, but in exceptional cases a diagnosis may be very difficult to make. He reports a case in which the diagnosis of true mitral stenosis associated with aortic insufficiency was made, and the autopsy showed the presence of uncomplicated aortic insufficiency. [J. S.]

4.—The patient, a man of 62, was remarkable for certain deformities in the skeleton. These consisted of an abnormally large, or rather box-shaped head, with a permanent tumor at the junction of the left frontal temporal and parietal regions. The lower jaw was heavy, but not prognathous; the shoulder blades were thickened and directed almost backward; the bones of the arm were roughened and uneven, and the forearm was curved. The ribs were heavy, the chest small and narrow. There was pigmentation of the skin. The pelvis was excessively broad and some of the bones of the legs were thickened. The general position and attitude of the patient was that of the orang-outang. Upon the death of the patient an autopsy showed the following changes. Sarcoma of the right frontal bone; general softening of the calvarium, with considerable thickening. All the bones in the body showed this peculiar condition. The viscera showed no significant changes. Microscopically the bones were found to consist of a finely porous structure containing large spaces filled with fibrous tissue, the cells of which were usually spindle in shape. Numerous groups of giant cells could also be detected. The bone decalcified much more readily than normal bone. There was evidence of the formation of new bone. The authors append a careful review of the literature of this condition, finding 99 reported cases, of which 66 were true **osteitis deformans.** The etiology of the disease is unknown. Males are more commonly affected than females, and it only occurs in relatively advanced life. The earliest symptom is usually enlargement of the head, and the deformity of the tibiae also attracts attention. The changes in the other bones occur more frequently secondarily. Pain in the bones is sometimes, but not always complained of. There appears to be some slight relation to malignant growths. Of the 67 cases, 3 had cancer, and 5 sarcoma, and in 2 there were non malignant tumors. The differential diagnosis involves the recognition of the disease, and the exclusion of such conditions as mollities ossium, fragilitas ossium, and hyperostosis cranii. There is no treatment. Iodide of potassium apparently is of no advantage. They conclude that osteitis deformans is a distinct disease possibly allied to, but not identical with other diseases of the bones. The symptoms are characteristic. It is not associated very frequently with malignant disease. Pathologically it is characterized by absorption of the compact substance, formation of new bone,

conversion of medullary substance into vascular connective tissue; and alterations in the shape and consistency of the bones. [J. S.]

5.—Coolidge discusses **asymmetry in the nasal fossae**, and as a result of his own observations and a very thorough study of the literature reaches the conclusion that deviation of the septum, and asymmetry of other nasal structures should be considered physiological or compensatory, and not the result of desease by diminution of the air currents. The result of this adaptation is to minimize the disturbances which otherwise would be produced by a defective septum. He reports 2 interesting cases, one of occlusion of both nostrils from birth, and the other occlusion of the right nostril. [J. S.]

6.—Stewart reports the case of a woman, 28 years of age, who shortly after the birth of her last child had swelling and bleeding of the gums. The external lymph glands were not enlarged, and the area of splenic dulness was slightly increased. The blood showed leukopenia; there was an irregular, moderately high temperature, with diarrhea and the presence of a roseolar eruption. The Widal reaction was returned on one occasion positive. About 1 month after admission the blood was again examined, and an enormous leukocytosis was discovered. This rapidly increased until the patient's death. Just before death she suffered with severe diarrhea. At the autopsy no typhoid ulcers were found in the small intestine, but numerous deep, ragged ulcers were found in the colon. The inguinal, mesenteric, and peribronchial lymph glands showed cellular proliferation. The differential blood count showed predominance of large mononuclear blood cells. Stewart in his analysis of the case discusses a variety of possibilities, and reaches the conclusion that the case probably was at first some form of blood allied to scurvy, with the subsequent development of **acute leukemia**. [J. S.]

7.—Pratt thinks that in typhoid fever there is evidence that the infection of the gall bladder which so frequently occurs, is brought about by metastasis through the blood. There may be a primary infection of the gall bladder with typhoid bacilli without lesions occurring in the intestine. He records a number of interesting cases of catarrhal cholecystitis. The first was a man of 28, who died in the fifth week of typhoid fever; the bile contained great numbers of minute threads which were composed of masses of desquamated epithelium and clumps of bacilli. These latter were found to be typhoid bacilli. The second case, a boy of 15, developed symptoms of perforation in the 4th week of typhoid fever. An operation was performed, no perforation was found, and the gall bladder accordingly opened. Pus and bile escaped. The typhoid bacillus was found in cultures in the bile. The 3rd case, a woman of 36, during the 3rd week of typhoid fever developed symptoms of suppurative cholecystitis. The gall bladder was opened and bile and pus escaped together with a number of small gall stones. Cultures from the gall stones showed the presence of typhoid bacilli alone. It appears in this case as if the calculi must have been formed within 18 days. The 4th patient, a woman of 43, was brought to the hospital suffering from symptoms of gall stone. At the operation the gall stones were removed and cultures obtained from them which proved to be typhoid bacilli. The symptoms dated back 7 years. The 5th patient, a woman of 36, in the 3rd week of typhoid fever developed symptoms of abdominal infection probably proceeding from the gall bladder. This was opened and found to contain a considerable amount of pus. Cultures of the typhoid fever bacillus were obtained. This is probably an instance of primary infection of the gall bladder. [J. S.]

8.—Whitman discusses the treatment of **paralytic talipes**. He calls attention to the fact that shortening of the Achilles tendon or transplantation of the other tendons of the foot are not likely to be of value. The first, because the muscle is too weak to keep the calcaneum in a proper position, and the second because the muscles of the transplanted tendon are not strong enough to supply the place of the gastrocnemeus. Arthrodesis has been performed with the object of establishing ankylosis at the ankle joint, but the results are disappointing. He therefore advises removal of the astragalus, which corrects the deformity and allows sufficient play at the ankle joint to enable the patient to walk comfortably. He describes the operation and also a new light and effective splint that he employs to prevent recurrence of the deformity. [J. S.]

9.—Taylor reports the following instructive case. A boy of 5 months appeared to have pain in the right leg which was flexed to about 45°, rotated outward and abducted. The pain had existed for about 3 months. The left leg was moved freely. There was a doubtful history of venereal infection in the father; there was no history of miscarriages. At the age of 2 months the child had had a swelling of the left wrist which recovered unler mercurial ointment. Its general nutrition was good; there was a diffuse spindle-shaped swelling of the upper third of the right thigh; the lymphatic glands were not enlarged. There was a moderate leukocytosis. The diagnosis seemed to rest between scurvy and tuberculous osteomyelitis. Injection of tuberculin failed to give any reaction, there were none of the associated symptoms of scurvy, and therefore it was decided to try anti-specific treatment. One week after mercurial inunctions had been instituted the swelling was increased and harder, though the child appeared improved in every other particular. The treatment was continued, and finally complete cure ensued. Taylor calls attention to the leukocytosis which was discovered, and considers that it is of great value as a differential sign because although it occurs in many conditions, in the present instance it indicated either scurvy or syphilis, and the former could be excluded. A second patient, a boy of 18 months, was admitted with a huge abscess of the right side, extending from the border of the ribs to the iliac region, and from the left axillary line to the spinal column. There was history of an injury, the leukocytes were 40,000; 500 cc. of thick greenish pus were evacuated, the abscess cavity curetted and drained, and the patient made a complete recovery. The abscess contained the staphylococcus pyogenes aureus. [J. S.]

10.—Case I. A man, 18 years of age, was struck on the head with a club, brought to the hospital profoundly unconscious, with slow pulse. There were clonic contractions of the right arm and leg. Upon turning down the scalp no fracture could be discovered, but a large piece of bone being removed a bulging dura was observed, and after incising it a clot of blood about the size of an orange was removed. The patient did not recover, and at the autopsy numerous small hemorrhages were found throughout both hemispheres. Case II. A woman, 20 years of age, had been struck in the face by some large blunt object. When admitted to the hospital she was conscious, the nose was bleeding freely, and there was swelling of the entire face. The frontal bone appeared to be completely depressed. This was elevated, the edges of the fractured bones of the nose carefully adjusted, and the patient recovered. From time to time she now has spells of mental depression, excitability, headache and insomnia, lasting from 2 days to a week. The physical deformity is not very great. Sense of smell is lost, and there is slight internal squint of the left eye. At the operation extensive fractures of the base of the skull were discovered, but the brain was apparently uninjured. Case III. A negro, 38 years of age, had been struck on the head by a portion of a wheel that had burst. He was dazed, and suffered from shock. The scalp and skull were torn and lacerated, and blood clots and brain tissue protruded through the wound. At the operation 7 fragments of bone were removed from the brain, and as the dura was extensively lacerated it was necessary to restrain the cerebral tissue by packing. The patient recovered with left-sided homonymous hemianopsia. There was slight paresis of the left side, and slight dulling of tactile sense on the same side. This patient lost approximately 2 ounces of brain substance. [J. S.]

11.—Beyea reports some interesting cases of **tuberculosis of the female genitalia**. The first, a woman of 23, had been married 5 years, and for 3 years had suffered from profuse and offensive leucorrhea. Examination showed a hardened cervix which bled readily to touch. It was greatly hypertrophied, and there was erosion of the surrounding mucous membranes. The cervical canal was dilated and a papillary growth was felt within it. A diagnosis was made of tuberculosis, malignant adenoma, or syphilis of the cervix. Syphilis and malignant adenoma were both excluded, and therefore tuberculosis was suspected. Microscopical examination confirmed this, and therefore high amputation of the cervix and double salpingo-oophorectomy were per-

formed. Beyea has been able to collect 68 cases from the literature, the majority of them occurring before 40 years of age. He recognized 3 forms: tubercular papillary hyperplastic endocervicitis; tuberculous ulceration of the cervix, and miliary tuberculosis of the cervix. Treatment consists of radical interference, such as pan-hysterectomy, unless there is latent tuberculosis of some other portion of the body. [J. S.]

12.—Adt criticizes a case reported by Wishart, in which there was apparently paralysis of all muscles supplied by the 3rd nerve in the left eye, with the exception of the internal and inferior oblique, and of the internal oblique alone in the right eye: Wishart concluding that this indicated double unilateral paralysis of the 3rd nerve of the same eye, in which the paralysis was most extreme. Adt suggests that the displacement of the image in the right eye, which was assumed to indicate paralysis of the internal oblique, was possibly produced by the disturbance in the movements of the other eye, and he suggests a lesion which might produce the same group of symptoms by involving the fibres at their decussation. He also criticizes a case reported by Starr, in which the patient had an attack of some cerebral disturbance accompanied by vertigo and dizziness, and subsequently there was found to be paralysis of the inferior rectus in the right eye, and paralysis of the inferior and superior recti in the left eye. There was no ptosis, and no disturbance of the pupils. Later the paralysis of the right internal rectus disappeared and the patient made a partial recovery, although he was not able to do his work of painting. A diagnosis was made of embolism resulting in softening in the tegmentum. Adt discusses the circulation of the crus, and shows that according to Shimamura a lesion affecting both eyes in this manner could not have occurred, and he believes that in cases of monolocular ophthalmoplegia with sudden onset, affecting only some of the muscles supplied by the oculo motor, the lesion is in the tegmentum. [J. S.]

13.—Nicholson gives some valuable hints on **the management of the puerperal patient.** He shows how it is possible to discover that the inlet is of ample size—of course the one necessary point—without causing the patient pain or without recourse to a pelvimeter. He urges the duty of the obstetrician in determining the position of the child, not for the purpose of doing an immediate external version, but for the purpose of having the patient notify the physician when the first pain occurs that the external version, if necessary, may be done at the most favorable moment. The condition of the mother in the last months of pregnancy has an important bearing upon the condition of the child at birth, he therefore is indisposed to approve of the frequent induction of premature labor to meet slight indications, such as moderate contraction. Of course this does not apply to those cases in which the deformity is so great that a major operation may be required. Forceps should be used intelligently, not as a convenience to the doctor, but for the purpose of rendering delivery easy, and avoiding laceration. He does not put much credit in autoinfection, but believes that nearly all cases of puerperal septicemia are due to faulty technique. In private confinements all that is possible in the way of asepsis should be accomplished, and in hospitals, where still more rigid measures can be employed nothing should be neglected. Lacerations should be repaired at once, and the operation should be as thorough as possible. An examination should be made 2 weeks later in order to detect the presence of any additional laceration. [J. S.]

14.—The patient, a boy of 18, had a history of frequent epistaxis, complete stoppage of the left nostril and a purulent discharge from that nostril. A large tumor was observed, apparently springing from the septum, which, when microscopically examined, proved to be a pure **fibroma** without sarcomatous change. As the patient rapidly grew worse the nose was resected from the face and turned to the right side, and the tumor then removed by a wire loop. Recovery was uninterrupted, and in the course of 5 years no recurrence has taken place. [J. S.]

15.—DaCosta reports the results of the examination of **the blood in 118 cases of appendicitis,** all of which were treated surgically. In these 118 cases 38 showed no pus formation, and 80 showed pus formation with or without inflammatory changes. In nearly all cases there was more or less anemia. There was loss in hemoglobin reaching 50% in one case in 10 ,and dropping to 40% at least, in about 2.5% of all the cases. The erythrocytes were usually moderately diminished, not in proportion to the hemoglobin. The color index therefore is low. In the catarrhal and interstitial form the leukocytes were not increased, although occasionally a count of 12,000, or 15,000 was noted. This may be accounted for by local inflammation of the peritoneal covering of the appendix, or the result of vigorous purging. Where abscess, gangrene or general peritonitis is present, the leukocytes are generally found to range between 15,000 and 20,000 per cmm.. Some fatal cases are tabulated showing no very remarkable leukocytosis. In the 118 cases only 6 exceeded 25,000 and 31 were below 10,000. The range of leukocytes is a diagnostic sign of value when correlated with other clinical symptoms. If more than 20,000 leukocytes per cmm. are present, pus is indicated. But as a sign of intense infection in mild cases it is of no value. [J. S.]

16.—Campbell and Hoagland have made some studies in the alteration on **the blood count at high altitudes.** Their experimental work was done with Belgian hares taken to an altitude of 10,000 feet and then to the top of Pike's Peak, and showed a progressive increase in the number of corpuscles which continued for at least 3 weeks, the period of the experiment. They then undertook to make a series of experiments in order to determine to what factor this increase in the count was due. Exercise increases the blood count, and exercise of one limb will increase the blood count in that limb without producing any general alteration. Packing the arm in snow produces contraction of the peripheral capillaries, and a diminution in the count. Placing the arm in a hot air apparatus also produces a considerable diminution in the count, and it was also shown on a number of persons that a gradual increase in the altitude at which the blood was drawn caused an increase in the blood count. On rabbits it was possible to experiment on the internal circulation, and blood taken from the mesentery at a high altitude showed a lower count than that taken from the ear. The authors therefore conclude as follows: That the blood count increases with the increase in altitude at the rate of about 50,000 corpuscles per cc. (?) of blood per thousand feet of altitude. The increase is due to a changed vasomotor condition in the peripheral vessels resulting from the diminished barometric pressure. All these altered conditions are relieved by a return to normal altitudes. The method by which the accumulation of corpuscles is brought about is due to dilatation of the arteries and temporary stasis. The hemoglobin does not increase proportionately to the corpuscles. [J. S.]

17.—Stewart contributes a valuable summary of **the literature of the past 2 years concerning contusions of the abdomen.** [J. S.]

The Renal Form of Simple Acholuric Jaundice.—Gilbert and Lereboullet discuss the renal form of simple acholuric jaundice (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, June, 27, 1901, No. 22). It is seen in patients of biliary heredity, and there is often a predisposition to renal trouble, besides. The symptoms are intermittent or continued albuminuria, paroxystic hemoglobinuria, and slight cholemia with little or no jaundice. There are no biliary pigments in the urine. The intermittent albuminuria may be cyclic, digestive, or orthostatic in character. It is generally small in amount. There are never any signs of Brights disease, nor is the renal permeability impaired. The albuminuria, when continued, is also little in quantity. Attacks of hemoglobinuria occur frequently, with chills. A case is reported in full. The blood contained bile pigment, but none appeared in the urine. The diagnosis is generally not difficult; the prognosis is generally favorable. The albuminuria is due to the toxi-infection produced by a mild chronic angiocholitis; the cholemia is due to a functional disturbance of the liver. The paroxystic hemoglobinuria is probably due to the cholemia. Milk diet, alkaline waters, and hygiene will effect a cure. [M. O.]

Special Article.

THE PROPAGATION OF YELLOW FEVER BY MOSQUITOES.

By W. C. GORGAS, M. D.,
of Havana, Cuba.
Major and Surgeon, U. S. A.; Chief Sanitary Officer of Havana Cuba.

To the Editor of **The Philadelphia Medical Journal:**

Your edition of October 19th, contains a letter from Dr. John H. Purnell, M. D., Vicksburg, Miss. The letter is in reply to a letter written by Dr. Bispham, Assistant Surgeon, U. S. A., on the subject of the mode of propagation of yellow fever.

My home, being in Alabama, just across the Mississippi line, I have the pleasure of knowing Dr. Purnell personally, and also his reputation as one of the foremost health officers of the Southern States.

I am very glad to see a man of his standing and influence in hygienic matters in the South, take an interest in the mode of propagation of yellow fever. To the Gulf States, and, in a less degree, to those in the interior, it is a most important question, at present; important from a hygienic point of view, because of its great destruction of life when it gets into a country, but principally because of the great financial loss caused every year to the commerce of the Gulf and lower Atlantic States by the quarantine now imposed.

As I take it, the ground assumed by Dr. Purnell in this correspondence, is that, though yellow fever may be transmitted by the mosquito, this is not the only means of its transmission, and, that probably the common way is through fomites.

It is a very important and vital question, and no criticism can be made against Southern health officers for looking into the matter very carefully, before accepting the mosquito as the only means of the transmission of yellow fever, and acting upon that belief, as we have done in Havana.

The instances of the conveyance of yellow fever by fomites, noted in the literature of the subject, are difficult to explain. The circumstances were recorded at a time when that theory was accepted, and when it was apparently established that the disease was carried by fomites; but the facts bearing upon all these cases should be carefully reviewed, in the light of our present knowledge.

The sanitary work done in Havana in the last year, is. I think, a very strong argument, at any rate as far as Havana is concerned, that here the Stegomyia mosquito is the only carrier of yellow fever, and that here all cases of yellow fever are transmitted by the Stegomyia, and in no other way. I think the best way that I can present this side of the question, is to run over briefly the origin, development and application of this theory here.

Dr. Carlos Finley of Havana, some twenty-one years ago, came to the conclusion that the Stegomyia mosquito was the causative agent in yellow fever, and for these reasons: That in many instances, the theory of infection through fomites did not explain the transmission of the disease, and, for this reason, he suspected that some insect must be the carrier. That the disease was favored by heat and moisture, and always promptly eradicated by cold or frost. This indicated that the insect suspected of carrying yellow fever was affected by these conditions, and fleas, bedbugs and common household insects, which are about as bad in winter as in the summer, were, therefore, eliminated, leaving the mosquito as the principal object of suspicion. And, finally, that, as the disease was a house disease and was generally confined to individual localities, the Stegomyia mosquito was its transmitter, as this species is the most domestic in its habits.

As is well known, Dr. Finlay has written upon this subject and urged this theory upon the profession in many articles and pamphlets, in the past twenty years.

When the Army Board commenced their investigations in Havana, it was a well-nigh settled fact that the organism of Sanarelli was the causative agent in yellow fever, but, not being able, after careful investigation, to verify the work done in this direction, they turned their attention to the mosquito and demonstrated that, with an infected Stegomyia mosquito, they could start a local epidemic among human beings at will, and that, by killing the mosquitoes in the room which they had infected in this way, they could at once stop it. They were unable, during three months' constant experimentation, to convey yellow fever by fomites, in any way.

I was a member of the Official Board appointed to see and verify all cases of yellow fever occurring in Havana, and all cases produced by the Army Board were referred to this Official Board for verification, and, in this way, I kept in very intimate touch with the work.

I had yellow fever myself in 1882, in an epidemic that occurred at Fort Brown, Texas, and, for this reason, I have been detailed for supervision of yellow fever whenever it has occurred in military garrisons. In this way, I have come in contact with it a good deal and have been much interested in the subject, and have paid considerable attention to the literature of the question. Like all other health officers, my experience seemed to me to confirm the fomites theory, and all my reading tended in that direction.

The first series of experiments, on which Major Reed and the Board based their preliminary notes, was I think, entirely inconclusive. I recognized that these cases were well marked cases of yellow fever, and, while it struck me as quite a coincidence that they should have occurred within three or four days after the bite of the infected mosquito, I felt sure that they were accidentally contracted by visits to the infected city of Havana, though I had to acknowledge that it was remarkable that these two or three men who had been bitten were the only men to have the disease, out of 2000 leading the same life and visiting the city in the same way.

In the next series of experiments, the patients were so situated and isolated that they could only have contracted the disease in the locality in which they were confined, and the disease was so sharply

limited to those who were bitten, that it was proof that they contracted the disease in this way.

On the other hand, infected material was used so abundantly and for such a length of time, with other non-immunes, as to make it evident that, under circumstances as they were at these experiments, it was difficult to acquire the disease through fomites.

In February, 1901, at the termination of these experiments, I took the position that, while I was convinced that yellow fever was conveyed by the Stegomyia mosquito, it was not proven that it was the only way. We had all become convinced that we could not eradicate yellow fever from the city of Havana by general sanitary measures. The disease had been endemic here for 150 years, and, up to the time of the American occupation, there had never been a month in which Havana had not had more or less yellow fever. While there had been a remarkable improvement in the general sanitary condition of the city, and a great betterment of the general death rate, yellow fever had been only slightly affected.

In 1899, the first year of the American occupation, after the Spanish immigration started in, we had one of the severest winter epidemics that ever occurred in Havana, and, though in 1900 the sanitary condition of the city showed a still greater improvement, and the death rate dropped so as to compare very favorably with most cities of the civilized world, of the same size, yellow fever showed no inclination to disappear and was not very far below the average of former years.

I discussed the condition very carefully with General Wood, the Department Commander, and Colonel Havard, the Chief Surgeon. They were both much more impressed with the work of the Army Board than I was, and more inclined to accept the mosquito as the only method of propagation. We were all agreed, however, that as the mosquito could convey the disease, we should do everything in our power, looking to this as one of the causes of yellow fever. Orders were accordingly issued that every case suspected of being yellow fever should be screened. This was done at public expense. We made some adjustable screens and within two hours after a case was reported, the room or rooms designated were made mosquito proof. A force of men was immediately put to work and all mosquitoes in the infected house and in all the contiguous houses were killed. At the same time, measures were taken to kill the larvae in their various breeding places. After the middle of February, 1901, 100 men were employed in this work, putting oil in the cess-pools of all the houses and in the suburbs, clearing the streams, draining the pools and oiling the large bodies of water. We still kept up the disinfection as for other contagious diseases.

I did not feel sufficiently confident on the subject of fomites to give up the precautions in this direction, so I still had the room occupied by the patient disinfected with formaline and bichloride; the house washed down with bichloride, and all fabrics in the quarantined part of the house taken to our disinfecting plant, where they were sterilized with steam or formaline, as the case might be.

As time went on and the yellow fever did not increase as it ordinarily does, and the new foci as they appeared were apparently controlled, I became more confident. I could see that if the mosquito were the only means of propagating yellow fever, the success of the work would rest, in large part, upon the thoroughness with which the disease was reported, and that this would greatly depend upon the amount of trouble and inconvenience people would be put to in reporting cases. The greatest part of the annoyance connected with the disinfection and isolation of the yellow fever patient was caused, not by the measures used for killing the mosquito, but by our efforts to prevent the scattering, and cause the destruction of the fomites. In June, therefore, orders were issued stopping the work in this direction; that is, the rigid quarantine of the patient was stopped and the disinfection of fabrics and clothing ceased. It was merely required that the patient should be reported, his house placarded and screened, and a guard placed over each case to report how general sick room sanitation was carried out, to see that too great communication was not had with the sick room, and to see that the screen door, connecting with the screened part of the house, was kept properly closed.

The attending physican is allowed to designate four or five non-immunes, who can have communication with the screened quarters.

Under this system, we went through the summer with a few foci developing now and then, but, as they occurred, they were promptly stamped out. Once or twice they caused us some anxiety, but as time went on, we felt more confident in our method.

One of the little towns near us, Santiago de las Vegas, became pretty badly infected, furnishing some 20 odd cases, but the Adjutant General, in the absence of the Military Governor, furnished funds and gave authority for carrying out the same methods as in Havana.

We took the whole infected area of this town, went through every house, carefully killed all the mosquitoes, and after the work was finished, no more cases occurred. This work in Santiago de las Vegas cost the Department $4,000.00. I mention this to show that considerable expense is necessarily involved.

By September, we had gotten rid of the last focus, and since September we have not had a single case. It is pointed out that yellow fever, time and time again, disappears in the United States under other methods. This is true in some instances, in the smaller communities and isolated localities; but, in the large majority of cases in the United States, yellow fever rages as long as it has a non-immune supply, and almost always lingers until the frost appears. But in Havana, it must be remembered that it has never disappeared under any process before the American occupation; that always, for the past two years, there has been some yellow fever in Havana.

Since the American occupation, we have spared

neither labor nor expense on measures of general sanitation. The Engineer Department under the able management of Lieutenant Barden, keeps the streets as clean as it is possible for them to be kept, and disposes of the garbage in a most efficient manner, and the continuous house to house inspections made by the Sanitary Department have caused the interior of the houses to be kept, considering the circumstances, in a remarkablly clean condition. I know of no city in the United States where the tenement houses and poorer classes will compare at all in cleanliness with the same class in Havana.

Under the circumstances, the death rate has fallen from 91.03 in 1898, to 33.67 in 1899, to 24.40 in 1900, and this year I think the average will be about 21.00. For the month of September it was below 16.00.

I go into detail to point out the great success of our general sanitary measures and to show that these measures had little effect upon yellow fever; that yellow fever which caused an average of 410.54 deaths from the first of April to the first of December, for the years since 1889, with a maximum of 1175 for the year 1896, and a minimum of 79 for 1899, caused, this year, five deaths. That in the months of October and November, months in which it was always exceedingly rife in Havana, there has been neither a death nor a case from this cause. That the conditions have been as good this year as they have ever been for the spread of yellow fever, and that probably we have had more non-immunes than we have ever had before—somewhere in the neighborhood of 40,000. That the only difference between this year and the other two years of American occupation, 1899 and 1900, is the mosquito work. Of this we have done a great deal.

Since the first of March we have averaged 100 men daily, engaged in this work in various ways.

As far as Havana is concerned, it seems to me that this presentation is a very strong argument in favor of the view that the Stegomyia mosquito is the only means of conveying yellow fever, and that it is not conveyed by fomites at all.

Dr. Finley and the Army Board have proven in many instances, that the female Stegomyia mosquito did give yellow fever. Dr. Reed and the Army Commission have proven that there was a definite period of incubation in the mosquito, from the time at which she bit the infected person, to the time at which she herself could convey the infection. This would point to the probability of her being the only insect conveying it. Then the Sanitary Department, basing their work upon the truth of this theory, succeeded in eradicating yellow fever from Havana, where it had been constant for the last 150 years.

If this is not a strong enough proof of the theory, it is certainly a strong enough presumption in that direction to cause any of our Southern cities which may become infected with yellow fever in the future, to add the method of killing mosquitoes to their methods of disinfection.

I think our work down here a demonstration that the disinfection of fabrics can be safely done away with, and many of the inconveniences of personal quarantine abated.

If this be true, its adoption by Southern cities, subject to yellow fever visitations, would save many millions of dollars yearly, by taking off the present burden imposed upon commerce every summer.

These points, I think, would be well worth considering by the cities of our Southern States.

This is probably not a very direct answer to the point raised in Dr. Purnell's letter. I merely take the opportunity his letter gives of stating the reasons that seem to me strong for believing the mosquito to be the only means of transmitting yellow fever, and I hope that the matter may interest Dr. Purnell, and other Southern health officers, enough for them either to come to Havana and investigate the subject, or to carry on further discussion in the Journals.

A Curious Case of Latent Renal Lithiasis.—In *Medicine Moderne*, (July 17, 1901, No. 29) Dessirier and Legrand report an interesting case of latent renal lithiasis in a soldier aged 21, who had been in an infantry regiment but three months. He was suddenly overcome by fatigue while marching, and had some epistaxis. He had had lumbago for several years, off and on, and drank three liters of wine every day. Examination revealed nothing abnormal. The urine contained a little albumin. He was doing well when, a week afterward, he began to urinate frequently, and edema appeared in the cheeks and ankles. There was some dyspnea, galop rhythm was noted, and the diagnosis of acute nephritis was made. He died in syncope a week after the first symptoms appeared. Both kidneys were found filled with calcium oxalate of all sizes, some as big as a pigeon's egg, weighing 20 g., numbering in all over 500. The left kidney was hypertrophied, the right, small and sclerotic. The heart was dilated and showed some myocarditis. He had never had nephritic colic or hematuria. His heart, unable to withstand the exaggerated tension of the entire circulatory system, dilated, and finally caused death in syncope. Renal insufficiency was only noted after he left his sedentary life to become a soldier. Outside of alcoholism, there is no cause known for the occurrence of calculi in this case. [M. O.]

Pneumococcic Peritonitis in Adults.—Menetrier and Aubertin report another case of adult pneumococcic peritonitis, (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, June 27, 1901, No. 22). The patient, a man of 50, had always used alcohol to excess, and had had malaria. He had chills, fever, and indigestion, followed by pain in the side, with cough and expectoration. This was diagnosed pulmonary congestion. In 10 days all symptoms had disappeared, yet he remained weak. Then his abdomen began to swell, as did the legs. There was dulness and marked bulging over the left side of his abdomen. This dulness was not movable, though fluctuation was felt over it. Some bronchopneumonia persisted. Exploratory puncture gave but little seropurulent fluid, as the trocar was stopped up by the flakes of fibrin. In this, and in the sputum, pneumococci were found. He died upon the day of the puncture. The autopsy confirmed the diagnosis of acute circumscribed pneumococcic peritonitis. They believe that the peritonitis, while the main affection, was still secondary to the bronchopneumonia. From the previous history it was easily understood how he got atrophic cirrhosis of the liver. This also helped to locate the peritonitis. They believe that three forms of pneumococcic peritonitis exist in adults; the encysted form, acute general peritonitis, and peritonitis complicated by meningitis, pleurisy, pericarditis, thromboses, etc. [M. O.]

Original Articles.

RHEUMATIC FEVER AND ITS COUNTERFEITS.

A CLINICAL LECTURE DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL, NOVEMBER 29th, 1901.*

By SIR DYCE DUCKWORTH, M. D., LL. D.,
of London, England.
Physician and Lecturer on Medicine to the Hospital.

Gentlemen:

I am going to speak to-day about the case of a little boy who came into my ward last week and who died in four days. His case was a very difficult one at first. A diagnosis was made, and after the boy's death an examination was made which enabled us to learn a great deal about the case. He was aged sixteen, a silver worker's boy who had been in his ordinary health up to the fourteenth of this month, when he was taken ill with pains in his head, vomiting, and shivering. On the 17th pain and swelling came on in the left knee joint. Next day he bled from the nose. He had been delirious at night since the 15th, and he was admitted here on the 19th. On admission he was delirious, and was evidently very ill. His temperature at that time was 103.8°. He had swelling in his left knee joint. The history which we obtained from his mother was that when he was six years of age he suffered from rheumatic fever, and that apparently must have left some mischief in the heart, because three years ago he was again admitted to the Hospital suffering from heart disease. The prominent symptoms in his body were that he looked exceedingly ill, he was very pale, and his nose had been bleeding, just before he came in. The most prominent physical sign was the painful swelling in the left kneejoint. On looking at this it was seen that the joint was red, very much puffed, and the lower part of the thigh appeared to be swollen also as compared with the right one. There was a little pain in the right sternoclavicular joint, and there also we found a swelling. On examining his heart there was very plain evidence of heart disease, a double murmur all over the precordia, a to-and-fro murmur, especially loud in the aortic area. In addition there was a pericardial friction rub, of a to-and-fro character. The preliminary diagnosis was that the body was possibly suffering from rheumatic fever again. It was clear that he had rheumatic fever once, and that he had heart disease as a result of that. We learned that his mother had also suffered from rheumatic fever. The history of rigor which the boy had is however very unusual in an attack of rheumatic fever, and the absence of sweating was very noteworthy, as well as the fact that only one joint was affected. Moreover, the swelling itself was not of the character associated with rheumatic fever, there being a great deal more redness and puffing of the integuments than is generally found in a rheumatic joint. The temperature also was a little higher than one is accustomed to see in ordinary rheumatic fever. The appearance of the joint led me to suspect that there was something more profound and dangerous than rheumatic arthritis. I suspected that he had got osteo-myelitis, as it is called, or epiphysitis, or necrosis of the lower part of the left femur. That is a condition which sometimes gives rise to symptoms resembling rheumatic fever. Patients who are admitted with that affection are sometimes thought to be suffering from rheumatic fever. That is a serious mistake to make, because the condition of the knee joint and the lower end of the femur requires prompt surgical attention. We asked Mr. Marsh to see this boy, and he concurred in the view that there was disease of the lower end of the femur, probably osteo-myelitis or periostitis, or possibly suppuration within the joint itself. He was clearly of the opinion that something should be done at once, that there should be an opening made at the side of the joint, or into the joint itself, if necessary, so as to ascertain what the condition of the bone was. The boy was accordingly taken downstairs and operated upon. It was found that the swelling steadily increased, and that the circumference of the left leg four inches above the middle of the patella was one inch larger than that of the corresponding one. The delirium had continued, and it was under those circumstances that he was taken for operation. The operation consisted of an incision which was made into the outer side of the joint at first, and then the joint was opened and found to contain pus; it was a purulent arthritis. After an incision had been made through the periosteum to the bone, there was no evidence of disease of bone or of bare bone. The pre-patellar bursa was much swollen. The pus was examined and was found to contain staphylococci. A further examination of the patient's blood also revealed the presence of staphylococci in it. It was then perfectly clear that we had to deal not with rheumatic fever but with a form of pyemia, that is to say, a pyemic arthritis, a gonarthritis of the left side, and a swelling of the sterno-clavicular joint of the right side. This fully accounted for the boy's condition. It showed him to be much more ill than if he were merely suffering from rheumatic fever, and it also explained the extremely high temperature and the delirium, with the tendency to epistaxis. The case was complicated by the past history, which at first rendered the diagnosis more difficult. The previous attack of rheumatic fever had damaged his heart and given rise to aortic disease, which he showed signs of, and his present condition of pyemia had caused pericarditis simulating a rheumatic pericarditis, giving rise to this to-and-fro friction sound of which I have spoken. That was the puzzling element in the case. But in spite of that and other prominent symptoms, one was led, as it happened, to believe it was not a case of rheumatic fever but one of blood poisoning. The boy never recovered; he was too much poisoned and impregnated for that, and he died on the 23d of November, four days after admission. The autopsy threw more light on the case. The brain contained some small pyemic abscesses, and so did the lungs. There were also evidences of numerous sub-pleural hemorrhages. The condition of the heart was of especial interest. There was a slight roughening of the pericardium, with the presence of fluid. There were also a few pericardial hemorrhages, and several

*Specially reported for the "Philadelphia Medical Journal," and revised by the lecturer.

minute white purulent specks below the visceral pericardium, which resembled tubercles. These were more numerous in the endocardium. The edges of the aortic valves were thickened and one of them was fenestrated, and it was that condition which gave rise to the double aortic murmur. There was evidence of both old heart disease and more recent heart mischief. There were numerous masses of vegetations on the segments of the valves and the chordae tendineae, and the endocardium below the valve was ulcerated. So the active signs of heart mischief here were pericarditis, and ulcerative endocarditis, the latter being grafted upon an old lesion of endocarditis which had been due to his rheumatic fever of many years ago. If you follow out the order of events in this case you will see that the case was not so easy for diagnosis as it might appear. The boy, as I have said, had been in his usual health, and fairly well, up to a certain date, the 14th, and he died after an illness of only nine days. His blood must have become contaminated in some way with staphylococci, but there is nothing to show in what way these staphylococci gained entrance to his system; it may have been by the mouth or by some other channel, but we cannot tell. Suffice it to say for the present that his blood became distinctly impregnated with these germs, and that the mischief fell most heavily upon the left knee joint in the form of a pyemic arthritis. After death an abscess was found around the sterno-clavicular joint and another corresponding to the second interspace, that is to say, a sub-pleural abscess. Over the liver and over the spleen were numbers of scattered small pin-point abscesses, the whole condition showing that the blood was impregnated and the blood-vessels were carrying the infective matter to every part of the body. The fact of certain joints being affected gave the case the aspect of rheumatic fever. And that seemed all the more likely because it occurred in a boy who had had rheumatic fever earlier in life, and had the results of the mischief which that previous attack of illness had caused in his heart.

Those were the difficulties of the case, but the severity of the infection soon disclosed its true nature, and the disease did not last long. It is probable that the ulcerative endocarditis which ocurred may have been the result of blood poisoning. But you might also put it the other way and suppose that his valves, already damaged by rheumatic mischief, had become infected by specific microbes, and that they had been the source of this systemic poisoning. Probably the last was the true course, and the heart mischief was the secondary and not the primary result of the entrance of these bacteria into the system. At any rate there was a vicious circle made. I am not aware that these ulcerous patches have been reported upon yet, but they have been saved for careful examination. I think it is probable that staphylococcal growths will be found in connection with vegetations on the valves and on other points of the endocardium.

This leads me to say a few words upon the diagnosis of rheumatic fever, and to mention the other conditions which may be mistaken for it.

First of all, I lay it down almost as an axiom that all forms of arthritis or joint disease are the result of some infection, and at present I can only think of one exception to that statement, and that is in the case of gout. Therefore when an arthritis occurs, unless it is the result of direct injury, so-called traumatism—and even then it is very likely that microbes are at work—you may always be sure that infecting matters have gained access. Arthritis which comes on independent of injury is always of an infective nature. You will see that the diseases which I shall mention as giving rise to arthritis are of that character. Gout seems to be the only exception, in so far that the noxious matter does not come from without but from within. The gouty patient makes his own poison; he produces it by a vicious metabolism of which he is the victim. The rheumatic patient does not grow his own poison; that comes from without. Therefore in all these cases of arthritis, with the exception, theoretically, of traumatic arthritis, we have to deal with an infective process.

What are those diseases? Of late years we have come to know, what was not well recognized before, how influenza, that miserable disease which has come to dwell with us lately, is very often the cause of arthritis, a condition which is called post-influenzal arthritis. That is a very clear case of infective arthritis. We have long been familiar with scarlatinal arthritis. There is certain toxic matter in that disease, but it has not been differentiated and separated, though I believe it soon will be. Scarlatinal arthritis is generally of a pyemic character, and it illustrates a disease due to a mixed infection.

Let us take another poison, that which produces gonorrheal arthritis. There is no doubt about that, and in that case it is a particular poison, caused by the gonococcus. That is well recognized and the gonococcus is found in the joints. In some people that infection leads to a very severe and intractable form of arthritis, falling especially heavily upon persons of a gouty constitution. I mean it is a more serious condition in a person of a gouty habit of body than in one who is not gouty. One also recognizes dysentery as a disease which is sometimes followed by arthritis, a post-dysenteric arthritis. There is a pneumococcal arthritis depending on the presence of the same pneumococcus as causes pneumonia in the lung.

After cerebro-spinal meningitis we meet with arthritis which also belongs to the pyemic class. Thus there are several varieties of septic arthritis. Formerly, before the days of antiseptic surgery and antiseptic midwifery, cases were seen after childbirth of puerperal arthritis. Those illustrate merely a form of pyemia, which has now become fortunately very rare, owing to accoucheurs and midwives having been taught to be much more careful and to disinfect their hands and everything which they handle.

As a result of osteomyelitis, or acute necrosis of a bone, of which the lower part of the femur is very apt to be the seat, or it may be the petrous portion of the temporal bone, you have blood poisoning produced by the setting free into the blood-stream of showers of streptococci or staphylococci. All these agencies may give rise to a form of joint disease closely resembling rheumatism. Gout has long

been confounded with rheumatism, and is so still in many quarters. When gout is in its typical form, falling upon the great toe joint, in an over-fed and over-indulged person, the diagnosis is not very difficult; but when you meet with gout occurring in a number of joints at the same time, as it does sometimes, the diagnosis is much more difficult. Very often men do not get classical symptoms of gout early in life, that is to say, between thirty and forty years of age, and perhaps they show no obvious indication in that direction until sixty years of age. One authority says, "Call no man free from gout until he has passed the age of sixty." There was a physician to this Hospital who had his first gouty symptoms when he was eighty, long after he had retired from the practice of his profession. There was a famous Bishop of Durham, who never had any evidences of gout until he was ninety. If a man reaches sixty years of age it will sometimes happen that he does not have gout in the classical form, but will have it spread over a number of joints. The disorder then looks very much more like rheumatic fever than gout. How do you discover that it is not gout? In the first place, you find that the ordinary treatment for rheumatism does not do much, if any, good in these cases. Again, you do not find in that condition that characteristic sweating which you find in rheumatic fever. The perspirations in rheumatism, as you are no doubt aware, are recognizable by their quality and their rank sour smell. That is not due to the fact that the patient is dirty; you will find it in the cleanest patients. You do not find that odor present in pyemia or in the infective forms of arthritis. There is a peculiarity of breath which is recognized in association with pyemia and pyemic arthritis. The old Sisters of the Hospital used to recognize it, and in particular one Sister, who had a very keen sense of smell, distinguished the peculiar mawkish sweet odor, and she could almost make a diagnosis from that characteristic. Nothing of that kind is present in rheumatism or in gout. Polyarthritis uratica, that is to say, a generalized gout occurring in many joints, may simulate rheumatic fever very closely. But it yields to different treatment; to the treatment for gout and not that for rheumatic fever. Some symptoms of influenza, during the first day or two, are not at all unlike the early ones of rheumatic fever, and it may not be possible to make the diagnosis at first. But if influenza is very prevalent at the time, you may make the diagnosis by judging of the pains and severe depression, which are rather characteristic of influenza as distinguished from rheumatic fever. In typhoid fever in the first ten days there may be pains which may lead you to suspect rheumatic rather than enteric fever. In relapsing fever, which you do not often see, in the early stages there may be this pain occurring in the joints which may prevent an exact diagnosis being made. In scurvy-rickets in children there is enlargement of the joints and bones, and if you are not familiar with that disease you are apt to suspect that it is nothing more than rheumatism, and you may be quite ignorant of the more grave disease of the patient, namely that he has this nutritive disease together with rickets. But by far the larger number of mistakes are made in the case of osteo-arthritis, which is sometimes called rheumatic gout, which is for the most part a chronic form of arthritis, not infrequently starting acutely. There are many degrees and many varieties of rheumatic arthritis. In the acute forms you may be misled easily in thinking that the patient is suffering from rheumatic fever; in other words, there are a number of joints affected, both small and large joints, and these are red and excessively tender and painful. The patient may sweat, but there is not that rank sour odor about the perspiration. So that the most experienced men make mistakes in such cases, but the mistakes are not of very great moment. The first thing you notice is, that the treatment which you find to be generally successful in rheumatic fever is of no use here. For instance, the salicylate treatment does not relieve the pains at all. The same may be said with regard to gonorrheal arthritis. You may treat the patient with salicylates and find they are of no use whatever. I suppose four out of every five cases of true rheumatic fever are promptly relieved by salicylate of sodium treatment. But there remain a few cases of rheumatic fever which are not benefited by salicylate. Whenever you find salicylate treatment does not do good, you may reasonably conclude that the time has come for you to review your diagnosis, and see whether you are dealing with a case not of rheumatic fever but, perhaps, with a variety of arthritis due to some other infection.

In the chronic cases of osteo-arthritis, or of rheumatic gout, you will not be liable to have any difficulty. There the changes are slow, the joints are deformed and enlarged, and are chiefly painful when any movement is attempted. You are only likely to confound the acute cases of osteo-arthritis with true rheumatic fever. In that case the mistake is venial, but it is most important not to make any mistake in the case of osteo-myelitis, because in this instance you may diminish the patient's chance of recovery by the delay. In a case of osteo-myelitis it is of the first importance to treat the case surgically, by evacuating the pus wherever it is found. If there is pus in a joint it should be let out; if there is an inflamed periosteum with pus under it, make an incision freely down to the bone, liberate the pus and drain it, taking care to do so antiseptically. Cases of blood poisoning due to bone disease, or associated with arthritis, are very grave, and they nearly all prove fatal. They are very apt to occur in boys at the age of twelve to sixteen, and therefore this boy of whom we are speaking was of the vulnerable age. Why that should be the age at which this disorder comes on I do not know.

You see what were the puzzling features in this case which led us for a time to doubt the nature of it. I have indicated the reasons which led one to believe, rightly, that it was a case of blood poisoning. The condition is not uncommon, and you will be sure to come across such cases in after life. By special attention to the characters of rheumatic fever, and knowing that whereas in pyemia you almost always meet with rigors, whereas in rheumatic fever rigors are extremely rare and the patient merely feels poorly, without having shivering, and bearing in mind the number of joints which are affected, and the fugitive character of the pains from

one part to another quickly in rheumatic fever, you will be able to differentiate between rheumatic fever and pyemia. In pyemia the joints became insidiously infected one after the other, and the patients go from bad to worse; the pains do not fly about. You must also carefully recognize the perspirations in the case of rheumatic fever and their peculiar odor. There is an absence of these in the gouty cases, and moreover the subjects of this latter disease are usually older than the subjects of rheumatism. Young persons are much more the subects of rheumatic fever than of blood poisoning due to acute necrosis, whereas gouty ailments supervene in after life. I have sometimes told you, or rather your predecessors, that some of the most puzzling diseases which occur in late life are due to gouty manifestations.

With regard to treatment, the main treatment in the case we are considering was surgical. Every effort was made to keep up the boy's strength, by good food and stimulants, but they were in vain, because of the presence of an overpowering dose of staphylococcic poison. Under these circumstances his recovery would have been nothing short of miraculous. You know that the results of the treatment of rheumatic fever by means of salicylates are extremely satisfactory; and you seldom nowadays meet with the extraordinary high temperatures which were frequent thirty years ago. One can recollect patients dying from hyperpyrexia due to rheumatic fever. One can say that rheumatic fever has come as much under beneficial control by salicylate treatment as have the violent movements and jactitations of chorea since we have learnt how to use chloral hydrate. The employment of these drugs constitutes advances in therapeutics which have operated very greatly for the benefit of humanity.

THE TRIAL, EXECUTION, AUTOPSY AND MENTAL STATUS OF LEON F. CZOLGOSZ, ALIAS FRED. NIEMAN, THE ASSASSIN OF PRESIDENT McKINLEY.

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WITH A REPORT OF THE POST-MORTEM EXAMINATION.

By EDWARD ANTHONY SPITZKA,
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The terrible shock which the assassination of President McKinley by Leon F. Czolgosz at Buffalo, New York, on September 6th, 1901, imparted to the entire civilized world, and which naturally engendered in the public mind a mingled feeling of horror, vindictiveness and revenge—a feeling which was exceeded only by the profound sense of sorrow and depression which took possession of the people when a few days later it was realized that despite the highest efforts of surgical and medical skill a fatal result to the distinguished victim was inevitable—naturally suggested, both to the lay and medico-legal mind, the need of inquiry as to the mental status and responsibility of the perpetrator of so repulsive and atrocious an act. Moreover, there are many persons who are disposed to hold that the enormity of such a crime is in itself sufficient evidence to warrant the opinion of the existence of insanity, merely because it seems to them inconsistent with the principles of ordinary rational conduct, even though aside from the act itself there be nothing in the entire life and conduct of the individual that is suggestive of mental disease. On the other hand, there are many who, in view of the magnitude of the crime, would oppose the granting of exemption from the ordinary consequences of capital offences even though the offender were a raving maniac. Suffice it to say that the position taken by such persons, in either case, is untenable and would be an untrustworthy test of responsibility as regards the ends of justice, whether viewed from a legal or a medical standpoint.

It need scarcely be said that the question as to whether or not a certain act is the offspring of mental disease, cannot always with safety be determined by the act itself, but must be determined by all the attendant circumstances leading up to and surrounding the act.

"An act of violence," says Ray, "must not be attributed to insanity merely because, to a person of high culture and correct morals, it seems inexplicable on the ordinary principles of human conduct."

According to the Code of Criminal Procedure of the State of New York, Section 21, the legal test of mental unsoundness, as applied to criminal cases, is based on the assumption that insanity is a question of law to be determined by the court, and that the question of responsibility in mental disease hinges upon a knowledge of right and wrong as to the particular act at the time it was committed; whereas medical science holds that insanity, in its relation to crime, is always a question of fact to be determined like any other fact in evidence, aided of course, in such case, by the interpretation of expert opinion evidence, and that whenever its presence can be so determined, the accused should be absolved from responsibility, irrespective of the form or degree of his mental disease or the nature of the act committed. "All that medical science has to do in any such case," says Dr. John P. Gray, "is to say whether the deed springs from disease or not. If it does not, the man is responsible, however ghastly, seemingly purposeless or vindictive the act may be." In other words, medical science holds that the whole question of responsibility should rest upon the presence or absence of mental disease, and not upon a knowledge of right and wrong as regards the nature and consequences of the act in question, and that that which in fact is a condition of mental disease cannot in law be a condition of mental health.

The question to be determined then, in the case of Czolgosz, from the legal standpoint, as embodied in the Code of Criminal Procedure of the State of New York, was: When he shot the President, did he know the nature and quality of the act he was doing, and that the act was wrong? If this question could be determined in the affirmative, then he was

responsible under the law and punishable for the offense which he committed, even though he was medically insane, so to speak.

On the other hand, the question to be determined from the standpoint of medical science was: Was Czolgosz at the time he committed the act a victim of mental disease or mental unsoundness? If so, according to the dictum of medical science, he was not responsible and hence not punishable for the act he committed. These are the sole questions upon which the guilt or innocence of the accused must rest, whether in the eyes of the law or in the judgment of medical science, and it follows logically that if he were guilty of crime owing to the absence of mental disease, he was equally guilty within the intent and meaning of the statute. Such being the case, the subject of the responsibility of the accused resolves itself into a question of health or disease—sanity or insanity. Hence the application of the legal test may be dismissed from further consideration here and we may proceed to consider the question of his responsibility from a medical point of view.

The Trial.

The trial of Czolgosz which took place in the city of Buffalo, N. Y., on September 23, 24, 1901, Hon. Truman C. White, Presiding Justice, was neither attended by delay "nor harrassed by the trivial technicalities of the law." The "machinery of justice" moved so smoothly and so rapidly that the jury was procured, the case tried and a verdict of guilty rendered within a period of two court days with sessions from to 10 to 12 o'clock in the forenoons and 2 to 4 o'clock in the afternoons, the time actually occupied being eight and a half hours in all. The proceeding were marked by no melo-dramatic or sensational episodes or unseemly wrangle among counsel; while the fact that, under the extraordinary circumstances, the trial was not anticipated or interrupted by any riotous demonstration against the prisoner—any attempt at mob or lynch law—when he appeared in public, affords striking proof of the respect for law and order which prevails in the community where the trial was held. Czolgosz was brought into court closely guarded by a double cordon of police and handcuffed to an officer on either side. He was neatly dressed and cleanly in appearance, his face clean-shaven and hair neatly combed.

The preparation and trial of the case on the part of the people by the Hon. Thomas Penny, District Attorney, and his assistant, Mr. Haller, was well nigh faultless. Shortly after his arrest the District Attorney procured from Czolgosz a statement several pages in length which was taken down in longhand, in narrative form, each page of which he signed after himself making corrections and revisions as to matters which he claimed the reporter had misapprehended. This statement gave in detail facts concerning his premeditations and preparations for the crime, also his movements for some time prior, and up to the time of the shooting. The District Attorney also, within a few hours after the crime was committed, proceeded to put the prisoner under the observation of local experts in mental disease, namely, Drs. Joseph Fowler, police surgeon, Floyd S. Crego and James W. Putnam. These physicians had free access to him, down to and during the trial—covering a period of nearly three weeks during which they examined him repeatedly and made a careful study of his case with reference to his mental condition. The District Attorney also permitted the experts on either side to confer together freely, and allowed those for the defense to have free access to all facts and information relative to the case in his possession—a proceeding which in effect was equivalent to the appointment of a commission of five experts—three for the prosecution, and two for the defense—to determine the prisoner's mental condition. This course on the part of the District Attorney, marks a new departure in the methods of getting expert evidence in criminal trials where the question of mental responsibility is involved, which is to be hightly commended as a practical measure tending to eliminate much superfluous testimony and at the same time to minimize the danger of contradictory expert opinions.

In view of the great importance of the case, it is regrettable that no experts were called to testify on the trial as to the prisoner's mental condition in order that it might appear on the record of the trial, that his mental state was inquired into and determined by competent authority. Had the experts on either side been given the opportunity of thus stating officially their unanimous conclusion, together with the grounds on which it was based and the methods by which it was reached, it would have left in the public mind no room for reasonable doubt as to its absolute correctness and that it had been arrived at only by the rules of professional conduct governing the examination of such cases.

The attorneys assigned by the court to the defendant, at the request of the Bar Association of Erie County, were ex-judges Loran L. Lewis and Robert C. Titus, both prominent lawyers and highly respected citizens of Buffalo. For obvious reasons these gentlemen were reluctant to undertake what they regarded as a most distasteful task, and consented to do so only from a high sense of duty to the public, at the urgent solicitation of the President—Hon. Adelbert Moot—and other prominent members of the Bar Association, on Saturday—September 21st—preceding the trial which began on Monday, the 23rd.

Respecting the defense, it appears that substantially no preparation was made beyond a fruitless effort of counsel to confer with the prisoner and the examination made of him at their request by Dr. Hurd and the writer with reference to his mental condition, and a verbal statement by them to counsel of their conclusion that he was not insane. It also appears that no plea was entered by the attorneys for the defense, but Czolgosz, speaking for the first time in court, entered a plea of guilty to the indictment, which plea the court promptly rejected and directed that one of not guilty be entered on the record for the defendant.

Each juror on qualifying said, in answer to the usual question, that he had formed an opinion as to

the guilt of the prisoner, but that this opinion could be removed by reasonable evidence tending to show that the defendant was innocent. And yet, to one accustomed to being in court and observing jurors when qualifying, it was difficult to avoid the impression that each of the jurors in this case held a mental reservation to convict the prisoner. Had Czolgosz been on trial for the murder of a common citizen, instead of the President, it is safe to say that not one of the jury as completed would have been accepted by the defense; and instead of getting a jury in approximately one hour and a half, that feature of the trial alone would probably have occupied several days.

Having in view the nature and importance of the case, the fact that no testimony was offered on the defendant's behalf and that practically no defense was made, beyond a perfunctory examination of jurors and a mild cross-examination of some of the people's witnesses, which was limited to efforts to elicit information respecting the President's condition during his illness and of his body after death, and a summing up by one of the counsel—Judge Lewis—which consisted mainly of an apology for appearing as counsel for the defendant and a touching eulogy of his distinguished victim, renders the case, in this respect, a unique one in the annals of criminal jurisprudence.

The jury retired for deliberation about 4 P. M., and returned in less than half an hour with a verdict of guilty of murder in the first degree. Czolgosz heard the verdict of the jury standing and without appreciable display of emotion. Several of the jurors were reported to have said after the trial, that the jury was in favor of conviction unanimously from the first and could have rendered a verdict without leaving their seats, but deemed it best to make a pretense of deliberation "for appearance's sake." Czolgosz was remanded to jail for two days and on Thursday, September 26th, was sentenced to be executed by electricity at Auburn Prison, in the week beginning October 28th, 1901.

When Czolgosz returned to his cell after his conviction he ate a hearty supper and soon thereafter went to bed and slept continuously until midnight, when the guard was changed, when he awoke for a few minutes, and then slept again until 6 A. M., when he arose and took a short walk in the cell corridor, after which he made a careful toilet, and at 7.30 partook of a hearty breakfast. He talked freely, as usual, on ordinary topics, but maintained his usual silence respecting his crime and would not talk of the verdict. On Thursday, September 26th, he was removed from the Buffalo jail to the State Prison at Auburn, N. Y., where he was confined in a "death cell" until his execution took place.

THE EXECUTION.

Czolgosz was executed by electricity on the morning of October 29, 1901. The official witnesses, the Superintendent of State Prisons and other prominent New York State officials, several physicians, three representatives of the respective press associations, Mr. Spitzka and others and the official physicians—Dr. John Gerin, Prison Physician, and myself—having been assembled in the execution room and having received the usual admonition from the Warden as to maintenance of order during the execution, the prisoner was conducted to the room a few minutes after 7 A. M. Every precaution was taken by the Warden, who had immediate charge of the execution, to minimize the opportunity for notoriety or sensationalism on the part of the prisoner as well as to insure that his taking off should be effected in an orderly and dignified manner.

As Czolgosz entered the room he appeared calm and self-possessed, his head was erect and his face bore an expression of defiant determination. The guards, one on either side, quietly and quickly guided him to the fatal chair, the binding straps were rapidly adjusted to his arms, legs and body, and the head and leg electrodes were quickly placed *in situ* and connected with the wire which was to transmit the lethal current through his body. These preliminaries occupied about one minute. Czolgosz offered no resistance whatever, but during the preparations addressed himself to the witnesses in a clear distinct voice in the following significant language: "I killed the President because he was the enemy of the good people—the good working people. I am not sorry for my crime. I am sorry I could not see my father." At this moment, everything being in readiness, the Warden signalled the official electrician in charge of the switch, who immediately turned the lever which closed the circuit and shot the deadly current through the criminal's body, which was instantly thrown into a state of tonic spasm, involving apparently every fibre of the entire muscular system. At the same time, consciousness, sensation and motion were apparently absolutely abolished.

Two electrical contacts were made, occupying in all one minute and five seconds. In the first contact the electromotive pressure was maintained at 1800 volts for seven seconds, then reduced to 300 volts for twenty-three seconds, increased to 1800 volts for four seconds and again reduced to 300 volts for twenty-six seconds—one minute in all—when the contact was broken. The second contact, which was made at the instance of the writer as a precautionary measure, but which was probably unnecessary, was maintained at 1800 volts for five seconds. That conscious life was absolutely destroyed the instant the first contact was made, was conceded by all of the medical witnesses present: also that organic life was abolished within a few seconds thereafter.

Czolgosz was pronounced dead by the attending physicians and several other physicians present, after personal examination, in four minutes from the time he entered the room; one minute of this period, as already stated, was occupied in the preliminary preparations, one minute and five seconds in the electrical contacts, and the remainder of the time in examinations by the physicians to determine the fact of death. The physicians present at the execution and at the autopsy, were Drs. H. O. Ely, of Binghamton, N. Y.; W. A. Howe, of Phelps, N. Y.; G. R. Trowbridge, of Buffalo, N. Y.; W. D. Wolff, of Rochester, N. Y., and C. R. Huntley, of Buffalo.

THE AUTOPSY.

The autopsy was made by Mr. Edward A. Spitzka under the direction of the official physicians—Dr. Gerin, and myself. The examination occupied about four and a half hours and embraced a most careful, gross examination of all the viscera, attention being especially directed to the brain and its meninges. The accompanying masterly description of the post-mortem findings and especially of the condition and anatomical structure of the brain by Mr. Spitzka, leaves nothing to be said here upon this point beyond the fact that the autopsy revealed no evidence whatever of disease or deformity of the bodily organs including the brain, which was normal in size, shape, weight and appearance, and was well developed in all respects—a conclusion which was concurred in by all of the physicians present, several of whom had witnessed the execution.

In deference to the expressed wish of the relatives of Czolgosz, and for reasons of a sentimental nature on the part of the State authorities, the Prison Warden declined positively to allow any portion of the body to be removed from the prison. Consequently, and regrettably, it was impossible for the examiners to retain honorable possession of any portion of the brain for microscopic examination and study. Accurate measurements, however, of the head and its appendages, of the face and of the exterior and interior of the skull, together with detail anatomical drawings and

descriptions of the brain were made; also plaster moulds of the head from which a cast was subsequently made and photographs of the same—full face and profile—taken. These measurements, together with plates of the drawings and photographs are presented in Mr. Spitzka's report of the autopsy.

In view of its great importance both to medical science and to medical jurisprudence, the writer regards it as fortunate that the State was able to secure the services of so able a brain anatomist and skilled operator and draughtsman as Mr. Spitzka, to make the post-mortem examination.

The Mental Status.

On Thursday, September 19th, 1901, I received a telegram requesting me to meet Mr. Adelbert Moot, President of the Erie County Bar Association, in Buffalo, New York, on the following morning. On my arrival in Buffalo the next day Mr. Moot informed me that he had sent for me for the purpose of requesting me to inquire into the mental condition of Leon F. Czolgosz, confined in the Buffalo jail under indictment for the murder of President McKinley, and whose trial was to begin on the following Monday. Mr. Moot further stated in substance that three local experts had already examined the prisoner for the District Attorney, but in view of the enormity of the offence and the fact that there obviously could be no legitimate defense other than insanity, it was deemed important, in the interests o. justice, that his mental condition should be investigated by other exports acting in behalf of the defense, or at least independently of the prosecution, to the end that the prisoner should be accorded every legal right, there being no desire to convict him if he were not mentally responsible, and that I had been selected for this responsible duty. With a deep sense of the responsibility involved, I consented to act, provided it should be distinctly understood that I was not there as a partisan expert in behalf of either side, but simply in a professional capacity to aid in determining the real mental state of the prisoner, and providing further that my selection would be acceptable to the eminent counsel whom the Bar Association had selected for the defense, should they decide to accept that duty, a matter which was then undecided. On the following morning—Saturday—Mr. Moot informed me that the gentlemen referred to had consented to act and invited me to meet them in conference, which I did, and which resulted in their requesting me to proceed at once to examine into the prisoner's mental condition and to report my conclusion to them as soon as I had reached one. They also assented readily to my proposal to invite Dr. Arthur W. Hurd to become associated with me professionally in the case, Dr. Hurd being the Superintendent of the Buffalo State Hospital for the Insane and a competent alienist of large experience in mental diseases. It was also agreed that we should be allowed to confer freely with the District Attorney and with the experts for the people, after completing our personal examination of the prisoner. Being unable to establish communication with Dr. Hurd before evening of that day, and in view of the short time intervening before the trial, I decided to make a preliminary examination of C olgosz alone, and did so that afternoon, in the District Attorney's office, first disclosing to him my identity and the object of my interview and informing him of his legal right to decline to answer any question I might ask him.

I examined him again on the following day—Sunday—in the jail jointly with Dr. Hurd and in the presence of one of his guards who was questioned at length, respecting his observations of him in jail, as to his habits of eating, sleeping, talking, reading, etc. We subsequently interviewed the District Attorney and the Superintendent of Police, General Bull, who gave us all the facts and information in their possession respecting the case. The statement which Czolgosz made to the District Attorney shortly after his arrest throws much light on his mental condition on the day of the crime, but that official deemed it his duty to refuse to allow me to publish it. We also conferred at length with the people's experts—Drs. Fowler, Crego and Putnam—who stated to us separately and in detail their observations and examinations of him. We also observed him carefully in the court room throughout the trial.

After our examination of Czolgosz, on Sunday, we reached the conclusion, independently of each other, that he was sane and we so informed his counsel, on Monday morning before the trial began.

It should be said that owing to the limited time—two days—at our disposal prior to the trial and the fact that his family relatives resided in a distant state and were not accessible for interrogation, we were unable to obtain a history of his heredity beyond what he himself gave us.

Czolgosz, as he appeared at the time of my examinations of him at Buffalo, may be described as a well nourished, rather good looking, mild-mannered young man with a pleasant facial expression; features, regular; face, smooth shaven and symmetrical; mouth and ears well formed and symmetrical; teeth, none missing but in poor condition from neglect; tongue, clean; palate, fauces and uvula, normal in appearance; eyes, blue and normal in expression; pupils, equal in size and normally responsive to light and accommodation; hair, light brown and slightly curly; stature, medium—five feet seven and a half inches—and weight—estimated—about 140 pounds. The extremities were in all respects normal. The external genitals normal, excepting two small, flat, unindurated cicatrices on the mucous surface of the prepuce, probably the result of previous chancroids, although he denied having had venereal disease other than gonorrhea. There were no signs of specific nodes or periosteal tenderness over the usual sites of these lesions, nor was there any evidence upon the head or body of traumatism excepting a slight deviation of the nose due to a blow which he received at the time of the assassination, and a superficial, perpendicular cicatrix on the left face which he said was the result of a slight injury he received when working in a barbed wire factory. There were no tremors or twitchings of the facial muscles, tongue or hands. The pulse and temperature and skin were normal, as also were the special senses, knee reflexes, coordinating power and the sensory and motor functions. Finally, a careful inspection of the entire visible body failed to reveal the presence of any of the so-called stigmata of degeneration. The almost perfect symmetrical development—especially of the head and face—is a noteworthy feature in Czolgosz's case, although had deviations been found the fact would have had little weight as tending to show mental disease or degeneracy, as marked asymmetries, both cranial and facial, are frequently observed in persons who are sane and above the average in mental capacity.

In answer to questions he stated, in substance, that he was born in Detroit, Michigan, of Polish parents; that he was twenty-eight years of age, unmarried and a laborer by occupation; that he was a Romanist, originally, but had abandoned that faith several years go becuse he no longer

believed in it; that he attended the common schools as a boy and had learned to read and write; that he had used beer and tobacco, but not to excess; that he had done various kinds of unskilled labor such as farming, factory-hand, etc.; that his mother was dead and his father, one brother and a married sister were living; that so far as he knew there was no insanity in his family, and that he had not suffered any serious illness or injury during his life time; that he had never been subject to fits, spasms or vertigo; that he usually ate and slept well, and that his bowels were always regular. He admitted having had sexual intercourse with women, but denied masturbation or other unnatural practices.

Careful inquiry failed to elicit any evidence of delusion, hallucination or illusion. When questioned as to the existence of enemies, persecutions or conspiracies against him, he replied in the negative. He evinced no appearance of morbid mental depression, morbid mental exaltation, or of mental weakness or loss of mind; nor did he display any indication of morbid suspicion, vanity or conceit, or claim that he was 'inspired" or had "a mission to perform," or that he was subject to any uncontrollable impulse. In fact, as regards the existence of evidences of mental disease or defect, the result of the examinations was entirely nagative. On the contrary, everything in his history as shown by his conduct and declaration, points to the existence in him of the social disease, anarchy, of which he was a victim.

My last examination of Czolgosz was made jointly with Dr. Gerin, physician of Auburn Prison, the evening before his execution. This examination revealed nothing either in his mental or physical condition which tended to alter the opinion I gave to his counsel at the time of his trial, namely, that he was sane—an opinion which was concurred in by all of the official experts on either side, namely, Drs. Fowler, Crego and Putnam, for the people, and Dr. Hurd and myself for the defense, also by Dr. Gerin, the only other physician who examined him. Furthermore, the prisoner's manner, appearance and declarations in the execution room, together with the post-mortem findings, corroborated most conclusively the original opinion as to sanity—while his dying declarations "that he killed the President because he regarded him as an enemy of the good people—the good working people," and that he was not sorry for his crime—all tend to stamp him as an anarchist. In fact, his bearing and conduct from the time of the commission of the crime to his execution were entirely consistent with the teachings and creed of anarchy. Moreover, neither the three careful personal examinations which I made of him—one alone, one with Dr. Hurd and one with Dr. Gerin—the measurements of his body by the Bertillion system nor the post-mortem findings, disclosed the slightest evidence of mental disease, defect or degeneracy. This opinion is confirmed by the people's experts who repeatedly examined him and observed him from time to time, from the day of the assassination to the close of the trial, and by Dr. Gerin, the physician of the Auburn Prison, who observed him carefully during the four weeks that he was in that institution awaiting execution. Dr. Gerin has had exceptional opportunity for the study of criminals, both sane and insane, in his capacity as prison physician and, previously, as assistant physician at the State Hospital for the Criminal Insane.

If Czolgosz was a victim of mental disease the question would naturally arise as to what form of that disorder he was suffering from. If, in answer to this question, we undertake to make a diagnosis by exclusion, we find the following results: There was absolutely no evidence of insane delusion, hallucination or illusion. There was none of the morbid mental exaltation or expansiveness of ideas that would suggest mania in any form, none of the morbid mental gloom and despondency of melancholia, none of the mental weakness of dementia, one of the conjoined mental or motor symptoms that are characteristic of paresis, nor was there anything in his manner, conduct or declaration that would suggest the morbid vanity and egotism, the persecutory ideas or the transformation of personality which usually characterize paranoia or systematized delusional insanity. In fact, at no time during the period from his arrest to the time of his execution did he exhibit any of the mannerisms, boastful display, etc., or claim to have a "divine inspiration" or "a mission," or make any complaint or suggestion of personal wrongs and persecutions which are so characteristic of paranoiacs; nor did he, during his trial, or subsequently, evince any indication of satisfaction or delight at being the central figure of the occasion and the observed of all the observed which he was; nor was there any attempt on Czolgosz's part to simulate mental disease. The refusal to talk with his counsel was perfectly consistent with the views which he expressed to the District Attorney soon after his arrest, namely, that he did not believe in law and that he wanted no counsel. He did, however, converse with others, namely, the District Attorney from time to time before his trial, also with his guards at the Buffalo jail, with whom he frequently walked in the corridor fronting his cell for an hour or two at a time, conversing with them intelligently the while and making his wants as to bathing, toilet, tobacco, etc., known in a natural manner. He also conversed freely with the people's experts in their earlier examinations of him, and talked, though not as freely, with Dr. Hurd and myself, and when on arraignment for trial and formally asked to plead he promptly arose from his chair and answered in a clear voice, "guilty." He also responded promptly when directed by the clerk of the court to "stand up and look upon the juror" as each of the jurors were sworn, and resumed his seat in each instance at the proper time. Beyond this he remained mute while in the court room, and yet to anyone who observed him closely it was apparent that he was fully aware of, and attentive to the proceedings.

A recent writer—an eminent alienist—discussing the mental state of Czolgosz says:*

We can conceive no indications of mental disease in Czolgosz, and were the absurdity of his statements and acts to be a criterion of mental unsoundness we should have to establish a new category of insanity for the reception of the various groups of anarchists—not to mention other terrorists.

* * * * * *

We deem it an error to regard Czolgoszs's mutism in court when called on to plead and before his counsel as an attempt to simulate insanity. This conduct is in line with his role expressed in the theatrical declaration. "I am an Anarchist and have done my duty." As it was his "duty" to slay the President, it is his duty to go to death with his lips sealed, and with this intent, first the plea of guilty and his conduct are perfectly consistent. He shows no reluctance to converse on matters disconnected from the crime, nor even of matters connected therewith provided they do not touch its preparations and thus betray his associates.

Aside from his reticence to his counsel there was nothing in Czolgosz's manner, appearance or declarations that was indicative of insanity or of simulating. His reticence toward his counsel, as already intimated, was entirely consistent with his expressed disbelief in government and in law, and his declaration that he shot the President with a

*"The Mental Status of Czolgosz and Assassins Generally," by E. C. Spitzka, M. D. The Medical Critic, Nov., 1901.

clear knowledge of the nature and consequences of the act; and while he pleaded guilty in court and also proclaimed when he went to his death his reason for committing the crime, and declared that he was not sorry therefor, in a manner which clearly implied that he regarded the act as a justifiable one, he did not claim that it was not a crime on his part as paranoiacs usually do, nor did he in any way indicate that he regarded himself a victim of conspiracy or persecution. On the contrary, he declared—to the people's experts—that he fully understood what he did when he shot the President and was willing to take the consequences; that "I know what will happen to me—if the President dies I will be hung." Justice White, commenting on Czolgosz plea of "guilty" when arraigned for trial—a plea which could not be accepted under the law—said: "The prisoner's plea of guilty indicates that he himself anticipated no escape from the penalty which the law prescribes for a crime of the character alleged in the indictment." Again Czolgosz said: "I done my duty, I don't believe in voting; it is against my principles. I am an Anarchist." He further said that he had been an ardent student of the doctrine of Anarchy and had attended many "circles" where these subjects were discussed. He had attended a meeting of Anarchists about six weeks ago and also in July; had met and talked with an Anarchist in Chicago about ten days ago; that he belonged to a "circle" in Cleveland which had no name. "They called themselves Anarchists." That he went to Cleveland "on no particular business" the Friday before the assassination. He had been in Buffalo for two or three weeks prior to going to Cleveland. "I planned to kill the President three or four days ago, after I came to Buffalo"—from Cleveland—"I don't believe in the Republican form of government and don't believe we should have any rulers. I had that idea when I shot the President and that is why I was there."

In explanation of his abandonment of his religious faith and his rejection of the services of a priest, Czolgosz said the night before his execution, "I would like the American people to know that I had no use for priests. My family are all Catholics and used to go to church until the hard times of 1893. We had been taught by the priests that if we would pray God would help us along, but it did no good; it didn't help us and we stopped going to church at that time." He also said at this interview: "McKinley was going around the country shouting prosperity when there was no prosperity for the poor man. I am not afraid to die. We all have to die sometime."

It may be said that Czolgosz' belief which he expressed as he went to his death, that the President "was an enemy of the good working people" was a delusion, and such it undoubtedly was in the broadest sense of that term; that is, it was a false belief, but it was in no sense an insane delusion or false belief due to disease of the brain. On the contrary, it was a political delusion, so to speak—a false belief founded on ignorance, faulty education and warped—not diseased—reason and judgment—the false belief which dominates the politico-social sect to which he belonged and of which he was a zealot, who in common with his kind believes that all forms of government are wrong and unnecessary—a body of mal-contents whose teachings oppose all government and who advocate the use of violence to destroy the existing social and civil order of things. By his own admissions, Czolgosz was a devout anarchist and a firm believer in the principles of "Free Society" as taught by Emma Goldman—of whom he was an ardent admirer—and others. These were the beliefs which furnished the motives for the murderous deed.

That Czolgosz was an anarchist and actuated in his crime by the motives which spring from the teachings of that sect, are clearly shown by: 1. His declarations after his arrest, namely, that he did not believe in any form of government or law and that all rulers were tyrants who ought to be put down. 2. His admissions to the District Attorney that he was a member of anarchistic societies or circles, and had frequently attended the meetings of the same; also that he had been influenced in his views by the "lectures" of Emma Goldman; and that when apprehended anarchistic literature was found on his person, and 3. The recognition and commendation which he has received at the hands of Anarchists at their meetings both in this country and abroad since his death, several of these societies having openly recognized him as such and lauded his action.

The Anarchists' creed teaches that when one of their number is selected to do a certain deed he is to proceed about it quietly and in his own way, taking no one into his confidence; that, having accomplished the deed, if apprehended, he shall not admit his connection with any other members of the circle; that, if convicted and sentenced to die he shall go to his death without revealing his connection with others, resting secure in the belief that he will be ever regarded by his associates as a martyr and a hero who died in the discharge of a noble duty. The course and conduct of Czolgosz from the beginning down to his death are entirely in keeping with this creed. And finally the cool and courageous manner in which he met his death, and the fact that from the day of his arrest, until he died, he never uttered a word that could be used against his accomplices—if he had any—and that he died—as anarchists who suffer the death penalty always die—without uttering a word that would tend to incriminate any of his co-conspirators, tend to stamp him as an anarchist.

In conclusion, the writer having viewed the case in all its aspects, with due regard to the bearing and significance of every fact and circumstance relative thereto that was accessible to him, records his opinion unqualifiedly that Leon F. Czolgosz on September 6th, 1901, when he assassinated President McKinley, was in all respects a sane man—both legally and medically—and fully responsible for his act.

THE POST-MORTEM EXAMINATION OF LEON F. CZOLGOSZ.

By EDWARD ANTHONY SPITZKA,
College of Physicians and Surgeons, New York City.

The post-mortem examination was performed by the writer under the supervision of Dr Carlos M MacDonald, of New York, who was requested by the State Superintend-

ent of Prisons to take medical charge of the execution in conjunction with Dr. John Gerin, Prison Physician. The examination began at 7.50 A. M. and was completed at 12.30 P. M. Among the witnesses were the physicians in attendance at the execution.

As the body lay upon the table in the dorsal position, the right leg, to which the electrode had been attached, was slightly flexed and a trifle abducted. This attitude of the body has been found to be uniform in the post-mortem examinations made on many other electrocuted criminals by Dr. Ira Van Gieson (1). In all of these cases the electrode had been applied to the knee-flexure.

Corresponding to the attachment of the leg-electrode there was a superficial blisternig, with some desquamation of the epidermis and some edema. At the site of application of the head-electrode there were only a few signs of vesication, limited to the occiput.

Post-mortem discolorations existed in all the extremities, but not in the trunk, head or neck, where the skin was fairly white. There was post-mortem lividity of the toe- and finger-nails. The pressure of the straps had not produced any discolorations. There was a discharge of small amount from the urethra, probably of seminal fluid.

The assassin's physiognomy may be described as youthful and with rather a pleasant expression. The nose is pointed, slightly retroussé and fairly straight, deviating a little at the point of the injury inflicted at the time of the assassination. The eyes are blue, the pupils equal and moderately dilated. The hair is a light brown and slightly curly. The face is oval and symmetrical. The mouth is well-shaped, the lips full; measuring the true orifice, the width is 4 cm., between the outer angles is 5 ctm. The teeth are of normal shape, but are in poor condition. The external genitals are normal and are unclean with accretions of smegma under the prepuce. There are two flat cicatrices, one 4 mm. in diameter, the other half as much, on the mucous surface of the prepuce about 5 mm. from the corona glandis. The tissues under and about these cicatrices are not indurated, and the scars are doubtlessly the remains of chancroids acquired at some time previously. As stated before there has been a discharge of seminal (?) fluid, some of which is still within the urethral passage.

At 8.10 A. M. the surface temperature of the body taken on the side of the chest with a "Seguin" surface-thermometer was 97° Fahrenheit; per oram 97.4°.

The body cooled very slowly throughout the examination, and the greatest amount of heat appeared to be retained in the brain. Rigor mortis set in about three hours after death.

The following measurements of the head were recorded:

	Centimeters.
Max. circumference (21½ inches)	54.6
Max. antero-posterior diam. (from glabella to max. posterior point)	18.7
Max lateral diam. (Cephalic Index=82.88).	15.5
Bi-auricular diam. (between roots of zygomae)	15.0
Length of face (from the inter-superciliary point to the superior alveolar point between the middle incisors)	9.2
Bi-zygomatic diam.	14.5
Min. frontal diam.	12.0
Diameter from glabella to inion	19.1
From vertex to hair-line	12.0
From hair-line to root of nose	6.0
From root of nose to its base	5.3
From base of nose to chin	7.0
Vertex to chin (diameter)	25.4
Breadth between pupils of eyes	6.8
Breadth of nose at its base	3.4
Width of mouth (internally)	4.0
" " " (externally)	5.0
Length of ears (both sides equal)	6.1

After these measurements had been taken, about fifty minutes were devoted to the making of plaster moulds of the entire head. A cast has since been made from these moulds and two photographic views, full face and in profile, are presented here. Unfortunately the left ear in the mould had been broken during transportation from Auburn, and the fragments were pieced together with difficulty. The defects have been rectified in the photograph. On the subject the ears were perfectly symmetrical, both as to form and size.



Photograph of a cast of the head, from plaster moulds made by the writer soon after death.

DEFECTS:—Unfortunately the left ear in the mould had been broken in transit, and the fragments were pieced together with difficulty. The defects were rectified in the photograph. On the subject the ears were absolutely symmetrical.



Profile view of plaster cast.

The moulds were made upon the head while the body lay prostrate upon the table. This attitude gave rise to the prominence of the "Adam's apple," and to the slight parting of the lips. The hair was rubbed well with vaseline and flattened as much as possible to prevent the plaster from adhering.

On the skull the following measurements were taken:

Max. antero-posterior diam.	18.0 ctm.
Max. lateral diam.	14.7 "
(Cranial Index=81.66).	

The head of Czolgosz, as is typical of the Poles, falls into the sub-brachycephalic class; according to Weisbach the

cephalic index of forty Poles was 82.9. (82.85 in Czolgosz).

At the time of Czolgosz's reception at the Auburn State Prison (Sept. 27th), measurements of his body were taken according to the Bertillon system by J. N. Ross. I reproduce here the more important figures:

Stature (5 ft. 7½ in	)	171.4 centimeters.
Stretch		181.0 "
Trunk		91.1 "
Head, length		18.6 "
Head, width		15.6 "
Cheek, width		14.5 "
R. ear, length		6.3 "
L. foot		26.0 "
L. Mid. F.		11.7 "
L. Lit. F.		9.0 "
L. Cubit		47.2 "

"These measurements are all medium and each is consistent with the others. The stretch and cubit measurements might be said to be slightly out of proportion, indicating that his forearms were slightly longer than those of a majority of men of his stature, but this excess of length is not sufficient to call for comment."

His weight on that day was 141 pounds.

The marks and scars are here reproduced in the order in which they appear on the Prison Department's identification card.

"I. Sev. sm. cics. post. first finger, left hand near 2nd joint. Cic. of 1 ob. ex. on 1st Phal. 3rd finger left hand post.

II. Cic. of 2 par. ver crossing 3rd joint mid fgr. right post. Cic. of 1 circ. at 5 over right wrist post.

III. Mole at 5 under left cheek-bone and 9 to left med l.

IV. Sev. moles on front and back of neck."

Next the cranium was opened and the brain removed. The scalp was divided by means of a median incision passing from the glabella to the inion. On incising the scalp, a quantity of dark fluid blood escaped. The scalp was of moderate thickness, firm and well adherent to the skull. The two flaps of the scalp were dissected from the skull and drawn down on either side of the head. The sutures were well-marked and no synostosis was observed. Supernumerary or abnormally developed bones were not discernible.

The calva was removed by a saw-cut passing around the cranium about 1.5 ctm. above the glabella and about 2.5 ctm. above the inion. In figure 7 is shown the outline of the thickness of the skull along this section. In the removal of the calva, the saw was supplemented by the chisel and hammer. The calva came off readily, the dura being non-adherent. There was no marked escape of cerebrospinal fluid. Along the saw-cut the skull was slightly flatter in the fronto-parietal region on the right side while it was more curved or rounded on the left. The right parieto-occipital region was a trifle fuller than on the left side. The markings on the internal surface of the calva, such as the groove for the superior longitudinal sinus and for the meningeal vessels, the digitations, and the impressions for the Pacchionian bodies, etc., were all distinctly marked. The dura was grayish-white, moderately translucent and somewhat dry; there existed a marked engorgement of dark fluid blood. The dura was neither tense nor loosened. The Pacchionian bodies were of the usual number and distribution. The inner surface of the dura was fairly moist. There were no evidences of hemorrhagic pigmentation or of pachymeningitis.

The brain, invested by the pia-arachnoid, was exposed by crucial incisions into the dura, which was perfectly non-adherent to the membranes within. The brain was carefully removed and during most of the subsequent examination was kept in a salt-solution (about 1 part in 20 of water). At the time of removal, still invested by the pia-arachnoid and with the ventricles unopened, the entire brain weighed fifty-one and a half ounces avoirdupois (1460 grammes).

The base of the skull was normal in every respect.

The pia-arachnoid was of normal thinness, and devoid of opacities or other signs of disease—past or present. The only unusual appearance was an injection of bright red blood in the finer vessels of the pia, due—if we may judge from previous reports of autopsies on electrocuted criminals, to the high electro-motive force exerted by the fatal current in this part of the body. The pia was stripped off with ease, being nowhere adherent to the cortex.

EXAMINATION OF THE BRAIN.

(See Figures 1, 2, 3, and 4).

In general the brain presents no marked peculiarities of shape or size. It is firm to the touch and no portion of it, despite most careful examination, feels softened or indurated.

The brain was divided into its natural segments according to the following method. The ectal border of the optic

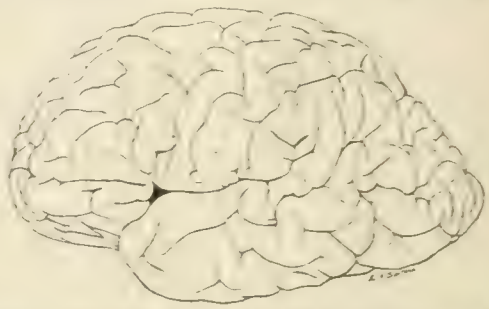


Figure 1. Lateral view of the left hemisphere from the assassin, Czolgosz. This drawing, as were the others of the brain, was made from the fresh [illegible]. Although the author [illegible] these drawings show the disposition of the fissures and gyres in a fairly correct manner.

tract and the taenia thalami ("ripa" of Wilder) are used as guides for a single simple incision: those of either side converge cephalad to meet in front of the chiasm: the usual cut through the callosum and the terma (lamina terminalis) completes a tri-section which leaves the cerebrum (prosencephal) and brain-axis separated as nearly the ideal as can be. This mode of dissection is a modification of Meynert's plan and is a method by which each hemicerebrum, with the insula intact, is separated from the brain-stem: whereas Meynert, by trenching round the circuminsular boundaries separates the convex cortical mass from the brain-stem plus the insula, leaving a cortical component attached to the axial structures. The Meynert method consequently does not give the weight of the cerebral hemispheres strictly speaking. As far as the

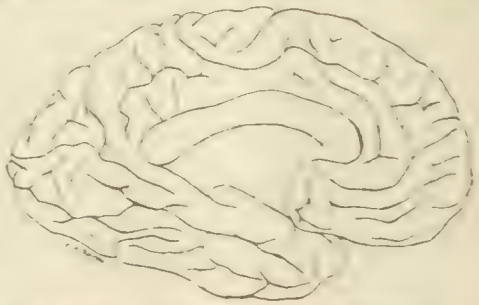


Figure 2. Mesial view of the left hemisphere.

caudatum and lenticularis are concerned, this would not be a serious objection: but as it also excludes the important cortical area of the insula—no inconsiderable portion of the cerebral projecting and associating tracts—it falls short of the method adopted here.

After the brain had been thus dissected and drained, and the pia-arachnoid stripped off the cerebrum, the segments were found to have the following weights:

Left hemicerebrum (without pia)	585 grammes
Right hemicerebrum (without pia)	[illegible]
Cerebellum (with pia-arachnoid)	166 "
Isthmus (with pia-arachnoid)	64 "
	1417 grammes

or a trifle less than 50 ounces.

Examination of the paracoeles (lateral ventricles) in both hemicerebra revealed the veins of the striatum [illegible]

atal veins) injected with deep-violet colored blood. The cornua were of normal extent and conformation throughout. The endyma was smooth, the choroid plexus was normal and contained little blood; the velum interpositum ("velum" of Wilder), was normal.

Description of the Fissures and Gyres.

LEFT HEMICEREBRUM.

The sylvian fissure is 6½ctm. in length; the episylvian, 2¼ ctm.; the hyposylvian is absent. The presylvian ramus is 2 ctm. in length, the subsylvian 1 ctm. in length.

The central fissure is fairly flexuous and ramified; it is

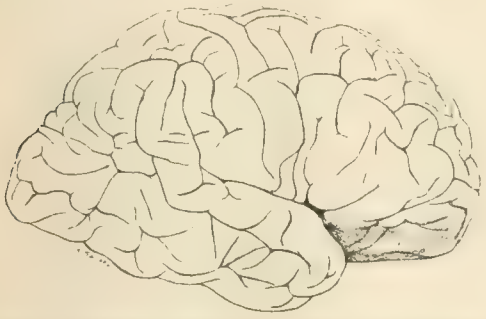


FIGURE 3. Lateral view of the right hemicerebrum.

uninterrupted throughout its length and is separated from the sylvian by a narrow isthmus. At its ventral end the fissure terminates in a hook-like manner. The dorsal end appears on the mesial surface. The supercentral fissure is confluent with the superfrontal, but is separated from the precentral. The superfrontal is distinct in the mid- and post-frontal regions, but is absent in the prefrontal region. The three-tier type is preserved in the

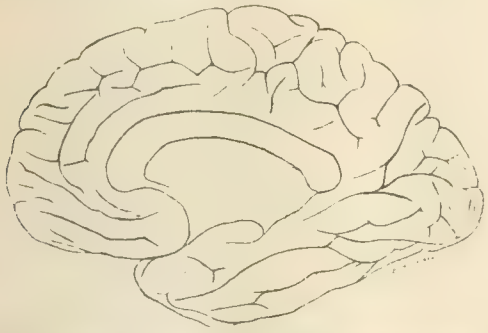


FIGURE 4. Mesial view of the righthemicerebrum.

prefrontal region by the existence of a medifrontal fissural segment about 4 ctm. in length, and which is confluent with the orbito-frontal. This is not very clearly seen in the figure, owing to the effect of the convexity. The reader is referred to the schematic outline in Figure 8.

The precentral fissure is confluent with a small diagonal fissure, and this in turn with the presylvian. It sends an "anterior precentral ramus" across the medifrontal gyrus to anastomose with the superfrontal fissure.

The subfrontal fissure is independent and sends off several rami into the neighboring gyres. There is a long radiate fissure.

The precentral gyrus is not very broad as compared with the postcentral. The three frontal gyres are fairly massive and marked by fissures which run generally transverse.

The postcentral fissural complex consists of three segments. The dorsal one is very flexuous and ramified, but independent. The middle segment is confluent with the parietal, and is only superficially joined to the third segment, the subcentral. The transpostcentral is hardly visible on the external surface, but on examination is found to communicate with the circuminsular fissure.

The parietal fissure is notable for the angle which it makes with the intracerebral cleft, converging rapidly toward it as it passes caudad. It communicates with the paroccipital fissure over a vadum about 6 mm. in depth. Otherwise the paroccipital does not communicate with any other fissure. There are two transparietal fissures; the cephalic one communicating with the precuneal fissure on the mesial surface.

The temporal lobe is of good size and shape. The superior temporal fissure is uninterrupted throughout its length and communicates with the intermedial over a slight vadum.

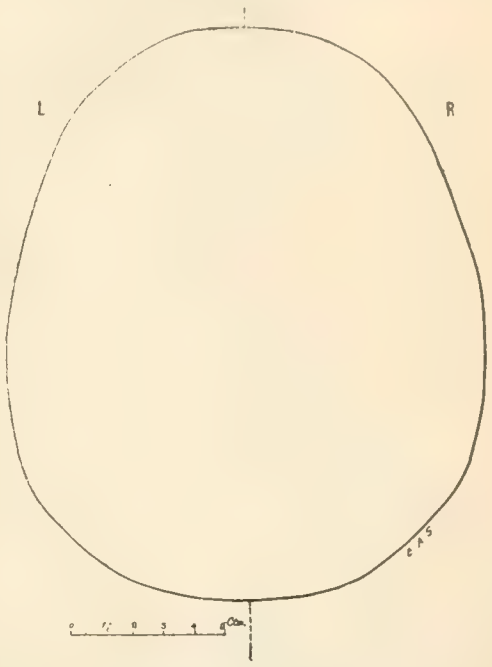


FIGURE 5. Horizontal outline of the head (by lead-strap).

The meditemporal fissure is represented by four segments. Numerous fissures, the "lateral occipital" among them, mark the region of the occipito-temporal transition. The postcalcarine fissure appears on the lateral surface for about 2 ctm.

The postcentral gyrus is of good development and is fairly wide. The marginal, angular and post-parietal gyral



FIGURE 6. Outline over the vertex, from ear to ear (taken just in front of the roots of the zygomae).

portions of the sub-parietal lobule exhibit a moderate development. The parietal gyrus is of cuneiform shape, broad cephalad, narrow caudad. The supertemporal gyrus is very sinuous. The remaining temporal gyres are fairly wide and well-developed.

The subcalcarine gyrus is wide in its caudal portion. The cuneus is small, rather unusually so. The precuneus is of good size and conformation. The paracentral gyrus is of typical appearance and of the usual size.

It is traversed by a well-marked inflected fissure and by a tri-radiate intraparacentral fissure. The mesial surface of the superfrontal gyrus is of moderate size and is marked by five or six transverse fissures, three of which are rami

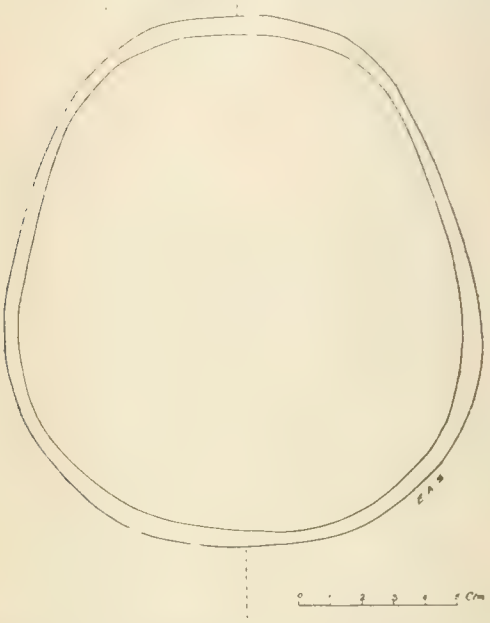


FIGURE 7. Outline drawing of the skull in the plane of the saw-cut described in the text, showing the thickness of the bones.

of the supercallosal. The callosal gyrus in its cephalic half is doubled by a long fissure running parallel with the supercallosal; in its caudal part it is traversed by several transverse fissures.

There are two well-marked rostral fissures (rostral and subrostral) and a short transrostral. The supercallosal fissure is long and anastomoses with the paracentral over a vadum of 5 mm.

The paracentral fissure in turn anastomoses with the precuneal over a vadum of 3 mm. The occipital and calcarine fissures anastomose freely. A "posterior cuneo-lingual" subgyrus tends to partially separate the calcarine from the postcalcarine. The collateral fissure is fairly well ramified.

The insula exhibits a good development. There are six gyres proper, with seven peri-insular digitations. The insula was completely covered by the opercula.



FIGURE 8. Diagrammatic sketch, showing disposition of the fissures and gyral tiers in the frontal lobe of Czolgosz.

RIGHT HEMICEREBRUM.

The sylvian fissure is 5½ ctm. in length; the episylvian 3 ctm.; the hyposylvian 1½ ctm.; the presylvian 2½ ctm.; the subsylvian is very short. The central fissure is uninterrupted throughout its length, and is separated from the sylvian by a very narrow isthmus. Its dorsal end crosses the dorsi-mesal margin. The supercentral fissure anastomoses with a long superfrontal fissure, but not with the precentral.

The precentral fissure joins both the transprecentral and the diagonal, and by means of these the sylvian cleft.*

This fissure gives off an 'anterior precentral ramus" from which springs the caudal segment of the subfrontal fissure.

The superfrontal fissure is long and uninterrupted, extending nearly to the frontal pole. There is no true medifrontal fissure present. The subfrontal fissure is in two segments, the caudal segment being confluent with the precentral by means of its "anterior ramus;" the cephalic segment anastomoses with the orbito-frontal. Besides an independent radiate fissure there are other unnamed fissures in the subfrontal region. There are two long sagittally directed orbital fissures; the lateral one of these communicates with the orbito-frontal.

As in the left half, the precentral gyrus is rather narrow as compared with the broader postcentral gyrus. The three frontal gyres are all of good width and are chiefly marked by transverse fissures.

The postcentral fissural complex is made up of two segments superficially confluent with each other. The dorsal segment is short. The ventral segment is longer, and is confluent with the parietal fissure. The parietal fissure is uninterrupted, deep, and separated from the paroccipital fissure by an isthmus. There is a well-marked post-paroccipital fissure, and one distinct transparietal.

The supertemporal fissure is long, uninterrupted, and not deeply confluent with any other fissure. There are four meditemporal fissural segments. The intermedial joins the parietal. There is a fairly well-marked "lateral occipital" fissure.

The postcentral gyrus is fairly wide and flexuous. The parietal gyrus is wide, and exhibits the same cuneiform shape as described for the left side. Of the sub-parietal gyres the angular gyrus is of fair size, while the remainder of this territory shows only a moderate development. The paroccipital gyrus is very small, but quite flush with the general surface of the brain.

The gyres of the temporal lobe show very good development, and in the occipito-temporal transition the markings are quite complex.

On the mesial surface the supercallosal fissure consists of two segments, and there is a similar duplication of the callosal gyrus (in its cephalic portion) as has been described in the left half. A notable peculiarity consists in the confluence of the inflected fissure with the paracentral stem, while the cephalic paracentral limb is separated from its stem but is joined to the caudal end of the supercallosal. There is tri-radiate intraparacentral. The precuneal fissure would be independent but for a superficial junction with the paracentral.

The occipital fissure is deeply confluent with the calcarine. The postcalcarine is tri-radiate and separated from the calcarine by a "posterior cuneo-lingual" isthmus.

The superfrontal gyrus is fairly well-marked by many transverse fissures, and by two long and distinct rostral (rostral and subrostral) fissures. The precuneus is large, a little larger than its fellow on the left side. The cuneus is as small as on the left half. The subcalcarine gyrus is of considerable width in its caudal portion.

The insula presents an ordinary degree of development and, as on the left side, possesses six gyres, with seven peri-insular digitations.

Section of the Brain.

In cutting the brain, the resistance to the knife suggested neither increased nor diminished consistence. The cut surface was moderately moist, the grey as well as the white matter were of normal color, the cortex was of the usual thickness, and there existed neither anemia nor hy-

*Found by Sernoff in 40 per cent. of Polish brains

peremia. No hemorrhages, sclerotic patches, neoplasms or other lesions were discoverable.

The basal ganglia, crura, cerebellum, pons and oblongata were all perfectly normal, there being even an absence—so far as the naked eye examination could determine—of the small hemorrhages in the floor of the fourth ventricle, which have been usually found in electrocuted criminals.(2)

The spinal cord was not examined.

EXAMINATION OF THE THORAX AND ABDOMEN.

An incision was made from the top of the sternum to the pubic symphisis, a quantity of dark fluid blood escaping. The diaphragm was found attached to the sixth rib on both sides of the sternum. About three to four fluid-drachms of clear fluid were found in the pericardial sac. The heart was firm and appeared to be in a tetanized condition; it had ceased in systole. This contracted condition of the heart is doubtlessly due to the high electromotive force of the fatal current. The ventricles were empty; the heart-walls, endocardium and valves were normal. The weight of the heart was eleven ounces. Both lungs were somewhat emphysematous, floating a trifle more than half out of water. They were moderately pigmented and of firm consistency. None of the bronchial lymph-nodes were enlarged. Except for a few bands of pleuritic adhesions of the right lower lobe, there were no lesions in either lung. The left lung weighed 7¾ ounces, the right lung 8½ ounces.

The larynx, aorta and the venae cavae were normal. The stomach was in the normal position, well contracted, and well under the diaphragm, with only a small residue of food near the pyloric end—the prisoner having had nothing to eat since the evening before the execution.*

The examination of the intestines was a brief one, as nothing unusual was seen. The appendix was 8 ctm. in length, free, and lay dorsad and mesad of the cecum.

The pancreas was normal.

The liver was dark, hyperemic, but healthy; there were no patches, infarctions or other lesions. The gall-bladder contained about one ounce of clear bile. The liver weighed 61 ounces.

The spleen was also hyperemic, mottled with light pink streaks, but of normal structure. Weight, 7⅜ oz.

The kidneys were moderately supplied with fat, markedly hyperemic, but all the structures could be made out clearly to be of normal condition. The left kidney was somewhat larger than usual. The capsule was non-adherent in both instances. The left kidney weighed 7¼ ounces; the right weighed 5¼ ounces.

The bladder was somewhat contracted, firm, and contained about three ounces of clear urine. The bladder-wall and mucous membrane were normal in all respects. The prostate was rather firm, but not enlarged. The urethra, testes, etc., were normal.

It had been the writer's purpose to make a fuller anatomic and anthropometric investigation upon the assassin, but the peculiar circumstances which arose in the matter of the disposal of the body, and the anxiety of the Prison's Warden to put the body under earth, forced me to conclude my researches after having obtained the most essential data for purposes of record and future study.

The results of the necropsy can be summed up by saying that Czolgosz was in excellent health at the time of his death. There was, of course, a marked condition of hyperemia of all the viscera, and the blood was considerably altered in that it remained fluid, doubtlessly due to the destruction of the fibrin-ferment, or of the fibrinogen, or both. These phenomena, as also the seemingly tetanized condition of the heart, have been observed by E. C. Spitzka, Carlos F. MacDonald, Van Gieson, and E. W. Holmes, (3) on criminals executed by lethal currents of electricity.

The external appearances of the body of the assassin, especially the facial expression, have been admirably described by Murat Halstead, who happened to be present, in a short but vivid account of the autopsy entitled, "Czolgosz after Death."

"The spectacle was interesting; the assassin had been dead but a few minutes, and was lying at full length on his back on the table provided for the surgeons, his body white as marble, his face not at all distorted. One might say he was as if sleeping, but that would not describe the expression of the features, though that was almost of perfect repose. The head rested on the back part of the table so as to elevate the chin and allow the forehead to slope downward. There was no sign of a great agony; the hair had not been removed for the electrode, but was full of water from the sponge, and in disorder. If there was any mark on the head made by the deadly shock it was not visible. There was a red blotch on the right leg below the knee.—The strong throat, with a distinct "Adams apple" was prominent. The lips were slightly parted with more than the curl they had in life.—There was nothing in the appearance of the body of the emaciation from imprisonment so often referred to. Any physician would say the corpse was that of a well-nourished young man. The figure was of good proportions, his limbs especially so. The arms were not muscular. Evidently he was not a man who had cultivated his muscles by exercise or expanded them by labor. The arms were of a young man of leisure—smooth round and fair. His hands were not in any way notable. He had high insteps, neat ankles and long toes. The muscles of the legs were better developed than those of his arms, indicating he was swift of foot. He was not noticeably spare in body; his chest was round and symmetrical—not lean—but the ribs quite distinct. With his head thrown back, it seemed to have been well poised in life, more so than is shown in his pictures—all of which that are familiar having been taken in prison. Nothing in his face or his person gave indication of heavy feeding or drinking, or of evil indulgence. There were none of the inevitable traces of confirmed dissipation."

The question as to whether his body invested a healthy mind opens up a wide topic for discussion which it is not entirely in the writer's province to pursue. So far as our knowledge of the correlation of brain-structure and brain-function extends, nothing has been found in the brain of this assassin that would condone his crime for the reason of mental disease due to intrinsic cerebral defect or distortion. The brain-weight, though by itself unimportant, when considered in its other relations, points to a good condition of the organ. Divested of its membranes, dissected, drained, and after being immersed in a salt-solution for several hours, its weight was 1415 grammes, a trifle less than fifty ounces. This weight is even a little over the average. Giltschenko (4) records observations upon the weight of 102 Polish brains, the average being for males, 1397.8 grammes, with an average stature of 168.12 ctm. The development of the fissures and gyres, from a morphological viewpoint, has taken place in the direction usual in ordinary average brains. There are no marked evidences of arrested development or of pithecoidal anomalies. Generally speaking, this brain does not exhibit that especial kind of asymmetry of gyral structure in the cerebral halves that is so characteristic of the brains of highly endowed individuals. There are many features in the one hemisphere that are reproduced almost exactly alike in the other. The few peculiarities encountered in the course of the fissures, such as the confluence of the left precentral, by its anterior ramus, with the superfrontal—across the medi-frontal gyrus; or the separation of the right cephalic paracentral limb from its stem, while at the same time the inflected joins the paracentral—(a feature found by the writer in 9 out of 160 hemicerebra in which the inflected was present (5)); and also the smallness of the cuneus—are insignificant so far as individual brains are concerned, and will be discussed at length in a later contribution. (6).

The skull is not symmetrical, but the asymmetry is slight and fully within the normal range of variation. An absolutely symmetrical skull probably does not exist.

It is a probable fact that certain oft-mentioned aberrations from the normal standard of brain-structure are commonly encountered in some criminal or degraded classes of society, and those who have attempted to found a school of degeneracy have endeavored to explain crime and social wickedness as due to the "accidental persistence of lower types of human organization." But these structural anomalies, so far as they have been described in the brains of criminals, are too few and too insufficiently corroborated to warrant us in drawing conclusions from them. Various perversions or anomalies of mind may exist in this class without presenting a uniform criminal type, either from

*The "hearty breakfast" so graphically described in most newspapers was but a figment of the imagination.

the sociological or the anatomic aspect. Of course, it is far more difficult—and it is impossible in some cases—to establish sanity upon the results of an examination of the brain, than it is to prove insanity. It is well-known that some forms of psychosis have absolutely no ascertainable anatomical basis; and the assumption has been made that these psychoses depend rather upon circulatory and chemical disturbances. So far as this question touches upon the brain and body of Czolgosz, there have been found absolutely none of those conditions of any of the viscera that could have been at the bottom of any mental derangement. Taking all in all, the verdict must be, "socially diseased and perverted, but not mentally diseased." The most horrible violations of human law cannot always be condoned by the plea of insanity. "The wild beast slumbers in us all. It is not always necessary to invoke insanity to explain its awakening.

In conclusion, the writer wishes to express to Dr. Carlos F. MacDonald his appreciation of and thanks for the exceptional opportunity afforded in the performance of this autopsy.*

*The reader who may have happened to see an article entitled "'Degeneracy and Political Assassination," by Eugene S. Talbot, M. D., D. D. S., in Medicine, December, 1901, must be surprised to find that the citation of "It is admitted by E. A. Spitzka that the brain presented anomalies," is directly contradicted here. This is one of those numerous instances showing the desirability of medical writers awaiting the responsible publications of scientific results or conclusions, instead of giving newspaper canards currency by incorporating them in their papers, and at the same time distorting facts to fit the theories they hold. The paper of Dr. Talbot presents such an endless vista of degeneracy as to give ground for the apprehension that many other facts on which it rests were obtained in a similarly uncritical way, and hence misled that writer as unfortunately as in the Czolgosz matter.

The incorrect and misrepresenting citations were sufficiently trying without additional infliction in the way of an invidious implication, be it ever so unintentional on Dr. Talbot's part, but when the entire tone of the article in reference to the Czolgosz trial is critical anent its alleged "cooked and dried" character, and he intimates suppression of post-mortem evidences, it sounds as if "It is admitted by E. A. Spitzka that the brain presented anomalies," indicated an unwilling admission and hence a partisan spirit. However, as the statement is altogether false, this feature needs no more consideration than "no microscopic examination worthy of the name was made."

We deserve at least this piece of justice that we did not pretend to have done anything we did not do. Had we made one, it would have been our aim to have been more accurate in citation of collateral writers than Dr. Talbot has been or seems to have aimed at being. So how can it have been worthy or unworthy of any name, I cannot see.

Dr. Talbot, not familiar with the laws of New York State, commits another error when he says:

"The course of the court in refusing to accept his plea of guilty and forcing him to accept counsel is justifiable only on the ground of assumed insanity."

The laws of this State do not permit the plea of guilty in capital offences.

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Epithelioma of the Scalp.—Dr. A. Morelle reports a case of epithelioma of the scalp in the occipital region, in a woman of 58. The tumor was very large and the occipital glands were swollen. The entire tumor was extirpated, some of the periosteum being necessarily removed. Flaps were made from the surrounding scalp, and bits of skin applied by the Tiersch method, from the buttocks. She recovered rapidly, and has had no recurrence since. (*Presse Medicale Belge*, July 7, 1901, No. 27). [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended December 27, 1901.

SMALLPOX—United States.

			Cases	Deaths
CALIFORNIA:	San Francisco.	Dec. 8-15.	1	
ILLINOIS:	Chicago	Dec. 14-21.	2	
INDIANA:	Evansville	Dec. 14-21	[illegible]	
IOWA:	Clinton.	Dec. 14-21.	[illegible]	
LOUISIANA:	New Orleans.	Dec. 14-21.	1	
	Shreveport.	Dec. 14-21.	[illegible]	
MASSACHUSETTS:	Boston.	Dec. 14-21.	41	12
	Cambridge.	Dec. 14-21.	[illegible]	
	Gloucester	Dec. 14-21.	2	
	Lowell.	Dec. 14-21.	6	
	Malden.	Dec. 14-21.	3	1
	Somerville.	Dec. 13-20	1	
MICHIGAN:	Grand Rapids.	Dec. 14-21.	1	
MINNESOTA:	Minneapolis	Dec. 7-14	7	
NEBRASKA:	Omaha.	Dec. 14-21.	3	
NEW HAMPSHIRE	Nashua.	Dec. 14-21.	1	
NEW JERSEY:	Camden.	Dec. 14 21.	15	
	Newark.	Dec. 14-21.	24	12
NEW YORK:	New York	Dec. 14-21.	2	1
OHIO:	Ashtabula.	Dec. 14-21.	1	
	Cincinnati	Dec. 13-21.	11	
	Cleveland.	Dec. 14-21.	1	
	Massillon.	Dec. 7-14.	[illegible]	
PENNSYLVANIA:	Lebanon.	Dec. 14-21.	7	
	Philadelphia.	Dec. 14-21.	[illegible]	1
SOUTH CAROLINA	Greenville	Dec. 7-14.	[illegible]	
TENNESSEE:	Memphis	Dec. 14-21.	[illegible]	
UTAH:	Salt Lake City.	Dec. 14-21.	[illegible]	
VERMONT:	Burlington.	Sept. 28-Dec.21	35	
WISCONSIN:	Green Bay.	Dec. 15-22.	7	
	Milwaukee.	Dec. 14-21.	1	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	Nov. 23-Dec.7.	7	
BELGIUM:	Antwerp.	Nov. 23-30.	3	
	Ghent	Nov. 30-Dec. 7.		3
CANADA:	Halifax.	Dec. 7-21.	[illegible]	
	St. John.	Dec. 7-21.	11	2
	Windsor.	Dec. 14-21.	1	
	Winnipeg	Dec. 7-14.	4	
COLOMBIA:	Cartagena	Nov. 23-30.	[illegible]	2
	Panama.	Dec. 9-16	25	
FRANCE:	Paris	Nov.30-Dec.7.	1	
GREAT BRITAIN:	Glasgow	Dec. 6-13.	[illegible]	4
	Liverpool	Nov. 23-Dec. 7	5	
	London	Nov. 23-Dec. 7	174	20
INDIA:	Calcutta.	Nov. 16-23.	[illegible]	3
	Madras	Nov. [illegible]	[illegible]	2
ITALY:	Naples	Nov. 23-30.	18	1
RUSSIA:	Moscow	Nov. [illegible]	28	9
	Odessa	Nov. [illegible]	[illegible]	3
	St. Petersburg.	Nov. [illegible]	[illegible]	
	Warsaw	Nov. 16-23.	[illegible]	1
SPAIN:	Coruna	Nov. 30-Dec. 7	[illegible]	3

YELLOW FEVER.

BRITISH WEST INDIES:	St. Lucia.	Dec. [illegible]	[illegible]	3
MEXICO.	Vera Cruz	Dec. 1-14.	[illegible]	17

CHOLERA.

CUBA:	Havana	Nov. 29	1 death from S. S. Buenos Aires.	
INDIA:	Bombay	Nov. 19-26.	[illegible]	4
	Calcutta	Nov. [illegible]	[illegible]	76
	Madras.	Nov. [illegible]	[illegible]	57
STRAITS SETTLEMENTS:	Singapore:	Nov. 17-Nov.23.		3

PLAGUE—Foreign and Insular

INDIA:	Bombay	Nov. [illegible]	[illegible]	85
	Calcutta	Nov. 16-23		48
	Karachi.	Nov. 16-17.	71	49
RUSSIA:	Batoun.	Nov. 30.	1	
TURKEY:	Constantinople	Nov. 24-27	1	
HAWAII.	Honolulu.	Dec. 5.		1

Department For Co-operation and Original Research.

INFECTIOUS DISEASES.

By JOSEPH SAILER, M. D.

The infectious diseases that have received the most attention during the past three months are: typhoid fever, plague, influenza, and malaria.

TYPHOID FEVER.

In typhoid fever quite a little new work has been done, particularly in regard to complications, and in reference to reactions of bacteria other than the typhoid bacillus, with the serum of patients suffering apparently from typhoid fever. There is still a considerable amount of literature upon the **Widal reaction.** Hirschfeldt (1) has tested it in one hundred children suffering from various febrile diseases. It was positive in 42 and in the remaining 58 typhoid fever could be excluded. In view of these excellent results he regards the reaction as more valuable in children than in adults. Wilson (2) has studied the reaction in two hundred and sixty-five cases of typhoid fever in all of which it was positive. This paper is an explanation of the cause of negative reactions in some typical cases, for he was unable in many instances to obtain the reaction before the 9th day of the disease, and in one case it was negative on the 35th and positive on the 37th day. Marsden (3) and Morse (4) believe that, if the reaction is negative a number of times and particularly after convalesence has been established, that a diagnosis of typhoid fever must be abandoned. A most interesting article in regard to this reaction is that of Sacquepée (5) who has made a series of studies for the purpose of determining to what extent the colon bacillus agglutinates in serum of typhoid fever patients. He found agglutination quite common if cultures were used obtained from the stools of the patient himself during the course of the disease. It occurred somewhat less frequently when the cultures were obtained from the stools of the patient at some other time, and least frequently if the cultures were obtained from other patients suffering from typhoid fever. He thinks that this reaction possibly represents a double infection. A considerable number of interesting **complications** have also been recorded. Allyn (6) gives an excellent report of a case in which during the fourth week of the disease there was a sudden drop in temperature, pain in the abdomen and symptoms of peritonitis. An operation was performed and peritonitis found, but no perforation. The patient died three days later and at the necropsy a connection was discovered between the colon and the gall bladder. He states that this is the only case on record of this extraordinary condition. Wishart (7) reports a case in which, during convalescence, severe dyspnea developed, due to swelling of the vocal cords and ulceration of one of them. The symptoms became so urgent that tracheotomy was necessary; the patient subsequently recovered. Thornton (8) reports a case in which perforation occurred during a relapse. The symptoms were typical, but he states that he regards the abolition of liver dulness without tympanites as conclusive proof of perforation. In this case a successful operation was performed, but eight days later the patient died as a result of the continued progress of the fever. Jochmann (9) mentions a case complicated by several cutaneous abscesses from which the staphylococcus aureus was isolated. The patient complained of pain in the chest, and at the necropsy a solution of continuity of the sternum was found due to acute inflammation and softening of the bone, with a secondary abscess in the anterior mediastinum. The staphylococcus aureus was isolated from the bone and from the abscess. Acute osteomyelitis is one of the rarest complications of typhoid fever. Scott (10) reports an excellently studied case of typhoid fever in which on the 27th day cardiac symptoms occurred, and the patient developed endocarditis. Fisher (11) reports 4 cases of typhoid fever complicated by pneumonia. Bacteriological studies were not made, and autopsies were obtained in only two cases, and in one of these the Widal reaction had been persistently negative. Barlow (12) reports a case of typhoid fever in a child of 13 months with characteristic symptoms, and the Widal reaction in high dilution. No intestinal lesions were found at the autopsy, but the typhoid bacillus was obtained from the tissues after death. In a discussion in the British Medical Association, Houston (13) stated he believed that enteric fever was preventable provided sufficiently rigorous measures were employed. Dixie added that the disease had apparently decreased in London. Smith argued that the respiration of sewer gas would so decrease the vitality that infection became more likely. Heft criticized the prevailing method of estimating the quality of drinking water and suggested that a very small number of virulent microorganisms in a cubic centimeter might constitute pollution. Very little has been added to the **treatment.** Taylor (14) urges that milk should not be given to patients who have gastric catarrh, or myasthenia. The old theory that typhoid fever from which one has recovered is really of benefit to the system seems to be upheld by the remarkable case of Downs (15) in which during four months following recovery four severe but successful operations were performed, and Fisher (16) mentions the case of a man suffering from tuberculosis who was being treated by Koch's TR. This patient developed typhoid fever in a severe form, from which however he recovered, and subsequently a residence in California produced extraordinary improvements in his pulmonary condition. Fisher believes that possibly the typhoid fever exerted a tonic effect. Fütterer (17) urges his claims to priority in the discovery of the typhoid bacillus in the gall bladder, and he states that as early as 1888 he recognized that the infection of the bile was hematogenic, and that relapse might be due to the discharge of the bacteria with the bile into the intestine. We are beginning to learn that the typhoid bacillus can produce a considerable variety of **clinical manifestations.** Dalglische (18) mentions that an epidemic of catarrhal jaundice among the British troops in South Africa varied exactly with the epidemics of typhoid fever and malaria which existed at the same time, and he suspected, without definite proof, that the typhoid bacillus was the cause. The last quarter of the year is notable for the paper of Kurth (19) which makes us acquainted with what is apparently **a new infectious disease.** During an epidemic of typhoid fever in Bremen (which was very carefully studied bacteriologically) five cases were observed in the hospital, in which the Widal reaction could not be obtained although the clinical course was apparently typical. From the stools of these cases he obtained a new variety of bacillus, the B. Bremensis febris gastrica. This reacted with the blood in dilutions as high as 1 to 8000. It resembles in some respects the bacillus enteriditis of Gaertener; is intensely pathogenic for mice and guinea pigs, but does not cause infection in these animals when administered by the mouth. It produces a toxin that is extremely sensitive to heat and has certain cultural and staining peculiarities. The disease was characterized by a rather mild febrile course, and the bacilli were found in the urine and in the stools. Kurth suggested that perhaps this discovery will account for some of the cases of the old clinical type of disease known as gastric fever.

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THE PLAGUE.

Considerable literature has appeared upon the plague which seems to have spread itself pretty well over the entire world by this time. The most interesting points which have recently been added are in regard to the treatment by intravenous injections, and the relation of plague in human beings to the same disease in the lower animals. Thus, Davis (1) would prevent the distribution of plague by freeing vessels of rats. Eddington (3) mentions that there was great mortality among the dock rats at Cape Town just before the epidemic. He believes, however, that they were killed by a variety of the bacillus of hemorrhagic septicemia. The bacillus of Danysz does not appear to fulfill the hopes that were felt regarding it. Kline and Williams (4) have been unable to produce fatal epidemics in rats by its means. Flexner (2) was unable to discover the plague bacillus in San Francisco rats. The most important measure in controlling an epidemic is an early diagnosis of the existence of the disease, a point upon which Barker (5) lays especial stress. Among the important complications albuminuria has been particularly studied. Hawthorne (6) has complete records of the urine of 597 cases. Twenty-five per cent of the non fatal cases did not have albuminuria, and only 7% of the fatal ones. She thinks that the quantity of albumin bears some relation to the severity of the infection and therefore is a guide in prognosis. Retention of urine occurred in .19% of the non fatal cases, and in 12.17% of the fatal cases. Plague bacilli were never found, and are probably not eliminated by the kidney. An interesting paper is that of Jacques and Gautier who observed marked irregularity in the temperature in some cases suffering from plague, that had been quarantined at Marseilles, and during convalescence found the plasmodium of malaria in the blood. They suppose that the malaria infection was latent, and was developed by the presence of the plague bacillus. In one case, after some abdominal symptoms, pus was discharged in the urine, and they regard it as probably caused by the suppuration of an internal bubo. Yerson's serum is gradually recovering its reputation, as a result of new methods of employment. Brownlee (8) has treated a number of cases, and observed that in all, after intravenous injections, the symptoms improved within 24 hours. After subcutaneous injections the improvement was slight or doubtful. Four of his cases were fatal, and in all some complication was found that sufficiently accounted for death. When subcutaneous injections were given so that the fluid would be conveyed to the buboes by the lymphatics, bacilli isolated from the buboes often showed marked retrogressive changes. Novy (9) reports a case of laboratory infection of the most severe type. During the first 24 hours the patient received 60 cc. of serum subcutaneously, and 60 cc. of serum intravenously. A few hours after the last intravenous injection the temperature dropped to 100°, and on the third day it was normal. The patient had swollen joints and hives, both of which were ascribed to the serum, and cardiac weakness that persisted long into convalescence.

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SUNDRY INFECTIOUS CONDITIONS.

MALTA FEVER.

Malta fever has certainly become established in the United States. (1) Currier reports eight cases from the Army and Navy General Hospital at Hot Springs, Ark., all occurring in soldiers returned from the Philippines, and in all a diagnosis of rheumatism had first been made. The correct diagnosis was only determined by the reaction with the Micrococcus melitensis. Strathe (2) has observed an epidemic of a peculiar disease at Forsyth, Ga., the symptoms consisting of malaise for three or four days, with variable symptoms, and sometimes high temperature. The course is from five to fifteen days, the patients recover but feel weak, and the fever apparently diminishes by lysis. He suspects that it is closely allied to Malta fever.

INFLUENZA.

Frank (3) describes several signs of this condition which he regards as typical. Reddish streaks may occur upon the anterior border of the soft palate, varying in size from 1 to 3 mm., and usually arranged in a radiate manner. The only symptom they produce is a feeling of slight constriction of the throat. Sometimes there is swelling of the anterior papillae of the tongue such as occurs in scarlet fever and occasionally in measles, but not in other infectious diseases. The spleen may be considerably enlarged, and its size may fluctuate with the intensity of the symptoms and degree of the fever. He mentions illustrative cases. The complications of influenza are still numerous. Perigal (4) mentions meningitis, and Eichhorst (5) describes a remarkable case in which as a result of thrombosis of the axillary artery the right arm became gangrenous. He appends to his article an almost complete synopsis of the literature on the subject, from which it appears that gangrene of the extremities occurs most frequently in typhoid fever, typhus fever, and influenza. Babes and Robin (6) report a number of cases of influenza which commenced with symptoms characteristic of typhoid fever. In most of these cases the Widal reaction was obtained in high dilution, although in one, the typhoid bacillus could not be isolated from the tissues after death, and the lesions were not characteristic. The influenza bacillus was obtained from all the cases, either during life, or after death. They regard them as illustrative of a primary infection with the typhoid bacillus, and a secondary infection with the influenza bacillus which checked the growth of the typhoid germ.

YELLOW FEVER.

Comparatively little work has been done upon yellow fever. Reed, Carroll and Agramonte (7) continue to accumulate evidence that the mosquito is an important factor in the transmission of the disease. Pernel (8) mentions some epidemics which occurred on shipboard at sea when the ships were entirely free from mosquitoes.

SMALLPOX.

Soiland (9) describes a very mild epidemic that occurred in central Louisiana with one death in 150 cases. Confluent eruptions occurred in 34 cases. Roger and Weil [illegible] describe the rash of smallpox which precedes the typical eruption. It is more frequent in women than in men and occurs chiefly upon the flexor surfaces of the joints. They mention six varieties. [illegible] patients with pus from the smallpox eruptions and found [illegible] the disease which in some instances resembled streptococcus. They noted that if the rabbits were well fed they usually survived showing the importance of resistance to the organism. Roger [illegible] in these cases of smallpox are far more numerous in the neighborhood of the smallpox hospitals than elsewhere in the city.

CEREBRO-SPINAL MENINGITIS.

[illegible] has occurred [illegible] in [illegible]. [illegible] of the [illegible] from the

nose of a patient suffering with the disease will cause infection of a guinea pig with the meningococcus when deposited upon the nasal mucous membrane. He therefore believes that epidemics are probaly transmitted by discharges from the respiratory tracts. Sicard (13) collects some very remarkable cases of suppurative cerebro-spinal meningitis which caused sudden death with few or no preliminary symptoms, or which were only diagnosed by lumbar puncture in patients who manifested few signs of the disease. He groups these under the term "ambulatory cerebro-spinal meningitis," and although many of the cases were not carefully studied, in all those that were, the meningococcus was found to be the infectious agent. Buchanan (14) believes that the carrier of the contagion is dust; 57 of 60 cases that he studied having worked in dusty atmospheres. He reports three cases, one complicated by arthritis, one by hemiplegia, and one of the fulminant hemorrhagic type. Bacteriological records are lacking.

Jordan (15) calls attention to the fact tnat the staphylococcus aureus occasionally produces erysiplas in human beings.

Perkins (16) gives an interesting account of nine cases of pyocyaneous infection. The microorganism produces very variable symptoms according to the site of infection; causing in one case cerebro-spinal meningitis; in another pneumonia; in a third peritonitis; in a fourth orchitis; in another softening of the bone; and in one extraordinary case multiple small abscesses of the brain.

Syphilis and tuberculosis are only included when they give rise to infectious processes differing in their characteristic forms.

Stewart (17) describes a very unusual case in which he was able to make a correct diagnosis. The patient, a nurse, had cared for a patient suffering with pulmonary tuberculosis. She was suddenly attacked with severe chills, high fever, and extreme prostration. The only symptom was enlargement of the spleen. Malaria and typhoid fever being excluded, a diagnosis of splenic tuberculosis was made, which was confirmed at the autopsy.

Otis (18) has obtained six typical reactions with tuberculin in 35 cases of syphilis, and de Lille and Julien (19 and 20) have obtained a new bacillus from the plasma of syphilis that reacts with other blood serums.

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MALARIA.

The chief interest in connection with malaria at present centers in the relation of this disease to the anopheles mosquito. Mauser (1), for example, allowed himself to be bitten by mosquitoes fed in Rome on a case of tertian malarial fever. The period of inoculation was between 10 and 16 days, he then developed fever and the parasites were found in the blood. Nine months later, when he had been apparently cured by quinine, he spontaneously developed malaria. Young (2) stated in a discussion before the British Medical Association, that in Hong Kong the occurrence of malaria was always associated with the appearance of the anopheles mosquitoes; and Manson (3) urged that the natural conditions antagonistic to this insect should be discovered and employed to exterminate them. Fernside (4) stated that it was impossible to eradicate the mosquito in India, because to do so would destroy the rice swamps. Natal (5) stated that the anopheles is attracted by dark colors and repelled by light colors, a hint that may be of practical use. On the other hand, Egbert (6) states that in the mountains of Honduras at an altitude far above the mosquito belt malarial fever of both the quotidian and tertian types is frequent, and he thinks it is propagated by fleas. The prophylactic treatment, of course, consists in avoiding mosquito bites, for which Bras (7) employs the punkah or the electric fan, and Macgregor (8) recommends extermination by filling the swamps or covering the pools with kerosene. He warns that results should not be expected for 2 or 3 years, and in the meantime prophylactic doses of quinine should be employed. Ewing (9) contributes a valuable study of the life history of the malarial parasite which serves to show how incomplete is our knowledge of this organism at present. The relation of quinine to malarial hemoglobinuria is still unsettled. Klein (10) reports 15 cases in which this complication followed almost immediately the administration of quinine. He cautions against the careless administration of the drug in large doses, and thinks that black water fever is the result of poisoning by it. Smith and Taylor (11) report 2 cases, one in an officer who had been taking quinine in moderate doses for a long time; the other in a negro soldier. The parasites appear to have been exceedingly few in the blood. Two extraordinary complications are noted. The first observed by Mellroy (12) was a negro who went into a state of coma lasting 7 hours; bullae developed upon the knees, and 4 weeks later they became gangrenous. The estivo autumnal parasites were found. The second, observed by Ewing (13), was a girl who was brought to the hospital suffering from fever, vomiting, and constipation. There was considerable albumin in the urine, and a diagnosis of typhoid fever with acute nephritis was made. At the autopsy the renal tubules were found packed with malarial parasites. Ewing concludes as the result of a study of recorded cases, that malaria may produce acute degeneration of toxic origin in the kidneys or focal necroses with numerous hemorrhages, and the parasites may be massed in the renal capillaries, causing hemorrhage and thrombosis. The last form occurs only in estivo autumnal infections.

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RARE FORMS OF INFECTION.

Musser (1) reports 2 cases of streptothrix infection. The first, a man of 37, had the physical signs of bronchitis, and moderate fever. In the course of the disease signs of broncho-pneumonia developed, and the fever became more severe. There was no leukocytosis, but the sputum contained a few organisms, occasionally branched, that stained faint red by the tubercle bacillus staining method. Cultures were negative. The second patient, a man of 24, was suddenly attacked with severe headache, and became unconscious. Later there were some symptoms of disturbance of innervation on the right side of the body, and the patient died. At the autopsy a cavity was found in the cerebrum just anterior to the fissure of Rolando. Careful histological examination showed in a few places bunches of tangled filaments that had a peculiar staining reaction. Cultures and inoculations were negative. All the cases of this condition, hitherto reported, are tabulated, and Musser suggests that probably many cases described as sterile abscess have been due to streptothrical infection. The clinical course of this form of infection is usually afebrile.

Williams (2) has conducted some elaborate studies in order to determine the frequency of unsuspected [illegible]

chinosis in the United States. In 505 post mortem examinations the results were positive 27 times. The disease appears to be more frequent among the foreign-born then in the native population, and among the insane than among the sane.

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PEDIATRICS.

THE INFECTIONS OF CHILDHOOD.

By MAURICE OSTHEIMER, M. D.,

The most important work since June is the discussion upon the early diagnosis of the acute specific fevers, at the British Medical Association Meeting in Cheltenham, England, July 31, 1901. The only novelty in this field has been offered by Weil, Courmont, Montagard, and Pehu, who have studied the leukocytic formulae found in the different infectious diseases, with the object of facilitating diagnosis.

Diphtheria.—Caiger (1) believes that a speck of definite exudate upon the tonsils or rhinorrhea without other evidence of catarrh, will almost certainly prove to be diphtheria. When bacilli apparently conforming to the Klebs-Löffler bacillus both morphologically and in culture are found in a case in which the clinical aspect is negative, bacteriological examination cannot be regarded as conclusive unless it includes the result of animal inoculation. When bacilli are found that conform to the Klebs-Löffler bacillus in their microscopical, cultural, and staining characters, and the clinical appearances of the case are consistent with diphtheria, the bacteriological evidence may be held sufficient to establish the diagnosis. Failure to detect the Klebs-Löffler bacillus in a case which, from the clinical standpoint, is negative, is sufficient to exclude the diagnosis of diphtheria, provided the negative result be confirmed by at least one subsequent examination. On the other hand, failure to detect the Klebs-Löffler bacillus, even though subsequent examination should prove negative, cannot be held to exclude diphtheria, should the clinical appearances be distinctly suggestive of that disease. Clinically it is often impossible to distinguish diphtheria from follicular tonsillitis. In tonsillitis the exudate is usually limited to the tonsils, while in diphtheria it spreads to the surrounding parts. Goodall (2) states that bacteriological examination is not always helpful, since scarlet fever and diphtheria may co-exist. Marsden, (3) in his excellent report of an epidemic among convalescent scarlet fever patients, believes that the epidemic was due to diphtheria bacilli found in the throats of newly admitted scarlet fever patients. Laryngeal diphtheria is to be suspected when the scarlet fever is too mild to produce rhinitis, when one nostril is more affected than the other, when blood occurs in the nasal discharge, or when a membrane is formed. Marsden advises antitoxin injections for all children exposed to diphtheria. Ootmar (4) reports an epidemic in Ham. Mason (5) reports the occurrence of diphtheria during the first week of typhoid fever in a child of six. When the onset of the disease is sudden, with fever and vomiting, and antitoxin causes no amelioration, the patient should be watched for a scarlatiniform eruption. Lovell Drage (6) believes that all cases of sore throat could be treated as diphtheria. Roger (7) had 207 cases of diphtheria under treatment last year at the Aubervilliers Hospital, 13 in infants, with 5 deaths, and 8 in children over 2 years of age, of whom 3 died. Beaton, Caiger and Pakes, (8) lay stress upon the value of Neisser's double stain in the differentiation of the Klebs-Löffler bacillus, the diphtheria bacilli showing bluish black granules. Cover-slip preparations can be made from the throat directly. The bacilli are easily recognized, and no time is lost waiting for a culture. Pitfield (9) reiterates these facts in a very thorough article to which he appends the directions for preparing the Neisser stains, with their composition. That diphtheria can be spread by dental instruments is noted by Steeves. (10). The latest statistics upon the use of diphtheria antitoxin, collected by Steele (11) show that the former death rate of 65% has fallen to 16%. It varies with the strength and promptness of the injection. Jump (12) inoculates every child exposed to diphtheria with 500 units, with excellent results. Shurly's (13) results, as noted in his painstaking work upon treating laryngeal diphtheria with antitoxin and intubation, are satisfactory, speedy, and certain. Dzierzgowski (14) shows that the fetus acquires an immunity to diphtheria *in utero*, especially when the mother is affected with the disease during the early months of pregnancy. But the new born infant does not long remain imune. The treatment of diphtheria other than with antitoxin is reviewed by Griffith, (15), in full. Among the interesting complications noted was Henoch's purpura, appearing in a girl of 10 upon the sixth day of the disease Buckley (16) noted hematemesis, petechiae, and hemorrhagic vesicles in this case. Walsh (17) noticed urticaria in a child of 12, upon the fourth and fifth days. In both of these cases antitoxin had been given, but in neither case does the author consider the eruption due to antitoxin. Paralysis of the ciliary muscle is a frequent complication of diphtheria. Rivault (18) shows it to be due to the effect of the diphtheria toxin upon the nerve centers. His thesis is most interesting.

Scarlet Fever.—Variot (19) states that though rash, angina, and fever may simulate scarlet fever, when all three are found together in a child, and the eruption appears from 24 to 36 hours after the others, the child should be isolated with the diagnosis of scarlet fever. Caiger, (1) in his excellent paper defines the angina of scarlet fever as a vivid, red injection of the whole faucial mucous membrane with a raw, clean tongue, generally accompanied by vomiting. The vomiting, short incubation and faucial inflammation will distinguish it from rubella. Sympson (20) thinks the circumoral pallor and the great heat of the skin very important in the diagnosis of scarlet fever. Stoupy (44) noted a redness of the palmar and plantar surfaces in 35 cases, after the first 24 to 36 hours of the period of invasion. In 13 of these cases, which are minutely described, no eruption followed, yet desquamation occurred about the thirteenth day. Weil (21) has found that the leukocytic count in scarlatina always shows marked polynuclear leukocytosis. Roger (7) reports 28 cases during 1900, in children over two years old, all recovering. Of the 12 infants affected, two died. A mild epidemic in Louisiana is briefly described by Owen (22). Steeves (10) refers to the infection of patients by dental instruments. DeVos (23) believes that the fever is due to gastro-intestinal intoxication, and advises continued high enemata, a practice which surely does more harm than good. Seibert (24) advises the application of an iodine and carbolic acid solution to the tonsils, and resorcin-alcohol to the naso-pharynx, a method which he has found successful. Brown (25) states that the local use of hydrogen dioxide prevents sequelae. Otitis media complicating scarlatina often contains Klebs-Löffler bacilli, and may cause infection Marsden (3) considers a large percentage of the cases of so-called secondary sore throat in scarlet fever to be true diphtheria. Eichhorst (26) reports an unusual complication of scarlet fever, gangrene of the foot and leg in a girl of 4, due to embolism of the popliteal artery from aortic thrombosis. The child recovered after amputation. Roger (7) reports but four cases of albuminuria with scarlet fever. That this albuminuria may become orthostatic is shown by Aubertin (27) who reports in an excellent paper 4 cases in which the albumin appeared only after standing, without any symptoms of fatigue, during convalescence from scarlatina. He believes that many cases of orthostatic albuminuria may be the terminal stage of a previous nephritis or at least follow some disturbance of the renal circulation. Other cases are reported by competent observers that seem to confirm this. Albuminuria in childhood is studied in detail by Rathmell (28). Herringham (29) has well collected the literature upon dropsy without albuminuria, a condition generally existing with nephritis or some kidney trouble approximating nephritis. Batten (30) points out that fever is the main cause of this condition.

Measles.—A pre-eruptive stage of 2 or 3 days with marked catarrhal symptoms is of great value in the diagnosis of measles. The rash which appears on the second day, Caiger (1) says is strikingly like that of German measles. But the spots are less irregular, smaller, and pinker in rubella than in measles. He thinks that there is no question as to the permanent value of Koplik's sign in the diagnosis of measles both in respect to its early recognition, and in its differentiation from other infectious diseases. Goodall (2) con-

siders prodromal rashes, often resembling scarlatina, very common in measles. Ashby (31) has not often seen the Koplik spots. Weil (21) and his assistants, Courmont, Montagard, and Pehu (32), in their excellent work upon this subject, found polynuclear leukocytosis during the eruptive stage of measles. Eosinophilic polynuclear leukocytes were rarer than normally. When broncho-pneumonia occurred, a polynuclear hyperleukocytosis resulted, much more marked than that due to the measles alone. Thus measles could never be mistaken for smallpox, in which disease the blood shows a mononuclear leukocytosis with myelocytes and nucleated erythrocytes. Roger (7) reports 9 deaths from broncho-pneumonia. DeVoe (23) advocates the use of high intestinal injections to reduce the fever of measles. As in scarlatina, this measure is generally unnecessary. Caiger (1) says that the pre-eruptive period of post-scarlatinal measles lasts only about one day.

German Measles.—Caiger (1) states that the first sign of rubella is the rash, though tender enlargement of the posterior cervical glands may have existed several days before the eruption. This enlargement of the lymph-glands of the back of the neck is considered pathognomonic of rubella by Kraatsch. Very little rash may appear and catarrhal symptoms are limited to a slight injection of the conjunctiva and faucial mucous membrane. Pyrexia is slight and transient. The rash is less resistant than in measles and does not leave blotches. The period of incubation is ten to fourteen days or more, vomiting is rare and spots appear even in the circumoral region. Roger (7), who has thoroughly collected his statistics, has seen five typical cases in the past year. Sympson (20) found the rash of rubella more behind the ears and around the nose and mouth, and less around the scalp than in measles. Some cases of German measles seem to resemble scarlet fever, some measles. Those resembling measles Dukes (33), to whom this new nomenclature is due, calls rubella, while those which are scarlatinal in type he calls the "fourth disease." Ashby (31), Poynton (34), and Watson Williams (35) agree with Dukes. Caiger (1) cannot agree with Dukes' conclusions, because Dukes found no cases in children who had had scarlet fever, nor could he give the length of the period of incubation. An epidemic of both varieties of rubella, with lamellar desquamation, is reported by Simpson (36).

Chicken Pox.—In the differential diagnosis of varicella from variola, the blood examination is of no service; for Weil (21) shows that there is a constant mononuclear leukocytosis, just as in smallpox. This suggests a close relationship between the casual agents of both conditions, which future investigation may perhaps discover. Goodall (2) has seen a scarlatiniform rash in chicken-pox after the eruption of varicella. Rogers (7) has noted very large bullae in one case, which became hemorrhagic. 6 deaths occurred out of 117 cases in children.

Whooping Cough.—In the diagnosis of pertussis, Caiger (1) notes the relative frequency of the cough at night, its sudden onset, paroxysmal quality, and energetic character, with puffiness under the eyes, subconjunctival edema, viscid sputum, and fine sticky rales, even if there be no whoop. Psychical disturbances, nervousness, and enuresis are common. Koplik (37) and Jochmann and Krause (38), by hard work, found a bacillus in the early stages, in grayish mucus. It is very minute, difficult to cultivate and stain, and may be grown upon coagulated hydrocele fluid. Ashby (31) found a cough much resembling that of pertussis in influenza. Heimann (39), in his table of statistics, shows that pertussis caused more deaths among Prussian infants than all the other infectious diseases together. Guinon (40) reports a most interesting case of multiple neuritis following pertussis, in a girl of 5. Scarlet fever, diphtheria and tetany succeeded the neuritis, yet the child recovered. Haralson (41) uses heroin and belladonna in the treatment of whooping cough; Mays (42) advises counter-irritation over the pneumogastric nerves, either by massage of the neck, mustard plasters, iodine, or hypodermic injections of silver nitrate; while Payne (43) reports success from the use of nasal irrigations with a 1 to 40 carbolic acid solution. Probably each method will be of service in certain cases.

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PHYSIOLOGICAL CHEMISTRY.

SOME RECENT LITERATURE CONCERNING FERMENTS AND THEIR PRODUCTS.

By D. L. EDSALL, M. D.,

The literature concerning this question has devolped enormously in the past few years and only a few reports which are directly interesting to physicians in general can be given.

It has long been suspected that besides pepsin and the milk curdling ferment there is a fat-splitting ferment in the gastric secretion; and there have been numerous reports concerning such a ferment, though its presence has only recently been definitely proved. The methods of investigation were such as to yield, at best, rather doubtful results, and apparently showed that if any such ferment is present, its action is so slight as to be of comparatively little importance. The ferment is usually either not mentioned, or is at most mentioned in a very off-hand manner by writers on physiological chemistry.

Volhard (1) reported that he had found that the gastric juice was capable of causing considerable splitting of fat in emulsified form (as it is present in eggs and milk.) This work was criticised from the belief that the action was due to bacteria on the fat, or to pancreatic secretion

which had lodged in the stomach. These objections are now answered by Volhard, by the statement that he has demonstrated that the gastric juice after removal from the stomach is capable of splitting emulsified fat, that this does not occur when the gastric juice is previously boiled, and that it is therefore apparently due to a ferment. It also does not occur with artificial pepsin-HCl. mixture, and therefore is not due either to the pepsin or the HCl. He also found that the emulsion was broken up, and that a cylinder-like mass composed of the fat was formed. This he at first thought to be an easy method of determining that there is a fat-splitting ferment present. He found, however, that it had nothing directly to do with the actual fat-splitting. This peculiar action upon the emulsion seemed to be due to the presence of HCl.; and it did not occur in an ethereal extract of neutralized gastric juice, even though this extract was rich in fatty acids, which showed that fat-splitting had occurred. As to the possibility that the fat digestion is due to pancreatic secretion, Volhard states very definitely that his more recent work has been done on animals after establishing a Pawlow fistula, the gastric juice being obtained through this fistula, thus excluding all possibility of the presence of any pancreatic secretion. Glycerine extracts of the gastric juice also show the presence of the fat-splitting ferment—and it was found by glycerine extraction that the fat-splitting ferment was excreted chiefly by the fundus, just as the pepsin is. Further he passed the gastric juice through a porcelain filter, and thus freed it of bacteria, and determined that it is still capable of splitting fats. Hence the fat-splitting was not due to bacteria. There was a final possibility that the fat-splitting action might be due to a ferment which existed in the egg which was used in the test. This, however, was shown not to be the case, since when the gastric juice was boiled no fat-splitting occurred. The ferment is capable of splitting a considerable number of different forms of neutral fats, and its action is not confined solely to natural emulsions. There seems to be no definite difference between the action of the gastric steapsin and the pancreatic steapsin, for the latter splits only emulsified fats; the pancreatic secretion, however, has the further power of emulsifying fats, and therefore is much more effective in its action on fats than is the gastric juice. The ferment is evidently easily destroyed; in so-called gasterine a very acid gastric juice obtained from the stomachs of dogs, and recommended for therapeutic purposes no fat-splitting action could be discovered. The fact that the ferment acts only on emulsified fats is of interest because it seems to support Pflüger's view that fat is never absorbed unless it has been split. Some testimony against this view of Pflüger's was thought to be furnished by the fact that after removal of the pancreas a considerable portion of milk fat is absorbed and this cannot be attributed chiefly to bacterial fat digestion. The gastric ferment may, however, probably be looked upon as splitting this milk fat, and the existence of a gastric fat-splitting ferment therefore, is added testimony toward the belief that fat must be split before it is absorbed.

Some interesting further facts concerning the ferment were that as contained in the gastric juice it is very sensitive to alkalies, while the ferment in the glycerine extract is not sensitive to weak alkalies. On the other hand, the ferment in the gastric juice itself is much more resistant to HCl. than is the ferment in the extract. This seems to indicate that the gastric juice contains the ferment, while the extract of the mucous membrane contains the zymogen. It was found that the rapidity of the action of the ferment varied at different periods of its action. It was not proportional to the time through which it was allowed to act, but the energy of its action was apparently subject to variations at irregular intervals. The extent to which it acts was not dependent upon the absolute amount of the neutral fat present, for only a certain percentage of the fat was split at best. The ferment was not destroyed, when present in the gastric juice, by exposure to ordinary room temperature, even after a series of days in the warm chamber; however, at about body temperature it was rapidly destroyed, more rapidly in a neutral solution than in an acid solution. Clinically it was observed that achylia was accompanied by marked reduction in the secretion of fat-splitting ferment, just as there is, in this condition, a marked reduction in the milk-curdling ferment and in the pepsin. Also in hyperchlorhydria the fat-splitting action was decreased. There is a complete description of the method used in determining the presence of the ferment and in studying its action quantitatively.

A point of even greater interest to most persons, which also concerns the ferments of the stomach and their action, was that contained in the article of Zunz, which while two years old, has received so little notice, and is of so much importance, that it seems worth while to direct further attention to it. Zunz made a very elaborate and careful study of the quantitive course of peptic digestion an investigation involving an enormous amount of time and patience. Briefly speaking his method was fractional precipitation with zinc sulphate and the determination of the nitrogen in the various precipitates and in the filtrates. Besides the fact that he isolated three albumoses by this method, which he considers identical with E. Pick's deutero-albumoses A. B. and C., he makes the exceedingly interesting statement that he found that, in the final fraction that was not precipitated by zinc sulphate, the fraction therefore corresponding to what has previously been believed to be the peptone fraction), the greater part of the substances contained therein were not peptones, i. e., they did not give the biuret reaction. The method of determining this was to precipitate the final fraction with phosphotungstic acid, afterward determining the nitrogen in the precipitate and in the filtrate. The peptones are practically all precipitated by phosphotungstic acid, although there is some question about this. However the precipitation was probably entirely complete in this instance, because the filtrate gave absolutely no biuret reaction. The contrary possibility has more chance of truth—that the phosphotungstic acid carried down other substances than the peptones, and hence the results which Zunz obtained indicated more than the peptone than was actually present. He found that of the nitrogenous substances in the filtrate, (practically all of which have previously been looked upon as peptones) usually over [illegible] are really some other nitrogenous substances which do not give the biuret reaction and are therefore not peptones. The significance of this fact is at once apparent. It has previously been taught that peptic digestion ends with the production of peptone, while a considerable portion of the proteids digested by trypsin is carried on to further stages, leucin, tyrosin asparagic acid, typtophaer, ammonia, etc. Hence tryptic digestion has always been looked upon as a far more extensive process than peptic digestion. This work of Zunz shows that there is much less difference between peptic and tryptic digestion, than has previously been supposed.

Pfaundler has endeavored to demonstrate the nature of substances resulting from peptic digestion which do not give the biuret reaction, but was not wholly successful. He did, however, determine in one series of experiments that leucin and tyrosin were not produced; after 6 months digestion of serum albumen the digestion had advanced to such a point that the albumens had practically disappeared, and yet leucin and tyrosin were apparently entirely absent. He could not determine the presence of asparagic or glutamic acids. He used a method devised by himself, (and reported in the same number of the same journal) for the quantitative estimation of the amido-acids, for the purpose of determining whether those instances are products of peptic digestion, and if so, in what amounts they appear. He could not determine that they were present, and considers that the substances which do not give the biuret reaction but which are produced by peptic digestion, have a position mid-way between the simplest peptones and the amidoacids.

The most interesting part of the matter, however, is the

fact that Zunz determined that in digestion of serum albumen as short a time as one half an hour sufficies for the digestion of as much as 30% of the albumen to a stage beyond peptone, and that within 3 hours this amount increases to about 40%. This is of great interest from a physiological standpoint, and therefore indirectly to the clinician. Previously it has been considered that peptic digestion stopped with the peptones, and also that the greater part of the products of gastric digestion was passed on into the intestine unabsorbed by the stomach, this organ acting chiefly as a reservoir, and the ultimate digestion being carrried on in the intestine. If the results obtained by Zunz are correct, as they seem to be, they are of interest from this standpoint because they indicate the possibility that a considerably greater portion of the products of gastric digestion than has recently been thought, is absorbed by the stomach and that perhaps the stomach is less a mere reservoir than has been supposed. The report also indicates that those products of digestion beyond the peptone stage are of far greater importance in nutrition than has usually been believed. It can hardly be considered that when the gastric juice in so brief a period as half an hour can carry the digestion of 30% or more of the proteids contained in it, to a stage beyond peptones, that these further products of digestion are not of very great importance in the economy. It is growing more evident through work such as this and numerous reports of Kossel and his students, that a knowledge of digestion which is chiefly built upon a study of the albumoses and peptones is a very limited one, and that we have more to learn about digestion itself and its relation to nutrition than has yet come to our knowledge. There are interesting possibilities in the study of the manner in which these further products of digestion influence nutrition, and there is likewise a very interesting suggestion in this work: i. e., that the organism makes use of the products of digestion very much more largely through synthesis, than has been generally taught, for certainly a great part of these substances which have gone beyond peptones are built back again into actual albumens. There is also a possibility of interesting clinical results from quantitative study of these substances in gastric juice in different pathological conditions. It is, however, at present wholly impossible to undertake such clinical study, because of the difficulties of the method. These results demonstrate how futile it is to attempt to make any definite determination of the completeness with which gastric digestion is being carried on by making rough estimations of the amount of peptone present, a method which has been repeatedly suggested recently.

Another point upon which the teaching of years past has apparently been completely erroneous is that concerning the existence of an antipeptone—one which resists further tryptic digestion. Kutscher's work concerning this point is, like that just quoted, comparatively old now, since it appeared in 1899. It is, however, of a good deal of importance and likewise deserves wider mention than it has received. In his investigation Kutscher showed that antipeptone apparently does not exist and previous teaching concerning its existence has been based upon fallacies in the methods of demonstrating its presence, the fallacy being chiefly as in the previous teaching concerning pepsin digestion, one which was due to considering the whole of the ultimate product of digestion as peptone without determining that it really was. Kutscher demonstrated that only a small portion of the so-called antipeptone is really peptone, the remainder consisting of the further products of peptic digestion, lysin, lysidin, arginin, etc. There have been a number of criticisms of this work, but they have not been effective, and as the matter stands at present, Kutscher seems to have quieted his opponents and to have proved his point. If this is the case, the teaching concerning tryptic digestion has, in a sense, been rather too elaborate, contrary to that concerning pepsin digestion. But at the same time it is another indication that the products of digestion which are beyond the peptone stage have more value than we have previously believed. And again it indicates that the production of tissue from food is more largely a synthetic process than seemed probable a few years ago, and is a more complex process than has been generally thought.

It is beginning to be thoroughly realized now that digestion is a process not confined to the gastro-intestinal tract. It has of course been known that some methods of breaking down food and tissue went on in that mysterious process called metabolism, but there has always been doubt as to the exact nature of metabolic processes, and great question whether they are actually fermentative processes. While this general question is far from being settled, and we have no real knowledge as to the extent of activity of ferments in tissue break-down, (and even less knowledge of their possible activity in tissue regeneration) we are learning most astonishing facts concerning the presence of ferments in various tissues, and their activity under certain circumstances both pathological and physiological. The number of writings in recent times concerning this question has been so great that it is impossible to mention more than a few results which are of unequivocal and evident importance to all medical men.

Among the most strikingly interesting and most carefully and definitely demonstrated of these results are the facts shown by Martin Jacoby. It has previously been demonstrated that the liver and the suprarenal glands in particular and in some, perhaps in all, other tissues have an oxidizing action, and it has been shown with considerable probability, but hardly with certainty, that this action is in some cases due to a ferment. The liver is in this respect the most active of all organs, and Jacoby's most exact and pains-taking work has shown quite definitely that the liver does contain a ferment which oxidizes salicylic aldehyde to salicylic acid. He has also determined the various properties of this ferment; that it is soluble in water; it is destroyed or its action much reduced by boiling, or by presence of free acid or free alkalies; it is precipitated by alcohol, tannin and uranium acetate, and the precipitate can subsequently be brought in solution. One of the most important facts concerning its study is that it is precipitated by concentrated solutions of ammonium sulphate, and that by functional precipitation with ammonium sulphate it may be separated from other bodies. It is not diffusible; does not give the characteristic reactions of albuminous bodies, and seems to be a colloidal substance.

Even more interesting than this is the demonstration that the liver—as has been practically certain since Salkowski's work about ten years ago—contains a proteolytic ferment which produces the usual products of proteolytic digestion. It is present not only in post-mortem, but in tissues removed from living animals. It produces most of the products of tryptic digestion, but there is good evidence that the ferment is not trypsin, and is derived from the liver itself, for the products of its digestive activity differ decidedly from those of trypsin. An interesting fact relating to this ferment is reported in another article by Jacoby in the same number of the same journal: That the proteolytic activity of the liver is decidedly increased in phosphorus poisoning. Whether this means that the ferment is produced in excessive amounts in phosphorus poisoning, or that it is merely set free by the action of the phosphorus upon the liver; whether this is due to a secondary bacterial infection; or whether the ferment under the influence of the phosphorus poisoning is brought from other points through the circulation in excessive quantities, is wholly unknown, but the autolysis of the liver in phosphorus poisoning is a very striking fact and is a complete confirmation of the suggestion that has previously been made by some authors that the action of phosphorus is similar to that of a ferment. The phosphorus, of course, does not exercise the powers of a ferment itself, but in some way increases the normal autolytic power of the liver. It shows it is possible that ferments may play a most tremendous part in various constitutional toxic conditions, as well as bacterial infections.

The possibilities in the study of ferments are beginning to be realized. Whether any very important results will be obtained is still questionable, but there is an unlimited field for work, though it is a very difficult one in which to demonstrate definite results.

Among the further extremely suggestive results obtained from investigating the presence of ferments, may be mentioned the recent report of Friedrich Müller, who has demonstrated the presence of a proteolytic ferment in pneumonic consolidations in the stage of resolution. The details of his work give fairly satisfactory demonstration that this ferment is not of bacterial origin, and his own conclusion is that the ferment is provided by the organism of the subject of pneumonia and that its purpose is to cause rapid solution of the consolidation.

A fact that can scarcely fail to arouse even more active interest is that Eugene Petry demonstrated the presence of an active proteolytic ferment in several specimens of carcinoma. There are various reasons why ferment action would be the most satisfactory explanation of the etiology of carcinoma, and if carcinoma were shown to be due to some abnormal ferment action, the difficulty in understanding the origin and cause of this disease would be largely cleared up. It is, however, highly probable that the definite demonstration of a fermentative cause of carcinoma is at present impossible, even though such a cause exist. At any rate, should this be clearly proved, it would be an excessively difficult matter to demonstrate why such a ferment has the curious method of action that is exhibited in carcinoma, and it would be still more difficult to bring forth from this any rational method of treatment of the disease. But such an origin of carcinoma is so nearly a pure hypothesis, and has so minute a basis of proof that it is at present a waste of time to discuss it further.

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RECENT LITERATURE ON DISEASES OF THE KIDNEY.

By JOHN M. SWAN, M. D.

Movable Kidney.—Much work has recently been done upon movable kidney in which the abnormal mobility is found affecting an organ that occupies its normal position and relations. Delaforge, (2) however, reports the case of a young woman, aged 24 years, who had had a misplaced kidney from birth. Following a fall, this kidney became movable and produced symptoms similar to those of hernia due to force, with a sensation of bearing down. The diagnosis of movable kidney is difficult when a congenital misplaced organ is involved, and, on account of its low position, the condition may be mistaken for an ovarian cyst. Reduction is difficult and anterior nephrorraphy often gives better results than the posterior operation. The prognosis is less favorable than in the ordinary form of movable kidney.

Pathology.— Haushalter (1) reports the case of a boy, aged 12 years, who suffered from chronic hip-joint disease with a fistula. The child died of an acute intercurrent affection. His kidney showed, to an extreme degree, the changes of large, white kidney. Each kidney weighed 280 gm.; whilst the normal kidney from a child of this age weighs between 60 and 80 gm.

The present ideas of the pathogenesis of toxic nephritis ascribe that condition to two classes of substances. The first class includes definite chemical products, such as phosphorus, arsenic, mercury, acids and alkalies which produce necrosis and rapid fatty degeneration of the epithelium of the convoluted tubules, the glomeruli being slightly involved. The second class includes cantharides, toxins, venins, and sera, and the lesions are more diffuse and resemble the glomerulonephritis of the acute infectious diseases. Curlette (9) believes that the nephritis produced by large doses of chemical poisons does not belong to the class of toxic nephritis. If a chemical poison is given in small doses or if, after large doses of chemical poisons, the organism reacts secondarily, a true toxic nephritis may be produced, which is chronic. On the other hand, acute intoxications by animal or complex vegetable substances produce true inflammatory reaction rather than mortification of the tissue.

Roustan (6) concludes that nephritis may occur as a complication of secondary syphilis, which is different from the nephritis met with in the tertiary period of the disease. This nephritis of secondary syphilis may be mild, when it is characterized by slight albuminuria and urinary insufficiency, determined by a study of the urinary toxicity, the elimination of methylene blue and cryoscopy. It may be of moderate severity, when it is charcerized by edema and persistent albuminuria. It may be grave, when it is characterized by a large amount of albumin and the rapid development of uremia. The disease is due to the action of the syphilitic poison upon the renal epithelium, the glomeruli participating to a slight extent. Mercury in small doses and potassium iodide in large doses, combined with the ordinary means of treating nephritis, should constitute the treatment.

Tumors.—Amesller (3) points out that in the adult pseudolipomata, epitheliomata, angiosarcomata and sarcomata have been found in the kidney; whilst in children all the cases of malignant growth that have been described may be grouped under the term adenosarcoma. In the tumors of the kidney found in children, the epithelial element holds a subordinate position and muscular tissue, connective tissue, cartilage and the like are found in its neighborhood. It has been proposed by Napier (4) and Lemoine, (5) to treat inoperable tumors with the salts of quinine. As malignant tumors of the kidney are often inoperable, it may be advisable to exhibit this drug in such cases. The evidence in favor of and against such treatment is very slight and too much enthusiasm should not be raised until further reports have been published. Napier employed the drug because he thought that some malignant tumors were due to animal parasites. The drug acts on the general condition of the patient as well as on the tumor itself. The action is augmented when arsenic is administered at the same time.

Lemoine administered quinine salts by the mouth and hypodermically and used them as local applications with asserted good results. The drug, according to the author, acts as an antiseptic and as a general tonic, increasing tissue resistance and the phagocytic activity.

Abnormal constituents of the urine.—Indicanuria indicates an excess of formation of indol and skatol on account of intestinal putrefaction and the passage of an excess of these two substances into the blood. Debets De La rousile believes that this intestinal putrefaction may be due to hepatic insufficiency. The presence of indicanuria also points to the existence of excessive fermentation in the intestine and the retention of the product of that fermentation in the digestive tract.

In diseases of the digestive tract the urine may vary in quantity, in its degree of acidity, in the quantity of contained chlorides, phosphates, nitrogenous substances and oxalates. It may contain abnormal substances, such as albumin, peptone, acetone, glucose, urobilin, ethereal sulphates and indican. Julien (8) concludes that chlorids and urea seem to bear some relation to the nutrition and the diet of the patient. Phosphaturia seems to depend upon nervous erethism and upon hyperchlorhydria. Albuminuria peptonuria, oxaluria, glycosuria seem to be due to toxic phenomena and to disorders of nutrition. Acetonuria the presence of sulpho acids, indicanuria and urobilinuria ap-

pear to be due to the existence of fermentation and of its products in the intestine.

In a patient suffering from burns, who was secondarily hemoglobinuric and albuminuric, the urine contained many leukocytes and a large number of microorganisms Tuffier and Milian (11) have shown that the blood serum was not colored, which indicates that hemoglobinemia was not the source of the hemoglobinuria. The urine dissolved the red bloodcorpuscles of the patient very rapidly. Sterilization of the urine in the autoclave at 120° removed all its hemolysing properties; exposed to the air, however, the urine again became toxic for the red blood corpuscles. The hemolysis then was due to the presence of microorganismal ferments.

Phobécourt and Delamare (10) have applied cryoscopy to the urine of pregnant women who were not suffering from albuminuria. They have found that in such patients, no matter what the stage of pregnancy, the freezing point and the relation of the freezing point to sodium chloride are normal. The sphygmomanometer also shows that in these patients the circulation remains normal. The authors conclude that pregnancy does not produce albuminuria by first producing circulatory disorders, because in certain pregnant women who were suffering from albuminuria the freezing point of the urine and the relation of the freezing point to sodium chloride were normal.

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GENERAL SURGERY.

By JOHN H. GIBBON, M. D.,

The Surgical Treatment of Amoebic Dysentery.—Francis W. Murray, of New York, (*Annals of Surgery*, May, 1901) suggest a surgical means of treating amoebic dysentery which appears to us rational and deserving of further trial. The seriousness of chronic amoebic dysentery, its immediate and remote dangers, and its very high mortality, are well known and any rational and practical suggestion regarding an improvement in its treatment should be given a proper consideration by both physicians and surgeons. Murray approves of the classification of Councilman and Lafleur, who divide amoebic dysentery into (1) that of moderate severity; (2) gangrenous dysentery; (3) chronic dysentery. It is only in the last class of cases that Murray recommends the operation of right inguinal colostomy by means of which the colon is placed entirely at rest and is capable of being thoroughly irrigated. This operation is not recommended in the early stages but after the disease has existed a number of months in spite of medical treatment. Its use should also be confined to those cases in which the disease is limited to the colon. These chronic cases are characterized by periods of great improvement when the patient will apparently be quite well. Many chronic cases of amoebic dysentery terminate in an hepatic abscess which is apt to be fatal. Medical treatment has been able to do little for this condition as the remedies employed cannot reach the real seat of the disease, which is an extensive ulceration of the submucosa of the large intestine with oftentimes only a very small opening through the mucous membrane. Streptococci are often associated with the amoebae and play an important part in the development and extension of the disease. The ulcerating areas in the submucosa may communicate with one another by tortuous sinuses. The lesions of the mucous membrane would appear to be secondary to those of the submucosa. One of the dangers accompanying the chronic form of this disease is that it may pass into the gangrenous form at any time. The tendency of these ulcerations is to extend gradually. When the ulcerating areas are accessible and of limted extent, the administration of drugs and irrigation of the bowel may bring about a cure, but Murray thinks there can be little hope of a permanent success unless the diseased bowel is put entirely at rest. The operative treatment suggested should be performed early in the disease, that is, of course, after medical treatment has failed. If after four months of medical treatment the condition is not cured, it is recommended that an artificial anus be esablished by means of a right inguinal colostomy. This artficial anus should be kept open for a long time and not closed until it is quite evident that the ulcerations have healed. A cure can be demonstrated by examining the bowel with Kelly's tubes introduced through the anus and through the wound. If the mesentery of the ascending colon is found to be too short to permit of the formation of a complete artificial anus, or if this portion of the bowel is found to be involved in the ulcerating process, then the operation should be performed upon the ileum. This method of treating ulcerations of the large intestine is not new, but Murray knows of no case in which colostomy has been performed in a case of chronic dysentery. He reports a case upon which he operated two years previously in the manner suggested in his paper. The patient was a man, twenty-nine years of age, who had suffered from amoebic dysentery for nearly two years, having undergone during this period careful medical treatment in a number of hospitals. Right inguinal colostomy was performed and daily irrigation of the colon practiced. The patient improved at once and three months after the operation was able, for the first time in more than two years, to work at his trade, that of a tailor. Six months after the operation his wound had practically healed and the patient was working every day. It is unfortunate that in this case the patient would not allow Murray to form a complete artificial anus and therefore he was not able to put the colon entirely at rest. The case, however, illustrates the points made by Murray and we can but think, if this operation were performed in the apparently hopeless cases of chronic dysentery, the mortality of this disease would greatly diminish.

Murray's patient was operated upon in August, 1898, although not reported until 1901. We have been able to find, however, a case of amoebic dysentery reported by Sullivan (*Jour. A. M. A.*, Dec. 8, 1900), in which Barbat performed colostomy for the purpose of thoroughly irrigating the colon. The patient was a soldier, 35 years of age, who had contracted amoebic dysentery in the Philippines and had suffered from the disease for 28 months. In this case all of the symptoms were relieved and the amoebae entirely disappeared from the stools. Bolton (*Med. Rec.*, March 16, 1901) suggests the treatment of colitis by valvular colostomy and irrigations. He reports a case in which he performed this operation upon the cecum with an extremely satisfactory result. The method of operating was the same as that employed by Kader in performing the operation of gastrostomy. In connection with these cases it is interesting to refer to Lilienthal's report of a case (*Amer. Med.*, April 27, 1901) in which he removed the entire colon for hyperplastic colitis. Before resorting to this radical measure he had with little benefit performed a right inguinal colostomy. It will be observed that in none of these cases was the operation suggested by Murray performed, that of forming a complete artificial anus so that the colon would be put entirely at rest.

Cholecystectomy for Gallstones.— C. L. Gibson (*N. Y. Med. Jour.*, Nov. 30, 1901), presents a very

strong plea for the performance of cholecystectomy in certain selected cases of gallstones. Since gallstones result from disease of the biliary passages and particularly of the gallbladder, and because the mechanical disturbances which are produced by the impaction of gallstones in the bile ducts are almost invariably due to stones which have originated in the gallbladder, the removal of this organ would seem to be a measure which would prove absolutely curative. Gibson compares this operation to that of appendectomy and refers to the similarity between the affections of the appendix and those of the gallbladder. It is allowed that thorough drainage is a perfectly satisfactory operation in many cases, the presence, however, of a biliary fistula for any great length of time is a considerable drawback and the patient can be given no absolute assurance that gallstones will not be reproduced after the closure of the fistula. Hans Kehr is quoted as having reported 17 per cent. of remote disturbances in the cases in which he has employed drainage and but one percent. in over 100 cases in which cholecystectomy has been done. A third advantage in the removal of the gallbladder is the avoidance of malignant disease which may result from a continued irritation of the organ. Among the less important advantages Gibson mentions the avoidance of post-operative hemorrhage which occurs from the mucous membrane not infrequently. Where the cystic duct is obliterated, cholecystectomy should be performed, and also when a stone is lodged in the cystic duct and cannot be dislodged into the gallbladder. Cholecystectomy is the only satisfactory operative treatment in phlegmonous, ulcerative, or gangrenous conditions. The operation is not suggested as a routine measure in all cases of gallstones nor is it thought that it will ever displace simple cholecystotomy. A gallbladder which is distended is more easily removed than one of normal size. When the organ is buried in adhesions and is inaccessible, it is best not to attempt its removal unless there are urgent reasons for the operation. The operation should not be undertaken unless it is quite evident that the common duct and the structures in its neighborhood, particularly the pancreas, are in functionating condition. In Kehr's more than 100 cases the mortality was a little over 3 per cent. Gibson does not attach much importance to the reservoir function of the gallbladder. Deaver (**Phila. Med. Jour.**, Dec. 21, 1901) has lately also advocated cholecystectomy in certain cases of cholelithiasis. The suggestions made by these operators appear good and rational. We should, however, be careful not to fall into the habit of being too radical and removing the gallbladder in cases in which simple drainage would be a safer and probaly as satisfactory a procedure. About a year ago W. J. Mayo, of Rochester, Minn., (*J. A. M. A.*, Dec. 1, 1900) described a method of removing the mucous membrane of the gallbladder in certain cases in which cholecystectomy would seem to be indicated. This measure was strongly urged in cases of permanent obstruction of the cystic duct, but it would appear to us that it might be employed in many of the conditions in which Gibson recommends cholecystectomy. Mayo claims that the operation which he suggests and practices is more easily performed than that of cholecystectomy. After the removal of the mucous membrane the other coats of the gallbladder are sutured to the abdominal wound and obliteration of the cavity takes place.

Hydatid Disease of the Breast.—Hydatid disease of the breast is so rare a condition that a case reported by Le Conte (*Amer. Jour. Med. Sci.*, Sept., 1901) is of peculiar interest. The patient was a young multiparous mulatto woman. A tumor appeared two years after a miscarriage and five years after a chronic cervical adenitis on the same side. The growth remained a small, hard tumor until subjected to an injury, when it increased rapidly. The tumor was round, slightly tender, fluctuated, was of the size of a small cocoanut, and the skin over it was normal in appearance and was movable over the tumor except for a small area surrounding the nipple, where it was adherent and slightly inflamed. In the right axilla there was a small mass of tender and enlarged glands. On the right side of the neck there was a suppurating sinus which looked tuberculous. In making a diagnosis Le Conte considered the possibility of one of three conditions, an adenoma undergoing cystic degeneration, tuberculous abscess, and echinococcus cyst. The last condition was dismissed because of its rarity and the second because of the duration of the growth (more than four years). At the time of operation the cyst was ruptured and found to contain from twelve to fifteen ounces of pus, which, when immediately placed under the microscope, revealed hydatid hooklets in large numbers. As little of the glandular tissue of the breast was uninvolved, the whole breast was removed together with the enlarged axillary glands. The wound healed primarily and the patient made an uneventful recovery.

Le Conte thinks that the earlier writers too frequently made a diagnosis of hydatid disease of the breast, classifying the majority of cysts occurring in the breast under this head. He has examined the literature of the subject very carefully and presents a table of 33 cases in which a definite diagnosis of hydatid disease of the breast is warrantable. So far as he knows Le Conte believes his own case to be the first reported in America. Numerous statistics of hydatid disease are quoted which go to show the great rarity of the occurrence of this disease in the breast. No case has been reported in which the male breast has been affected. The condition is most frequent during the child-bearing period, the oldest patient in Le Conte's table being 46. The right breast seems to be the most frequent seat of the disease and the upper half of the organ seems to be involved twice as often as the lower. In all of the cases reported the growth began as a small, hard, movable tumor usually free from pain. In about one-half of the cases the tumor gradually and slowly increased in size, in the others there were periods in which no increase occurred. Traumatism seems to have produced rapid increase in many cases. But in one case were multiple cysts found. Pain appeared late in the disease or accompanied a rapid increase in the size of the growth. Enlargement of the axillary glands was present in six cases. Fluctuation was by no means a constant symptom. The crepitation which is characteristic of hydatid disease in other organs was noticed in none of the cases in this table. Urticaria of the skin, the so-called hydatid rash, which has been noticed after aspiration of an echinococcus cyst of the liver, was noticed in none of these cases in which aspiration or puncture was practiced. Degeneration of the cyst as it increases in size is very common, suppuration being frequent. This suppuration results in the formation of adhesions and occasionally in ulceration and the establishment of sinuses. The passage of daughter cysts through these sinuses has occasionally led to diagnosis.

Attention is called to the fact that death of the hydatid may occur from other causes than suppuration, the cyst contents sometimes becoming of a putty consistency containing "fat, granular debris, carbonate and phosphate of lime, cholesterin, hooklets, and broken down hydatid scolices." Such death may result from the natural termination of the existence of the parasite, from the production of daughter cysts which are so numerous as to destroy the mother cysts by pressure, and death may also occur because the growth of the hydatid is much more rapid than that of the surrounding fibrous sac which results in a cutting off of the food supply of the animal. It is possible also that the disease may terminate with advancing age from increasing denseness of the fibrous capsule which produces an interference with the circulation within the cyst. Occasionally the growth has been described as irregular and lobulated and Le Conte thinks that this condition results from degenerative processes which take place in the fibrous capsule. Le Conte refers to the interesting fact that fluctuation is absent in this condition unless the tumor has reached a large size.

The mode of entrance of the parasite is an extremely interesting question. Le Conte thinks, however, that the

suggestion of Thomas is probably the most plausible one and it is expressed in the following words: "It may naturally be supposed that the liver becomes the most frequent seat of these cysts, because the embryos, after finding their way into the portal vein, here meet with the first obstruction to their passage through the capillary system; but many do find passage through it, and, traveling through the inferior vena cava, enter successively the right auricle and ventricle of the heart, and thence by the pulmonary artery reach the pulmonary capillaries, where again a considerable number abide, others run the gauntlet of this second obstruction, and pass by the pulmonary veins into the left side of the heart, and subsequently become conveyed by the current of the systemic circulation to the most remote and varied parts of the body of their host."

The treatment of the condition which is suggested is as follows: (a) When the cyst is young and not adherent to the surrounding tissue, it should be removed; (b) when it is old and large and intimately connected with breast tissue, so that excision would involve considerable mutilation of the gland itself, the growth should be freely incised, the contents evacuated, and the cavity packed and allowed to heal by granulation; (c) when the cyst is quite large, thick walled, and firmly adherent but surrounded by a considerable portion of breast tissue, a partial amputation of the mamma is indicated; (d) if the cyst is so large that most of the breast tissue has disappeared through atrophy, or if the nipple is involved, a complete amputation of the breast should be done.

We feel that this report by Le Conte of so interesting a pathological and clinical condition should stimulate other surgeons to a careful examination of the contents of all mammary cysts.

Ureteral Anastomosis per Vaginum.—William K. Turner (*Annals of Surgery*, December, 1901) reports an interesting case of ureteral anastomosis which demonstrates the fact that it is possible to anastomose a divided ureter *per raginam*, after the uterus and its appendages have been removed by this route. Turner's patient was operated upon for a complete prolapse of the uterus and bladder. The uterine cervix was very much hypertrophied and badly eroded, and both uterus and bladder protruded beyond the vulval orifice. For the relief of this condition he performed a vaginal hysterectomy. During the operation he accidentally divided the left ureter about two inches from the bladder. In attempting to perform anastomosis by the Van Hook method the proximal portion of the ureter was split for the distance of about one inch. This interferred with the carrying out of the operator's intention and after debating the question of opening the abdomen he determined to reverse the operation of Robinson by implanting the lower segment of the ureter into the upper. This was accomplished without much difficulty and the patient made a most satisfactory recovery, returning to her home five weeks after the operation. At no time was there any leaking whatever from the anastomosed ureter. Turner has searched carefully the literature on the subject and has been able to find no other case in which the ureter has been anastomosed through the vagina. He doubts whether the operation would be found practicable in many instances. It was much facilitated in his own case by the extreme proplapse of the bladder.

The Treatment of X-Ray Burns.—To anyone who has had experience in the treatment of burns by the X-ray a report of a successful case will prove of interest. Huntington (*Annals of Surgery*, Dec., 1901), reports a case which he operated upon on May 12th, 1901, and which on August 27, 1901, appeared entirely cured. The burn was an extensive and painful one situated on the upper portion of the abdomen and surrounded by a hyperemic zone. Hyperesthesia was very marked at the junction of the necrotic and hyperemic areas. Under chloroform anesthesia the entire ulcerating area was excised. All of the fat beneath the ulcer and beyond it and a large portion of the sheath of the right rectus muscle were removed. Over the muscle was then applied a number of skin grafts after the method of Tiersch. The grafts were covered with silver foil and dry aseptic gauze. The patient made a quick recovery and is now perfectly well except for some hypersensitiveness over a small area. A keloidal ring encircles the grafted area. Since healing the surface has been exposed to considerable irritation as the patient has been "roughing it" for a number of weeks in the mountains but no evil effects are to be noted. All treatments for this condition have been so unsatisfactory and disappointing that if this method of deep and extensive excision with skin grafting has brought about a permanent healing in even one case it is deserving of extensive trial. Our own experience with this condition has been very discouraging.

GENITO-URINARY SURGERY.

By FRANCIS T. STEWART, M. D.,

Kidney.—In 1896 Reginald Harrison first drew attention to the satisfactory termination of many cases of exploratory incision into the kidney for various suspected lesions which were not found at the time of operation; this lead him to infer that the symptoms had been caused by a marked congestion of the organ and that the good results were directly due to the relief of this tension by incision. At the annual meeting of the British Medical Association, (*British Med. Jour.*, Oct. 19, 1901) the subject was again brought forward and submitted to discussion. Harrison reported a case of kidney disease in which incision was followed by recovery. One was a case of scarlatinal nephritis, one a nephritis from exposure to cold, one a subacute nephritis occurring subsequent to influenza, one a nephritis following trauma, and one a case of cystic degeneration of the kidneys ensuing on injury. The question has reached such a stage that Harrison feels justified in formulating the following indications for the relief of **renal tension** by incision: (1) Progressive signs of kidney deterioration, as shown by the persistence or increase of albumin when it should be diminishing or disappearing from the urine, as in the natural course of inflammatory disorders ending in resolution; (2) suppression of urine or approaching this state; (3) where a marked disturbance of the heart and circulatory apparatus arises in the course of inflammatory renal disorders." After exposing the kidney through a lumbar incision, he advises a division of the renal capsule along the convex border; punctures may be made into the parenchyma wherever congestion seems greatest. Drainage, which is essential, is maintained for a week or ten days by means of a rubber tube. In the subsequent discussion Spanton expressed an opinion that the best subjects for surgical interference were cases of subacute nephritis; he cited two instances in which an exploratory incision was followed by complete recovery. Cousins thought the most favorable condition for surgical measures was acute nephritis associated with infection through the blood. Barling and Chicken were not favorably impressed with the operation and maintained that as the condition was bilateral in the majority of cases, strictly medical procedures were best suited to combat it. Curtis (*Annals of Surg.* March, 1901), resorted to incision of the capsule of the kidney in two cases of post-operative anuria without relief in either case.

An operation for Bright's disease is rather striking at first, but on deliberation appears highly rational for the treatment of selected cases. When one recalls the importance of iridectomy for glaucoma, the value of incision in severe cases of orchitis, the marked relief which follows incision in edema of the glottis, tonsillitis, metritis, and in fact wherever tension is a factor, the impression that the operation will endure becomes stronger. But this reasoning applies only to the acute cases associated with pain in which an unyielding capsule is an improtant factor in the resulting parenchymatous degeneration, cases following trauma, exposed to cold, or induced by the excretion of

toxines, just such cases as are cured by cupping and medical measures. The question as to which organ should be selected for incision is of little importance, according to Harrison, unless there be marked pain or other indication for one side or the other, as division of the capsule of one kidney reflexly lowers the tension in its fellow. Harrison's observations are entirely clinical; he has studied living kidneys *in situ* and advances no argument from the standpoint of chemistry, physiology or animal experimentation. The subject of the relief of renal tension or 'renal glaucoma" by operation has been encouragingly commented upon by the *Lancet*, **Philadelphia Medical Journal**, *Medical Press*, and *New York Medical News*. "How far the operation of incision of the kidney can prevent or relieve the effects of congestion, time alone can show, but the subject deserves the careful attention of all surgeons."

Jonathan Hutchinson, Jr., (*British Medical Jour.*, Oct. 19, 1901), in common with many surgeons believes that the X-rays are capable of diagnosticating with certainty the presence of **renal calculi**. They not only tell the size and number but by accurately localizing the stones enable the operator to remove them with the minimum amount of trauma to the kidney, dispensing with the extensive separation of the organ from its environs which is indispensible to its being delivered from the wound. Exception must be made to the great value of the rays in the case of very obese patients or in the case of very small stones. Even when handled by experts the **Roentgen Ray** is not an infallible means of positively deciding the presence or abscence of renal calculi as we are often tempted to believe. Concerning the possibility of an absolutely positive or negative diagnosis Henry Morris (*Surgical Diseases of the Kidney and Ureter*, 1901), says, "the results are most unreliable, shadows have been found when no calculus was present, and no shadow obtained when a calculus existed." Donald Macrae, Jr., (*American Medicine*, Oct. 12, 1901), thinks we should skiagraph all nephro-ureteral conditions, with the possible exception of post-exanthematous nephritis, in order to exclude the possibility of renal lithiasis. Kolischer and Schmidt (*Jour. Amer. Med. Assoc.*, Nov. 9, 1901) introduced into the ureters a wire which is made of lead blended with antimony, and then skiagraph the kidneys and ureters. They claim to be able to determine the course of the ureters and the seat of any obstruction in them; the location of the renal pelvis together with the amount of dilatation; and the situation of kidney stones. The procedure appears not only to be dangerous and difficult but also of doubtful utility.

Henry D. Beyea (*American Medicine*, Sept. 21, 1901), estimates the proportion of **floating kidneys** which produce symptoms as from 10 to 15%. He points out the common mistake of treating the suffering induced by nephroptosis for neurasthenia, hysteria, etc. He formulates the following judicious indications for treatment: A movable kidney causing no symptoms needs no treatment, when symptoms are present a simple elastic binder should be applied to support the lower two-thirds of the abdomen or a long, straight front, modern corset may be worn. Edebohls (*N. Y. Med. Rec.*, May 4, 1901), says the relief obtained from bandages depends upon the presence and degree of any associated enteroptosis. Without enteroptosis no form of apparatus will prove satisfactory. The ordinary kidney pads are useless and dangerous. When the patient can afford prolonged treatment and the symptoms are severe and persistent, medical treatment may be combined with mechanical support. If this fails nephropexy should be performed. In the poor it is best to resort at once to operative fixation of the organ. In case complicated with gastroptosis the treatment of the future will be nephropexy followed at a later period by shortening of the gastro-hepatic omentum and the gastro-phrenic ligament. Bramwell (*British Medical Jour.*, Oct. 19, 1901), cites the case of a woman aged 49, who had suffered for 19 years with indigestion. She suddenly died as the result of an acute dilatation of the stomach. At the autopsy three cords of thickening peritoneal tissue were found extending from the pylorus to the surface of the kidney to which they were firmly attached. The kidney was movable to the extent of three inches and its descent clearly dragged on the pylorus and duodenum thus causing stenosis.

Concerning the indications for operation Israel in his *Chirurgische Klinic der Nierenkrankheiten* (review in the *Annals of Surgery*, Nov., 1901), states that nephropexy for floating kidney without hydronephrosis is a short-lived fad, practised upon neurasthenic females for the benefit of the surgeon. "The class of patients that formerly went to the gynecologist to have their ovaries removed now go to the surgeon to have their kidney sewed up. When these cases have symptoms referable to the kidney, they can be relieved by a suitable abdominal support, and are no longer operated upon in his clinic." Waston (*British Medical Jour.*, Sept. 19, 1901), protests against the belief that floating kidney is an innocent condition. Among the more serious consequences are hydro- and pyonephrosis, abnormal fixation of the kidney, and in rare instances gangrene of the organ due to occlusion of the blood vessels from twisting.

Beyea proposes the following operation, which was planned and practised by C. B. Penrose: A longitudinal incision is made in the lumbar region for a distance of three and a half inches; the perirenal fat is excised and the kidney delivered from the wound. A rubber drainage tube is pushed through the perirenal fascia about 1 cm. above the ureter and vessels and its ends allowed to protrude from the wound. A second tube is introduced below the ureter and vessels and brought out of the incision in an similar manner. The drainage tubes being surrounded by perirenal fascia are prevented from changing their position and slipping over the convex end of the kidney or interfering with the ureter or vessels. The kidney is replaced, the incision closed except where the tubes emerge, and the tubes tied over a piece of gauze. The tubes remain in place for three weeks, the idea being the formation of two connective tissue loops which will support the organ. The operation has been performed in eight cases, three of whom were operated upon two and a half years ago, three two years, one one year, and the other six months ago. All have been examined recently and in all the kidney is fixed in position. The principle sought is the same as that involved in the Harris operation. Direct injury to the parenchyma or the capsule which must occur after suturing, after splitting the capsule, or after the Senn or Deaver operation is avoided.

From a review of 320 cases of **injury to the kidney**, (*Annales des Maladies des Org. Genit.-ur.*, July, 1901), which he has collected from literature, Delbet concludes that the treatment is purely symptomatic. Hematuria is not a safe guide as to the amount of damage inflicted; the absence of blood in the urine may be occasioned by a clot in the ureter, a thrombosis of the renal vessels, a pre-existing stricture of the ureter, extensive laceration of the pelvis of the kidney or complete separation of the kidney from the ureter. Operative intervention is indicated when signs of internal hemorrhage with an increasing tumor in the loin are evident. Secondary operation is indicated in subperitoneal hemorrhage, infection, anuria, or persisting hematuria. Delbet strongly urges conservative treatment unless the kidney is hopelessly destroyed. We must remember however the increased mortality which accompanies a secondary nephrectomy after the appearance of infection. The surgeon should lean towards exploration in doubtful cases and in severe laceration towards nephrectomy. (Keen).

Legueu (*Annales des Maladies des Org. Genit.-ur.*, June, 1901), direct attention to the frequency with which tuberculosis of the kidney is treated for bladder disease. He advocates nephrectomy when the disease is progressing and when medicinal measures fail to check the emaciation. Hematuria and renal pain are secondary in importance. Infection of the lungs or bladder does not contraindicate removal of the kidney. Involvement of the ureter calls for ureterectomy at the time of the nephrectomy. If the dis-

ease be limited to the kidney alone nephrectomy may produce a permanent cure.

Von Hofmann (*Centralblatt f. d. Grenzgeb. d. Med. u. Chir.*, Oct. 2, 1901), says that males are more frequently afflicted with **tuberculosis of the bladder** than females. In adults the disease is generally secondary but in children it is often primary. Gonorrheal infection may precede the invasion of the tubercle bacilli. The pathological picture consists of numerous small nodules or ulcers scattered around the openings of the ureters, although there may be wide spread ulceration. This ulceration may extend into the rectum and in one case the bladder perforated into a patent urachus. Dysuria, pyuria, hematuria, and frequency of micturition are the symptoms complained of by adults but in children these may be absent, the sole external manifestation being incontinence of urine. Many of the symptoms are due to secondary infection. The reaction of the urine is at first acid, becoming alkaline when other microorganisms invade the bladder. Bleeding is usually trivial and occurs at the end of micturition. The diagnosis is made by the finding of the bacilli in the urine which is especially difficult because of their resemblance to the smegma bacilli. The cystoscope is not to be employed. That complete cure occurs especially in the primary cases is assured. The treatment consists of the internal administration of ichthyol (Goldberg and Richter), nuclein (Chetwood), the injection of an emulsion of iodoform in liquid vaseline (Bazy), distention of the bladder with air (Ramond), distention of the bladder with water (Battle), cauterization or curettage of the bladder and drainage through the vagina, perineum, suprapubically, or by permanent catheterization.

Samuel Alexander (*Annals of Surgery*, August, 1901), collects 45 cases of **intraperitoneal rupture of the bladder** treated by laparotomy and suture, and 6 cases that were treated by laparotomy without suture. Of the former, 23 died, 16 from peritonitis, of which at least 4 were due to imperfect suturing, 2 from shock, 2 from hemorrhage, one primary and one secondary, one from pneumonia, and 2 died on the table. Of the latter three died. Death is certain without operation. Rupture of the bladder is intraperitoneal, simple or complicated by fracture of the pelvis or other intraperitoneal lesion; extraperitoneal, simple or complicated; and combined intra- and extraperitoneal, simple or complicated. A blow on the hypogastrium may be followed by hematuria due to rupture of the mucous membrane alone. Rupture of the bladder within the peritoneum is in most cases due to the crushing of a full bladder against the promontory of the sacrum posteriorly, although it is possible for concussion alone to cause a bursting. Extraperitoneal rupture is often associated with fracture of the pelvis. Normal urine may invade the abdominal cavity without causing infection, but if microorganisms are present peritonitis is sure to ensue with great rapidity. The symptoms are shock, hypogastric pain, a sensation of something having given way inside, rectal tenesmus, and an urgent desire to micturate but inability to accomplish the act. The catheter brings away a little blood stained urine or no urine at all. The instrument in some cases may be passed directly into the peritoneal cavity. Cases have been reported in which clear urine has been withdrawn from the bladder and yet a rupture in its walls exists. A measured quantity of boracic acid solution may be injected into the bladder; if the same amount returns, the bladder is probably intact. This test, however, is sometimes misleading, as in the case reported by Alexander; 8 ounces of salt solution were thrown into the bladder and the same quantity returned notwithstanding the existence of a laceration 4 inches in length. Air or hydrogen have been recommended in place of solutions. If the viscus be intact, it will rise above the pubes as a symmetrical tumor tympanitic on percussion, and the gas will rush from the urethra when allowed to do so. When the tear involves the peritoneum, a general distention of the belly ensues and when the rent is extraperitoneal an emphysema of the extravesical tissues occurs. Alexander says this inflation for diagnostic purposes is not only unreliable but positively harmful. It is useless when the abdomen is tympanitic, and hazardous because it disseminates infection and adds to the existing shock. Dulness in the flanks suggests intraperitoneal rupture while unilateral tenderness and swelling indicate extraperitoneal laceration of the bladder. Alexander holds that it is unnecessary to differentiate between intra- and extraperitoneal laceration as both require immediate suprapubic incision. If the prevesical space is healthy the incision should be continued upward and the peritoneum opened. The treatment consists of early operation, thorough cleansing of the abdominal cavity, and accurate and efficient closure of the tear in the bladder. Extraperitoneal rupture demands drainage.

Concerning the question of draining the bladder after operation the statistics offer but little aid. Of the 18 cases in which the bladder was not drained, 9 died. Of the 21 drained by catheter through the urethra, 11 recovered and 10 died. The 2 cases that were drained suprapubically recovered. The method of drainage could not be obtained in 4 cases. The manner of suturing is of greater importance than the material used; Alexander sutured the bladder in his case with interrupted Lembert silk sutures, reinforced by a layer of mattress sutures. He advocates a copious flushing of the peritoneal cavity with salt solution and in doubtful cases leans towards drainage.

John A. Wyeth (*New York Med. Jour.*, Oct. 19, 1901) reports a case of **rupture of the bladder** following the injection of sterile water. Formerly he advised the injection of as much water as could be safely carried so as to give the greatest amount of available space between the symphysis pubis and the peritoneum in the performance of suprapubic cystotomy. When the bladder is contracted he advocates the injection of 8 or 10 ounces of fluid.

Charles L. Scudder (*Annals of Surgery*, Aug., 1901) reviews all the recorded cases of **strangulation of the testicle by torsion of the cord**, 32 in number. In all of the cases operated upon some abnormal condition connected with the testicle has been found. In all of the cases the testicle moved freely within the tunica vaginalis and in some of the cases the tunica was much larger than normal, extending well up on the cord. In 47% the testicle lay within the inguinal canal or just without the external ring. In every case there was a long mesorchium. Sometimes the epididymis was considerably separated from the testicle and in a few instances the testicle was flattened. The cause of the twisting is not known; it has been attributed to the action of the anterior abdominal muscles, to the action of the undeveloped mesorchium which has the appearance of a second cord entering the opposite extremity of the horizontally placed organ, and to the trauma incident to violent exertion or to taxis when the condition has been mistaken for strangulated hernia. It is interesting to know that torsion of the spermatic cord was applied to horses and rams in ancient days in order to produce atrophy of the testicle.

From a practical standpoint the condition is important because of its resemblance to strangulated hernia. There is sudden agonizing pain, vomiting, tumor in the groin or scrotum, and shock together with a chill. It has also been mistaken for periorchitis and ruptured varicocele. The constitutional symptoms are less severe than in strangulated hernia and there is not apt to be any obstruction of the bowel. The presence of an undescended testicle with an unoccupied external abdominal ring would render mistake scarcely possible. The presence of a hernia on the same side as the twisted cord would lead to confusion. Seventy-five per cent. of the cases were under 24 years of age; from birth to 4 years of age were 4 cases; from 13 to 23 years, 20 cases; from 33 to 38 years, 3 cases; from 41 to 49 years, 2 cases; from 60 to 62 years, 2 cases; and in 1 case the age is not given. In 16% a hernia was present on the same side as the torsion of the cord. In 88% the

testicle became gangrenous. In 25 of the 32 cases castration was performed for gangrene; in 7 no operation was done. Sloughing of the testicle occurred subsequently in 3 of these cases; atrophy occurred in 2; and in 2 which were treated by untwisting the cord, the ultimate fate of the testicle is not given. None of the 32 died. If the case is seen immediately after onset of the pain and the condition be recognized, an effort may be made to untwist the cord; if it has existed for more than one hour castration is indicated.

OBSTETRICS AND GYNECOLOGY.

By W. A. N. DORLAND, M. D.,

PUERPERAL ECLAMPSIA.

Etiology.—J. P. Simpson (8) remarks that the etiology of puerperal eclampsia is obscure, but that uremia, constipation, pressure and tension are all important factors. Goedecke (6) has analyzed 403 cases of eclampsia observed at the Berliner Frauenklinik. Three-fourths of these women were primiparæ, and 23% of these were old primiparæ. He finds that eclampsia rarely occurs in subsequent pregnancies. Thus, of the 403 women eight had one recurrence, and nine had two recurrences; in all there were 2.23% of recurrences. The absence of albumin in the urine in some fatal cases and its presence and absence in the same case at different times, shows that it is valueless for prognosis, and uncertain for diagnostic purposes. (Deficiencies of the urates and other solids in the urine we regard as much more significant of the onset of eclampsia than the presence of albumin). Goedecke also finds that eclampsia usually occurs in the latter stages of pregnancy. In one case the first symptoms were noticed five days after delivery and the first attack occurred on the seventh day after delivery. The mortality of the 403 cases was a little below 17%. Göz (7) reports the history of what he calls a case of delayed eclampsia; the woman had several convulsions 59 days after a normal labor and puerperium while nursing her child. (There is nothing in the history of this case to indicate that these convulsions were other than uremic convulsions or that they had any connection whatever with the pregnancy). Simpson (8) reports three cases of the disease, all occurring in primiparæ, in one of whom the convulsions were antepartum at the seventh month, in the second occurring during the second stage of labor, and in the third occurring post-partum subsequent to the delivery of twins. All of the mothers lived as did all of the children, save the one which was born prematurely. T. W. Eden (13) claims that the toxemic theory of the causation of albuminuria offers the best explanation of the clinical phenomena of the disease and also of the occurrence of the characteristic placental lesions. The accumulation of toxins in the maternal blood rapidly affects the quality of the fetal blood and the characteristic changes in the fetal arteries are then due to the impurity of the blood flowing through them. Eden says that the toxins may be formed in the maternal tissues, but that there is something to be said for the alternative view that they are products of fetal tissue-metalobism. In the toxemic theory of the albuminuria of pregnancy be accepted, the renal and hepatic changes which are characteristic of the disease must be regarded as mere incidents of the disease, and not the cause of it. The great objection to this theory appears to Eden to be that it proves too much, namely, that every pregnant woman must suffer from albuminuria. There must, in the first place, be a deficiency in the normal rate of elimination allowing of the accumulation of toxins in the blood, thus starting the whole train of symptoms. He calls attention to the fact that Sir Andrew Clarke has described a condition of renal inadequacy due not to definite changes in the kidneys, but to a deficient elimination through these organs. Eden claims that it is possible that some such condition occurring, in pregnancy is the primary fault on the part of the mother, resulting in the development of the disease. R. Jardine, (13) of Glasgow, also holds to the toxemic theory of eclampsia. He believes the toxin is a waste-product of tissue-metabolism. He remarks that the death of the fetus does not always lessen the amount of albumin in the urine or cause its total disappearance. Thus, he has seen three severe cases of eclampsia associated with mascerated fetuses in which the albumin had been most abundant. An important point to ascertain is, how does the maternal system deal with these waste-products? In the first place, he believes that in these patients the elimination by the alimentary canal is below the normal. This is proved by the fact that as a rule constipation is present in pregnancy, and that marked constipation is the history in eclamptic patients. He believes that the toxin acts upon the kidneys in the same manner as does turpentine and cantharadin. Thus, albumin and often blood appears in the urine; the excretion of urine is lessened and there may be even a complete suppression of the flow.

Since sections of the liver in fatal cases show marked evidence of degenerative changes in the hepatic cells, Jardine is convinced that the liver plays an important part in the destruction of the circulating toxin. The fits are produced by the direct action of the toxin upon the nerve-centers. Jardine believes that the poison affects the fetus just as it does the mother. Thus, albumin has been found by him in the urine of several infants whose mothers had exhibited grave albuminuria without fits. Albert (15) considers eclampsia as an intoxication resulting from the absorption of bacterial products in the decidua; in other words, that it depends upon a latent bacterial endometritis of pregnancy. He believes that in order to secure active results the bacteriologic results should be confined to those placentæ which are secured by Cesarean section. With six such placentae he obtained a positive result in two cases, and a doubtful result in one. The bacteria differed in nature; hence he states that there is obviously no particular one which causes eclampsia. (The results of Albert do not carry sufficient weight to prove the bacteriologic origin of the disease; while it is possible for the bacteria which he found to bear some causal relation to the eclamptic state, it is more probable that they were merely accidental features). Döderlein (15) attributes a marked influence upon the causation of eclampsia to geographical and social situations. Thus, he finds that the people of Württemberg seem nearly immune, but one case being recorded in 3565 births, while in England the ratio is 1 to 150 labors and in Russia 1 to 156 labors. (There can be but little doubt that the climatic influences, which are radically different in the countries mentioned, had much to do with the varying proportions of the disease mentioned). A Dienst (5) gives an interesting summary of his work, and announces the theory of its etiology which he has deduced from his labors. He found in the specimens examined the same pathological lesions in the organs of the mother and children, and the same changes in their blood and urine. The fundamental cause of eclampsia, he believes, is an insufficient action of the maternal excretory organs, the kidneys and liver, due to inadequate renal or cardiac inactivity. The retention of fetal excrementitious material results in blood-changes in both mother and fetus, which are shown first by an increase of the fibrin-elements in the maternal circulation. This increase of fibrin leads to multiple thrombosis with secondary tissue-degeneration, involving primarily the liver and kidneys, which are attempting to excrete the excess of toxic substances. If the maternal circulatory disturbance begins abruptly, the numerous anastomoses in the liver permit a greater flow of blood through that organ than through the kidney, resulting in tissue-changes in the liver. Consequently, the incomplete katabolic products from the liver, entering the circulation more rapidly than they are excreted from the kidneys, accumulate in the circulation in addition to the fetal excretions already there. With this sudden onset the eclamptic spasms may occur before any degenerative changes show themselves in the kidneys.

In these cases, which are often fatal, there is no albuminuria and the autopsy shows quite or nearly normal kidneys. If the onset is gradual or the sudden attack is protracted, the kidneys likewise become affected by the toxins and albuminuria will occur. If the altered condition of the maternal blood is more than temporary the composition of the fetal blood is correspondingly changed, and this leads to similar pathological changes in the fetal organs.

H. O. Nicholson (11) submits an interesting proposition when he calls attention to the relationship existing be-

tween the thyroid gland and eclampsia. He considers in the first place the relation of this gland to some of the more prominent pre-eclamptic symptoms. *Edema*, he remarks, is not a constant feature, but is often marked during the latter months of pregnancy in eclamptic patients. In certain cases he has found that this edema is of a peculiar character, being more solid and pitting only on a firm and prolonged pressure. In these cases there is a uniform thickening of the hands and arms, the entire neck is swollen, and the face is often profoundly altered, the features being thickened. In one case the extraordinary thickness of the abdominal wall lead to the supposition that the uterus was unusually large. Nicholson believes that edema of this kind is in reality myxomatous in nature, and indicates thyroid inadequacy, but in the absence of other abnormal symptoms does not always indicate a grave prognosis. He states that Allbutt thinks that the toxemia of the blood incident to pregnancy will account for the increase of arterial tension, and the presence of *albumin* in the urine, but that so long as free diuresis exists there will be sufficient elimination of the toxins to prevent serious results. It is well known that the thyroid gland normally becomes enlarged during pregnancy, and in 25 cases noted by Lange in which this hypertrophy did occur, there was albuminuria in 20. The administration of fresh thyroid juice has a distinct diuretic effect; moreover, it not only increases the amount of secretion of urine, but markedly increases the amount of urea excreted, thus fulfilling two important indications. Nicholson believes that *high arterial tension*, as exhibited by the radial pulse-tracing, is a symptom of considerable importance. He believes that the degree of arterial tension is frequently an index of the ability of the kidneys to continue their eliminative work. In eclamptic cases the sphymographic tracings all indicate extreme tension. It has been shown by means of Oliver's arteriometer that preparations of the thyroid gland possess a specific tendency to increase the caliber of the radial artery, and thereby lower the blood-pressure. In normal conditions, therefore, the thyroid influence antagonizes the suprarenal influence, the tendency of which is to lessen the radial caliber. In cases in which the thyroid secretion is diminished or wanting, there will be a correspondingly profound influence of the suprarenals upon the arterioles of the body including those of the kidney, resulting in an intense arterial spasm with a cessation or lessening of the urinary secretion. He states that the diminished secretion of urine in eclampsia does not, however, altogether depend upon this spasm of the arterioles, but in part upon complex derangements following upon the failure of the thyroid gland to deal with the proteids. He argues that this may explain why a large proteid meal toward the end of pregnancy will occasionally be followed by the symptoms of eclampsia. Nicholson regards *headache, vomiting, epigastric pain*, and especially an unusual *diarrhea* toward the end of pregnancy as suspicious symptoms. Thyroid inadequacy also produces disastrous effects upon the liver, since proteids, which should have been modified by the action of iodothyrin, come to it unchanges.

Pathology.—A. Szili (3) has examined the blood of six cases of eclampsia and has come to the conclusion that the freezing-point of eclamptic blood is practically the same as that of normal blood, a point which is almost constant. This, he asserts, proves that the permeability of the kidneys is not altered in the same way in eclampsia as in most uremic processes. He accordingly deduces the hypothesis that the supposed toxic substance which is the etiologic factor of eclampsia is a complex molecule, and perhaps an intermediate product of katabolic changes in the albumin-molecule. Simpson (8) remarks that comparatively few autopsies have been obtained on patients dying from eclampsia, and that therefore the pathology is not well established. Dropsy of the ventricles of the brain has been found, which, he suggests, might point to pressure and nerve-irritation as causes. Other observers have noted an anemic condition of the brain and nerve-centers, while others believe that the convulsions are due to thrombi and to minute hemorrhages which they have observed, and which they assert are produced by the increased coagubility of the blood in pregnancy. [This fact, however, has not as yet been proved by experience.] Simpson remarks that most authorities regard the pathological lesions in the kidneys of supreme importance. W. Nagel (15) reports that in 289 cases examined *post-mortem* in every instance renal lesions were discovered, while hepatic changes were observed in only half of these cases. T. W. Eden (13) remarks that all observers are agreed that albuminuria is attended by a heavy fetal mortality, namely, from 30 to 77%, and that generally the fetus is imperfectly developed. He insists that in this connection it is important to note that a diseased condition of the placenta is also frequently met with in albuminuria, and he believes that it is very probable that this condition has much to do with the fetal mortality and the imperfect development of the product of conception. He has found that the placental changes consist largely of extensive infarction, which has been termed "pathological infarction," in order to distinguish it from the normal process which takes place in the mature placenta. Infarction in the healthy placenta has been demonstrated to start in an obliteration of the fetal arteries; in pathological infarction the arterial obliteration attains a greater degree of development. The primary lesions are probably identical in the two.

John McElroy (10) reports a case of eclampsia occurring in the sixth month of gestation which was followed by a temporary mental aberration lasting four days, and ending twenty-four hours prior to the discharge of the macerated fetus. (It is a curious occurrence that this symptom should have ended abruptly before and not after the discharge of the degenerating fetus).

Prognosis.—Simpson (8) claims that the prognosis is apt to be too grave; the mortality is probably not far from 10%. If Herman's view is correct, the prognosis may be given almost with certainty with a systematic examination of the urine. If the albumin is principally paraglobulin, recovery may be predicted under a course of judicious treatment, for this condition is due to an altered blood-pressure in the vessels, and the patient will probably recover without subsequent ill-effects. If serum-albumin predominates, nephritis is present, and the recovery is tedious even if the patient lives. The result of this quantitative examination should, in a large degree, govern the treatment.

Treatment.—As regards treatment, O. A. Gordon (2) prefers the hypodermic use of 10 min. of the fluid extract of veratrum viride with 5 min. doses at intervals of one-half hour until the pulse comes down to 60 or below. He keeps the patient under the influence of the drug until all danger is past. Taylor (9) claims that Norwood's tincture of veratrum viride always gives definite results. He has used it extensively and has never known it to fail. The ordinary tincture is not only depressing, but is a very prompt emetic even in small doses. It is exceedingly rare, Taylor claims, to have Norwood's tincture act as an emetic.

Simpson (8) says that morphin is valuable in allaying the irritability of the cerebro-spinal system, but fatal results may follow its use in cases of Bright's disease with renal inadequacy. In those cases in which paraglobulin predominates morphin is of great value. Many cases will recover with a simple diuretic and diaphoretic treatment, together with the application of heat to the body in some form. Chloral, bromide and chloroform are all valuable. In case all the above remedies fail, one-fifth of a grain of pilocarpin given hypodermically will produce profuse diaphoresis in twenty minutes (provided pulmonary edema does not supervene). W. B. Halowes (12) reports four cases of eclampsia successfully treated by rectal injections of chloral hydrate. All were given sixty grains in one ounce of water *per rectum* as often as the convulsions occurred. Wyder (15) summarizes his treatment as follows: (1) Immediate and rapid delivery without too great regard for the life of the fetus; (2) narcosis during all the manipulation; (3) great care in asepsis and antisepsis on account of the marked tendency to sepsis; (4) careful individual selection of such drugs as chloroform, chloral, morphin, and veratrum viride, which do not remove the toxins but merely limit their action and increase the burden upon the heart and kidney; (5) rapid regulation of the excretory functions of the kidneys, skin, and intestines; (6) removal and dilution of the toxin-containing blood in some cases with phlebotomy and saline infusions; (7) Oxygen-inhalations to increase the oxidation of the blood;

(8) rapid stimulation by ether, camphor, caffein, and other drugs for threatened cardiac failure. Schatz (15) holds that phlebotomy acts by diminishing the blood-pressure and not by removing the toxins. Olshausen (15) favors saline infusion and phlebotomy, which he believes are effective by diminishing the toxicity of the blood.

The treatment of eclampsia by saline infusions is rapidly gaining in favor. Jardine prefers subcutaneous infusions of from one to three pints under the breast or in the abdomen. If necessary the infusions may be repeated several times. He believes that there is a diuretic effect obtained by the use of the infusion, especially when, in addition to the normal salt-solution, sodium acetate or potassium bicarbonate is used. The saline solution, besides flushing the system, dilutes the poison and stimulates the patient. He also believes it has an effect in controlling the convulsion. The death-rate of cases of puerperal eclampsia treated by saline infusion at the Glasgow Maternity Hospital is as low as 24% as against 47% of those cases which were treated by the old methods. Simpson (8) states that intravenous transfusion is more dangerous and no more valuable than rectal or subcutaneous infusion.

A. Giles (13) claims that the best results follow the use of the saline infusion if the patient's elimination is not faulty. He favors the combined use of venesection and saline infusion, and he believes that injections into the cellular tissue under the breast or into the abdominal wall are most efficacious inasmuch as the fluid becomes mixed with the serum in the tissues before passing into the general circulation. Jardine (1) would employ a saline injection containing one dram of sodium acetate to a pint; this quickly establishes diuresis. At the Glasgow Maternity Hospital Dr. Munro Kerr found that the older methods of treatment gave a death-rate of 47%, while with the saline solution there was a death-rate of 24%—a fall of nearly 50%. He believes that the saline solution is a most powerful, though slow, diuretic, a valuable cardiac stimulant and a valuable adjunct to other treatment. He would not exclude morphin or chloral in those cases in which there is much restlessness, and the convulsions are not at once arrested by saline infusion, Nicholson (11), basing his opinion upon the relationship existing between the thyroid gland and the genital organs, believes that as soon as the promonitary symptoms of eclampsia appear, even if albumin be not present, the thyroid extract should be administered in 5 grain doses twice daily increasing, as tolerance is established, to three times daily. Proteid foods should be withheld until there is an improvement in the symptoms. Britton sometime ago proposed potassium iodid as a specific for puerperal eclampsia, and only recently it has been suggested that potassium-iodid infusions be given instead of ordinary saline infusions. Nicholson claims that the thyroidin gives all the good effects of potassium iodid. If the convulsions are imminent or have already occurred, from ten to fifteen min. of the liquor thyroidi may be given hypodermically and repeated every hour or two as needed. Even better than this would be ten min. of the fresh juice from a sheep's thyroid together with an equal quantity of distilled water to be injected as the other preparation. If the convulsions have occurred, morphin should also be given to inhibit the various processes of metabolism and to give the thyroid gland a chance to regain its function. After the labor is completed, should the convulsions recur, large doses of sodium salicylate may be given. Nicholson believes that the beneficial effects of saline infusion are due to the relief of the arterial spasm.

A. Dührssen (4) claims that the only rational and good treatment for eclampsia is that which empties the uterus quickly. Other methods may ward off the eclampsia, but do not cure. He endorses Cesarean section *per vaginam* as the best operative method of treatment. He limits the classical Cesarean section to cases in which the true conjugate is under 7½ or 8 centimeters. The vaginal operation he recommends for cases of difficult labor due to the maternal soft parts, including those in which the life of the mother or child is endangered by a closed and rigid cervix. He holds that as the child is so likely to die in a case of severe eclampsia during the first seven months, pregnancy should be terminated without respect to its viability. The vaginal section, he claims, allows the delivery of a living child within a few minutes if it is viable. (We are opposed on general principles to vaginal major surgery in any of its forms. If Cesarean section be indicated at all in eclampsia, we would much prefer to perform it according to the classical method).

P. Müller (15) does not interrupt pregnancy for albuminuria alone. He reserves Cesarean section for those cases in which the mother's life is practically lost. He prefers incisions of the cervix to dilatation by bags, while on the other hand L. Meyer (15) strongly favors dilatation. Simpson, (8) in those cases in which the eclampsia appears in the early months of pregnancy, does not favor forcible dilatation and emptying of the uterus. This he says should be avoided, even under chloroform. A bougie kept in place long enough to produce powerful and regular contractions he believes is the best way to induce the labor. Adolph Glockner, (14) of Zweifel's clinic, delivers early under anesthesia in cases in which the attack begins before labor. If necessary the cervix is dilated gradually by bags, rapidly by incisions, or by a combination of these procedures. After birth, frequent lavage with the administration of solutions of the vegetable acids (usually tartaric), hydrotherapy, morphin, and occasionally phlebotomy and saline infusion will be the course to pursue. His mortality under this active treatment is 15.49%, a decided improvement upon the statistics of Zweifel's clinic when milder measures were employed. The fetal mortality was 43.59%, of which nearly half were premature. W. Nagel (15) believes that Cesarean should be reserved for cases in which, while the mother's condition is serious and the child alive, no other operation seems feasible. Dilatation by the Champetier de Ribes bags is free from danger to the mother.

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Cypridopathies and Tuberculosis. Elie Catheau (*Paris Thesis*, 1900-1901, No. 459.) (*Gaz. Heb. de Med. et de Chirur.*, Oct. 27, 1901 48me. Année, No. 86). According to Chateau some adenopathies of undoubted venereal origin are characterized by a hopeless tendency to chronicity. This gravity leads one to the conclusion that some foreign influence is at work besides the pathologic condition that caused the lesion. This influence is oftentimes tuberculosis. These tuberculous lesions are not situated primarily in the genitals, and one is obliged to admit the pre-existence of tuberculosis in the individuals carrying these lesions. This tuberculosis, up to the times of the development of the venereal lesion, is latent and manifest itself only after the establishment of that lesion, in the same manner that it develops after a traumatism. Complete extirpation is the best treatment for these adenopathies, and the results of the operation are excellent provided there is no visceral tuberculosis. [J. M. S.]

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To Change the Name of the United States Marine Hospital Service.—Whatever special fitness or significance the name of this valued public service may ever have possessed, is probably lost in the mists of the past. We have ourselves often wondered, but have never asked. The service under Surgeon-General Wyman and his able assistants does such remarkably good work that we have always considered its name to be a matter of minor importance. We are heartily glad to note, however, that a bill has been introduced into Congress to change the name of this service to the "United States Health Service." (Why not *Public* Health Service?) We believe the bill has met the approval of the officials, and comments on it readily suggest themselves.

In the first place, the present name does not adequately indicate and define the duties of the service. This bureau is *de facto* and *de jure* a Public Health Service, and should be named so. All its functions are for the promotion and preservation of the public health, and are not limited to marine hospitals. It does indeed conduct such hospitals, in which it treats annually some 56,000 seamen, but it also enforces quarantine (domestic, insular and in foreign ports); engages in the management of epidemics; the medical inspection of immigrants; the publication of sanitary reports and statistics from all parts of the world; and pursues original scientific research. All these are duties of the highest public import. The change of name does not imply any radical change of function; the service will continue to perform all the duties now required of the Marine Hospital Service.

The bill recognizes and authorizes several Divisions of the Bureau in Washington, and makes the officer in charge of each Division an Assistant Surgeon General. It thus improves the organization and discipline of the service. This it promotes also in other ways. It recognizes the essentially military character of the organization and personnel of the corps.

This provides a proper status for the officers, who, in discharging their duties, are often brought into intimate contact with the Army and Navy, with other public services, with state and municipal affairs, and, in a representative character, with learned societies and even with foreign governments. It is highly desirable that this Public Health Service should have the proper prestige which comes from thorough government organization and countenance.

It is intended also to bring the laboratory work of the service into relations with the scientific work of the Army, Navy, the Department of Agriculture and with the various scientific laboratories in different parts of the country. Thus its work will be both stimulated and correlated. Provision is made for the employment of skilled laboratory workers.

One of the most important provisions of the bill is for coöperation between National and State authorities in matters of health. Not a year passes but the necessity for closer union and more harmonious work is manifested. This is seen especially in cases of epidemic diseases. Such diseases do not respect state lines, and they need a centralized authority to direct the control of them. In collecting vital statistics the newly-named service can and will perform a good work by promoting the adoption of uniform blanks. Vital statistics in this country are in a state bordering on hopeless confusion for want of uniformity.

We believe this bill to be one of the most important measures, from a medical standpoint, that have appeared before Congress in recent years. It evidently contemplates the larger and fuller participation of the general government in all matters relating to public health. We regard this as in every way an augury of good.

The Surgery of the Heart.—In commenting editorially upon this topic in a recent issue of the Journal, in which also appeared a report of a case of punctured wound of the left ventricle, by Nietert, of St. Louis, we closed by saying that the subject had not received an extensive study by American surgeons. This remark was suggested by the fact that but two of the twenty-three cases collected by Nietert had been reported by Americans.

In the *Medical News* of December 7th, Dr. George Tully Vaughan, of Washington, reports another interesting case in which he operated for a penetrating wound of the left ventricle. His patient died from the effects of hemorrhage immediately

after the wounds of the heart and of the pericardium had been sutured. In several particulars this case differs from Nietert's, but mainly in the fact that the wound of the heart was larger, requiring seven sutures, and in that the pleural cavity was injured, a condition which permitted the loss of an enormous amount of blood. These two cases are the only ones reported by American surgeons that have come to our notice, but in this connection it is interesting to note a prophetic remark made by Dr. John B. Roberts in a paper entitled "The Surgery of the Pericardium," and read before the Anatomical and Surgical Society of Brooklyn in 1881 (*Annals of Anatomy and Surgery*, December, 1881): "The time may possibly come when wounds of the heart itself will be treated by pericardial incision to allow extraction of clots and perhaps to suture the cardiac muscle." A fuller consideration of this subject is also to be found in a later paper written by Roberts in 1883 (*Medical News*, Jan. 3, 1883). Another discussion of penetrating wounds of the heart, containing a table of eighteen cases, was presented by Dr. L. L. Hill in the *Medical Record*, December 15, 1900. These contributions and the reports by Nietert and Vaughan, constitute, so far as we know, the American literature on the subject, and are quite sufficient to remind us of the urgent necessity of immediately perfecting measures of relief in stab wounds of the heart.

Smallpox Ethics.—The statement, as published recently in the newspapers, that some physicians in a neighboring city have been showing a wholesome dread of smallpox, and abandoning their patients, may require to be taken with a grain of salt. Such reports may do great injustice to the physicians concerned, and need careful verification before the accused men are condemned. If it be true that some doctors in Camden, after paying a first visit to smallpox patients and making a diagnosis, promptly reported the cases to the Board of Health, and then did not make another visit, they are not necessarily censurable. It depends largely upon the circumstances of each case. If the cases occurred in patients who could not safely be treated in their own homes, the physicians may have been justified in turning them over promptly to the public health authorities.

The city of Camden, it is to be presumed, makes provision for such cases; and a physician who promptly reports such a case, does his duty, and is not to be blamed if he considers himself absolved from further responsibility.

It is just as well for the public to understand that attendance upon a case of smallpox is always a matter of considerable risk to a physician, and to his family and his practice. The pecuniary sacrifice alone may be large. When public provision is made for such cases in persons who are unable to command the services of a physician, the latter is not necessarily called upon to make the sacrifice. In saying this we do not disparage in the slightest the claims of duty and the readiness for self-sacrifice which should always characterize (and always have characterized) the medical profession. It is simply a question of what is best for the patient, for the community, and lastly for the physician.

The Action of Narcotics.—One of the most remarkable and interesting developments from Ehrlich's lateral chain theory as to the action of bacterial toxins and the production of antitoxins, is the work on the influence of narcotics upon the tissues and on their manner of action. Hans Meyer has in several communications given very convincing evidence that narcotics act by combination with certain portions of the tissues of the nervous system, and his work has been confirmed by several other investigators. Mayer (*Archiv f. exper. Pathologie u. Pharmakologie*, Bd. XLVI. Hft. 5 und 6) now adds a further confirmation of his previous statements, reporting his results from the determination of the co-efficient of combining power of various narcotics under the influence of changes of temperature and demonstrating that they follow the course which is necessary if his theory is correct: and, in the same journal, Archangelsky gives reports of rather elaborate investigations concerning chloral hydrate and acetone, in which he shows that, after the administration of these substances up to the point of the production of narcosis, they may be found in the nervous system in much larger amounts than elsewhere, and that, as their effects pass off, they are retained in the nervous system longer and in greater quantity than elsewhere. This also points strongly to their having directly combined with certain elements in the nervous system and having produced their effects in this way. A fact which makes this seem still more probable, one which has long been known, is that a number of the narcotics, at least, cause demonstrable alterations of the tissues, and it is, of course, probable that they do this through direct chemical action upon the latter, and not, as was at one time taught, through mere reduction in oxidative processes practically all research-work pointing against the latter view. This further proves that the influence of narcotics does not cease with the disappearance of the narcosis and gives us a broader and more rational understanding of the immediate and more remote dangers connected with their use. At the same time it adds some further emphasis to the fact that physiological chemists now, as probably they will in the more immediate future, contribute more

interesting and suggestive facts than any other general class of investigators; a fact which is not yet sufficiently recognized by most of the best teaching institutions in America or England. Were it recognized, there would be a more active and spirited effort to broaden the views of students in such matters and to build up a larger and more productive body of research workers in this line in our land.

Precocious Dementia.—Esquirol, the eminent French alienist, in his chapter on idiocy, described many years ago the cases of so-called acquired imbecility. These cases happen in children who were once intellectually bright. They are among the tragedies of pubescence. Such children may have shown a marked degree of susceptibility. In the language of Esquirol, they were lively and possessed of a brilliant imagination with a precocious intellect. But they quickly ran their course; their minds came to a standstill; they acquired nothing more, and the hopes which they once gave, vanished.

The tragic cases thus outlined by Esquirol may be seen in every asylum. They are classed as imbeciles, and the story of the wreckage of their minds is too often dismissed in that convenient term. But in the *American Journal of Insanity*, for October, there is an abstract of a paper on "Dementia Praecox" by Dr. J. Christison, Physician to the National Asylum at Charenton in France—in which there is presented a careful analysis of this important mental affliction which has led to the undoing of so many youthful minds.

The characteristics of this juvenile dementia are its appearance at the age of puberty; various delirious symptoms at the beginning; constant sudden impulses; and a rapid termination in a dementia which is more or less complete. Dr. Christison calls this disease also "Hebephrenia Gravis." It represents an obscure disease process which sweeps, as it were, through the brain cortex in juveniles and leaves naught but a wreck behind.

Dr. Christison describes this important disease in a paper that is well worth the study not only of the psychiatrist but also of the general clinician. Here is a disease which offers problems; one which with one fell swoop wipes out the functions of the brain cortex. In pathology there is no problem more complex, more engrossing, more fascinating than this. It appeals alone to the *materialists*, however. The metaphysical psychologists, who affect a horror at the thought that mental function can depend upon cell-structure, should have nothing to do with it. It will surely scandalize them.

Dr. Christison's paper is in the best style of the French alienists—clear, analytical and learned. In it we see the methods of modern science applied to the elucidation of profound psychological problems.

The Etiology of Retrodisplacements.—An examination of many of the leading text-books of gynecology will show, as the general teaching, that uterine retrodisplacements are most commonly produced by parturition. Admitting that a large, a very large, number of cases do occur after the birth of one or more children with resultant lacerations of the pelvic floor and subinvolution of the uterine body, it is still, we believe, too sweeping a statement to attribute all these cases to the injuries received at childbirth. Indeed, very many badly lacerated perinei are encountered without any associated backward displacement of the uterus, while many heavy and subinvoluted uteri maintain a normal anterior inclination for varying periods of time even reaching to the menopause, when the natural retrograde changes incident to the climacteric induce a normal diminution in the size of the heavy uterus. Again, every large gynecological clinic will show a great many cases of marked and adherent retrodisplaced uteri in the development of which the ill-effects of parturition have taken no part. Such are the cases encountered in young girls, in elderly single women, and also in women in the third and fourth decades, not married. In many of the younger women the uteri lie far back in the pelvis, are retroverted or retroflexed, and are often undersized, not heavy and subinvoluted. In this large class of cases some other cause than perineal and vaginal lacerations or uterine and vaginal subinvolution must be sought. An investigation of the clinical histories of these patients will reveal, in a large majority of the cases, two causes quite distinct from parturition, namely, pelvic inflammation and irregularities in the development of the uterine walls. Just as anteflexion of the uterus is produced by a comparative over-development of the posterior uterine wall, so retroflexion, or rather a retroversion, may result from an imperfect development of the same wall. It is not at all uncommon to see in sharply anteflexed uteri an associated retroversion, carrying the organ back toward the sacral promontory where it becomes subject to the downward pressure of the intestines exerted upon its anterior wall. If such uteri are not soon replaced and held in their normal situation, the retroversion progresses to a retroflexion, and this in turn becomes adherent to the bowel and a serious form of displacement results. The frequency with which pelvic inflammation following salpingitis results in uterine displacement is now very generally recognized. A gonorrheal infection of the cervix, quickly invading the corpus uteri and the tubes, spreads to the pelvic peritoneum and results in dense adhesions which drag the uterus into the hollow of the sacrum. Even after the inflammatory products in the tubes have been absorbed and

these structures have returned apparently to a normal condition, as they not infrequently do, the uterus still remains in its pathological position and the patient suffers from one of the most serious affections of the pelvic cavity. Here, then, we find a very prolific cause of retrodisplacement of the uterus. Now, in many of the cases following childbirth, either shortly or at a more remote period, it is not at all improbable that a secondary or superimposed pelvic inflammation is the direct cause of the displacement, without any relationship whatever with the associated perioneal or vaginal laceration. These two pathological elements, pelvic inflammatory bands and irregularities in the uterine development, merit prominent places in the determination of permanent posterior dislocation of the uterine fundus, and in our opinion should even head the list of causes, with parturition and its ill-effects as a less important consideration.

The Alloxur-Bodies and the Leukocytes.—The investigations of Milroy and Malcolm have shown that the rise of the endogenous alloxuric bodies in the urine is only seen in cases of splenomedullary leukocythemia. On the other hand, the lymphatic form of the disease shows no increase; whilst the leukocytes, as pointed out by Sivén, Kühnau and Weiss, and von Noorden and Zuntz, are devoid of any constant effect. Hutchinson and Macleod (*Journal of Experimental Medicine*, October 1, 1901) have studied the alloxuric excretion in a case of leukopenia. The patient was a woman, 37 years old, who was suffering from Malta fever and whose blood contained between 1500 and 3000 leukocytes. The general result of this study has been to show that the phosphoric acid and the alloxur-bodies in the urine, the patient being on an alloxur-free diet, suffered no distinct diminution from the normal. This result, it is suggested, may be due to the leukopenia being brought about by an increased destruction of the leukocytes in the spleen, rather than to a diminished activity of the bone marrow. It would seem, therefore, that Horbaczewski's theory, which connects an increase of alloxur-bodies with a corresponding leukocytosis, does not hold good for all forms of leukocytic increase. The case studied in the article under review shows that the converse of the proposition holds good; namely, that a decrease of leukocytes is not necessarily accompanied by a decrease of the alloxur-bodies in the urine.

Dr. James K. Crook, of New York, favors our readers this week with an interesting diary of a mid-winter trip to Florida. As the season is now upon us when tourists and invalids turn naturally to southern climes, this paper is highly appropriate and may, we trust, prove both entertaining and helpful. This country is fortunate in possessing within its borders a wide range of climate from the almost subarctics of some of the northern states to the truly subtropics of the southern ones. Climatology has become a recognized science among us—as is appropriate in a people who inherit such a rich diversity of climates. Dr. Crook's paper, which we publish as a special article, has not only scientific value but a distinct literary quality that commends it to all readers.

"The Lady and the Cigarette" promises to be an issue yet, not only in society but also in ethics and in medicine. It is bad enough to have to discuss the cigarette habit in the masculine gender, but when it assumes a feminine shape the problem is still more embarrassing. The doctrine of *laisser faire* covers a multitude of small sins (as it is meant to do) and it may yet be made to cover this little sin too; but stern moralists may see a divine justice in the case of the maiden who set fire to her beautiful hair with a cigarette. Young women may be assured that even without imposing such a sacrifice the cigarette is capable of consuming much in them which they should strive to preserve.

Dr. Mary Wolf, of the Norristown Insane Hospital, has stated in a recently published interview, that she is in favor of coeducation in medicine. "Personally," she says, "I am not favorable to women's colleges. I was not educated in one and I have never been sorry that I wasn't." This is rather startling testimony from a woman. Dr. Wolf goes on to say that "in women's colleges women meet only women, and are apt to measure the universe by women." Here in Philadelphia we believe that we have the best as well as the oldest women's medical college. Surely some of its graduates should answer Dr. Wolf.

The report that Professor Virchow has sustained a fracture of the thigh will, if it proves true, cause profound sorrow throughout the medical world. The accident is a serious one in a man passed eighty years of age, and is such as to cause much concern for the welfare of the venerable and beloved scientist. Let us hope that later reports may be more encouraging. Virchow, who has just received the acclaims of the whole professional world on his eightieth birthday, is *facile princeps* in the scientific world to-day.

Current Comment.

AN UGLY CHARGE.

Charges of cowardice in the treatment of smallpox cases were made openly against several Camden physicians by Dr. H. H. Davis, president of the Board of Health, at a meeting of that body. He declared that he had been informed personally about the cases, but he did not mention the names of the physicians who had been accused. In each instance he said the doctor left the stricken patient immediately upon diagnosing the case and failed to pay a second visit to the afflicted person, contenting himself with informing the Board of Health of the existence of the case. There was some surprise among the other members of the board at the statement, but no open comment was made upon it. President Davis was instructed to get physicians for those patients who had been deserted. Dr. Davis explained that he had found it difficult to do so, as physicians did not care to attend smallpox cases.

—*The Philadelphia Press.*

AS TO MEDICAL COLLEGES.

In the last report of Prof. Delos Fall, the State superintendent of public instruction, that official makes some interesting observations as to the result of the study of reports made to him by visitors whom he appointed to inspect business and medical colleges of the State. As to medical colleges the following recommendations are made: A standard of preliminary education should be required, and a board created to examine all students before entering upon the study of medicine. Some safe, uniform standard for graduation ought to be fixed and insisted upon as a condition precedent to a license to practice medicine. The financial solvency and stability of each institution should be more carefully guarded and insisted upon. Medical colleges should not be chartered in small towns where clinical and hospital facilities, so necessary to the proper education of a physician, are not ordinarily found. A constant and thorough visitation and inspection of such institutions should be regularly made by a board of visitors competent to fairly judge of their merits. The capital of every college should be large enough to warrant the employment of men learned in their profession and the provision of equipment in all branches adequate to promise a proper medical course..—*The Detroit Tribune.*

THE NICARAGUA AND PANAMA CANALS.

The construction of a canal across the Central American Isthmus is not free from elements which make the business of protecting the health of those engaged upon the work especially difficult. The sanitary care of an army of soldiers under strict military discipline, in this region, unencumbered by the exhausting labors of digging and building a canal would be a large undertaking. But if we add to the natural disadvantages of climate and topography, the stupendous engineering work contemplated, involving an estimated expenditure of nearly 200,000,000 dollars and the continuous employment of ten or fifteen thousand men for eight or more years, it will be seen that the Government has a problem in hand which calls for all the knowledge of hygiene which can be brought to bear upon it. Nor does it appear that this, our substitute for the old Northwest Passage, is less dangerous to navigators. It is not improbable that more or less apprehension will always be felt that ships passing through the canal will become infected by diseases indigenous to the country, or carried there by vessels from unhealthy ports. Will the Isthmian canal become a focus of disease as well as a focus of trade?

—*The Medical News.*

Reviews.

Anatomical Atlas of Obstetrics with Special Reference to Diagnosis and Treatment.

By Dr. Oskar Schaeffer, Privatdocent in Obstetrics and Gynecology in the University of Heidelberg. Authorized Translation from the second revised German edition. Edited by J. Cilfton Edgar, A. M., M. D., Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College, etc. 122 Figures. 56 Lithographic Plates. 38 other Illustrations. W. B. Saunders & Co., 1901.

The second edition of this one of a remarkable series of Hand Atlases is before us from the able pen of a competent translator, himself an obstetrician of note. The present volume deals with obstetric diagnosis and treatment, aiming by a profusion of colored plates and other illustrations to present the subject in a graphic form which will increase its didactic value. The second edition presents many necessary changes. Most of the colored plates are new. Current literature has been worked over to bring the subject up to date, and a large amount of new material has been added to keep pace with the advance of knowledge. As the author pertinently says, in the last few years many questions have been brought nearer a final solution, many others become more complicated, while new ones have made their appearance.

The chapter on physiology and diagnosis contains a number of colored plates and full descriptions of appearances found at various stages of gestation. The statement is made in reference to examination that after labor is begun it should be made only for urgent reasons. Emphasis is placed on a point too often forgotten, that absolute surgical cleanliness of the hands cannot be obtained within twenty-four hours after contamination by attendance on a puerperal fever patient, or after exposure to the germs of scarlet fever or diphtheria. Throughout the work much attention is given to anatomy, both minute and gross. In smaller type a page or more of anatomical description is inserted wherever it could possibly be of use. This greatly increases the value of all plates, and adds to convenience. The section on the Pathology of Pregnancy is admirable. Particularly valuable is the clear cut analysis of the important subject of tumors, their diagnosis, and the treatment which their presence calls for. In the chapter on the Pathology of the Puerperium the classification lays more emphasis on the varieties of structural involvement than on bacteriology. It may be noted that in the management advised for septic conditions hysterectomy is not given a prominent place, which is quite in accordance with the best practice, as it is seldom called for. The colors used in the plates are in most cases natural. In a few cases, as in Fig. 37, they are too vivid, and resemble those of infective inflammation. The difficulty of copying colors in their natural condition is of course great. A profusion of most graphic diagramatic drawings adorns the work, which should prove as popular in this country as it has been abroad. [G. E. S.]

Spyhilis; Its Diagnosis and Treatment. By William S. Gottheil, M. D., Professor of Dermatology and Syphilology, New York School of Clinical Medicine; Dermatologist to the Lebanon and Beth-Israel Hospitals, the West-side German Dispensary, etc. Chicago. G. P. Englehard & Co., 1901.

Dr. Gottheil's book on the diagnosis and treatment of syphilis is a volume of two hundred and eleven pages of convenient size. It gives a concise résumé of the latest conclusions regarding the natural history of the disease and the best methods of combating its manifestations. The author has not hesitated to publish his own conclusions from personal observation, even if these conclusions are not in accord with generally accepted ideas. The author places great reliance on the diagnostic significance of the spread of an angina from the tonsils to the uvula and soft palate in a case of suspected syphilis. The inflammatory

area in such a case is dark crimson in color and is separated from the healthy mucous membrane by a very sharp border. This border is so different from the diffuse demarcation in ordinary catarrhal angina that it is considered to be pathognomonic. He believes that the prognosis of syphilis is better than that of gonorrhea, and that there is abundant evidence that the disease is curable. He is of the opinion that the thoroughness with which antisyphilitic medication is carried out is the greatest guarantee of the future mildness of the disease and its permanent cure. The efficient regulation of prostitution is the most important prophylactic measure. Dr. Gottheil places himself on the side of those who believe that patients presenting tertiary lesions cannot, as a rule, transmit the disease to their offspring. He allows syphilitics to marry when the disease is in the tertiary or noncontagious stage, or when, after proper treatment, one full year has elapsed without the appearance of lesions. He is an advocate of the hypodermic administration of mercury in the treatment of syphilis, preferring to use a 10% suspension of calomel in equal parts of glycerin and water as the medicament. He employs from 5 to 15 minims of this mixture, injecting it into the gluteal muscles at intervals of from 5 to 15 days. There are several unfortunate typographical errors in the monograph. The illustrations are very good. [J. M. S.]

A Treatise on Appendicitis.

By George Ryerson Fowler, M. D. Second Edition, revised and enlarged. Octavo, pp. 236. Philadelphia: J. B. Lippincott Co., 1900.

The first edition appeared in 1894 and the second bears the date of 1900. This very valuable book has been thoroughly revised and a new chapter added which is devoted to the differential diagnosis between appendicitis and the affections which are most frequently confounded with it, including lesions of the gall bladder, the kidney, the intestine—not of necessity involving the appendix—and of tubo-ovarian disease. Dr. Fowler gives a very elaborate tabulated résumé of the symptoms of these conditions as they may simulate appendicitis, based upon studies made upon cases seen by him. This is a particularly valuable chapter and well worth careful study by both physician and surgeon.

In speaking of the complications and their treatment, he condemns, where a diffuse septic peritonitis exists, the so-called scouring or scrubbing of the intestines with gauze to remove lymph patches. While he admits that they harbor hordes of microorganisms, he believes that great harm may result from the rough method of manipulation to the serosa itself. He advises very strongly the elevated head and trunk position as an important means of preventing further absorption of septic material from the peritoneal cavity in peritonitis, and this is very well worthy of a systematic and careful trial.

His descriptions of the technique of the various methods of operating are very clear. The chapter on bacteriological considerations is very full and the relations of the bacteria of the intestinal canal to the etiology of appendicitis are worthy of careful study.

The book is a very valuable contribution to surgical literature and should be read by every practitioner and studied with the greatest care by the surgeon. [W. J. T.]

A Treatise on the Acute, Infectious Exanthemata. Including Variola, Rubeola, Scarlatina, Rubella, Varicella, and Vaccinia, with especial reference to Diagnosis and Treatment. By William Thomas Corlett, M. D., L. R. C. P. Lond. Professor of Dermatology and Syphilology in Western Reserve University; Physician for Diseases of the Skin to Lakeside Hospital; Consulting Dermatologist to Charity Hospital, St. Alexis Hospital, and the City Hospital, Cleveland; Member of the American Dermatological Association and the Dermatological Society of Great Britain and Ireland. Illustrated by 12 Colored Plates, 28 Half-tone Plates from Life, and 2 Engravings. Pages viii-392. Size, 6¼ by 9¼ inches. Sold only by subscription. Price, extra cloth, $4.00 net, delivered. Philadelphia: F. A. Davis Company, publishers.

This interesting work is practically a series of monographs upon Variola, Rubeola, Scarlatina, Rubella, Varicella and Vaccinia. It is comprehensively and clearly written and illustrated by forty-two well drawn plates, some of which are colored. We can safely recommend this volume to all students of the acute exanthemata. A point of especial value in the book is a series of elaborate differential diagnoses, which are brought out clearly and definitely, leaving very little doubt in the reader's mind as to the important differential diagnostic criteria between the various eruptive diseases. The book is attractively bound and well printed, and altogether the author and publishers are to be congratulated upon the [illegible] which they have brought out. [J. L. S.]

Proceedings of the Washington Academy of Sciences. Vol. 3, 1901.

The portion of Volume 3 of the Proceedings of the Washington Academy of Sciences that is before us for review consists of seven numbers. The first is a paper from the Harriman Alaska Expedition, on the Willows of Alaska, by Frederick V. Coville. The monograph describes the specimens of the Willow family found in Alaska and is illustrated by ten excellent plates. The second numer, by Otto Heidemann, gives a list of the Hemiptera found by the Hopkins Stanford Galapagos Expedition in 1898-1899, and describes two new species; Ghilianella galapagensis and Salda rubromaculata. The third number, by D. W. Coquillett, describes the Diptera obtained by the same expedition and the fourth number, by Rolla P. Currie, treats of the Odonata. Ten new species of Diptera and two new members of Odonata are described. The fifth number is a monograph on the Algæ of Alaska, by De Alton Saunders, and is one of the papers from the Harriman Alaska Expedition. The sixth number treats of the Orthoptera collected by the Hopkins Stanford Galapagos expedition and is by Jerome McNeill. The seventh number, by Edwin Chapin Starks, treats of the synonomy of the fish skeleton. [J. M. S.]

The Medical Record Visiting List or Physician's Diary for 1902. New Revised Edition. New York: William Wood & Co.

The Medical Record Visiting List for 1902 is now offered to the medical profession. The book is a well-known and useful diary for the recording of professional services. The list is attractively bound and is arranged for thirty and for sixty patients per week. In addition to the usual tables at the front of the book there is a page devoted to hints for the writing of wills by a member of the New York Bar. [J. M. S.]

Technique of Massage. By Prof. Dr. J. Zabludowski. With 64 illustrations, Leipsic, 1901.

The little paper bound volume of 118 pages comprises a portion of the text book of Physical Therapy, edited by Prof. A. Goldscheider and Prof. P. Jacob. It presents the thoroughness and [illegible] so characteristic of German savants. It treats in detail upon the general technique of massage and considers minutely the individual manipulations. It lacks a substantial binding, and the shabby paper cover is a poor enclosure indeed for the 64 excellent illustrations. Ocular massage sometimes valuable although in other cases of dental [illegible] deserves a position in this exhaustive treatise. Pelvic massage, a procedure of recognized efficiency [illegible] deserves as much consideration as the massage of the skull for headache, as illustrated by figure [illegible] on page 106 or as vibration of the scalp for cerebral neurasthenia, as shown in figure 41. The printing and typography are all that can be desired, although the poor binding [illegible] something to which the reviewer has frequently called attention as occurring in German monographs, cannot be too strongly condemned. [M. R. D.]

A Text-Book of Diseases of the Nose and Throat. By D. Braden Kyle, M. D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical College, etc., etc., with 175 illustrations, 23 of them in colors. Second edition, Philadelphia, W. B. Saunders & Co., 1900, pp. 646.

The prompt exhaustion of the first edition of this work shows that it has filled a gap, despite the large number of similar volumes published within a very few years, and thus must be doubly gratifying to the author. It differs from the first edition, as we learn from the preface, merely in some changes of expression and the correction of a few typographical errors; so that an extended analysis is not requisite.

The best portion of the work is its pathology, but the volume as a whole may be regarded as a safe text book for the medical student, and a safe guide to the general practitioner. [J. S. C.]

Essentials of Physiology. Saunders Question Compends, No. 1. Prepared Especially for Students of Medicine by Sidney P. Budgett, M. D., Professor of Physiology in the Medical Department of Washington University, St. Louis. Arranged with Questions following each chapter. Illustrated. Philadelphia and London. W. B. Saunders & Company. 1901.

Notwithstanding the legitimate objections that have been urged against the use of Compends, the success which has attended their publication is a sure indication that they meet the needs of the student body. Those most familiar with the crowded condition of the college curriculum can readily understand why the student appreciates every good summary of any branch of science. All, however, are of the opinion of the author of this Compend, that they are to be used in conjunction with a text book and not as a substitute for one. The present volume may be regarded as a system of notes on the lectures of the author, and while not as complete as might be desired, it nevertheless contains the essential facts of physiology presented in a clear and concise manner. The section devoted to the Nervous System is illustrated by a number of drawings made from natural sections, showing the relation at different levels of the conducting paths and their relation to the nerve centers.

To each chapter is appended a series of questions which are designed to test the students' comprehension of the subject matter of that and other chapters as well. A correct answer, in many instances, will necessitate a rereading of the section, and definite thinking on the part of the student. [A. P. B.]

A Case of Rupture of the Heart.—Jolly, in *L'Independance Medicale*, (July 17, 1901. No. 29), reports the case of a woman of 55, who came into the hospital with dyspnea. Pulmonary congestion and pain were found over the left base. She died suddenly, while asking for a basin. The autopsy showed the pericardium full of clotted blood. There was congestion of both lungs, and some fluid was found in the pleura. The cause of death was evidently intrapericardial hemorrhage, through a tiny fissure, 4 to 6 cm. long, near the apex of the left ventricle. This rupture was due to myocarditis. Jolly then describes parenchymatous and interstitial myocarditis, with fatty degeneration, pigmentation, and the other changes which may occur.

[M. O.]

Multiple Exostoses in a Child with Chorea.—Guinon and Dieu report the case of a boy of 6, who had pertussis a year ago. Urticaria appeared with gastroenteritis six weeks ago. Then exostoses were first noted, most marked upon the hands and the spinous processes of the dorsal vertebrae. Three weeks ago chorea developed, mainly on the left side. Exostoses are found on the metacarpal bones, the olecranon, epicondyle, clavicles, acromion, and spine of the scapula, chondro-costal articulations, occipital and parietal bones, etc., but none in the lower extremity. Upon arsenic and diet he is already much better. They believe that these ostoses are periosteal in character, as they grew too rapidly to be true osseous tissue. (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, July 18, 1901. No. 25.) [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA NEWS.

Smallpox at the Almshouse.—Smallpox has developed among the paupers at the Almshouse. Ten cases have been discovered among the 5000 inmates. All have been removed to the Municipal Hospital, and the ward in which the disease was discovered is under strict quarantine. More than a hundred inmates of this ward are isolated. Every effort is being made to check the spread of the disease to other wards in the Almshouse. The disease is thought to have been introduced into the institution by a man who was admitted November 9 from 536 Wood street. It was discovered on November 30 that smallpox prevailed at this lodging house, and it was at once quarantined.

College of Physicians, Philadelphia.—At the meeting of the College of Physicians, Philadelphia, January 1, Dr. Horatio C. Wood was elected president, Dr. Arthur V. Meigs, vice-president; Dr. Thomas R. Neilson, secretary; Dr. Richard H. Harte, treasurer, and Dr. Frederick P. Henry, honorary librarian. The censors elected for the ensuing year are Drs. Richard A. Cleemann, Arthur V. Meigs, S. Wier Mitchell,, and Horace Y. Evans. The councillors elected are Dr. John Chalmers Da Costa and Dr. J. P. Crozer Griffith.

Obstetrical Society of Philadelphia.—Dr. John M. Fisher has recently been elected president of the Obstetrical Society of Philadelphia.

Smallpox is Abating.—The record of ninety new cases of smallpox and sixteen deaths for the week ending noon January 4, gives the health officers assurance that the disease is abating. For the previous week there were seventy-six cases and nineteen deaths. Cold weather is favorable to the spread of smallpox, but the records of the last few weeks show fewer cases proportionately than during the fall. During 1901 there were in the city 1159 cases of smallpox and 156 deaths, a percentage of deaths of 13.45. Officials of the Health Bureau do not believe now that the epidemic will close until spring, and that it may not be stamped out completely until summer. The house to house canvass, although it has checked the spread of the disease, has not been as effective as was hoped on account of the large number of persons who have refused to be vaccinated. In West Philadelphia the disease is spreading. During the week there have been reported 4 new cases in the thirty-fourth ward, 3 in the thirty-fifth ward, and 11 in the twenty-eighth ward.

Society Meetings Next Week.—The following sections of the College of Physicians, Philadelphia, will hold meetings next week, at 8.15 P. M., Monday evening, January 13, Section on Medicine; Tuesday evening, January 14, Pediatric Society; Wednesday evening, January 15, Section on Otology; and Thursday evening, January 16, Section on Gynecology.

American Chemical Society.—At the 25th annual session held in Philadelphia during the last days of December, 1901, Dr. Ira Remsen, president of Johns Hopkins University, was elected president of the society.

Smallpox in the State.—Almost 100 cases of smallpox are reported at Figart, Blandburg, Fostoria, Juniata, Tipton, etc., all suburbs of Altoona. More cases are reported at Sunbury, Salford, Collegeville, and the suburbs of Lebanon. While efforts were made to secure a patient with smallpox who walked into a doctor's office in Austin, the patient, securing a horse and wagon, drove out of town and has not been heard of since.

Philadelphia's Only Leper Dead.—Mrs. Peterman, who has lived at the Municipal Hosuital for the last ten years, died there January 6. Although 76 years old, she did not suffer at all. It has never been discovered how she contracted the malady. She spent all of her life in this city, and, so far as known, had never been exposed to the disease.

Free Hospital for Poor Consumptives.—It is announced that as soon as the weather will permit, two of the proposed group of cottages will be erected at White Haven, Pa., one to accommodate 16, the other 24 patients. It is proposed eventually to erect 12 such cottages about a larger building. The two cottages when finished will be used for women, the men using a large barn which has been fitted up

as a temporary sanatorium. An effort is being made to raise enough funds for this purpose.

Philadelphia Hospital.—The Department of Charities and Correction has received from the deans of the Medical Department of the University of Pennsylvania and the Jefferson Medical Colleges communications expressing the opinion that there is no need for the establishment of gynecological and genito-urinary staffs in the Philadelphia Hospital.

A Bequest.—By the will of the late George W. Farr, Jr,. of Philadelphia, over $200,000 was left to charity. Among those institutions which received large amounts are the Rush Hospital for Consumptives, Pennsylvania Hospital, Wills' Eye Hospital, Home for Incurables, Presbyterian Home for Aged Men and Aged Couples, and the Hayes Mechanics' Home.

NEW YORK AND NEW JERSEY.

Crusade Against Tuberculous Patients.—Sullivan county, N. Y., is instituting a vigorous crusade against the admission of tuberculous patients. The Board of Health of Liberty has passed an ordinance imposing a fine of $50 on any one maintaining a hospital or sanatorium for consumptives within the village limits. The Board of Health of Rockland has adopted an ordinance imposing a fine of $50 on any resident of the town harboring a consumptive who is not a member of his family, or dependent on him for support. The Board of Health of Monticello has instructed real estate agents to discriminate against consumptives in renting property. At the Loomis Sanatorium for Consumptives, established four miles from Liberty through the generosity of J. Pierpont Morgan, hundreds of consumptives are unable to obtain admission.

Dr. Seymour Oppenheimer has been appointed laryngologist and otologist to the Gouverneur Hospital, New York City.

New York Academy of Medicine.—Two interesting papers were read at the meeting held January 2. Dr. Loomis emphasized the necessity and demonstrated the possibility of establishing a municipal hospital for consumptives by using the building on Ward's Island which was formerly occupied by the Manhattan State Hospital. Dr. Knopf stated that, contrary to the opinion of the United States Government, tuberculosis was not contagious. He believes that the exclusion of immigrants with tubercular symptoms and tendencies is wrong. In the majority of cases they are well provided, not only for caring for themselves, but their families as well.

A Mayor Quarantined.—Mayor Adams, of Beverly, N. J., became ill a week ago with what was supposed to be typhoid fever. His physician, however, has pronounced the malady smallpox. As Mayor Adams is a physician, it is supposed that he contracted the disease while treating a smallpox patient at Palmyra two weeks ago. His house and drug store are quarantined.

New York Vital Statistics.—The vital statistics for the city show that the death rate for 1901 was 22.02, as against 20.57 for 1900. There were 33,485 marriages, as against 32,247 in 1900, while the births were 80,735 this year, against 81,721 in 1900. There were in all 70,808 deaths reported to the Health Department during the year, 8295 of which came from the Morgue, 3219 of these were children under five years of age. 3857 deaths were due to accidents, 701 to suicides, 105 to homicide, and 1273 to sunstroke. Pneumonia killed 9128 and consumption 9396, while 729 deaths were from typhoid fever.

New York Juvenile Asylum.—What would probably have been a disastrous fire was effectually checked one day last week through the efficiency of the amateur brigade composed of the inmates of the Juvenile Asylum at One Hundred and Seventy-sixth street and Amsterdam avenue, New York City. The 850 inmates first marched from the burning building, the older boys then assisted in putting the fire out, before the city's fire department arrived. The damage is estimated at $3000. No one was hurt.

A Bequest.—By the will of the late John B. Myers $35,000 was left to seven of the charitable institutions of Albany, N. Y.

Smallpox in New Jersey.—Smallpox, which has been prevalent in Hudson County, has broken out in the jail and almshouse at Snake Hill. The Pennsylvania Railroad station at Colonia has been quarantined and no trains stop there, on account of a case of smallpox in the station-master's family. Cases are reported in Trenton, and Camden has had 49 cases since December 15. The Camden Public Schools will not open until January 13. Free vaccination is not at all encouraged, the people informing the doctors that they prefer smallpox to tetanus. Smallpox hospitals are to be constructed at Bridgeton and Gloucester. There are forty cases of smallpox in Hackettstown, and the place has been isolated by the direction of the local Board of Health, the members of which have acted under the advice of the State Board of Health. The large number of cases is said to be due to the ignorance of the local physicians, who had been treating numerous cases, but did not know the disease was smallpox until it spread to twenty people. Experts on the disease came from New York and pronounced the cases to be smallpox.

WESTERN STATES.

The Milwaukee County Medical Society was formed on January 2, and 36 names were placed on the list. Many interesting papers were read and the following officers were elected: President, E. W. Bartlett; vice-president, R. C. Teschan; secretary and treasurer, W. B. Hill; censors, for three years, W. H. Earles; for two years, L. F. Jermain; for one year, F. M. Schultz.

To Study Scarlet Fever.—On January 3 there was incorporated at Springfield, Ill., the Memorial Institute for Infectious Diseases, founded by Mr. and Mrs. Harold McCormick in memory of their son, who died a year ago of scarlet fever. At the beginning its researches will be devoted to scarlet fever solely, and the work will be carried on in some other medical institution. It is the intention, however, to house the institution later in a building of its own and to broaden the scope of its inquiry so that it will include all that its name indicates.

The Oldest Physician in the United States.—Probably the oldest living practitioner in this country is Dr. C. F. Willgohs, of Clinton, O., who celebrated his ninety-eighth birthday recently. *St. Louis Medical Review.*

Population of Indiana.—A bulletin issued by the Census Bureau gives the population of Indiana as follows: Males, 1,285,404; females, 1,231,058; native, 2,374,341; foreign, 142,121; white, 2,458,532; colored, 57,960. Of the colored 207 are Chinese, 5 Japanese, 243 Indians and the remainder negroes. In the three States represented in this bulletin there is a slight excess of males over females, the males constituting 51.1 per cent. of the total population in Indiana, 51.8 per cent. of that of Iowa, and 52.3 per cent. of that of Kansas. Iowa has only 12,693 negro residents. Kansas has 52,000.

Wages for a Hospital.—Five thousand workmen in Youngstown, Ohio, have pledged themselves to give a day's wages to endow the city hospital with a permanent fund. Prominent manufacturers are erecting new hospital buildings and the workmen propose to raise an endowment fund of $50,000.

Northwestern University Abandons Women's Medical Department.—The business agent of Northwestern University is negotiating for the sale of the buildings and grounds of the Women's College of Medicine, with a view to abandoning that institution. This action has raised a great deal of discussion among the women physicians of Chicago.

Smallpox in Lincoln, Ill.—An epidemic of smallpox has appeared in the Asylum for Feeble-Minded Children, and as a result 1,000 inmates and 183 officials have been quarantined. The disease has been prevalent in certain wards of the institution for two weeks, but was treated as chickenpox. Instead of diminishing, the number of cases rapidly increased. The disease exists in two forms, some patients suffering under the most violent effects of the disease, while others are not confined to their beds. Immediately upon the discovery of the disease, the patients were removed with great haste to a large isolation hospital upon the premises. Every inmate and attaché of the institution was compelled to be vaccinated and the wards were thoroughly fumigated. The isolation hospital is quarantined from the inmates of the other buildings, and Lincoln people are being restrained by guards from entering the premises.

A New Hospital in Hannibal, Ohio.—$25,000 is to be given to the city of Hannibal by Mr. A. R. Levering for the erection of a hospital under the following conditions: The building shall be known as "The Levering Hospital;" its

conduct shall be absolutely non-sectarian and non-political; and its management shall be vested in a board of control consisting of nine residents of Hannibal.

To Hypnotize Degenerate Children.—Judge Davis, president of the Board of Children's Guardians of Terre Haute, Ind., has permitted Prof. Henry, of a Chicago school of hypnotism, to experiment upon the children in the home maintained by the board. Mr. Henry thinks that hypnotic suggestion can start a train of thought for good in the minds of children of vicious parents. Judge Davis believes that hypnotism cannot do the children any harm and may possibly have some good results.

St. Luke's Hospital, Racine, Wis.—William Horlick, who recently gave $12,500 for building the addition of St. Luke's Hospital, has just sent $1,000 to the Danish Hospital Association to be used upon St. Luke's Hospital.

Milwaukee's Death-Rate.—3,840 deaths occurred during 1901, while 4,026 had occurred in 1900, making the death-rate for 1900 13.88 per thousand and for 1901 13.01 per thousand. There were 1,243 cases of contagious diseases in 1901, with 197 deaths. This includes 29 cases of smallpox. In 1900 the total number of cases of contagious diseases was 3,187, with 289 deaths. The number of births last year was 7350, while in 1900 they numbered 7554..

A Death From Lemon Extract.—After drinking eight two-ounce bottles of lemon extract, a farmer living near Paris, Ind., died recently. The coroner, who held the inquest, recommended that merchants selling lemon extract be prosecuted, as this was the fifth death of the kind in the vicinity.

Smallpox in Randsburg, Cal.—About twenty residents of Randsburg have been afflicted with what was pronounced, until recently, a skin disease. The county physician, who has just been called in, states that the cases are smallpox. Many of the residents believe that the disease is not smallpox and it is probable that an expert will be called in to decide.

SOUTHERN STATES.

A New Embalming Process.—The Memphis Medical College, Memphis, Tenn., has for several weeks been experimenting with an embalming fluid. It is asserted that this discovery is superior to that of the Egyptians, for while the infusion will preserve the subject for all time, as did that of the ancients, it prevents the shriveling up that followed Egyptian embalming, and it does not call for the bandages in which all Egyptian mummies were encased. The principal experiment up to this time has been upon the body of a dog, which was treated thirty days ago. To-day it is rigid, but in a perfectly natural pose. There is no trace of odor about it, nor is there any visible symptom of decay. The fluid petrifies the body. Neither arsenic nor strychnine is used in the preparation.

Negroes Going South.—One of the curious features of the national census of 1900 is the relative decline of the colored population in Maryland, Kentucky and Missouri, and its increase in Mississippi, Alabama and Florida. Ten years ago the negro population of the country was 11.9 per cent. of the whole population; now it is 11.6, a fractional decline. In the States of the extreme South, in which the material condition of the colored race is least desirable, there has been the largest gain in population. Though in the border States the competition of colored labor is decidedly less, and race antagonisms, based on fears of colored domination, are little known, colored people from the extreme South do not seek homes there. They do not move North. On the contrary, they are moving southward, and but for newcomers from Northern States, there would be an actual falling off both in Kentucky and Maryland. In two States only does the colored population exceed the which was recently caused by the hospitals when they closed ceased to predominate in Louisiana, in which up to 1890 they were in a majority.

Maryland Hospital for the Insane, Spring Grove.—The institution now maintains 59 patients at a cost of $150 annually for each patient.

Smallpox at Elberton, Georgia.—Assistant Surgeon, W. C. Hobdy, U. S. M. H. S., reports an outbreak of smallpox at Elberton, a town of 5000 inhabitants. About 20 cases have been found, four of them severe in type. There have not been any deaths from the disease. Four years ago, on account of the occurrence of an unknown eruptive disease, most of the townspeople were vaccinated. To this vaccination Dr. Hobdy gives the credit for the general immunity, since so few cases of smallpox have occurred this year.

Diphtheria in Maryland.—The public schools in and around Jefferson have been closed on account of the prevalence of diphtheria in the vicinity. Two deaths have already occurred.

Smallpox in Hagerstown, Md.—On Christmas Day a case of smallpox was discovered in Hagerstown, the first reported case of smallpox in the State of Maryland.

Virginia State Hospital Destroyed.—The main building of the Eastern State Hospital at Williamsburg, Va., was destroyed by fire January 4. 150 patients were saved without injury. The loss is about $75,000.

CANADA.

Mattawa Hospital Burned.—On December 17, the General Hospital in Mattawa, Ontario, was completely destroyed by fire. No one was injured.

The New Dean of McGill University.—Dr.. T. G. Roddick, M. P., has been chosen by the Faculty of Medicine for the position of Dean, rendered vacant through the resignation of Dr. Craik. Dr. Roddick at present holds the Chair of Surgery. He was graduated in 1868 as Holmes gold medalist. He is ex-president of the Montreal Medico-Chirurgical Society, of the Canadian Medical Association and of the British Medical Association. He was elected a Member of the Canadian House of Commons in 1896, since which time he has been prominently identified with the question of inter-provincial registration.

The Smallpox Outbreak in Ottawa has cost $15,000 so far, and there have been over one hundred cases.

Poisoning From Canned Apples.—A whole family was poisoned recently in Montreal from eating canned apples. On examination it was found that the can had been incompletely soldered, while an analysis of the apples showed that they contained dissolved tin.

Recent Bequests.—$10,000 has been given by Lieut. Col. Pellatt for the erection and equipment of an operating room in Grace Hospital, Toronto, and the Hospital for Sick Children will receive a large amount by the will of the late W. E. H. Massey.

The Toronto Hospitals have again decided to admit patients with tuberculosis, who will in the future occupy special isolation wards. This action should allay the scare which was recently caused by the hospitals when they closed their doors absolutely to patients with consumption.

MISCELLANY.

United States Marine-Hospital Service.—A bill was read in the House of Representatives December 18, 1901, by Mr. Hepburn, providing for an increase in the efficiency of the United States Marine-Hospital Service, and a change in its name to that of the **United States Health Service.** This bill was referred to the Committee on Interstate and Foreign Commerce.

Measles on the Wisconsin.—Surgeon-General Van Reypen has been informed of a slight epidemic of measles aboard the *Wisconsin* while in the Pacific, but does not regard it is serious, as he has had no further report since the vessel arrived in American waters.

Sick Soldiers in Manila.—Surgeon-General Sternberg has received the health report of the Division of the Philippines for the month ending November 15. The report shows 650 sick in quarters, 1024 in regimental hospitals and a total incapacitated of 2952. The percentage of sick to the command was 6.79 per cent. Lieut. Col. B. E. Pope, chief surgeon of the division, says in the report that the number of sick sent to Manila for treatment continues larger than it should, and every effort is made to have as many patients as possible treated at their stations.

Cholera in Java Islands.—Colonel E. F. Hand, who recently arrived from the Java Islands, states that cholera is raging there more severely than ever before. The death record in the city of Sourabaya during the month of November was over 7000.

Bubonic Plague in Asia Minor.—Consul Lane, at Smyrna, has cabled the State Department that the bubonic plague has broken out, December 30, 1901.

Smallpox in the United States.—Statistics compiled by

the Marine Hospital Service show the total number of smallpox cases in the United States from June 28 to December 27 of last year to have been 17,496, with 575 deaths. For the same period in 1900 the number of cases was 7796, with 137 deaths.

Notes.—The United States has a physician to each 637 persons.—The Chinese have the idea that milk revives the youthful powers, and that it has special virtues as winter food for old people.—Of one thousand cases of caries of the spine studied by Waterman and Jaeger, the youngest patient was six months old, the oldest sixty-nine years. It was found that the affection was in the cervical region in 6.6% of cases; in the dorsal region in 70.9%; and in the lumbar region in 22.5%.—Aden, on the Suez Canal, does a large business in the export of salt secured by evaporating sea water.—The atmosphere, if compressed, would make a sea thirty-five feet deep around the globe.—Medical men have noted the injurious effect of the Philippine climate on wounds. The time for healing is much longer than in the United States, while in South Africa it is shorter.—The Jamaican Government is making great efforts to do away with witch doctors, who practice among the superstitious blacks, and the lash is inflicted to discourage this kind of quackery.—Although artificial incubation is quite modern, the idea of it dates back into remote ages. The dusky subjects of the Pharaohs practiced it in great sand-ovens known as "mohmals."—A tribe of peculiar people dwell on the banks of the Purus, in South America. Men, women, and children are spotted, with brown spots on a white skin. Their chief article of diet is fish.—The Bedouin Arabs are small eaters. Six or seven dates soaked in melted butter serve a man a whole day, with a quantity of coarse flour or a little ball of rice.—To see objects at a distance of 100 miles the observer must be standing at a height of 6667 feet above the level of the sea. The rule is that the distance in miles at which an object on the earth's surface may be seen is equal to the square root of one and a half times the height of the observer in feet above the sea level, allowance being made for the effect of atmospheric refraction.—Nearly eighty-five per cent. of all epilepsies develop before adult age is reached; and about fourteen per cent. of cases are distinct heritages from epileptic parents.

Suicide and Lynching in the United States.—Suicides and lynchings are on the increase. The total suicides last year were 7245, compared with 6755 in 1900. The lynchings were 135, compared with 115 in 1900. The legal hangings were 118, compared with 119 in 1900. The total number of deaths by violence in the United States was 7852, as compared with 8275 in 1900.

Divorce in European Countries.—Divorce was established in Germany in 1875. From 1881 to 1885 the yearly number of divorces was about 8000, while of late years it exceeds 10,000. In England divorce was established in 1857. During the years 1858-1862 the annual number was about 200; in 1894 about 550; in 1898 about 650. In Austria, where only non-Catholics can apply for a divorce, the number of demands for divorce increased 25 per cent. in four years, and in Belgium about 20 per cent. in four years.

Obituary.—Dr. William Koonz, at Philippine Islands, recently, aged 26 years.—Dr. Charles Scharer, at Franklin, Wis., December 30, aged 42 years.—Dr. S. H. Hudnall, at Brookneal, Va., December 31, aged 75 years.—Dr. John Bell, at Benton Harbor, Mich., December 29.—Dr. Abram Litton, at St. Louis, Mo., January 4.—Dr. Frederick Murdock, at Kansas City, Mo., December 23.—Dr. Oscar D. Abbott, at Manchester, N. H., January 1, aged 78 years.—Dr. James Snyder Mackie, at Newark, N. J., December 30, aged 77 years.—Dr. Charles J. Baraum, at Boston, Mass., January 1, aged 21 years.—Dr. E. Darby, at Providence, R. I., January 1, aged 32 years.—Dr. John R. Wood, at White Hall, Va., December 28, aged 60 years.—Dr. Thomas A. Joyce, at Pittsburg, Pa., January 1.—Dr. Royal B. Prescott, at Nashua, N. H., January 2.—Dr. Lucius L. Wakefield, at Chicago, Ill., December 23, aged 66 years.—Dr. Elias P. Ileff, at Newark, N. J., December 22.—Dr. Orrin E. Miner, at Noank, Conn., December 22.—Dr. Green R. Price, at Waco, Ga., December 20.—Dr. John F. Bigelow, at Chicago, Ill., December 28.—Dr. Charles Francis Carpenter, at West Chester, Pa., January 6, aged 75 years.

GREAT BRITAIN, ETC.

A Great Gift.—It is announced that $1,000,000 has been placed at King Edward's disposal for charitable or utilitarian purposes, by Sir Ernest Cassel, a merchant and financier. King Edward has decided to devote this gift to a sanatorium which will accommodate 100 patients. Twelve of the beds are to be reserved for wealthy sufferers, while the remainder will be for those who are able to afford but a small fee. King Edward has appointed an advisory committee composed of Sir William Henry Broadbent, Sir Richard Powell, Sir Francis Henry Lacking, Sir Felix Semon, and others. Three prizes, of $2500, $1000 and $500 respectively, have been offered in connection with the scheme for the best essays on and plans for the construction for the sanatorium, and the Advisory Committee will be guided by the result of this competition in the execution of his Majesty's wishes. The competition is open to medical men of all nationalities. Sir William Henry Broadbent explained that it was intended to employ the open air treatment for consumptives, the success of which was now absolutely established. Sir William believed the sanatorium would be within easy distance of London, for it has been shown that the open air treatment could be conducted almost as successfully in England as in Switzerland.

Beri-Beri in Liverpool.—Two Lascars belonging to the crew of a steamer which recently reached Liverpool from India have died of what was supposed to be beri-beri. Two more are in the hospital under treatment.

London's Smallpox Epidemic.—The smallpox epidemic in London is growing steadily and the daily average of new cases is about forty. There are now 637 cases under treatment. The latest cases reported include two in the Probate Department in Somerset House. This attracts considerable attention, owing to the danger to officers who handle wills and others who examine them, as these documents are signed in sickrooms. A law requiring the fumigation of all documents intended to be filed in Somerset House is among the possibilities of the near future.

Measles at Exmouth.—At a meeting of the District Council early in December an outbreak of measles lasting through June, July, August, and September, 1901, was reported in detail. Out of 235 patients, 15 died, a little over 6%. It is probable that many more cases occurred which were, however, not reported.

Appointment of Dr. Porter.—Dr. Charles Porter, a graduate of the Royal University of Ireland and of Cambridge University, barrister at law, member of Gray's Inn, formerly medical officer of health at Stockport and at present county medical officer at Shropshire, has been appointed medical officer of health of the city of Johannesburg, South Africa, with a salary of $10,000 a year.

Cost of Cremation.—Apart from sentimental prejudice, the expense of cremation has hitherto been considered as chiefly militating against its general adoption. The Hull Council, however, recently established a municipal crematorium, where the cost of cremation, including an urn to hold the ashes, is only a guinea, and this is likely to be reduced, as it was based on the cost involved at a period when coke was at an abnormally high price. When coke is at its usual price the cost of cremation ought to be about fifteen shillings [illegible] the price of a grave.

British Death List.—The total reduction of Great Britain's military forces in South Africa from the beginning of the war to December, [illegible] including deaths from disease, men reported missing, etc., amounts to 24,299 men. Of this number 19,430 were actually killed or died. A total of 64,330 men were invalided home, the majority of whom recovered and rejoined their commands.

Obituary.—David R. [illegible], a graduate of the University of Edinburgh, consulting physician to the Industrial Institution for the Blind and to the Working Ladies' Guild, honorary physician to the National Industrial Home for Crippled Boys, died near Rye, in Sussex, December 5.—John S. Ward, a graduate of Edinburg University, surgeon to the Brookfield Agricultural School, Lasswade, died December 16.—Samuel H. Carmichael, a graduate of the University of Glasgow, medical officer of the Port Rush Dispensary, admiralty surgeon, died at Port Rush, December 12, in his 77th year.—Andrew Campbell, a graduate of the Universities of Glasgow and of Edinburgh, died at Wallington aged 60 years.—William S. Paterson, a graduate of Edinburgh University, died at Earl Shilton, December 2, aged 70 years.

CONTINENTAL EUROPE.

VIENNA LETTER.

(From Our Special Correspondent.)

At the "Gesellschaft für innere Medicin," November 28, 1901, Paul showed a specimen of a **gray-colored tape-worm**, passed by a patient with chronic lead poisoning after taking extract of male fern. Paul suggested that the gray color of the tenia was due to the presence of lead sulphate in the intestine. Schlesinger again referred to his case of **myiasis intestinalis**, already reported. (v. *Philadelphia Medical Journal*, volume 8, page 1019). This should be considered a possible diagnosis, whenever irregular dysenteric symptoms exist. Long remissions in symptoms may occur. Prophylactically raw meat must be prohibited.

In the *Pester Medico-Chirurgische Presse*, Doctor reports a case of pregnancy in a woman of 26, complicated by the presence of an echinococcus cyst which was twice punctured. Finally it was drained and packed through the posterior vaginal wall, and pregnancy went on to term.

At the "Wiener Medicinisches Doctoren-Collegium," December 2, 1901, Gersuny, formerly Billroth's assistant, delivered an address on minor surgery. In treating boils, he said that suppuration could be prevented by removing the deep-seated necrotic tissue in the early stage. When due to external infection, abscesses should be opened early. In treating carbuncle, he makes crucial peripheral incisions and curettes away all necrosed tissue. In burns he uses boric or argentic nitrate salves; panaris should be opened early; dermatitis serpiginosa and ingrowing toe-nail should be touched with caustic potash; and ichthyol is advised in erysipelas.

At the "Gesellschaft der Aerzte in Wien," December 13, 1901, Spiegel demonstrated an artificial esophagus for use in the treatment of carcinomatous and cicatricial strictures. The performance of esophagotomy and a gastric fistula will be necessary for putting this apparatus in place, and it can be easily removed at night.

As we stated in these columns some time ago, (v. *Philadelphia Medical Journal*, volume 8, page 628), it is now officially announced that Dr. Theodor Escherich, professor of pediatrics in the University of Graz, has been appointed professor of pediatrics in the University of Vienna, to succeed the late Dr. Widerhofer. Dr. Alois Monti, Director of the Poliklinik, has been filling this position temporarily.

The "Russki Vratch."—This new medical journal, to take the place of *Vratch*, appeared October 27. The new journal is in appearance very much like the old one, but the arrangement of the review of current literature, with some other new features, make the periodical a better representative of what is best in medical journalism. We notice that *Russki Vratch* has adopted the plan of giving a systematic review of the current medical journalism. References to papers are extremely brief, and the review is almost an index. This plan was first introduced by the **Philadelphia Medical Journal**, and we are glad to see that American ideas have found their way to Russia, even in medical journalism.

An Accident to Prof. Virchow.—Professor Rudolf Virchow, the eminent pathologist who has just celebrated his 80th birthday, recently slipped in alighting from a street car in Berlin, and is reported to have been seriously injured, having fractured one thigh-bone.

Death of Prof. Nentski.—Science has sutained a great loss in the death of Prof. M. V. Nentski, chief of the chemical division of the Institute of Experimental Medicine in St. Petersburg. He was born in 1847, and studied at Krakow, Jena, and Berlin, where he received his M. D. He then worked with the well-known chemist Bayer for two years. In 1872 he was appointed assitant at the Pathological Institute in Berne and became professor of physiological chemistry in 1877. In 1891 he accepted the position at the St. Petersburg Institute, where he remained up to his death. For the past 30 years his contributions to physiological chemistry were numerous and important, and, like his famous countrymen Mendeleeff and Metchnikoff, he was held in high esteem in his country and abroad. The vacant position is temporarily occupied by a lady, Dr. O. N. Ziber-Schumova, who has been assisting Prof. Nentski for 25 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

December 21, 1901.

1. Remarks on the Bacteriological Examination of Potable Waters from the Public Health Point of View. A. C. HOUSTON.
2. On Rubella, Scarlatina and "Fourth" Disease. P. WATSON WILLIAMS.
3. Post-Scarlatinal Diphtheria and Rhinorrhea and Otorrhea. EDGERTON H. WILLIAMS.
4. Pneumococcus Arthritis with Notes on Seven Cases. NATHAN RAW.
5. A Case of Anthrax in which the Infection arose from a hitherto Undescribed Source. J. CONNAL WILSON.

1.—From the Public Health point of view knowledge is required concerning the microorganisms that are to be thought of as adventitious and possibly dangerous in drinking water, rather than those that are normally found in such water. As sewage is the most common and dangerous source of the pollution of potable water, a further knowledge of the micro-organisms characteristic of sewage is important. Bacteriologists have almost entirely neglected the question of the relative abundance of micro-organisms in water as compared with sewage and in virgin soils as compared with polluted and cultivated soils. The question of relative abundance shows that the biological distinction between pure and impure substances is so great that the adoption of stringent bacteriological standards is both unnecessary and inadvisable. Furthermore, this biological distinction permits the bacterioligsts to detect objectionable polluting material in much smaller quantity than can be detected by the chemist. Houston's study of the drinking water has shown that streptococci are absent from 10 cc.; bacillus coli communis from 100 cc. and bacillus enteritidis sporogenes from 100 to 500 cc. of pure water. These organisms are commonly present in very small quantities of crude sewage. The presence of streptococci indicates extremely recent, and of bacillus coli communis less recent,but not remote, animal pollution of water. The presence of bacillus enteritidis sporogenes in water cannot be considered as evidence of pollution by the recent evacuation of animals. Streptococci and bacillus coli commuis are present in very small numbers in virgin soils and may be absent from polluted soils unless the contamination is of comparatively recent origin. Soils recently polluted with animal matter contain these organisms in great abundance. The presence of streptococci in any number in a water supply points not only to recent animal pollution, but also to anticedent conditions not unfavorable to the growth of organisms like the bacillus typhosus. Organic matter in itself it dangerous in drinking water only on account of the microorganisms that are likely to be associated with it. It is not necessary to demonstrate in a polluted water supply the presence of definite pathogenic microorganisms in order to prove that there is danger in drinking such water. It is sufficient to show that micro-organisms of undoubted intestinal origin are present in a water in order to condemn it. Chemcal analyss ought to occupy a secondary position to the **bacteriological examination** for an opinion as to the purity **of a water supply.** [J. M. S.]

2.—Wlliams reports an epidemic of 32 cases of **German measles** which might have been considered to be examples of the **fourth disease** of Duke's. The patients presented a widely-scattered, papular eruption, a temperature of about 99° F., enlargement of the posterior cervical glands and mealy desquamation Some of the cases resembled **scarlet fever** and others resembled measles. Th author is of the opinion that the epidemic was one of German measles presenting the 2 types of disease; morbilliform and scarlatiniform. He also reports an epidemic of 4 cases which might have been considered to be fourth disease but which the au-

thor believes to be an epidemic of scarlet fever resembling German measles. The origin of this epidemic was considered to be infected milk. William's evidently does not believe in the existence of a fourth disease. [J. M. S.]

3.—Williams has studied **post-scarlatinal diphtheria, rhinorrhea and otorrhea.** He believes that it is advisable to make bacteriological examinations of the discharge in all cases of rhinorrhea and otorrhea in scarlet fever, excepting possibly the acute attack of rhinorrhea. When bacilli are found in such cases that at all resemble the diphtheria bacillus, they should be regarded as a modified variety of that organism. Patients presenting these complications should be isolated, and such isolation may be reasonably expected to reduce the number of cases of diphtheria occurring after scarlet fever. He does not definitely advise the administration of antitoxin to patients presenting diphtheria bacilli in these discharges, but the 2 cases that are reported in the paper, rhinorrhea was followed by the deposit of membrane in the throat; and it is possible that the use of antitoxin might have prevented this formation. These discharges are frequently unaccompanied by sore throat or other symptoms, and may be easily overlooked. [J. M. S.]

4.—Raw reports 7 cases of **pneumococcus arthritis.** He believes that the pneumococcus is capable of producing very serious lesions in other parts of the body than in the lungs. The 7 cases of arthritis reported occurred out of a total of 817 cases of pneumonia. Of these 7 cases 4 recovered and 3 died. In all 7 cases, the pneumonia was right-sided and the joints affected were all on the right side. In some cases of pneumonia the author has often noticed pain and a slight redness in the shoulder joint of the affected side which has subsided with the crisis. The joint affection may precede the lung symptoms, follow the crisis or develop intercurrently. Alcohol seems to decide the severity of the attack and the prospect of recovery. The only treatment is the early evacuation of the pus, if it can be reached. [J. M. S.]

5.—Wilson reports a case of **anthrax** which occurred in a man, aged 26 years. It was thought that he contracted the disease by chewing small pieces of hide. [J. M. S.]

LANCET.

December 21, 1901.

1. The Purvis Oration on the Practice of Medicine and Original Research. JAMES F. GOODHART.
2. Modern Methods of Vaccination, and their Scientific Basis. S. MONCKTON COPEMAN.
3. Observations on the Etiology and Morbid Anatomy of Tuberculous Meningitis. EDMUND CAUTLEY.
4. Ovariotomy in Pregnancy; Three Recent Cases. JOHN B. HELLIER.
5. A Case of Epidemic Diarrhea in an Infant Treated by Irrigation of the Bowel. WILLIAM B. BENNETT.
6. Some Observations on Certain Trophic Hinderances to Bony Growth. HEATHER BIGG.

2.—Copeman read a paper before the Royal Medical and Chirurgical Society, Dec. 10, 1901, on **Modern Methods of Vaccination and their Scientific Basis.** He gives a brief review of the various laws pertaining to vaccination since the publication of Jenner's article in 1798. The British government employs a large staff to prepare vaccine lymph. Calves from three to six months of age are selected and quarantined in stables for a week. If their health is satisfactory, they are transferred to the animal vaccine establishment. Here each animal is carefully examined in regard to its general health, its weight, its temperature taken, and a record of these points is kept. When the animal is to be vaccinated, it is strapped to a large tilting table. The lower portion of the abdomen, extending backwards from the umbilicus, into the flanks, is carefully shaved. The shaved area is then washed with 5% carbolic solution, then with tap water and finally with sterilized water. The excessive moisture is removed with sterilized gauze. Through numerous parallel linear incisions the glycerinated lymph is introduced into the skin by a sharp scalpel. The calf is stalled so as to prevent any injury to the vaccinated surface. The vaccine material is collected about five days later. The vaccinated surface is first thoroughly washed with soap and water, then gently rubbed by the hand of the operator. It is then washed with tap water and finally with sterilized water. Any crusts that may have formed and any epithelial debris are carefully removed from the underlying vesicles. The vesicular contents are next removed with a sterilized Volkman's spoon and collected in a previously sterilized stopper bottle of known weight. The abraded skin-surface is treated with dusting powder. The animal is removed from the table, weighed and then slaughtered. A careful examination is made of all the viscera by a veterinary surgeon, especially appointed for that purpose. No lymph is used for vaccination of a human subject until a report showing that the animal is healthy is furnished to the authorities. The lymph pulp is carefully weighed and then triturated in a machine invented by Dr. Chalymaeus of Dresden. To the triturated pulp is added six times its weight of a sterilized mixture of 50 per cent. of glycerine in pure water and the mixture is again carefully triturated; a fine and intimate emulsion is the resulting product. This emulsion is stored in small sterilized test tubes having a capacity of from 5 to 10 cubic centimeters. It is then placed in a dark cupboard or ice-chest. By a series of bacteriological tests it has been found that at the end of a month living mircoorganisms do not exist in the emulsion. The lymph is ready for distribution, when the stage is reached at which agar plates show no growth after inoculation with emulsion. Samples of the lymph are placed into capillary tubes and sent to the vaccine establishment where children are vaccinated. A week later the results of these vaccinations give an estimate as to the potency of the lymph. If the lymph be satisfactory, it is transferred into sterilized capillary tubes. The ends of the tubes are sealed in a gas flame. The sealed tubes are stored in ice-chests. The vaccine lymph is then distributed to public vaccinators, who record their results. The results obtained from glycerinated lymph have been most satisfactory, showing a case success of 93 per cent and insertion success of 83 per cent. He describes the method of operation of vaccination which is briefly as follows: The surface to be vaccinated should be cleansed with soap and water, spirits of wine, or an antiseptic solution of boric acid, carbolic acid, lysol or perchloride of mercury. He prefers boric acid solution. The surface is next washed with sterilized water or alcohol and dried. Scarification should be performed through the beads of lymph previously dropped upon the skin in three distinct areas. He thinks that with modern methods of vaccination, the amount of permanent scaring is very slight. He also contends that excessive destruction of the skin is, as a rule, not the result of vaccination but is due to infection by microorganisms other than those specific of vaccina. Finally, he discusses the question of the relationship of vaccinia to smallpox. He performed a number of experiments which consisted in inoculating monkeys with human smallpox. These animals invariably contracted the disease. A calf was then inoculated with the material obtained from the vesicle of the monkey with the results that what appeared to be typical vaccinia developed. The author emphazises "that the point of interest in these experiments is to be found in the fact that whereas the human smallpox material employed could not be got to take directly on the calf, nevertheless results typical of ordinary vaccination were obtained when the strain of lymph, after inoculation with it of a series of monkeys, was again transferred from the inoculated vesicles of this animal to the epidermis of the calf. [F. J. K.]

3.—Cautley read a paper before the Society for the Study of Diseases in Children, entitled **Observations on the Ethiology and Morbid Anatomy of Tuberculous Meningitis.** He classifies the cases on anatomical ground into 3 groups: "(1)

simple tuberculous meningitis, in which the disease is limited to the brain (very rare); (2) tuberculous meningitis, secondary to a localized tuberculosis with little dissemination (the child dies from meningitis); and (3) general miliary tuberculosis—cases in which the miningeal symptoms bear a comparatively unimportant relationship to the disease." He reaches the following conclusions: "I am strongly convinced that inheritance means exposure to infection of a weekly predisposed child; that injury is very rarely an exciting or predisposing cause; that the respiratory tract is the great channel of infection; that cows' milk is very rarely, if ever, the source of infection; that limitation of the tuberculous process to the meninges is very rare; that the prognosis is very hopeless on account of the extent of tuberculous disease elsewhere; and that operative treatment may be discarded as experimental rather than useful." [F. J. K.]

4.—Hellier reports three case of **ovariotomy performed during pregnancy,** and remarks that ovariotomy is now recognized as the best treatment for almost all cases of pregnancy complicated by ovarian tumor. The earlier it is done the better. To leave the case untreated involves a risk of torsion of the pedicle amounting to 9%, and also risk of damages to the tumor in labor. The mortality of the expectant method was found by Remy to be 23% for the mother and 39% for the child. The mortality in cases in which pregnancy has been terminated for the presence of ovarian tumor was 22% in 135 cases collected by Dsirne. On the other hand, the mortality of ovariotomy in pregnancy performed with modern precautions is estimated at 5.9% by Dsirne, 8.4% by V. Weiss, and 4.09% by Vinay. About one-fifth of the cases abort. The best results for the child are obtained during the third and fourth month. [W. A. N. D.]

5.—Bennett reports a case of **epidemic diarrhea in an infant treated by irrigation of the bowel.** This case occurred in an infant, aged seven months, who was taken ill with diarrhea and vomiting on August 3, 1901. The child was seen by Bennett on the following evening. He ordered that milk be discontinued as a food and substituted barley water. Vomiting ceased immediately. Various remedies were tried to control the diarrhea without success. On the 12th of August, the author instituted a new line of treatment by washing out the large bowel with a hot weak antiseptic solution of permanganate of potassium. Three injections were used, the child made a complete recovery without having a relapse. [F. J. K.]

MEDICAL NEWS.

January 4, 1902. (Vol. LXXX, No. 1.)

1. Sanitary Aspects of the Panama and Nicaragua Canals. GEORGE A. SOPER.
2. The Trial Execution, Autopsy and Mental Status of Leon F. Czolgosz, the Assassin of President McKinley. CARLOS F. MACDONALD.
3. The Post-Mortem Examination of Leon F. Czolgosz. EDWARD ANTHONY SPITZKA.
4. A Report of Forty-five Unpublished Cases of Hemorrhage Treated by the Internal Administration of the Suprarenal Capsule. SAMUEL FLOERSHEIM.
5. Hysterical Hempilegia Treated by Suggestion, with Report of a Case. HENRY LYLE WINTER.
6. The Requiremnts of Modern Surgery. J. H. CARSTENS.
7. On the Absorption of Alexins by Tubercle Bacilli. P. A. LEVENE.

1.—In the conclusions of his article on sanitary aspects of the Panama and Nicaragua Canals G. A. Soper gives the following interesting facts: (1) Both the Panama and Nicaragua route pass through a country which is extremely unfavorable to health; (2) the climate of Nicaragua and Panama differ chiefly with respect to rainfall, the precipitation on the Panama route being distinctly the less unfavorable to health; (3) considerations of soil, topography and the nature of the engineering work to be done are in favor of Panama. Fewer men would be required; they would be concentrated and hence their health would be more easily protected; (4) there are practically no differences in the nature of the diseases to be anticipated, nor in the precautions to be taken to protect health in either case; (5) after construction, the difficulty of controlling health conditions along the line would be greater along the Nicaragua route; (6) the shorter Panama route would expose passing vessels to infection for a shorter time; (7) the likelihood of the canal becoming a disease focus is much greater in the case of the Nicaragua than in the Panama; (8) the health records along the Panama have been bad, but this is thought to be due to the unnecessary exposure; (9) whichever canal is selected, extraordinary care will be required to maintain satisfactory health conditions during construction and after completion of the work; (10) plans and preparations in detail for the organization of an efficient sanitary and medical department should be made as early as possible, so that the measures necessary for the prevention of disease may be carried on in harmony with the engineering projects. [T. M. T.]

4.—S. Floersheim administers the **suprarenal powder** in five-grain doses, placed on the tongue thoroughly rinsed with saliva and swallowed without water. It generally produces the effect within ten minutes. Nausea and vomiting have been observed in a few cases, but generally it has proved a safe drug, even when the hemorrhage was complicated by disease of the heart, lungs and kidneys. The author mentions a few conditions under which it has been used with marked results; (1) epistaxis; (2) hemoptysis; (3) uterine hemorrhage; (4) hematuria; (5) hemorrhage from the stomach; (7) gastric intestinal hemorrhage in the newborn; (8) intestinal hemorrhage. [T. M. T.]

5.—H. L. Winter reports a case of **hysterical hemiplegia** in which he considers two sets of neurons which are known automatically as motor cells and their processes, and also certain other sensory-motor (psycho-motor) neurons which have not been isolated, but which are supposed to form the higher volitional portion of the motor apparatus. The neurons which are known as anatomical entities are an upper set extending from the motor (sensory-motor) region of the cerebral cortex to the anterior horn of the spinal cord, and a lower set extending from the anterior horn to the periphery. The neurons which it has not been possible by any histological research to associate with the motor apparatus (but which none the less must be a part of it) are the cells and fibers lying principally within the parietal cortex, the sensory-motor cortex. Under normal conditions these several sets of neurons are physiologically associated and motor impulses arising in the cells of the sensory-motor cortical areas are transmitted through their processes to the cerebral motor neurons and thence by the spinal motor neurons to the periphery, finding expression in muscular movement. In an organic cerebral lesion involving the cortex it is probable that the higher sensory-motor neurons are destroyed (or impaired) as well as the cerebral motor neuron. If, however, the lesion occurs in the internal capsule or in the pyramidal tract, it includes only the motor neuron, the impulse does not reach the motor neuron at all, and a paralysis results. In the latter instance the impulse originated properly and it failed of its normal result of muscular motion merely because of the destruction of the integrity of its pathway of transmission. Locally, there is no reason why there could not be a physiological as well as an anatomical solution of continuity in this pathway. Therefore in the case herein cited the author's theory is that the paralysis was brought about, not by disease of the nerve process, but by a retraction of the terminal end-brushes of the sensori-motor (psycho-motor) neurons, thus preventing the impulse from reaching the distinctly motor neurons. The etiological factors were an inherited predisposition or mental instability, shock at the age of nine years (increasing the instability), and the fear of paralysis kept constantly in the foreground of the patient's consciousness by

his family (suggestion) and himself (autosuggestion). Suggestion may thus be regarded as the exciting cause. This being the case the desired therapeutic results would be gained by anything which would remove the effects of this suggestion. Logically, counter-suggestion (if the term may be allowed) should act in the desired manner, and, clinically, it *did* so act. [T. M. T.]

6.—J. H. Carstens briefly gives the requirements of modern surgery as follows: (1) A patient brought to the highest state of resistance to microbic infection and made as clean as possible; (2) an operation room, preferably in a hospital, where everything has been made thoroughly sterile; (3) a surgeon who has a mechanical hand and has received a long and thorough training. [T. M. T.]

7.—P. A. Levene in his preliminary communications states that dead bacteria of different species possess the power of absorbing alexins from normal sera. Living bacteria do the same only after they have been previously saturated with the "immune body." If a given serum loses its alexin on treatment with a living germ, it is safe to say that the serum possesses a bactericidal power over the same germ. Thus, the presence or absence of alexins in a serum treated with living bacteria could serve as an indication for the presence or absence in it of bactericidal power over the same bacteria. From the results of the author's experiments we have: (1) That there exists a certain minimum quantity of dead tubercle bacilli which it is necessary to add to a given serum in order to deprive it of its hemolytic power. On addition of smaller quantities of the germs, the hemolytic power is only diminished, not wholly abolished; (2) living virulent bacilli added in quantities approximately equal to the "minimum" of the dead bacilli have scarcely any effect on the hemolytic power of a serum; added in large quantities they diminish the hemolytic power of a serum, but in a lesser degree than do dead bacteria; (3) "attenuated" cultures act in the same manner as the dead germs. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

January 4, 1902. (Vol. LXXV, No. 1.)

1. The Etiology and Treatment of Bright's Disease. JOHN WINTER BRANNAN.
2. Clinical Notes on Gleet. A. RAVOLGI.
3. Round Ligament Ventrosuspension of the Uterus; Improved Technics. D. TOD GILLIAM.
4. Gelatinous Carcinoma of the Peritoneum, with Metastases in Sternum and Lung. PHILIP KING BROWN and GEORGE T. BRADY.

1.—J. W. Brannan gives Dr. Quimby's statements that Bright's disease in its chronic form is not in any sense an inflammation, but is always a degenerative process, and that this process is not primary, but is the result of perverted functions of other organs of the body. If the disease is well established, our object should not be to restore the kidney tissue which has been destroyed, but to do something to improve the nutrition of that which is left and to lessen the work thrown upon it. The measures employed to this end in general terms are: the restriction of the proteid foods, the prohibition of strong alcoholic liquors, the free use of diluents, especially alkaline mineral waters, and the promotion of the action of the skin and bowels. Tyson lays stress upon the necessity of including the white meat of chicken and fish among the proteids which must be carefully restricted, while von Noorden does not prescribe red meat entirely, but allows it in equal quantities as the white. Tyson also warns against the use of beef tea or bouillon, or the so-called beef extracts. For the action of the skin, patients should be warmly clad and avoid chilling of the body. Hot baths and vapor cabinets are valuable agents. Few drugs are needed, although nitroglycerine in a high tension pulse has been known to act very satisfactorily. Free action of the bowels should be seen to. The author states that in acute Bright's disease the condition is always an inflammatory one. The two chief exciting causes are (1) acute infectious disease; (2) exposure to cold. [T. M. T.]

2.—Clinical Notes on Gleet. (To be abstracted when concluded.)

3.—D. T. Gilliam describes his operation as follows: An abdominal incision three or four inches in length is made at the median line at the usual site between the umbilicus or pubes. The adhesions are broken up and the fundus brought forward. With a finger and thumb or a pair of bullet forceps the broad ligament of one side is seized and brought to the opening. By lifting up the anterior surface of the broad ligament on the tip of a finger applied to its posterior surface the round ligament is brought into view and is picked up, either between the thumb and finger, or with a bullet forceps. Selecting a point an inch and a half from the uterus, a thread is passed under the round ligament and the ends of the thread are brought out of the opening and secured in the bite of a clamp forceps, which is laid upon the surface of the abdomen. The other ligament is sought for and secured in the same manner. At a point about one inch and a half above the pubes, the peritoneum, muscle and fascia at one edge of the wound are caught up by a volsella and pinned together, being careful that the edges of these layers are in line. Traction is now made, and, with a small retractor, the skin and superficial fat are drawn in the opposite direction, uncovering the fascia. With a narrow-bladed knife, or better with the perforating forceps devised for the purpose, a stab wound is made from the surface of the fascia into the peritoneal cavity, the instrument entering one-half inch from the edge of the abdominal incision, and passing obliquely downward and outward, emerging on the peritoneum one inch from the edge of the abdominal incision. If the perforating forceps is used, the jaws are separated, and, by an outward movement of the handle, brought into plain view at the large opening. The thread which loops the round ligament is now placed in the jaws, the clamp forceps removed and the perforating forceps withdrawn, bringing with it the thread and the ligament. If a knife has been used to make the perforation, it is withdrawn and a slender forceps introduced, with which the thread is caught up and the ligament drawn into place. Now, while the ligament is held taut, with its loop end a third of an inch above the surface of the fascia, a catgut suture is passed through it, including the tissues on either side, and back again where it is tied. This is cut close to the knot, the suspending thread cut on one side close to the ligament and withdrawn and the volsella and retractor removed. The other side is dealt with in like manner and the abdominal incision closed. After both ligaments have been fastened, it will be found that an opening exists between the uterus and abdominal wall of from seven to nine inches in circumference, thus obviating any possibility of strangulation of the bowel. It will also be observed that the uterus is not suspended, but rest easily and naturally on the bladder, from which it can be raised to a position little short of vertical. Thus the uterus is enabled to conform to the altered conditions of the bladder, rectum, and to the various bodily movements. Should pregnancy ensue, the ligaments develop *pari passu* with the growth of the uterus, and there is neither embarrassment in gestation nor difficulty in parturition. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 2, 1902.

1. Cases of Rupture of the Spinal Ligaments. CHARLES F. PAINTER and ROBERT B. OSGOOD.
2. The Treatment of Placenta Previa. FRANK A. HIGGINS.
3. The Privileged Medical Communications. ARTHUR H. NICHOLS.
4. Traumatic Apnea or Asphyxia. H. L. BURRELL and L. R. G. CRANDON.
5. Rendering First-Aid in Railroad Wrecks. LUCIEN LOFTON.

1.—The authors give an individual description of all the cases in literature classified as **"injuries to the spine accompanied by ruptured ligaments."** With but few exceptions this title does not embrace either luxation or fracture. Painter and Osgood themselves report four cases of injury to the spine associated with kyphosis and not dependent upon tuberculosis or any other disease of the vertebrae. Upon analysis of these 14 cases from literature and the 4 cases reported by the authors, the following conclusions have been drawn by Painter and Osgood, from a pathological standpoint and also wherever it has been possible to judge from a clinical and anatomical point of view in other cases: 1. Spinal ligaments, during life, may be ruptured without fracture or dislocation. 2. Nerve pressure symptoms may occur from a simple flexion of the vertebral column. 3. Recovery in these cases requires prolonged rest in a position which favors the repair of ligaments, and that the effect of treatment speaks more for the ligamentous rupture than for luxation or fracture. 4. The force which commonly produces the injury (when stated) was one which *a priori* would be most likely to produce ligamentous rupture. [M. R. D.]

2.—Frank A. Higgins calls attention to the desperate condition in which many patients, suffering from placenta previa, are received at the hospital. Many women show a striking indifference as to **hemorrhage**, which he believes due to the fact that being **accustomed** to considerable loss of blood during about a quarter of the time of most of their life, an increase in hemorrhage does not impress them as being of serious import until constitutional weakening becomes manifest. He reports 8 fatal cases of placenta previa varying in occurrence from the sixth to the ninth month of pregnancy. In any of the 8 fatal cases reported it appeared that even the most ardent advocate of Cesarean section would not have cared to perform the operation under the conditions in which the patient was admitted. Six of the labors were premature and only two at term. The author believes that prematurity, as a general thing, is a contraindication to abdominal section except in rare instances when it may possibly be of avail for the mother. The author states it is therefore far from likely that the operation is often indicated or justified in placenta previa, or that it will reduce the percentage of mortality in placenta previa, notwithstanding that as an elective operation it is a relatively safe and easy one in skilful hands and in suitable cases. The maternal and fetal mortality is carefully reviewed with due regard to the literature on the subject. Personally, the author is of the opinion that the rational treatment of placenta previa depends more or less upon the circumstances arising in each case, and that the only cases of placenta previa in which Cesarean section is ever justified are cases at full term, with complete placenta previa, a rigid os, when seen before the occurrence of any severe or dangerous hemorrhage and with a mother and child in good condition. [M. R. D.]

4.—The authors report a remarkable case of **traumatic apnea or asphyxia** which occured in a single man, 22 years of age, and as a result of sustaining a crushing injury to the chest by being caught between an electric car and a door post. The patient had been held between the two obstacles for three minutes, and on the accident table presented the following conditions: A large muscular man with an especially well developed thorax, entirely unconscious, pulse 100, respirations 30 shallow, with an expiratory groan. Slight hemorrhage from ears, nostrils and mouth. No wounds on the head, small, equal and immobile pupils and extensive chemosis. Knee jerks were absent and other reflexes were diminished. Considerable subcutaneous emphysema with a suspected fracture of one or more ribs. From the third rib up to the scalp the skin was dusky, bluish and mottled, the discoloration disappearing upon pressure. It was not cyanosis as the cutaneous discoloration did not extend over the whole body. There was considerable subconjunctival ecchymosis and slight hemorrhages into the retina. Reaction was obtained by means of active stimulation and consciousness returned in four hours. Within three weeks the patient was discharged as practically well. Such accidents are not uncommon as exemplified by the number of reported cases contained in the literature, notably, some of the horrible catastrophies like the Champs de Mars, the Pont de la Concorde, the Vienna Ring Theatre Fire, the Victoria Hall panic and the Charity Bazaar fire. The immediate treatment is artificial respiration, and the secondary treatment is directed toward combating shock; nitroglycerine, atropine or strychnine being administered hypodermically, external heat applied and absolute quiet obtained. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 4, 1902.

1. The Specific and Nonspecific Lesions of the Brain Resulting from Syphilis and their Influence upon Diagnosis, Prognosis and Treatment. J. K. ESKRIDGE.
2. Treatment of Neurasthenia. J. G. BILLER.
3. The Nervous Relations in Diseases of the Nutritive System. HENRY S. DRAYTON.
4. Living on Bread. ALEXANDER HAIG.
5. Metamorphosia Varians. WILLIAM H. DUDLEY.
6. A Plea for Greater Uniformity of Strength and Exactness in our Medical Armamentarium. C. F. WAHRER.
7. Standardization of Crude Drugs of Galenical Preparations. ALBERT B. LYONS.
8. The Proper Management of the Tuberculous Lung. NORMAN BRIDGE.
9. The Nature and Histo-Pathology of the Epipharyngeal Tonsil. NORVAL H. PIERCE.
10. The Röntgen Rays, Etc. CARL BECK.
11. A Case of Relaxation of the Pubic Joints During Pregnancy. JOSEPH B. DeLEE.
12. A Case of Fatal Vaccination Infection Which Resembled Appendicitis, Etc. F. H. RUSSELL.

1.—Eskridge discusses the **specific and non-specific lesions of the brain resulting from syphilis and their influence upon diagnosis, prognosis, and treatment.** He classifies the intracranial pathological conditions of syphilis of the brain as follows: "(1) The specific or luetic lesions, those that are caused by the poison of syphilis and by nothing else; (2) those lesions of the brain that may have a specific or non-specific origin; and (3) the non-specific lesions of the brain that occur as indirect results of the syphilitic virus." The gumma when first observed, especially in the meninges, is a small area of inflammation which becomes a knot of granulation tissue described as gray, grayish red, semi-translucent or gelatinous. The granulation becomes fibro-cellular. This mass increases in size and the center soon becomes caseous. The inflammatory product which results from the syphilitic poison is not highly organized and shows a marked tendency to degeneration. He contends that one of the chief characteristics of specific intra-cranial inflammation, especially of the meninges, is its tendency to hyperplasia. He states that it is almost universally conceded that the nerve fibers and the brain structure possess a greater immunity from the syphilitic virus primarily than do the meninges, nerve sheaths and the blood vessel walls. The statement that the brain and nerve substances are never a primary seat of specific inflamation, he thinks, is doubtful, to say the least. Gummata may produce intra-cranial lesions of a non-specific character by their presence, lessening the intracranial space by their irritating effects and encroaching upon and injuring adjacent structures. He emphasizes the importance of differentiating between the direct and indirect effects of syphilis. For the primary lesions early in the disease, specific medicaments are at our command, while for the indirect lesions there are no known remedies of a special value. In discussing the blood vessel lesions, he mentions that the walls of the medium and sometimes of the larger arteries of the brain are affected. The inflammatory process involves the inner coats of the vessels and often shows a tendency to obliterate the caliber of the affected blood vessels. Occasionally, the caliber of the vessel is closed, and, unless the collateral circulation of the affected vessel be sufficient to insure a sufficient supply of

blood, necrotic softening of the brain follows. The caliber of the vessel may be only partially occluded and its final closure may be due to thrombosis. The poison of syphilis is also responsible for many of the nerve degenerations, both nuclear and system. He contends we may conclude "that the blood vessel walls are the intra-cranial tissues most vulnerable to the virus of syphilis." [F. J. K.]

2.—See Philadelphia Medical Journal, June 15, 1901, Page 1144. [F. J. K.]

3.—See Philadelphia Medical Journal, June 29, 1901. Page 1231. [F. J. K.]

4.—See Philadelphia Medical Journal, June 29, 1901. Page 1232. [F. J. K.]

6.—See Philadelphia Medical Journal, June 22, 1901. Page 1189. [F. J. K.]

7.—See Philadelphia Medical Journal, June 22, 1901. Page 1189. [F. J. K.]

8.—See Philadelphia Medical Journal, June 22, 1901. Page 1190. [F. J. K.]

9.—Pierce discusses the nature and histo-pathology of the epipharyngeal tonsil and draws the following conclusions: "(1) The tissue composing the adenoids has a wide distribution throughout the body; (2) the epipharyngeal tonsil is an organ normally present in all individuals; (3) the function of the epipharyngeal tonsil is at present unknown. Whether it is simply an evolutionary vestige or has to do with metabolic or other processes is equally uncertain; (4) its wide distribution among the various members of the animal kingdom, its embryological connections, and its identity with lymphoid structures elsewhere in the body, would suggest that the epipharyngeal tonsil has a function; (5) the histology and the experiments of Massini and Genta would tend to place it in the class of glands having an internal secretion; (6) the relation of tuberculosis, syphilis or scrofulosis to adenoids is not etiologic. Adenoids may be affected with tuberculosis, etc., but only as any other organ may be similarly affected."

[F. J. K.]

10.—Carl Beck presents a number of **skiagraphs** showing what the Röntgen rays will do in **differentiating between osteomyelitis, osseous cyst, osteosarcoma, and other osseous lesions.** Beck shows that the X-rays offer an early means of diagnosing cases of osteomyelitis and claims that their use will demonstrate every focus of the disease. Necrosis and other slow inflammatory conditions are represented very distinctly. The size and shape of the sequestra can easily be made out and their position defined. The rays will frequently show a sequestrum which it is impossible to feel with a probe. In inflammatory conditions of the joints the X-rays can also be used to advantage in representing the exact condition of the inflammatory tissues. In all tubercular lesions of the bones and joints the rays give definite information as to the seat and exact extent of the tubercular areas. Beck claims that the skiagraph of a periosteal sarcoma is characteristic since it shows the fine spiculated trabeculae which radiate from the surface. The skiagraphs of the soft sarcomata occurring in the medulla show the absence of osseous tissue, small fragments of it sometimes being left here and there. A skiagraph of an osteosarcoma proper shows more osseous tissue than the former variety, but its outlines are very irregular. Beck also pronounces the skiagraphic expression of syphilis as characteristic. The osseous cysts can also be defined. [J. H. G.]

11.—De Lee reports a case of **relaxation of the pubic joints occurring during pregnancy** in a woman aged 39, XII para, four abortions, all deliveries normal. The relaxation began from the sixth month and was characterized by severe pain and difficulty in locomotion. This condition gradually grew worse until the expiration of full term. Dr. Lee remarks that, as a rule, the patient does not complain of this condition, but at times there may be marked distress. In addition to the difficulty of locomotion there is an inability to arise from a sitting posture, easy tiring with the general sense of weakness, pelvic pain reflected up and down the nerve trunks of the pelvis; and a peculiar wobbling gait. The condition disappears rapidly after parturition. [W. A. N. D.]

12.—Russel reports a **case of fatal vaccination infection which resembled appendicitis.** This occurred in a female, 15 years of age, who was brought into the Presbyterian Hospital, Chicago, on March 12, 1901, presenting symptoms which resembled acute appendicitis. Her temperature was 102° F. and her pulse rate 120. The abdomen was tender and quite tympanitic. Marked muscular rigidity was present over the right side. The right thigh was partially flexed and movements of the right limb produced intense pain. Operation was decided upon. The abdomen was opened. The appendix was found healthy; clear serous fluid escaped from the abdominal cavity. On account of the poor condition of the patient further exploration of the abdomen was not warranted. After the operation the patient gradually grew worse, and death occurred on the day following the operation. A few hours after death a complete autopsy was made. The anatomical diagnosis was as follows: "Vaccination wound of the right leg; suppurative adenitis of the right inguinal and iliac glands; purulent infiltration of the recto-cecal tissues; diffuse purulo-fibrinous peritonitis; recent laparotomy; acute splenic swelling and general parenchymatous degeneration; ecchymoses in the lungs; hemorrhagic erosins of the stomach and right adherent pleuritis." [F. J. K.]

AMERICAN MEDICINE.

January 4, 1901.

1. Note on the Fever of Hodgkin's Disease, etc. J. H. MUSSER.
2. Preliminary Notes on the Virulence of the Bovine Tuberculosis Bacillus for Monkeys, and the Effect of Tuberculins Made from Tuberculous Bacilli Derived from Different Animals. E. A. DeSCHWEINITZ and E. C. SCHROEDER.
3. Triple Ectopic Gestation. WILMER KRUSEN.
4. The Therapeutic Value of Hypnotism. CHARLES W. BURR.
5. The Personal Elements of Error in Therapeutics. GEORGE F. BUTLER.
6. Practical Office Methods of Diagnosis with Special Reference to the Röntgen Ray. A. W. CRANE.
7. A Case of So-Called Malignant (Staphylococcus) Carbuncle of the Upper Lip Followed by Pyemia. WM. B. WHERRY.

1.—J. H. Musser discusses **the fever of Hodgkin's disease, recurrent fever, Ebstein's disease.** He furnishes a résumé of the literature and reports two cases of his own, neither of these came to autopsy. The first case was one of Hodgkin's disease of undoubted tuberculous nature, although the bacillus was not found in the discharges. The second was one of so-called Hodgkin's disease in which the clinical course was that of tuberculosis. In this case tubercle bacilli were found in the sputum. Musser concludes by stating that Hodgkin's disease is in all probability a lymphatic tuberculosis. Fever, recurrent in type, occurs commonly in this affection of the glandular structures. So called "recurrent fever" is a symptom, not a disease. In a few rare instances the clinical diagnosis, when such fever prevailed, was malignant lymphoma (Pel), sarcoma (Volckers), myelosarcoma (Hammer), and lymphosarcoma (Remus and Witthower, Seebohn). It must be remembered that such distinguished authorities as Ehrlich and Lazarus believe that Hodgkin's disease is a lymphosarcoma, and that the tuberculous process is accidental. Sternberg, on the other hand, has pointed out the differences, and insists strongly upon the tuberculous as the process giving rise to the adenitis of Hodgkin's disease. He believes that the symptoms are different from those of other forms of tuberculosis, the anatomy of the gland having much to do with the process. Musser agrees with the conclusions of Sternberg. [T. L. C.]

2.—E. A. de Schweinitz and E. C. Schroeder contribute a preliminary note on the virulence of the bovine tuberculosis bacilli for monkeys and the effect of tuberculin made from tuberculosis bacilli from different animals. Their experiments would tend to show that the bovine bacilli are even more virulent for the animals more closely allied to man, than for those nearer the lower animals. Their experiments taken in conjunction with the many cases recorded in which accidental infection with tuberculosis in man can undoubtedly be traced to the bovine germ, they are further evidence of the greater rather than the decreased virulence of the bovine germ for man. They tested tuberculin made from bovine cultures upon tuberculous cattle and upon man. The reaction corresponds in both cases to those which are obtained when tuberculin from human tuberculosis cultures is used. [T. L. C.]

4.—Charles W. Burr contributes a paper upon the thera-

peutic value of hypnotism. The historical side is briefly discussed. He states that some authors grossly exaggerate the percentage of cures following the employment of hypnotism. It can be of no use in organic disease as a therapeutic agent, but may be used in a limited number of cases of functional derangement. He emphasizes the possible harmful effects of hypnotism since it often leads to the unhealthy stimulation of an already morbid imagination. [T. L. C.]

3.—Krusen records an interesting case of triple ectopic pregnancy occurring in the right tube and resulting fatally from peritonitis. He remarks that the only similar case which he has been able to find on record is one reported by Sänger, of a triple ectopic gestation in which there was twin pregnancy in the wall of the uterus and the third ovum at the fimbriated end of the right tube. Careful examination shows this to be a case of intramural twin pregnancy at the point of entrance of the tube into the uterus, while at that abdominal end of the same tube there was another ovum. [W. A. N. D.]

5.—George F. Butler discusses the personal elements of error in therapeutics. He states that the chief factors which enter into the creation of this personal element of error are: The influence of notions regarding diagnostic data. The confused belief in differential diagnosis which centers on typical in place of atypical cases; the confusion of diseases under a nosologic label in place of the recognition of complex symptoms; the uncertain views regarding prognosis resulting from the non-recognition of remissions; the influence of the so-called reflex origin of disease; the failure to recognize alternations of mental and nervous states with other physical disorders: the non-recognition of mimicry of organic disorders by neurasthenia and hysteria; ignoring the environments in which therapeutic observations are made and the effect of this environment on the mentality of the physican; a mental bias in favor of certain medicinal preparations; the notion that it is only necessary to remove the primary cause, to cure the morbid condition; a false conception of the action of microorganisms. [T. L. C.]

6.—A. W. Crane devotes his article to the consideration of the technique of practical office methods of diagnosis with the Röntgen rays. He enumerates the wide application of the X-rays in medical and surgical practice and describes the instrument he employs. [T. L. C.]

7.—W. B. Wherry reports a case of malignant carbuncle of the upper lip due to staphylococcus infection which was followed by pyemia. The history of the case is given as well as the post mortem findings. [T. L. C.]

VRATCH.

October 27, 1901. (Vol. XXII, No. 43.)

1. Diagnosis and Non-operative Treatment of Complete Rupture of the Uterus During Labor. D. D. POPOFF.
2. On the Question of the Function of the Thyroid Gland. V. V. NEFEDOFF.
3. The Diagnostic Value of Stalactities in the Recognition of the Plague Bacillus. M. G. TARTAKOVSKI.
4. A New Method of Treating Epilepsy. M. E. LION.
5. On the Biology of the Blood. V. F. ORLOVSKI.

1.—Will be abstracted when concluded.

2.—Nefedoff repeated the experiments of various observers each of whom claimed some particular function for the thyroid gland. He injected subcutaneously and intravenously mucus into healthy dogs as well as dogs from whom the thyroid gland was removed. In neither was there any effect observed, although the mucus was injected in large quantities. He repeated Lindemann's experiments with caffein and obtained negative results. He also injected cocain, but observed no difference in the effects of the drug on the healthy and operated animals. Nor was any difference observed after injections of digitalin, showing that the removal of the thyroid gland has no effect on the circulation of the brain, as claimed by Schreger, Liebermeister and others. Cyon's theory that the condition produced by the removal of the thyroid gland is that of iodism was disproved by the negative results which followed injections of iodin. The question, whether the juice from the thyroid gland possesses any specific action was settled by the following experiments: The juice from the thyroid gland, meat and lymphatic glands was injected separately into dogs. The injections were followed by a temporary elevation of temperature, lowering or complete loss of sensation, the animals becoming dull and depressed, but the symptoms disappeared in 2-3 hours. No difference in the action of the 3 kinds of juices was observed. Neither was any difference observed when the injections were preceded by small doses of curare. Entirely negative results were obtained by the severence of the nerve-filaments leading to the thyroid gland, thus disproving the assertion of Munk. The conclusion drawn by the author is that we do not as yet possess any means of determining the function of the thyroid gland. [A. R.]

3.—Tartakovski observed that the stalactiform growth considered characteristic of the plague bacillus is also found in cultures of the bacillus of pseudo-tuberculosis of rodents. This characteristic still further establishes the close relationship between the two organisms. The prevalance of pseudo-tuberculosis among rodents is liable, in some cases, to lead to erroneous conclusions. [A. R.]

4.—Lion found cerebrine to be a most effecient remedy in the treatment of epilepsy. It exerts its beneficial influence in the first and second stages of the disease, in which the mental disturbances predominate. In the 17 cases reported by the author the drug allayed, as by magic, the irritability and criminal propensities of the patients who were chronic epileptics of the worst type. In combination with the cerebrine the author employed the so-called "bromide-diet," first suggested by Toulouse and Richet. This diet consisted in the withdrawal of sodium chloride and meat and giving instead 1½ liters of milk, 3-4 eggs, about 800-900 grms. of bread, 400 grms. of gruel, 200 grms. of potatoes, 40-50 grms. of butter, sweetened tea, cider and, simultaneously, 3 grms. of bromide daily. This diet seemed to have a beneficial effect on the paroxysms of *petit mal*, which were not benefited by the cerebrine alone. The author's conclusions are: 1. The combined method of treating epilepsy consists (1) of a diet deficient in sodium chloride, (2) sodium bromide and (3) opocerebrine. 2. This method of treating epilepsy gives far better results than any other. The psychical manifestations subsided promptly, the paroxysms become weaker and less frequent, occasionally disappearing altogether. With more prolonged treatment there is a hope of curing the disease, even when it is of long standing. 3. The duration of the treatment, the method of application, doses, etc., should be established by future observations. At all events, an exact determination of the above should be based on an accurate study of the correlation of the 4 stages of the disease in each patient. 4. The more frequent and pronounced are the paroxysms and the more remote is the beginning of the disease and the appearance of the first symptoms, the more persistent and prolonged should be the employment of the "bromide diet," not less than 3 months. Opocerebrine, on the other hand, should be used in every case, with interruptions, until a cure is accomplished. 5. The daily dose of sodium bromide is 2-3 grms. and may be increased in severe cases. 6. Opocerebrine was used in form of powders or tablets, 0.2-0.3 grms. at a dose, or 0.4-0.6 grms. daily. In mild or recent cases the dose may probably be decreased. 7. No untoward effects were observed. [A. R.]

5.—Orlovski makes a few adidtional remarks concerning the biology of the blood and also criticises Veliamovitch's paper on the same subject. He believes that the alkalinity of the blood plays a certain biological role in the organism, but what the role is we do not know. The alkalinity of the blood is more or less constant both in health and disease, except, as stated in a previous paper, in cancer and diabetes. (See abstract in Philadelphia Medical Journal, Vol. 8, No. 26.) The equilibrium is kept up by certain compensating forces. Thus, if an excess of alkalies

is introduced, the latter are eliminated with the urine; the acidity of the gastric juice is diminished and the acid elements in excess in the blood serve to neutralize the excess of alkali; if this is found insufficient, the excess of alkali is removed through the intestinal tract. For this reason, large doses of alkalies produce gastro-intestinal disturbances. In cases in which the alkalinity of the blood is lessened, the diminution is secondary and not primary. For this reason it is useless to administer alkalies with a view of correcting the abnormal reaction of the blood. The administration of alkalies, however, serves another purpose: They act favorably on metabolism of nitrogen and fat, exert some influence on intestinal fermentation and the scretion of urine, etc. With regards to the claim of Veliamovitch that the use of iron in anemia is useless, the author stoutly affirms that the clinical experience of ages is fully corroborated by recent investigations which prove that iron is absorbed and does contribute towards the regeneration of the blood. [A. R.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

No. 44.

1. The Cure of Congenital Fissure of the Bladder with Incontinence of the Urine. F. TRENDELENBERG.
2. The Origin of Tumors, Tuberculous and Organic after the Action of Blunt Injuries, with the Exclusion of Fractures, Hernias, Luxations and Traumatic Neuroses. JORDAN.
3. The Application of Sterilized Suture Material in Practice. KROENIG.
4. A Case of Sneezing During Pregnancy. K. HEIL.
5. Some Remarks upon the Specificity of Bacteria. P. KLEMM.
6. Portable Frames for the Treatment of Fractures of the Thigh in Small Children. C. STERN.
7. Urobilin in Ascitic Fluid. C. STICH.
8. The 70th Birthday of Carl von Voit. M. CREMER.
9. George Friedrich Louis Thomas.

1.—von Trendelenberg discusses the possibility of **radical cure of congenital fissures of the bladder,** and expresses his approval, in some cases, of the implantation of the ureters into the rectum. He has operated upon a number of cases according to his own method, and reports one in particular that has been practically cured. In this case 5 operations were performed in a period of about 2½ years. The length of time required being due to the fact that after every operation the child must recover completely and the scars become soft. The operation consists first in the separation of the sacroiliac synchondroses on one side. This serves to close the fissure between the symphysis pubis. At the second operation the edges of the fissure are freshened, united by suture, with the exception of a small opening in the anterior bladder wall which is designed to allow the outflow of urine. After this operation a fistula developed at the anterior end of the wound. At the 3d operation the opening in the central portion of the bladder wall was closed, but unsatisfactorily, and a 4th operation was necessary to complete this. Finally the lower fistula was closed and the urethra operated upon so that it became permeable for urine. Immediately after this the patient became continent and the only abnormally is the necessity of frequent micturition. [J. S.]

2.—Jordan has collected the histories of **tumors** occurring in various clinics, in order to determine to what extent blunt injury is responsible for their origin. He concludes that the material now at hand does not indicate that injury is of more than minimum significance in the development of carcinoma. With regard to sarcoma there seems to be more evidence, although in all cases the following conditions should be fulfilled. Careful localization of the injury, the occurrence of tumor in this locality, the development of the tumor at about the proper period after the injury, and the proof that the tumor had not commenced before the injury. However, with regard to these points, we do not know the incubation period of the malignant tumors, and therefore it is impossible to be certain that they appear after the proper interval. It is certain that the socalled callous tumor may appear a few weeks after the injury. Relation between an injury and tuberculosis is not quite so difficult to make out. It is possible that the injury may determine the localization of the tubercle bacilli already in the system, although experimental evidence does not determine that this explanation is correct. The opposite is true of ordinary pyogenic infection, and Jordan reports 2 cases observed by himself. In one, a boy of 15, with a furuncle in the neck, who developed osteomyelitis in the left tibia which was injured by a heavy weight pressing upon it. Another case developed the same disease after an operation. In view of these the question of the relation between appendicitis and injury should probably be answered affirmatively. [J. S.]

3.—Krönig, in view of the difficulties of sterilizing **catgut** in general practice, has had prepared by his direction small cases consisting of 3 shallow boxes which contain catgut threads 3 meters long. These are perforated filled with cumol and exposed to a temperature of 160° for an hour. The openings are then closed by turning the cover, and the material remains sterile indefinitely. In order to enable the surgeon to determine whether the catgut is sufficiently sterilized, a small piece of metal fusing at 160° is attached to the end of the threads. Unless this is melted, certain sterility cannot be assured. In practice catgut can be employed directly from the case. [J. S.]

4.—The patient in the 3d month of pregnancy developed severe frequent **sneezing,** as a result of which an **abortion** occurred. A few months later this sneezing reappeared and it was possible to determine pregnancy at the end of the second month. In order to prevent abortion the injected mucous membrane of the nose was treated with cocaine, and the patient relieved. [J. S.]

5.—Klemm calls attention to the **variations in the activity of the staphylococcus and streptococcus.** He objects to the criticism of Jordan that he ever claimed the streptococcus could not produce suppuration, and he states it is his belief that there is not an obligatory specificity of bacteria but a facultative specificity, and that the action of various groups of microorganisms is characteristic. [J. S.]

6.—Stern has devised an ingenious **apparatus** which renders it possible to carry children with **fractured thigh** bones into the open air, or to change them from bed to bed without danger of disturbing the extension of the leg. This consists essentially of a frame of wire to which the child is fastened, and a long extension apparatus, between which the legs lie and are fastened by leather straps. [J. S.]

7.—Stich has determined the presence of **urobilin in the ascitic fluid** of a case of parenchymatous hemorrhagic nephritis. The tests were made with great care and confirmed by the spectroscope. The nitrous acid test was not obtained. [J. S.]

8.—Voit was born on the 31st of October, 1831. He graduated in medicine at the age of 23, obtaining his Doctor's degree in the same year. After this he became a student of Liebig's and finally devoted himself entirely to chemistry. He became Privat Docent in 1854; Extraordinary Professor in 1860, and Professor of Physiology in 1863 at the early age of 32. His work has been chiefly in the domain of organic chemistry. [J. S.]

Special Article.

FLORIDA IN FEBRUARY—NOTES AND IMPRESSIONS OF A BRIEF MIDWINTER TOUR.

By JAMES K. CROOK, A. M., M. D.

of New York.

Author of "The Mineral Waters of the United States;" Adjunct Professor of Clinical Medicine at the New York Post-Graduate Medical School and Attending Physician to the Post-Graduate Hospital.

"Feb. 24th, 1901.—Arrived in Jacksonville at 7.20 this morning. Temperature 31° F. Sky overcast and a cold, northwesterly wind blowing. Ice an eighth of an inch thick observed in frozen puddles along the street. Heavy overcoats and wraps decidedly comfortable. Weather barely distinguishable from a New York March day. Plenty of flowers in bloom in public parks—roses, violets, verbenas, etc. Also observed peach and plum blossoms, but they look as if they would like to come indoors. Ornamental orange trees along sidewalks covered with canvas tents, some of them with oil stoves inside."

This extract indicates the nature of the writer's introduction to the "land of flowers" on the occasion of a recent visit to the palmy peninsula. We learned that the thermometer in front of the St. James had registered 28° F. at midnight. Our genial host, however, hastened to assure us that we had come in on the crest of an anti-cyclone, and that this particular day was the very coldest of the winter. Subsequent developments appeared to bear out these statements; before noon the mercury had climbed to 40° in the shade, and during the afternoon the air was quite mild and pleasant, resembling an early May day in New York. It had been our fortune to strike this section in the midst of one of its chief climatic drawbacks—a sudden cold snap, with cloudy skies and sharp northerly winds—of which three or four can usually be counted on every winter.

Jacksonville is evidently the grand distributing point for tourists and health-seekers visiting this region. Most persons tarry here a few days, but almost every individual one meets is either going further down the peninsula, or is on his return. As the observing medical visitor sits in the rotunda or dining room of one of the big hotels, he is struck with the large proportion of cachectic-looking persons about him. Sitting at a little table off to the left is a middle-aged gentleman with his wife and daughter. It is not necessary to look very closely to learn that they are visiting Florida in the interest of the latter, a young girl of 16 or 17. She looks fairly well, but a barely suppressed short cough andthe anxious solicitude of the parents in protecting her from slight draughts and in urging her to partake of food evidently unrelished, tell their own story.

Here is a stout, plethoric old lady accompanied by her son. These two would appear at first sight to be simply traveling for recreation or pleasure, but the old lady wheezes and has labored respiration when she walks, and is carefully assisted by the young man, so the conclusion is reached that she must be a chronic bronchitic or asthmatic, and is down this way looking for relief.

Even the waiter at our table ventured the information that he was working in the South until he could recover from a bronchial affection which the Philadelphia doctors could not cure.

Many visitors here are, of course, simply bent on killing time, but in perhaps a majority of groups of three or four persons the professional observer can pick out one or more probable health-seekers. At most hotels the manager will gravely assure the enquirer that they do not admit consumptives, and this statement appears on some of the circulars, but no physical examination of intending guests is made, hence no person suffering from phthisis except in a very late stage, need have any fear of not securing accommodations wherever he may choose to apply. The State Board of Health, which has its headquarters here, is keenly alive to the heavy annual visitation of invalid guests, and in its publications gives careful and specific instructions relating to the contagious nature of tuberculosis and the measures for its prevention.

Jacksonville is a very busy little city, quite metropolitan in some of its aspects, and affords an agreeable resting-place for the wayfarer from above or below. It is well lighted, has numerous brick-paved streets and shell-roads, and as good electric cars as one finds in New York. The residence portion in some localities, especially out Main-street way beyond the water-works, is hard to distinguish from a thrifty New England town.

Proceeding south from Jacksonville, a distance of 37 miles by rail, the traveler reaches the ancient city of St. Augustine, a health resort *par excellence*. During the month of February the season is at its height, and the little town, now about double its normal population, is alive with the coming and going of tourists. As at Jacksonville, most of those met at the big hotels were transient guests on the way further south, although we learned that many visitors were content to pass the entire season here. Nature has given St. Augustine a perfectly flat location, almost on the sea-level, a beautiful canopy of blue sky, and, as a rule, a mild and equable atmosphere. The rest is all artificial. The handiwork of man is shown in the gigantic hotels, the tidy cottages, the well-paved and perfectly clean streets, the sparkling fountains, and even in the ever-present palm, and the semi-tropical shrubs, vines and flowers filling the lawns. The climatic conditions here are practically the same as those at Jacksonville. The weather during the winter months is usually quite correct in its behavior, but at times it plays pranks properly described as "devilish." In the musty chronicles of the weather historian it is recorded that on one occasion away back in the thirties the mercury dropped to 7° above zero! The flat surface and lowlying coast look very favorable for the play of northeasterly winds, although the inhabitants with whom we conversed informed us that such breezes as proceed from that direction are greatly tempered by the Gulf stream which lies just a little distance out in the ocean. One gains the impression that if the wind did happen to rise, the dust from the coquina-paved roads would play havoc with the upper respiratory tract. Indeed, one acquaintance of the writer, the wife of a hotel-keeper, stated that she had been troubled with a

teasing throat cough since the first week of her stay in St. Augustine.

Among the important therapeutic adjuncts to the city is the Casino, containing well-equipped Russian and Turkish baths, and to these have recently been added hot electric and sulphur baths under the supervision of a competent physician. The water here is procured from driven wells, some of them 2000 feet in depth. The writer has not seen an analysis of the water, but its sulphurous character is fully attested in the odor proceeding from fountains and pools. That supplying the Casino is thermal at 78° F. as it rises to the surface, the average annual temperature at St. Augustine being 68° F.

From Jacksonville the traveler may continue his way via St. Augustine to the numerous resorts further south on the Atlantic side of the peninsula, or he may take the cars of the Plant System in a southerly and westerly direction through the interior of the State to the Gulf coast. Just at present Palm Beach near the southern extremity of the east coast is the *ultima thule* of the majority of Florida tourists. The lines of the Plant System, however, cover a much more diversified region of the State, and as the writer's time was too limited to include both routes, the latter was chosen.

The main tourist line from Jacksonville to Tampa includes many of the important points in the St. John's River district, notably Magnolia Springs, embracing among its attractions a very excellent light alkaline-calcic mineral water, highly recommended for rheumatism, Green Cove Springs, Palatka, the most important town in the interior of the State; Deland, a short distance from the junction, and Sanford, the terminus of the St. John's River steamers. Further along the line are Winter Park, Orlando, Kissimmee and Lakeland, in the so-called Florida uplands. The journey finally terminates at the big Tampa Bay Hotel and Port Tampa on the gulf.

The tourist will find abundant entertainment in the prospect from the car windows.. From Jacksonville to Sanford the eye is occasionally greeted with broad vistas of the St. John's River. Tangled forests of moss-covered magnolia, live-oak and other subtropical evergreens are penetrated at frequent intervals, while the ever-present pine and cypress rear their tall and ghostly shapes amid the forests of low saw-palmetto, cabbage-palm, mangrove, hickory and gum-trees. Glimpses of well-kept orange groves with their golden fruit, with occasional lime and pineapple orchards also meet the view as the journey continues. As along the east coast, shallow ponds and swamps are encountered on every hand. One would imagine that the ghost of Malaria might stalk forever undisturbed amid these innumerable morasses. It cannot be doubted that the climate undergoes some modification as we leave the Atlantic coast and penetrate further into the interior and into a lower latitude. The air is softer and at numerous points is redolent with the perfume of sweet-scented tropical plants and flowers. Going further west a gradual ascent is noticed; the swamps are smaller and less frequent, and the soil becomes dryer and more porous.

To the writer, Winter Park, 133 miles southwest of Jacksonville, and 100 miles northeast of Tampa, would appear to unite all the climatic and topographical advantages of the interior of Florida. The location being at a considerable distance from the salt water in either direction, as well as somewhat elevated, the climate loses something of its maritime character. Lying south of the 29th parallel, the situation is quite safely below the chilling influence of the anti-cyclones encountered higher up. In this section the enquirer will find many natives of northern states living permanently. A confidential chat will usually develop the fact that bad health, as a rule, weak lungs, has alienated these persons from their homes. Herein lies a most significant commentary on the salubrity of this region. These people find here good health and the prospect of long life. At home they cannot survive. The writer conversed with many of these persons; only one example need be cited here. A physician of perhaps 50, practising for the last 20 years in one of the Florida plateau towns, stated that he had originally commenced practice in a northern city near his own home. After two or three years his health began to fail. Pulmonary tuberculosis became manifest. A sojourn of a few months in Florida caused an arrest of the disease, and he resumed his practice in the North, believing himself cured. Within a year, however, the symptoms were renewed, compelling the patient again to abandon his work. He sought a favorable location in Florida and established his home there. At the present time the doctor is a rugged, sun-browned man, enjoying the best of health, and without a trace of his old trouble.

With excellent schools and churches, refined society and most of the adjuncts of modern civilization, the fate of these northern exiles cannot be regarded as a hard one.

Passing on toward the Gulf from the centre of the State, the dead level character of the country is lost, and the surface becomes somewhat undulating, although we saw nothing that could properly be called a hill.

In due time our train deposits us on the grounds of the mammoth Tampa Bay Hotel, proudly claimed to be the biggest place of its kind on earth. No description of this magnificent caravansary, with its enormous stretch of park and lawns sweeping to the Hillsborough River, its great rotunda and superb salon, its manifold wealth of plants and flowers, rugs and tapestries, bronzes, mirrors and cabinets, is required here. One of the first features to catch the prying eye of the sanitary fault-finder is the measures of protection instituted against a musical household pet not unknown in the Jersey meadows, Staten Island, and other purlieus of New York. Mosquito screens carefully guard the windows, and to circumvent any intruder who successfully passes these barriers, a second line of defense in the shape of heavy netting canopies invests the beds in the sleeping apartments. Thus intrenched, the tired visitor seeks repose with visions of tertian intermittents and yellow chills crowding thick on his aroused imagination. It was subsequently learned that these precautions were well taken. The enemy was discovered in great force during strolls about the grounds and along the river banks. The writer did not succeed, however, in identifying the Anopheles. The pose of the bodies of such as were seen at rest did not correspond to descriptions of

that genus, nor did the wings of several specimens that were captured contain spots. No opportunity was afforded to examine the larvae. Physicians at Tampa informed the writer that malarial affections were neither numerous nor of a serious character. On the whole it would appear probable that the mosquitoes found here are not of the malarial-bearing variety, but representatives of the genus Culex, upon whom the crime of spreading chills and fever has not yet been definitely fixed.

As a partial offset to these small disturbers of the peace, the trees and shrubbery about the hotel grounds resound with the sweet notes of the mocking-bird and the shrill call of the blue-jay, while that feathered *sine qua non* of the tropics, the turkey buzzard, describes majestic circles at a giddy height in the blue empyrean.

Exceedingly heavy dews were noticed early in the morning, but they were quickly evaporated by the rising sun.

The hotel is plentifully supplied with public and private baths, while the Casino contains a swimming pool 50 by 70 feet in area. A very complete hydro-therapeutic plant has recently been added, where, it is stated, patients may be treated in accordance with the methods of Charcot, Erb and Semmola

Various forms of amusement or recreation are open to the guests, including golfing, driving, boating, fishing, etc. Several excellent roads and bicycle paths will be found in the neighborhood. Nine miles further down the bay is Port Tampa, with its Plant System inn, a transient stopping place chiefly for sportsmen.

No tour of this neighborhood would be complete without a visit to the high, bold peninsula about 12 miles across the bay from Port Tampa. Landing at St. Petersburg, the natural objective is Belleair, some 15 or 20 miles distant by rail, with its new and elegant Hotel Belleview overlooking the Gulf. This location undoubtedly presents many attractions as a winter health resort. Unlike the flat, low-lying Atlantic coast, the surface here is more or less broken, and rises to a considerable elevation above the sea level. The soil is dry and porous and the atmosphere soft and genial, presenting nothing of the harshness observed further up along the east coast of the peninsula. The fishing here is said to be equally as good as that at famous Tarpon Springs, a few miles distant, while quail, wild duck and other game birds are abundant during the winter months. Surf bathing may be safely indulged in at all seasons.

The hotel grounds include about 100 acres, in which many varieties of tropical and sub-tropical shrubs, plants and flowers were noticed. The trees, however, are quite small as yet, reminding one of a new park in Manhattan. The grounds enclose the finest golf links in the State.

With its numerous attractions, artificial and natural, this location offers a tempting winter resting place for the pleasure-seeker or for the valetudinarian, especially those who suffer from respiratory affections. Climatic perfection, however, is not to be obtained even in this favored region. The writer feels no doubt that Belleair experiences at least a touch of the fierce northers which sweep the Mexican Gulf at intervals, although this subject is studiously avoided by mine host. As showing the almost uniform smoothness and equability of the climate here, the writer presents the following table of observations taken from the thermometer on the north piazza of the Hotel Belleview during the present season from January 15th to February 28th, 1901. In comparison is shown also the temperature range of New York for the same period, from observations made by the U. S. Weather Bureau:

TEMPERATURE RANGE AT NEW YORK CITY

FROM JANUARY 15TH TO FEBRUARY 28TH 1901.

Date	6 a. m.	12 N.	6 p. m.	Date	6 a. m.	12 N.	6 p. m.
Jan. 15th	27° F.	33	36	Feb. 7th	16	32	21
" 16th	37	40	43	" 8th	17	21	23
" 17th	37	40	50	" 9th	18	24	26
" 18th	40	40	35	" 10th	21	17	22
" 19th	29	22	17	" 11th	17	25	23
" 20th	23	17	9	" 12th	20	28	30
" 21st	6	19	25	" 13th	27	30	25
" 22nd	31	36	45	" 14th	13	17	16
" 23rd	40	41	34	" 15th	14	21	24
" 24th	26	33	34	" 16th	23	30	35
" 25th	33	35	37	" 17th	30	35	37
" 26th	35	36	40	" 18th	29	33	35
" 27th	28	32	32	" 19th	28	35	35
" 28th	24	31	31	" 20th	33	37	35
" 29th	31	33	29	" 21st	25	29	29
" 30th	22	28	30	" 22nd	23	33	35
" 31st	22	28	30	" 23rd	21	25	25
Feb. 1st	27	30	29	" 24th	19	21	23
" 2nd	17	26	28	" 25th	17	32	24
" 3rd	17	25	28	" 26th	24	33	33
" 4th	24	28	32	" 27th	31	38	37
" 5th	31	30	29	" 28th	23	24	
" 6th	25	25	22				

Highest Temperature . . . . 50° F.
Lowest " . . . . 6 F.
Average " . . . . . 27.91° F.

TEMPERATURE RANGE AT BELLEAIR, FLORIDA,

FROM JANUARY 15TH TO FEBRUARY 28TH 1901.

Date	6 a. m.	12 N.	6 p. m.	Date	6 a. m.	12 N.	6. p. m.
Jan. 15th	54°F	72	76	Feb. 7th	58	72	68
" 16th	54	66	60	" 8th	66	75	71
" 17th	63	62	56	" 9th	71	77	70
" 18th	49	58	53	" 10th	66	74	70
" 19th	40	60	51	" 11th	66	80	68
" 20th	48	72	60	" 12th	66	68	60
" 21st	56	76	62	" 13th	55	58	59
" 22nd	56	74	64	" 14th	52	60	59
" 23rd	56	72	62	" 15th	50	68	58
" 24th	56	66	64	" 16th	56	69	60
" 25th	58	64	57	" 17th	62	72	64
" 26th	45	60	56	" 18th	65	73	68
" 27th	58	68	64	" 19th	68	68	64
" 28th	54	64	62	" 20th	51	58	52
" 29th	50	70	62	" 21st	40	58	54
" 30th	60	72	66	" 22nd	43	65	54
" 31st	60	64	56	" 23rd.	54	65	52
Feb. 1st	40	60	52	" 24th	39	52	44
" 2nd	44	68	64	" 25th	38	63	66
" 3rd	61	76	68	" 26th	66	54	54
" 4th	67	70	62	" 27th	45	61	58
" 5th	50	66	58	" 28th	48	66	
" 6th	48	68	58				

Highest Temperature . . . . 80° F.
Lowest " . . . . 38° F.
Average " . . . . . 60.61° F.

This record of the temperature, however, does not tell the whole story. During most of the days when the heavens of New York are overcast and chilling winds are howling through the streets, the sojourners at Belleair are indulging in the delights of golfing, cycling, or bathing under sunny skies to the music of sweet song birds, the piping of Bob White, and the gentle rustle of soft tropical breezes in the evergreen foliage. The writer's stay in Florida was not protracted, but with his previous experience he has learned enough to be convinced that persons suffering from most forms of chronic bronchial and pulmonary complaints are better off there than in the North during

the winter months. It is not to be doubted that many cases of early phthisis are not only arrested, but permanently cured by a timely resort to the favorable surroundings found in many localities on the peninsula.

THE JOURNAL OF NERVOUS AND MENTAL DISEASES.

October, 1901. (Vol. 28, No. 10.)

1. A Tumor of the Superior Worm of the Cerebellum Asciated with Corpora Quadrigeminal Symptoms. HERMON C. GORDINIER.
2. A Case of Progressive Unilateral Ascending Paralysis; Probably Due to Multiple Sclerosis. CHARLES S. POTTS.
3. A Case of Progressive Muscular Atrophy and Tabes With Autopsy. JOSEPH COLLINS.

1.—H. C. Gordinier reports a case of tumor of the superior worm of the cerebellum which he diagnosed by the aid of Nothnagel's indications, which are: (1) an uncertain, unsteady gait like that of a drunken man, especially if the gait is the first symptom; (2) in addition to the above a double ophthalmoplegia, not being entirely symmetrical and not involving all the muscles to an equal degree, with an especial predilection for the superior and inferior recti muscles; (3) all other symptoms are subsidiary and of minor importance. The autopsy revealed in his case a tumor, neuroglioma, taking its origin in the ventral part of the superior worm, which in its growth forward into the mid-brain region destroys the superior medullary velum, the interior of the posterior quadrigeminal bodies, more especially the right, the central gray matter surrounding the aqueduct of Sylvius, the dorsal part of each oculomotor nucleus as well as the nuclei for the trochlear nerves, the tegmentum in the region of the red nuclei, and the superior cerebellar peduncles at their point of decussation, involving most the fibres of the peduncles coming from the left side. [T. M. T.]

2.—C. S. Potts reports a case in which the symptoms of an atypical multiple sclerosis were present, principally because it presented the rare symptom complex of a progressive unilateral ascending paralysis. While neither intention tremor nor mental dulness were present, and while he never suffered from either an epileptiform or apoplectiform attack, the diagnosis of multiple sclerosis seemed to be justified by the presence of nystagmus, paresis of extra ocular muscles, palenesss of the temporal halves of the optic discs, increased deep reflexes and some disturbance of speech. [T. M. T.]

Congenital Mitral Stenosis with Interauricular Communication.—Huchard and Bergouignan report the case of a woman of 34, who only began to menstruate at the age of 24. Since then menstruation has been irregular; and she could never run, play, or work long, so intense became her dyspna. Following scarlet fever and pneumonia in childhood, her legs were edematous. Headache always existed. She looks about 13 years old. Phthisis exists in the right apex. There is a presystolic murmur heard at the apex, a systolic murmur at the pulmonary area. She died two weeks later, with uremia. The autopsy showed that most of the interauricular septum was absent, the communication between the auricles measuring 4 or 5 cm. in diameter. The tricuspid valve was insufficient, the mitral stenotic, and the aortic small, as were the aorta and the large vessels. The right ventricle, the pulmonary valve, and vessels were very large. Tubercles were found at the apex of the right lung. The kidneys were sclerotic. Hirtz diagnoses the case aortic chlorosis, with congenital mitral stenosis, interauricular communication, and arterial aplasia. In the discussion which followed, Rendu stated that all cases of aortic aplasia die with renal insufficiency, because the small caliber of the blood vessels gives the kidneys insufficient nourishment. (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, July 4, 1901. No 23). [M. O.]

Original Articles.

THE TREATMENT OF INOPERABLE TUMORS.

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In spite of the rapid progress made during the last fifteen years in the diagnosis and treatment of tumors, there still remains a large number of tumors which are allowed to become inoperable either through sad neglect on the part of the patient or because he is misled by the so-called cures of fraudulent "Cancer-doctors" which end only in needless destruction of tissue and stimulation of the tumor cells to excessive growth. On the other hand, there are certain cases of malignant growths which on account of their nearness to important vessels and nerves or because they involve or infiltrate into the parenchyma of some vital organ are beyond the domain of legitimate surgery. Various measures have come into use during the last ten years for the treatment of these inoperable cases. Electrolysis has been used upon the theory that the tumor is composed of a tissue of a lower grade of vitality and, therefore, less resistant to the action of the electric current than the neighboring normal tissues. This is the principle of the treatment of fibroid tumors of the uterus according to the method of Apostolli. Injections of various kinds have been made into inoperable tumors or into the surrounding tissues for similar purposes. The materials used for these injections are pyoktanin or methylene blue, pure ferments, yeast cells, thyroid-extract, alcohol and, recently, the mixed unfiltered culture of the streptococcus of erysipelas and the bacillus prodigiosus, or "Coley's Mixture." In this paper we shall consider the results which have followed the use of pyoktanin and Coley's mixture in inoperable tumors at the University Hospital.

Pyoktanin or methylene blue was first introduced into medical use by Prois. Stilling and Wortmann of Strassburg. The cold watery solution of the drug in the ratio of 1 : 500 is used as an injection in carcinoma. Pyoktanin diffuses readily in both healthy and diseased tissues, and apparently causes a solution of tissues of a low grade, such as carcinoma, while it is thought not to injure the healthy normal tissues. The drug is excreted by the kidneys, imparting a green color to the urine of patients taking it. It will be interesting to review a few of the cases of inoperable tumors that have been benefited by treatment with pyoktanin.

Professor von Mosetig-Moorhof reports the case of a woman of 60, who had a sarcoma of the inferior maxillary bone which had grown to such a size as to interfere with mastication and the patient had to be fed with a stomach tube. After thirty-five injections of three to six grams of solutions of methylene blue 1 : 500 to 1 : 300 the patient was able to eat an ordinary hospital diet and the tumor was reduced to one-third of its original size. The pathological diagnosis of this case is not recorded. von Mosetig cites another case of a large pelvic tumor which had attained such a size as to inter-

fere markedly by pressure with the movements of the bowels, rendering a colotomy necessary. After fifteen injections of three grams of 1 : 500 pyoktanin solution, the tumor diminished to one-third of its original size and the patient was able to attend to his usual duties.

Dr. Victor Bachmeyer,[1] in 1891, reported a case of inoperable carcinoma of the uterus greatly benefited by the injection of one and one-half to three syringefuls of 1 : 500 solution of pyoktanin every second day for four months. The discharge became less profuse and the hemorrhages ceased. The injections were made dividedly at two or three points of the tumor and later into the adjacent sound parts of the vagina.

Dr. H. J. Boldt,[2] of New York, in 1892 reported four cases of advanced carcinoma of the uterus treated with methylene blue. In each case the uterus was first thoroughly curetted to remove the accessible infiltrated tissue and a tampon of dry iodoform gauze placed in the vagina. After forty-eight hours the gauze was removed and a douche of bichloride of mercury 1 : 2000 given. The parts were then dried with absorbent cotton. The needle of the syringe containing 1 : 100 pyoktanin solution was then inserted into the fundus of the uterus from 0.5 centimeter upwards to its full length according to the thickness of the respective part, the fluid being gradually pushed out while the needle was inserted deeper. Next he injected the solution into the parametria on either side, then the posterior and anterior vaginal walls. No danger appeared to follow the entrance of some of the fluid into the peritoneal cavity under proper aseptic precautions. After completing the injections pure pyoktanin powder was introduced into the uterus or absorbent cotton saturated with a 1 : 75 solution. A cotton tampon was then introduced into the vagina which was removed on the second day and the patient given a douche. This treatment was repeated every second day. There was no further infiltration in these cases and it diminished slightly in three of them. The chief effect noticed was a marked diminution of the pain, rendering it possible for the patient to sleep at night without anodynes, thus making the remainder of life more comfortable than it otherwise would have been under the continued influence of morphine. The question arises whether equal benefit would not have resulted from repeated curettement without the additional use of the methylene blue. It will be of interest to report in this connection the results obtained in the treatment of two cases of malignant disease with methylene blue in Dr. Nancrede's clinic at the University Hospital.

CASE 1.—S. L. Male. Age 44. Horse-dealer by occupation. Married. Muskegon, Michigan. Admitted to the hospital March 6, 1899, for a tumor upon the right side of the neck. The family history is negative as regards tumors and tuberculosis. The patient had the ordinary diseases of childhood, with no sequelae. Six years ago he had neuralgia of the left side of the face. In October, 1898, he first noticed a small hard nodule in the right side of the neck just below the angle of the jaw. This nodule gradually increased in size until at the time of the patient's entrance into the hospital the growth extended from the angle of the jaw above to the clavicle below and anteriorly to the median line. There were two distinct enlargements separated by a sulcus or groove. The tumor was nodular and had no well defined border. The skin was adherent to the growth. The clinical diagnosis was sarcoma. Treatment was begun with injections of methylene blue as soon as the patient entered the hospital and a month later a portion of the granulation tissue formed in the walls of the ulcer, produced by the action of the drug, was excised and sent to the pathologist, Dr. Warthin, who reported it to be granulation tissue.

The injections with methylene blue were made directly into the tumor, using a 1:500 solution. The dose at the beginning of the treatment was five minims, gradually increased daily until thirty minims were given every second day. From one half to two hours after the injection the patient usually had a chill, varying in severity with the amount of the injection and followed by a rise of temperature of one to four degrees. On one occasion the temperature rose to 105° F. Our experience with this drug is, therefore, entirely different from that of Boldt, who says that febrile reaction or any unpleasant symptoms have never followed the injections.

On March 17, 1899, about ten days after the treatment was begun, the patient had marked difficulty in breathing, being compelled to assume the upright position in bed. He presented the appearance of having some obstruction to the return circulation in the neck. There was great difficulty in breathing and considerable edema of the mucous membrane of the pharynx, right side of the face and eyelids, and speech was reduced to a whisper. The edema was relieved by scarifying the mucous membrane of the pharynx. On May 23, 1899, an incision was made into a fluctuating portion of the tumor and about four ounces of a greenish purulent fluid containing gas were evacuated. The discharge of this fluid reduced the tumor to one third of its original size and the respiration became much improved. The patient, however, continued to suffer from severe chills with fever and sweating and died soon after leaving the hospital on May 23, 1899.

CASE 2.—No. 315. J. H. Male. Age 47. Married. Laborer. Mt. Clemens, Michigan. Admitted to the hospital April 17, 1900, for a tumor on the left side of the neck. Family history negative as regards tumors and tuberculosis. Patient had measles at ten and jaundice at thirty-seven. The latter illness continued for about two weeks. About three months previous to his entrance into the hospital he contracted a cold, his voice became hoarse and he noticed a growth in the left side of the neck about an inch above the middle of the clavicle. The tumor reached its present size in about two weeks. He never had much pain in the tumor but has headache and earache quite constantly in the left side of the head. He has had a cough and hoarseness of the voice since he first noticed the tumor. Patient has lost about sixty pounds in weight in three months time. About two weeks ago the tumor suddenly increased in size and a half a cup full of pus was removed by incision. He has had difficulty in swallowing since the tumor first appeared.

S. P. There is a foul odor to the breath, the teeth are poor and the gums spongy in appearance. The left pupil is contracted and reacts very poorly to light. The skin over the tumor is red, due to a blister which was applied before the patient's entrance into the hospital. The tumor extends from the left clavicle to the angle of the jaw and to within one half an inch of the external auditory meatus. It is somewhat irregular in outline and hard in consistency, yet slightly elastic. The skin is movable over the tumor, which, itself, is movable upon the surrounding bony structures and the larynx. It is not sharply defined, hence infiltrating and there are no softened areas in it. The pulsations of the great vessels of the neck can be felt through the tumor, but no pulsation can be felt in the tumor itself. There is no edema of the left arm and no difference in the radial pulses as to time and strength. Bronchial breathing can be heard over the tumor; examination of the lungs is negative. Percussion over the upper part of the sternum shows a slight diminution in resonance. Patient was given a liquid diet of milk, eggnoggs and broth through a bent glass tube. No leukocytosis was found.

The tumor was injected with pyoktanin solution, 1:500 every other day. On April 24, about seven days after the treatment was begun, the temperature arose to 102.8° F. and the pulse was 120. At this time two sinuses formed

by the disintegration of the tumor by the pyoktanin. The growth diminished markedly in size, the breathing became easier and the voice improved. From May 22 to June 4 the patient became gradually worse, the breathing was more difficult and the pain in the head and shoulder was more severe. The discharge of greenish purulent fluid from the sinuses increased during this period. The patient died soon after leaving the hospital.

In both of the above cases a marked diminution in the size of the tumor was observed as a result of the pyoktanin treatment, with some relief from pressure symptoms, but there was an excessive stimulation to the growth of tumor cells in the neighborhood. It is extremely doubtful whether a cure could have been effected if the cases could have been placed under this treatment earlier in the course of the disease.

The most recent method in practice for the treatment of inoperable tumors, especially sarcoma, is that introduced by Dr. W. B. Coley, of New York. It consists of the injection of the mixed culture of the streptococcus erisypelas and the bacillus prodigiosus into the tumor directly or into the surrounding tissues. It had previously been observed that sarcomata sometimes disappeared in patients who had an attack of erisypelas. Laboratory experimentation later demonstrated the fact that the virulence of the erisypelas germ could be greatly increased by the addition of cultures of the bacillus prodigiosus. The following method has been used for the preparation of the material used in these injections, which is called "Coley's Mixture." One part of a virulent culture of the bacillus prodigiosus is mixed with three parts of a similar culture of the streptococcus erisypelas, each of ten days' growth in an incubator, and the mixed cultures allowed to remain in the incubator for ten days longer. The culture is then heated to 58-60° C. for one hour to kill the bacteria in the culture. The fluid, therefore, contains not only the toxins elaborated by the germs, but also the toxins present in the germs themselves. The treatment is begun by injecting one-half a minim of "Coley's Mixture" every day or every other day into the tumor or the neighboring tissues and gradually increasing the dose until the patient gets a decided reaction, as a chill and a rise of temperature to 102° or 103° F. It is considered advisable to obtain one or two well-marked reactions a week. Coley says that if no improvement results at the end of three or four weeks of daily injections, the treatment is not likely to be successful. But if there is improvement the injections should be kept up until the tumor entirely disappears or the injections lose their inhibitory influence over it.

The following case, taken from the records of the surgical clinic at the University Hospital, is of interest both on account of the nature of the tumor and its gradual disappearance under the use of Coley's Mixture.

CASE 110.—Miss G. N. Age 23. Housework. American. Ontonagon, Mich. Admitted September 18, 1900, for a tumor of the right upper jaw. Grandfather on mother's side died of apoplexy, otherwise the family history is negative. Patient had measles and diphtheria as a child, with no sequelae. About two years ago she had all the teeth of the upper jaw removed on account of decay. Nine teeth and roots were removed at this time. Patient thinks that the dentist splintered her jaw, as he removed several pieces of bone from it. About one year ago the patient's mother noticed a swelling in the mucous membrane of the upper jaw before the patient herself was aware of it. About seven weeks ago the tumor was operated upon under local anesthesia of cocain, but not all of it could be removed on account of pain. The tumor recurred at once and two weeks later another surgeon chloroformed the patient and removed most of the tumor, but recurrence soon took place. The portion of the tumor removed was examined microscopically after each operation at the Calumet and Hecla Hospital and the report of "granulation tissue" returned each time. Upon a physical examination there is considerable swelling of the right cheek under the zygomatic process of the superior maxilla. The mucous membrane of the right upper jaw is covered with a mass of granulation tissue which extends downward and laterally about three quarters of an inch. There has been no pain in the tumor.

A portion of the tumor was excised down to the bone, for examination, and the pathologist, Dr. Warthin, returned the following report: "Specimen shows only hyperplastic epithelium, beneath which there is granulation tissue infiltrated with leukocytes, nothing specific. The tumor is probably deeper down and has not been included in the specimen which represents only the inflamed and hyperplastic mucosa lying over some deeper growth? Unless deeper material can be obtained, better proceed upon the clinical appearances." As the section examined extended through the entire tumor it was considered to be some form of granuloma whose exact nature is not understood.

As the tumor was a granuloma, treatment was begun with Coley's mixture, October 5, 1900. At 10 A. M., October 5, two and a half minims of Coley's mixture, prepared by Parke Davis & Co., were injected into the tumor. The patient had a severe chill one hour after the injection and the temperature rose from 97.8° F., at 8 A. M., to 99.6° F. at 12 noon. There was no change in the rate of the pulse. The dose was increased one minim daily until a rise of temperature to 102° F. occurred with an injection of fifteen minims. On November 5th, when fifteen minims were injected, the patient had a slight chill, nausea, headache and soreness in the muscles. There was also a marked swelling of the cheek and pain in the region of injection. An ice-bag was applied to the head. The temperature arose to 102° F. in two hours after the injection. There was an increase of twenty beats per minute in the pulse rate. The temperature began to decline at 12 noon and reached normal at 6.40 P. M. On November 27, 1900, after an injection of twenty-five minims of Coley's mixture into the tumor the temperature began to rise in fifteen minutes, reaching 103° F. in an hour and a half. The frequency of the pulse was 136 at the height of the reaction. We have obtained a similar reaction in two other cases after injecting one and a half minims of Coley's mixture into the tumor. The amount of the mixture required to bring about a reaction depends upon the freshness of the preparation and the vascularity of the tumor. The time required for the reaction to occur varies from fifteen minutes to two hours. On one occasion fully ten hours elapsed from the time of the injection until a reaction occurred. At the height of the fever in this case there was a leukocytosis of four to six thousand leukocytes. There was no alteration in the size, shape or number of the red blood cells nor in the percentage of the hemoglobin. The reaction simulates an attack or erysipelas very closely. Immediately following the injection there is a local swelling of the tissues followed by necrosis, softening and sloughing. After the separation of the slough a firm dense scar forms. The tumor gradually disappeared in this way so that when the patient left the hospital December 21, 1900, there was only a very small amount of soft granulation tissue left on the outer side of the jaw. After returning home the tumor began to grow again and the patient consulted a surgeon in Chicago, who removed the upper jaw. There was no return of the tumor a month ago.

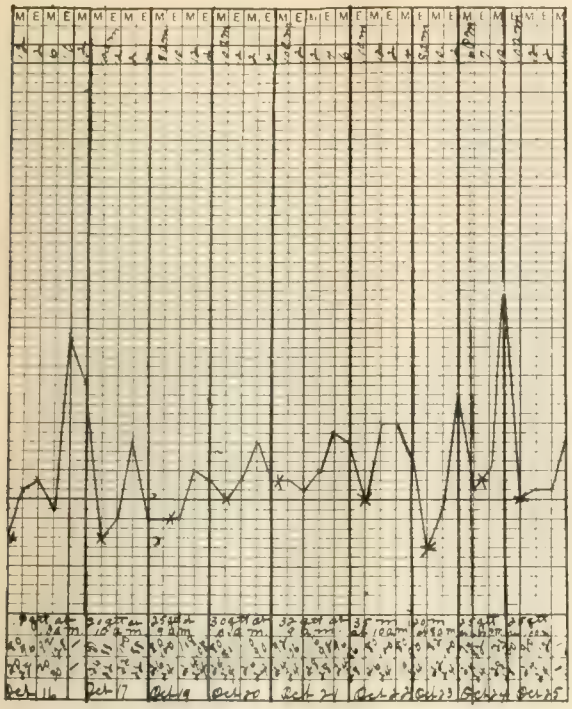


CHART I.

CASE 2.—S. A. W. Surgical, No. 247. Corunna, Michigan. Farmer, widower, age 73. Admitted to the hospital December 13, 1900, for treatment of a tumor on the inner side of right forearm. Family history negative. He was born with a congenital amputation of the left hand at the metacarpo-phalangeal joints. He had measles and whooping cough in childhood with a good recovery, an attack of gonorrhea at twenty, and at thirty years of age a severe attack of erysipelas by which he lost his right eye. In May, 1900, he noticed a small lump of the size of a pea beneath the skin on the inner side of the right forearm, about half way between the elbow and the wrist. This was freely movable under the skin and over the deeper structures. The growth increased in size and other small reddish nodules continued to appear in the neighborhood until at the present time the tumor is about two and a half inches in diameter. It is painless except on pressure. Occasionally there are sharp pains in the tumor, like a knife prick, more especially at night. The skin over the tumor is adherent, cyanotic and mottled reddish brown. The tumor is hard, elastic, nodular, infiltrates into the surrounding tissues and bleeds freely. The axillary glands were not enlarged when the patient entered the hospital. A portion of the tumor was excised and sent to the pathologist, Dr. Warthin, who reported it to be a large spindle cell sarcoma. The patient has a marked condition of arteriosclerosis with chronic interstitial nephritis and chronic bronchitis. On account of these conditions a radical operation for the removal of the tumor was considered inadvisable and treatment was therefore begun with Coley's mixture.

On December 21, 1900, one-half a minim of Coley's mixture diluted with normal saline solution was injected directly into the tumor. In three hours the temperature began to rise, reaching a maximum of 100.4° F. in six hours, but apparently no constitutional symptom was observed by the patient. The following day one minim similarly diluted was injected, and he had a chilly sensation about two hours later. He also had aching pains in the legs, back and side and a feeling of heaviness in the head. The temperature began to rise in an hour and reached 101° F. in three hours. On the fourth day two minims were injected and the temperature reached 102.2° F. in four hours. The pulse was accelerated about fifteen beats per minute. The patient had a severe chill with shaking of the whole body, which began about one hour after the injection and lasted thirty minutes. He also had severe pains in the back and legs and felt nauseated. Upon another occasion the patient had a chill lasting forty minutes, after an injection of four minims. Chills of any greater severity have probably never been observed in any septic condition.

After each injection there was increased pain in the tumor at the point of injection and in the area of distribution of the external and musculo-cutaneous nerves of the forearm. There was also increased swelling and redness at the point of injection, followed by the formation of a slough and a purulent discharge, probably due to the action of the toxins and pyogenic infection. The discharge has now ceased, but there is a sloughing fungous ulcer about an inch in diameter and three quarters of an inch deep in the central portion of the tumor. The tumor has extended peripherally very rapidly, so that it is about twice its original size. The tissue around the ulcer is very red, hot and painful. The application of moist dressings soaked in a weak solution has not lessened this redness to any marked extent. In the area of infiltration are numerous small nodules or points where the tissue is very dense, owing to the rapid multiplication of tumor cells. The axillary glands are considerably enlarged and painful.

As the tumor continued to increase in size it was considered useless to continue the injections. There has been no marked leukocytosis after the injections in this case. In spite of the large areas of necrosis produced in the growth by the action of the toxins it grew with great rapidity and soon infiltrated the entire forearm. Fluctuation was later discovered in the axillary glands and an incision into them permitted the escape of about half a pint of pus. A large abscess developed in the right arm on the inner side, which was also opened by incision. The patient's general condition became rapidly worse, all the symptoms of general septic poisoning and cachexia setting in and death occurred March 6th at 10 P. M. The autopsy was performed by Dr. Warthin at 9 A. M. the next day and is reported by him in the **Philadelphia Medical Journal**, October 26, 1901. At the point of the injections into the tumor there were large areas of necrosis. No leukocyte infiltration was present about any of these areas. There was fatty degeneration of the intima of the blood vessels, heart, voluntary muscles, and parenchymatous changes in the liver and kidneys, due probably to systemic intoxication.

A.

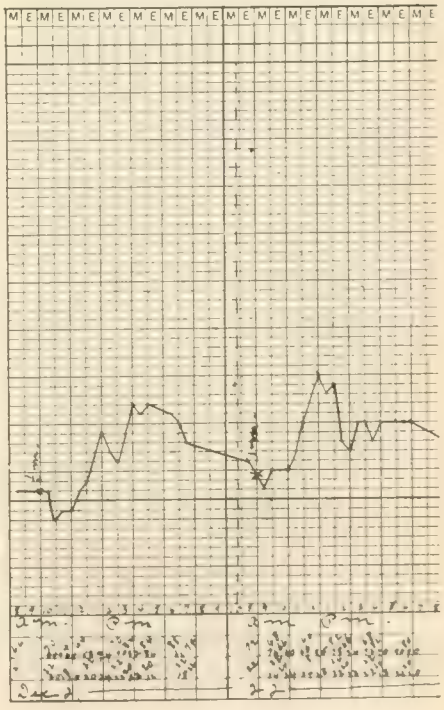


Chart II.

B.

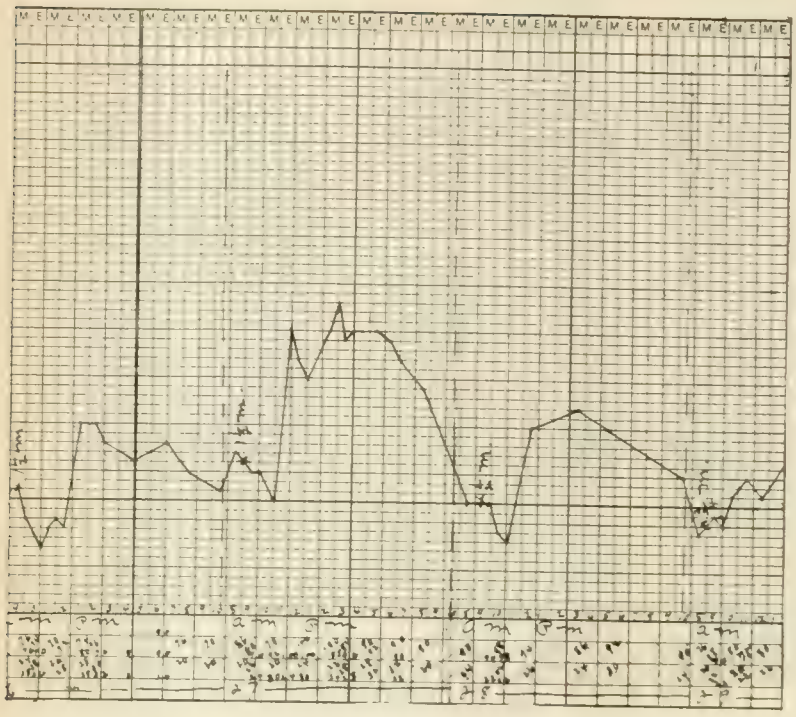


Chart III.

C.

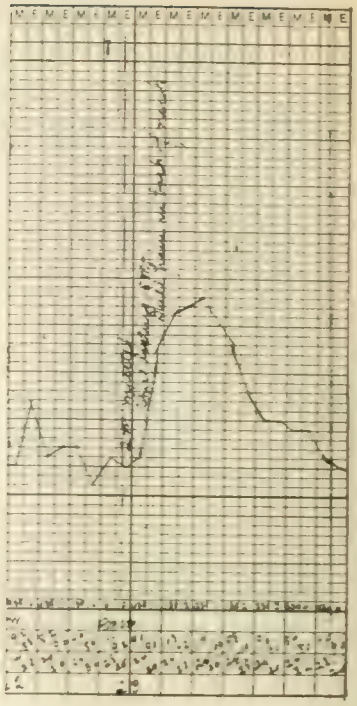


Chart IV.

Two other cases have been treated at the University Hospital in Dr. Nancrede's clinic with Coley's mixture, but with no benefit; one of which was carcinoma of the mandible and the other a lympho-sarcoma of the neck, according to the pathological reports. Our experience with Coley's mixture has, therefore, been very unfavorable to its use in inoperable tumors. It undoubtedly adds increased stimulation to the growth of sarcoma cells by the direct irritant action of the toxins. The absorption of the toxins and the products of the necrotic changes produced in the tumor causes marked general weakness and depression, which, when continued to a certain stage, results in the death of the patient. The one case which was improved by this treatment was an ordinary granulation tissue tumor with no evidence of sarcomatous tissue in it. It is a matter of grave doubt whether a true sarcoma has ever been caused to disappear under the use of Coley's mixture. Coley himself claims to have had his best results in spindle-cell sarcoma, in which we have had most disastrous results. The reports of English surgeons are likewise very unfavorable to the use of Coley's mixture.

The diagnosis of round-cell sarcoma from ordinary granulation tissue is often very difficult and may be impossible. They both consist of small round cells separated from one another by a very small amount of granular and fibrillated intercellular substance traversed by capillary vessels. In the various kinds of sarcoma we may find a close resemblance to every stage in the development of connective tissue from granulation tissue into bone. The question, therefore, arises whether all the cases reported as being successfully treated with Coley's mixture were sarcomata. Furthermore there are records of tumors bearing all the clinical characteristics of malignancy which have undergone resolution apparently without treatment. About two years ago, April 17, 1899, an exploratory laparotomy was performed by Dr. Nancrede upon a patient in the surgical clinic at the University Hospital for a malignant abdominal tumor. The incision was made in the linea alba from the ensiform cartilage to below the umbilicus. The incision revealed an immense tumor involving the stomach, the sigmoid flexure, the regions posterior to the stomach and colon, the descending colon, and the transverse colon. The tumor was very hard, the neighboring lymph-nodes were much enlarged; there was no suppuration and the tumor did not appear like an inflammatory mass. It was impossible to remove the mass and after irrigating the abdominal cavity with normal saline solution, the wound was closed. The patient recovered from the operation and was discharged in four or five weeks. In August, 1899, the patient reported that he had gained forty pounds in weight and was in perfect health. The tumor could no longer be palpated and the patient was attending to his business of a travelling man. Information was received from this man just recently, in October, 1901, to the effect that his health remains good. The fact that some of these tumors tend to disappear spontaneously has been thought by some pathologists to be due to fatty or mucoid degeneration in the tumor cells.

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DURATION OF IMMUNITY BY DIPHTHERIA ANTITOXIN.

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The difficulty of determining the immunizing power of any drug is great, for we can never say, with any certainty, how many persons exposed to an infection may become victims. Since the introduction and successful use of antitoxic serum as a curative agent in diphtheria, there has been a tendency on the part of the profession to consider the antitoxin a reliable agent for the protection of those persons who have been exposed.

There is not, however, a unanimity of opinion on this point and, among those who accept it as an immunizing agent, there is some confusion as to the dosage and length of time an individual may be protected by a single dose.

Kassowitz (1) denies that the serum confers the slightest degree of immunity. He bases his theory on the fact that the disease itself confers no immunity from late or early re-infection, and partly on cases which he reports. In those cases which succumbed to the infection, he does not always state the number of days which elapsed after the administration of the serum and, for this reason, we cannot use his results except as eidence as to absolute immunity. Of his cases, twelve received one hundred and twenty units each. Three of these developed diphtheria at some indefinite period after; two within twenty-four hours. One case received one hundred and fifty units and developed diphtheria in eighteen days, and one showed the disease in twenty-eight days. In the light of the large number of cases reported by others, we must consider his dosage as small. In the cases which developed in twenty-four hours the remedy had not had sufficient time to combat the infection which had taken place. Further, if he was able to protect some for eighteen and twenty-eight days, while they were still exposed to the infection, which they probably were, he had certainly accomplished something. If they had been removed, they probably would have escaped.

Variot[2] says immunization is not advantageous in a disease which can be so easily cured by the serum. As the administration of antitoxin is a perfectly harmless procedure in all persons except a very few, if immunization can be accomplished by its use, one is negligent of his duty if he does not use it.

A recent case of my own has shown that it is not always safe to trust to this expedient of Variot, for the exposed person may develop the disease and have it for several days before treatment can be instituted. The brother of a patient with diphtheria was removed from his home, to protect him, but was given no antitoxin. He was brought back in seven days suffering from diphtheria of his nose, pharynx and larynx, of probably twenty-four hours standing. Despite the rapid administration of large doses of antitoxin, he died. If I had given him an immunizing injection before he left, I believe he either would not have contracted the disease or would have had a mild attack. It is certain, from both experimental and clinical evidence, that immunity may be conferred, but it is just as certain that it is of short duration.

Behring[3] injected 50 cc. of concentrated serum into goats and found that the blood showed the maximum antitoxicity on the fourth day. From this time on it rapidly diminished, but a considerable quantity was still present on the twenty-third day. He also demonstrated the presence of considerable quantities of antitoxin in the blood of children three to four weeks after the injection of two hundred and fifty units.

Rubens[4] showed that two hundred antitoxin units protect for four weeks.

Passini,[5] on the other hand, has been unable, in four human cases, to find any antitoxin after eleven days.

Bomstein[6] injected eight thousand to ten thousand units in dogs and found that one-half had disappeared on the second day and all by the eighteenth day.

William Bullock[7] injected twenty-five thousand units into the subcutaneous tissue of an ass. He found that the serum entered the blood stream rap-

idly, reaching the maximum in twenty-four hours. On the fourth day one-third was lost; from this time on the quantity slowly but progressively decreased until, on the twenty-fourth, a little less than one-half of the quantity was found. It was still present, in minute quantity, at the end of one hundred days. There is here certain evidence that a large percentage of the antitoxin injected still remains in the blood at the end of three weeks. If we had no further evidence, this should be sufficient to inspire us with confidence in the immunizing power of antitoxin, if we believe in its curative power. In addition to this experimental evidence we have the following conclusive clinical observations of its value.

Lohr[3] injected two hundred and fifty-four exposed children, ranging in age from two months to fourteen years, with doses of antitoxin from one hundred to three thousand units; three of these developed diphtheria in thirty to forty days. He then began to repeat the injections every four weeks and after this no new cases appeared. In another pavilion eleven children out of two hundred and forty were stricken with diphtheria; ninety-seven of the remaining received immunizing doses and of these but one case developed and that in twenty-one days. Later some other cases appeared among them, but in none of these was the attack accompanied by grave complications. This condition seems to argue that while there was not sufficient antitoxin remaining in the blood to prevent the development of an attack, there was sufficient to modify the virulence of the infection. This is at least something gained. It will be noted that the earliest case to appear was in twenty-one days and that the doses were large.

Riether[9] states, that owing to the difficulty in checking the spread of diphtheria in a foundling hospital, he injected each of fourteen hundred and fifty children with one hundred units of antitoxin. The ages of the children ranged from a few days to several months and, even in the youngest, no ill results were found. Only two of these developed the disease and one of them was in seven weeks.

It is probable that infants may have a longer artificial immunity, just as they are less susceptible to the disease. In the next year, under this plan, no new cases appeared. In the two years previous to this treatment, there had been many more cases of diphtheria.

Morrill[10] treated eighteen hundred and eight children in the Charity Hospital, Boston, with from one hundred and fifty to two hundred and fifty units of antitoxin every twenty-eight days after diphtheria appeared in the wards. Seven new cases developed, while in previous years they had been compelled to close the hospital on account of the virulence of the epidemics. Of the seven, he thought two had had insufficient doses; two cases developed within twenty-four hours, showing that the incubation of the disease had progressed too far to be checked by a small dose; and two cases appeared in twenty-two or twenty-three days. On former occasions these last two had been perfectly protected when the injections were repeated every twenty-one days. Of eight hundred and twenty-nine children (less than half as many as in the above report) who were not treated at all, or at longer intervals than twenty-eight days, nine developed the disease against seven under treatment. His conclusions are that one hundred or two hundred and fifty units, according to the age of the child, will confer immunity for ten days, no matter how severe the exposure; that two hundred and fifty units for a child of two years, up to five hundred for one of eight or over, will do the same for twenty-one days.

Biggs and Guerard[11] injected seventeen thousand five hundred and sixteen persons who had been exposed to diphtheria. Among these, one hundred and thirty-one cases appeared within thirty days, one hundred and nine of which were mild and one fatal; after thirty days twenty mild and one fatal case appeared. Their conclusion was that the duration of immunity varies, but that the average is four weeks.

Donald[12] reports that in the Detroit Protestant Orphan Asylum seven new cases developed in the week following the appearance of a case of diphtheria. Each of the remaining eighty-seven children received two hundred and fifty units and, with the exception of one new case, which appeared in ten days, the disease spread no further. In the following year another outbreak occurred and five new cases developed before the immunizing doses were given. At this time the children were given from two hundred and fifty to five hundred units, according to age, and the disease was absolutely checked. In another outbreak, eleven months later, only one case appeared after the injections were given. In each of these epidemics, after the disease had gained a good start, it was practically shut off immediately after the injections.

In my own private practice I have been accustomed to administer five hundred units to all children who have been exposed. In many of them, occurring among the very poor, they have been exposed for two or three days before I would see them. Previous to the treatment of these reported, I had injected twenty children thus and in no instance had there been a subsequent attack.

My rule has been to isolate the sick child, disinfect the rooms which he has occupied, and remove the well children from the house when it is possible. Then each of them is given an immunizing dose. In no case was a second application made. The following cases may throw some additional light on the subject:

CASE 1.—W. K., aged four years was exposed to the contagion the whole of the time that his brother was sick with diphtheria, for it was impossible to remove him. He was given five hundred units and escaped. The thorough disinfection of the house was difficult on account of its dirty condition and the presence in the rooms of so much furniture and clothes. Six months later he contracted diphtheria, I judge, from the disturbance of some spot of infection which had been hidden. He died on the second day, although antitoxin was used. The duration of the immunity in this case was probably four or five weeks.

CASE 2.—Mrs. K., mother of W. K., also received five hundred units when her first child was sick and escaped as W. K. did. When the second child was taken sick she was not immunized and in three days developed the disease. She was immune then, after injection, for four weeks or more.

CASE III.—C. L., aged four, was exposed for three days to infection from his brother. He was given five hundred units and taken out of the house. On the eighth day he was attacked with a mild case of diphtheria. The four other

children of the family had been immunized and, notwithstanding the exposure to the second infection, escaped.

CASE 4.—The W. children, three in number, ranging from seven to eighteen years, were exposed for two days. Owing to the scarcity of the antitoxin, each was given but two hundred and fifty units. One developed diphtheria in eleven days, one in thirteen days, and one in ten weeks. The last case occurred after the usual disinfection, which, I felt, in this case, could not have been thorough. All of the cases were very mild. In these cases I feel that the dose had been too small.

CASE 5.—H. R., aged eight months, had been exposed to infection from her nurse for two days. The servant had been all over the house before the disease was discovered and was detained there for ten hours after, before she could be removed. The house was treated in every part with formaldehyde gas and each of the family was given an immunizing dose. The child was given two hundred and fifty units. In six weeks she developed diphtheria of a mild type. She had received a pretty thorough infection while in the arms of the servant and certainly had a good chance of contracting the disease. Yet she escaped for six weeks and the rest of the family continued immune. From the general distribution of the infection in the house, there must have been some places which did not become disinfected. Her attack can be considered as due to a fresh infection from a disturbed corner, for she had had no chance for infection outside of the house.

I feel warranted from these reports in deducing the following conclusions:

1. That as diphtheria antitoxin is practically harmless, all exposed persons should receive an immunizing dose in proportion to age.

2. That two hundred and fifty units should be given to children under two years and five hundred to all others.

3. That the immunity will last for at least three weeks, provided a reliable antitoxin is used.

4. That all exposed persons should be removed from infected surroundings, either by thorough disinfection of their own quarters or by removal to other places. If this be impossible, the immunizing doses should be repeated every third week.

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NOTE ON THE TREATMENT OF FOLLICULAR TONSILLITIS.

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The frequent occurrence of tonsillitis at this time of the year prompts me to describe a line of treatment which I have adopted with such entirely satisfactory results that I can sincerely urge it upon my colleagues. These cases almost invariably come to my notice at a time when the crypts and follicles are plainly marked with whitish or chamois-skin colored material, and after the preliminary indisposition and chilliness which often occurs in the first day or two of the disorder. Not infrequently this material presents an appearance which in the earlier years of my medical practice filled me with alarm; but larger experience has taught me to distinguish between the numerous small patches appearing simultaneously or almost simultaneously on both tonsils, and the continous single patch, or few consecutive patches, of diphtheria. But, with our present knowledge of bacteriology, no inflammatory condition of the fauces is regarded as trifling, and it is useful to have a plan of behavior which is simple and apparently sufficient. It is many years since I have applied any strong antiseptic to a sore throat, because I have found that more than I ever obtained by this is obtained by the use of so simple a thing as a gargle of a saturated solution of boric acid.

My present plan is to act upon the bowels with small doses of calomel and soda (one tenth and one grain respectively) every half hour, at once if the patient is seen in the morning, and to be postponed until the next morning if the patient is seen in the evening. At the same time I order a saturated solution of boric acid to be used as a gargle, or more properly as a wash to the throat by taking some into the mouth and protruding the chin and gently applying the tongue against the lower teeth so as to allow the solution to rest upon the surface of the fances. For very little children I order instead the administration of lime-water every hour through the day. If this is administered a little while before the calomel is given, I assume that it does not form "black-wash" in the stomach, and in practice I have seen no interference with the action of the calomel under these circumstances. The object of both of these solutions is to hinder the development of micro-organisms and their products in the fances and to avoid the necessity of measures which are very trying to little children. The results I have obtained by this simple treatment, combined with attention to matters of warmth and diet, have been so excellent that I have very little trouble in managing cases of follicular tonsillitis, and I have been equally fortunate in a similar management of cases of actual diphtheria.

In some older persons, where there is a good deal of pain connected with tonsillitis, I have found it of great advantage to administer salol and phenacetine, or salophen, in sufficient doses. This seems to lessen the pain very materially, and I am inclined to think it acts upon the systemic conditions present in such cases.

A most important point in the treatment of this, as of other diseases, is to give a rest to the digestive tract, which shares in the variance from health. There is, in my opinion, no more common or more fatal blunder in the treatment of the sick than giving them food when they do not wish it. I have practised letting alone patients, old and young, when they did not wish to take food, so long and with such satisfactory results, that I sometimes enforce my recommendations by saying to caretakers that I have been trying for years to starve some one to death, but have never succeeded. In tonsillitis, I find it conduces to health to have no food given until and except when the patient, if old enough to speak, asks for it. Infants can, and usually do, arrange this exemption for themselves. So, I find that almost no medication, almost no food for a while,

and the mildest sort of an antiseptic solution applied to the fauces in a simple way is followed by such prompt recovery that follicular tonsillitis, in my experience, soon passes away wihout giving much trouble. In some cases that I saw in adults last summer, with much pain and congestion, I found the application of dilute solutions of adrenalin chloride of seemingly great advantage. This I therefore think a useful addition to our armamentarium.

SOME AURAL COMPLICATIONS OF INFLUENZA.

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Influenza has been recognized and treated as such for ages, the epidemics having always been characterized by intervening periods during which the disease seems to have been banished from the face of the earth. To such an extent, indeed, has the absence of this disease prevailed, that many physicians of the past knew nothing of its nature from clinical experience. In the last decade, however, notably the epidemic of 1899, which in an incredibly brief time became pandemic, spreading over the entire civilized world, we have not only conceived much as to its true nature, but have learned to look upon the advent of epidemic influenza with serious apprehension; not, perhaps, so much from the fact that influenza per se seriously endangers life, but chiefly from the knowledge that grave manifestations and numerous deaths invariably result from local complications. It is with one of these complications as manifested in the organ of hearing, that this paper briefly treats.

With possibly one exception we are at present unable to draw a clinical picture characteristic of the changes in the upper air passages chargeable directly to the specific action of the bacillus of influenza. There can be no doubt, however, that the inflammatory changes are distinguished for their intesity, rapidity and virulency of action, frequently involving the tympanic and adjacent cavities in a serious suppurative process quite unusual in any other infectious disease. The exception above mentioned is that known as hemorrhagic otitis, which is by many believed to be *the* distinguishing feature of otitic influenza. Although this hemorrhagic tendency may not be wholly diagnostic of the severe inflammatory ravages involving the mucous membrane generally, there can nevertheless be no doubt that hemorrhage does occur from the membrana tympani, tympanic cavity, throat and lower respiratory tract, as well as from the gastro-intestinal, gastro-urinary and possibly other internal organs.

I feel that the gravity of this disease in its broadest sense has not yet been wholly comprehended either by the profession or the laity. This statement seems fully justified when we realize that more human lives, have been lost in one influenza epidemic than were sacrificed in many of the great wars of the world, or plagues of ancient days.

The virulence of the inflammatory process is accompanied at the beginning by a severe myringitis, hemorrhagic in character, with the formation of bluish-red extravasations, at times coalescing, forming large, dark-colored bullae, which, as Politzer has pointed out, usually collapse and discharge a bloody serous fluid before rupture of the membrana tympani occurs. Areas of ecchymosis are also seen on the walls of the external canal. Maceration and consequent peeling off of the mucous lining of the tympanum is much more rapid and extensive than when caused by other virulent disease.

Mastoid implication or irritation is present in all *severe* cases, the percentage of cases requiring operative interference being unusually large. In a few patients the mastoid became involved simultaneously with the middle ear. During the past winter the writer operated on two cases of primary mastoid abscess, the direct result of influenza, the tympanic cavity not being involved in more than a transient mild hyperemia in either case. In attacks of acute otitis media resulting from the more ordinary causes the pain is alleviated when escape of the confined fluid has been accomplished. In influenza otitis, however, the suffering frequently continues for a day or two, with little or no abatement. This is especially marked when spontaneous rupture has occurred in place of a timely free incision of the over-taxed membrana tympani.

In addition to the special predilection for mastoid complication, meningitis, lateral sinus thrombosis, intra-cranial and extra-dural abscess are encountered more frequently with each succeeding epidemic. The discharge, at first bloody, soon changes to that seen in ordinary cases of tympanic suppuration, with which all are familiar.

Demonstrating the presence of the bacillus of influenza is a matter of importance. However, within a short time the discharge from the tympanic cavity develops a mixed infection, such as the streptococcus, staphylococcus, pneumococcus, etc., thus often supplanting the original germs of infection. It is nevertheless of the greatest value to have a bacteriological examination of all discharges from the ear, as most useful information, even of vital import, is frequently disclosed.

It is a mistake to assume that the virulence of an aural discharge can be judged by its odor, or that the gravity of an otorrhea can be measured by its chronicity. An odorless discharge from the ear sometimes contains pathogenic micrococci, which may cause some of the most serious intra-cranial inflammatory lesions. The same is true in many cases of fetid otorrhea, nevertheless non-pathogenic cases are seen even when the fetor is extreme, clearly illustrating the value of the microscope and cultures in all cases of suppurative disease of the tympanum.

The method of infecting the middle ear and adjacent structures is either by direct continuity of structure, the organisms entering the tympanum through the Eustachian tube, or are conveyed by means of the blood vessels and lymphatics. But be assured that with the same facility that the bacilli of influenza find their way into the bronchi or deeper respiratory tract, producing a catarrhal or more serious complication, or into the gastro-intestinal canal with the attendant, and I might say characteristic diarrhea, or into the nervous and circulatory system, producing the train of serious neurotic

phenomena familiar to us all, or into the genito-urinary tract, causing a functional or structural disturbance of more or less gravity, with even greater facility, I repeat, do these pathogenic bacteria invade the cavities of the skull, frequently destroying the function of a part, or even leading to a fatal issue.

The records of twenty-three cases furnished me by the attending physicians, nearly all of whom the writer saw in consultation, teaches an impressive lesson. I shall not burden you with details of these interesting cases, but ask you to bear with me a moment while I point out a few general characteristics. Nine were of the distinct hemorrhagic type. In fourteen the membrana tympani ruptured spontaneously within forty-two hours. The pain, mastoid symptoms and fever, however, continued for twenty-four to sixty hours after an apparent free drainage had been established. In six the membrane was freely incised before the time of spontaneous rupture was reached; in each of these cases the pain was promptly relieved, as well as the temperature and all mastoid symptoms, nine of them requiring operation following a spontaneous rupture of the membrana tympani. In addition to mastoid empyema, meningitis developed in two patients before operative interference was resorted to.

One of these patients, a sister of a prominent physician in a neighboring state, suffered greatly from the otitis before rupture occurred; the pain continued, however, for several days in spite of the free escape of the pent-up secretion, when meningitis developed. The symptoms of mastoid implication were absolutely negative, except some pain in the back of the head and tenderness on *deep* pressure over the mastoid antrum. At this stage of the disease the writer saw the patient and advised immediate operation. The simple mastoid operation was performed, free communication with the external canal being secured. So far as the temperature was concerned the patient showed improvement on the following day. However, the mental state, and especially the profound prostration indicated that the patient was in a more critical condition than on the previous day. The late Dr. J. M. DaCosta and Dr. W. W. Keen were called in consultation. They both regarded the case as one of infectious meningitis; their prognosis, therefore, was most grave. The patient, nevertheless, survived that day and night and showed some signs of improvement the following morning. On the second day after operation her intellect began to clear, from which time she made an uninterrupted recovery, regaining perfect health and hearing.

As regards treatment, and especially prophylaxis the writer has but little to add to that familiar to you all. However, he wishes to lay particular emphasis on a few points. Aural complications to be treated successfully must be dealt with in a bold, but not necessarily non-conservative manner from the very inception of the attack. Absolute rest in bed, with free diuresis and properly conducted diaphoresis, are of the first importance. The bowels should be freely opened, and the diet restricted to milk and broth. Indeed, two or three days of absolute fasting and enforced rest in bed will frequently accomplish more in prophylaxis than any other combined therapeutic measures.

The first manifestations of aural involvement should receive prompt and energetic care. Influenza earache of the severe type will seldom yield to hot drops or applications, although, if seen at the beginning, a hot boracic acid solution instilled into the canal will do no harm, and may be somewhat palliative. It should be remembered that the external layer of the membrana tympani is composed of modified skin, and is influenced but little, if any, by medicated solutions. *Hot antiseptic* solutions are most useful in many acute cases of otitis; hot medicated solutions are also useful, almost wholly, however, from the effect of the *heat*, and not from the medicaments they contain. Solutions of cocaine, belladonnæ and opium, etc., can not therefore be depended upon for the relief of acute ear pain, except from the caloric they impart. Blood-letting in front of the tragus is of service in most all acute inflammatory diseases of the middle ear, but must be used at the beginning of the attack to be beneficial. The ear should be frequently examined with speculum and reflected light, to insure a prompt free incision of the membrane the moment any distension is seen. It is unwise in influenza otitis to wait until the membrana tympani is greatly distended, as resolution seldom takes place in severe cases, whereas it is the very delay that favors mastoid and intra-cranial complications. The more the distention the greater the destruction to the soft parts, and consequent involvement of the osseous structure. Under proper precautions an incision, and a free one at that, of the membrana tympani can do no possible harm, whereas a failure to promptly incise the membrane has been the one most prolific cause of serious complications. The part of conversatism is therefore best served by an early incision.

After evacuation of the fluid from the tympanic cavity has been accomplished, many cases will make a good recovery by antiseptic irrigation, followed by introducing a strip of iodoform gauze well into the deep canal, to provide for good drainage, this to be removed every day or two. It is well to keep in mind, however, that the two essential elements for the rapid development and multiplication of bacteria are heat and moisture. The treatment of many cases, therefore, must be directed to meet or correct these elements, as the site of suppurative otitis media is a veritable hot-bed for the propagation of disease germs.

Our chief object then in such cases is the application of therapeutic measures to rid the ear as far as possible of these bacteria, and endeavor to inhibit their further development by the destruction of the pabulum of their very existence through the reduction of inflammatory heat and by keeping the propagatory surface dry. After the secretions have been removed by inflation, irrigation, or a cotton carrier, the surface can be gently dried with cotton and hot air, and then dusted with some impalpable powder, such as aristol or nasophen, care being taken only to *dust* the surface, as any exc-

of powder would become impacted and interfere with drainage.

The limits of this paper will admit only of the mention of mastoid complications, in so far as to counsel their early recognition, and the adoption of energetic measures for relief of local symptoms and the prevention of additional complications of even more serious import.

ACQUIRED PULMONARY LUES.

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All writers agree that pulmonary lues does exist and that it may be inherited and acquired.

Some state that the acquired form is frequently met with, whereas others consider only the results of an autopsy deciding.

It seems that acquired pulmonary syphilis is *a rare disease* which, as a rule, follows the initial attack after a long interval of time, from 10 to 20 years and longer. Two forms of the disease may be differentiated, a chronic interstitial indurative process and a growth of gummata.

The interstitial tissue growth commences generally in the central portion of the lung around the larger bronchi and may sometimes start from the adventitia of the larger vessels of the lungs. As an endarteritis is always found accompanying the syphilitic growth in the lungs, it has been concluded by Hiller that this specific hyperplasia is a continuation of a peribronchitis and endarteritis which precedes.

As stated before, sclerosis is the final result. The fibrous tissue encroaches upon the lung parenchyma, contraction follows and gives to the organ a mottled and notched appearance.

Pressure of the interstitial tissue upon the larger bronchi may cause their dilatation which then will give the physical signs of cavities.

A chronic interstitial pleurisy frequently accompanies the process in the lungs.

It is important for diagnostic purposes to notice that generally only one lung and not its apex but its central or lower lobe is involved.

Gummata are as a rule associated with this form of interstitial pneumonia, varying in size from that of a pea to a walnut. If we consider the symptoms that may be derived from the pathologic process, we can readily see that there is none pathognomonic and that the diagnosis in many cases at least will be found difficult to make; in a few perhaps it will be impossible.

Some symptoms, however, are rarely absent in this disease. Cough with or without expectoration commencing generally with a tickling sensation in the throat; bloody sputa are frequently observed.

Severe dyspnea is a persistent symptom, frequently aggravated by stenosis of larynx and trachea. Then the seat of the trouble and the usual absence of fever are perhaps the most constant symptoms associated with pulmonary syphilis.

The result of auscultation and percussion will of course vary with the state of the disease the patient presents.

I owe the opportunity to report the following case to Dr. F. W. Parham, professor of general clinical and operative surgery of the New Orleans Polyclinic, who has kindly referred the patient to me.



Picture taken a few days after admission.

The patient was born in New Orleans and is now 48 years of age. His father is dead, died when 50 years old, with dropsy; patient does not know the cause. His mother died 47 years old, of a chronic disease, the nature of which the patient cannot tell. One brother dead; one sister living and healthy; no hereditary diseases in the family.

Patient is married and has four healthy children living. His wife has had 2 miscarriages and 2 children stillborn.

His occupation is that of a cotton sampler; he does not drink but is an inveterate smoker. He states that he has had measles, whooping cough, scarlet fever, malaria, gonorrhea, and syphilis about 26 years ago. His present trouble commenced in June last year with a tickling sensation in the throat, and coughing soon followed by shortness of breath. Cough and dyspnea have gradually become worse.

Patient complains of coughing spells, paroxysmal in character, severe dyspnea (orthopnea) and insomnia, entire loss of appetite and great weakness.

The man is 5 feet and 4 inches in height, weighs 118 pounds, and is fairly well preserved, considering the long duration of the disease.

His face shows an expression of intense anxiety, "air-hunger," aggravated when speaking and coughing. The skin is of normal appearance, no edema and no exanthem. Veins over right arm enlarged and the inguinal glands considerably increased in size. The pulse is tense 92 regular and smaller in volume and tension over right radial, carotid and temporal. The arteries are pulsating but there is no pulsation over the heart region. The dyspnea is severe, the patient states that he has not slept in a recumbent posture for several months past. The breathing is frequent and its character is jerky. Percussion note and breathing sounds over both apices are normal. The upper portion of the sternum shows on percussion absolute dulness and dulness nearly absolute is found over a half moonshaped area along right border of sternum, between the third and the fifth rib. Over this area very faint bronchial breathing is heard. Relative dulness is found below the right clavicle. The fremitus is increased over the dull area—and bronchial breathing accompanied by moist rales is heard. No pul-

sation or thrill can be detected. Over left lung the per cussion note is high and the breathing sounds are increased (compensatory empysema). The position of the diaphragm is low; the liver is pressed downward, normal in size. Apex beat of the heart is to the left, displaced, of the mammary line, heart dulness decreased in size: second sound over aorta accentuated. Abdomen normal. Specific gravity of urine, 1003; does not contain albumin or casts. Patient urinates freely. The sputum is found free from tubercle bacilli and I will mention here that tracheal tugging is absent.

This complex of symptoms recalls to us various pathologic conditions which one after the other will have to be excluded before a diagnosis can be made.

Against an aortic aneurysm speaks the absence of a thrill and bruit over the dull areas; absence of characteristic pain in chest and back; absence of a downward displacement of the heart and absence of murmurs which would both probably be found in case of aneurysm after the long duration of the disease; absence of an inciting cause, as hard manual labor, lifting, etc., and absence of tracheal tugging.

Tumor may be excluded on the following grounds: sharp demarcation of the dull area, which in case of foreign growths would of course be gradual, lung tissues overlapping part of the tumor, area of dulness too large for any of the benign tumors; no enlargement of veins over chest.

Against malignant growths speaks further the slow progress of the disease; absence of a cachexia; absence of pain and absence of currant jelly sputum.

The man has been a cotton sampler, which occupation forced him to inhale a large amount of dust and fibres, and we therefore will have to exclude a simple fibrosis of the lung. No displacement of the viscera, the heart is not pulled to the right but is pushed somewhat to the left and a retraction of the chest wall is absent. This, the onset and the course of the disease are sufficient reasons to exclude an uncomplicated fibrosis. Pulmonary lues alone will satisfactorily explain all the symptoms.

We have the definite history of syphilis, the characteristic onset 20 years after acute attack, commencing with a tickling sensation in the throat, followed by cough; severe and persistent dyspnea; the involvement of one lung; the absence of fever; the enlargement of the glands and the sputum free of tubercle bacilli.

If we remember that the process of interstitial induration causes hyperplasia and think of the gummata associated with this disease, we can readily explain the dull areas and other signs observed on physical examination.

Frequently it is difficult to make a differentiation between tuberculosis and lung syphilis, especially as both diseases may occur together and those are the cases that cannot always be directly diagnosed. In this case pulmonary phthisis cannot come in question; some of the characteristic symptoms of this disease not being present.

The patient was placed under the specific treatment of iodide of potash in large doses and mercury by inunction. During the first few weeks the improvement was rapid. For the first time after many months he could sleep in a recumbent posture, and with it cough and all other functional disturbances improved. Since then he has kept up the treatment and though the improvement is now not as rapid as in the beginning, it is still marked and steady.

The inhalation of dust and fibres setting up an inflammatory condition in the lungs is perhaps to be considered the determining cause of this case of pulmonary syphilis as we so frequently notice late lesions of the disease determined by inflammations elsewhere.

Though the dull areas are considerably cleared up and the general condition of the patient is improved, the prognosis as in all cases of this disease is grave as to recovery.

It affords me pleasure to thank Mr. S. K. Simon, R. S. Charity Hospital, for his efficient assistance, and thanks are due to Dr. Pothier, pathologist of the Charity Hospital, to whom I owe the photograph of the patient.

The case presents a number of interesting features of which worth mentioning are its resemblance to aneurysm of the aorta, the absence of symptoms of tuberculosis (dilatation of bronchi due to syphilitic interstitial growth has been confounded with tubercular cavities).

The occupation of the patient, cotton sampler, and his habit of cigarette smoking *perhaps determining onset and course*, I think will make this report of sufficient general interest.

All these cases are clinically important, as only in those in which the diagnosis is made early the prognosis will become more favorable.

SOME EXPERIMENTS ON THE FORMATION OF BILE PIGMENT AND BILE ACIDS; A CONTRIBUTION TO OUR KNOWLEDGE OF ICTERUS.*

By ALFRED C. CROFTAN, M. D.,

of Philadelphia.

From the Pepper Clinical Laboratory of the University of Pennsylvania, Woodward Fellowship of Physiological Chemistry.

It will be our object to demonstrate in this report:—

1. That the bile pigments and the bile acids are not formed by the liver cells.

2. That the bile pigments and the bile acids can be formed in various parts of the organism other than the liver.

3. That the bile pigments and the bile acids can be formed from hemoglobin outside of the organism, by a purely chemical, fermentative process and without the intervention of the liver cells.

No one has so far seen bile pigments or bile acids within the cells of the liver excepting in certain pathologic conditions; in judging of the role of the hepatic cells in the formation of these bile-constituents, the latter finding is without significance for the reason that secondary imbibition of the liver cells with bile constituents may have occurred. No bile pigments or bile acids can, further, be manufactured from normal liver cells, if care is take that all the bile pigment and all the bile acids that are contained in the channels of the liver are removed; the reported discovery of the bile constituents named in liver cells must be attributed to a faulty technique in this respect on the part of the different experimentators.

Bile pigment is undoubtedly formed from blood pigment, hemoglobin; this is demonstrated by the increase of bile pigment excretion in the bile following the injection of hemoglobin or the administration of certain hemolytic substances; in addition, the liver possesses the power of arresting and of excreting any bile pigment that may be present in the circulation; that hemoglobin is converted into bile pigment in the liver seems therefore established and as the liver channels secrete only mucus, the bile acid—and bile pigment—forming function, it *appears*, must be relegated to the liver cells.

The bile acids are also probably formed from hemoglobin; as one of them contains a sulphur molecule, we can assume that they are derived directly or indirectly from the proteid radicle.

In order to determine, if possible, the exact role of the liver cells in the formation of the bile acids

*Read at a meeting of the Pathological Society of Philadelphia, Dec. 14th, 1901.

and the bile pigments, the following experiments were undertaken:—

Following the example of a number of the pupils of A. Schmidt, (who published their results some ten years ago in a series of inaugural dissertations that are only in part accessible in the libraries of this country) a pulp of liver cells was prepared by scraping the surface of sections through fresh livers and the pulp brought in contact with dilute solutions of hemoglobin. I could corroborate the statement made by Anthen, one of the above *doctorandi*, that the simple bringing together of liver cells and of hemoglobin is followed by no reaction whatever. In order to simulate as much as possible the conditions actually existing within the liver, it was decided to add a certain proportion of glycogen to the above mixture; if this is done, the hemoglobin is, in fact, destroyed and the fluid over the liver pulp turns from a cherry-red to a pale yellow; this conversion occurs at room temperature and occupies about five days; at body temperature it occurs more rapidly. At the bottom of the flask a brownish sediment containing traces of bile pigment and in the super-natant fluid a trace of bile acids will be found.

The destruction of hemoglobin, according to the researches of Schwartz, is a property of all living protoplasm and as the liver-cell pulp undoubtedly contained traces of the bile pigments and the bile acids, these experiments were hardly available for the purpose of determining anything definite in regard to the role of the liver cells in the production of these substances.

As it is manifestly impossible to obtain liver cells without a slight admixture of bile constituents, we proceeded as follows, basing on the hypothesis that possibly the "vital" action of the liver cells had nothing to do with the formation of the bile pigments and the bile acids; I felt justified in entertaining this view from the negative findings chronicled in the experiments with surviving liver cells in the absence of glycogen.

The liver of a calf was divided into several pieces while still warm and from the cut surfaces a considerable quantity of bloody pulp was scraped and this pulp rapidly washed with water until the washings were quite clear and bloodless; the bulk of the water was then expressed and the residue placed into absolute alcohol and allowed to remain there for two weeks; it was expected that at the end of this time all "life" in the liver cells would be destroyed; the coagulate was freed from alcohol by washing with ether and the ether allowed to evaporate *in vacuo*; a dry amorphous mass consisting of liver cells and strands of connective tissue remained; in order to completely destroy the integrity of the liver cells, the mass was mixed with sand and powdered; from the brownish powder an extract was made with water. This contained no coagulable albumen; on evaporation to dryness, only a small quantity of dry residue was obtained consisting largely of inorganic salts and of a small quantity of organic material; the extract contained no bile acids nor bile pigment; the latter had been dissolved in the alcohol and were determinable there.

A small quantity of crystallized hemoglobin was now dissolved in water and 1% of dextrose added (Dextrose was employed in the place of glycogen because it was so much more readily procurable and because this substance is as much a specific carbo-hydrate constituent of the normal liver habitat as glycogen; further, because the above named authors had found that the destruction of hemoglobin proceeded as well with dextrose as with glycogen). To 200 cc. of the mixture of hemoglobin and dextrose 50 cc. of the liver cell extract were added and, in addition, a small quantity of thymol to prevent bacterial action; the whole was kept at room temperature for a week.

At the end of this time it was found that all the hemoglobin was destroyed; the fluid had become quite colorless and contained bile acids; the brownish sediment at the bottom of the flask contained a substance that gave the typic reactions of bile pigment. At the same time a portion of the sugar had been destroyed, and the supernatant fluid contained no albumen.

Here then a conversion of hemoglobin into bile pigment and bile acids had occurred without any "vital" action on the part of the liver cells; the process was a chemical one; the active agent was a substance that was soluble in water and was therefore unorganized.

It was next attempted to determine, if possible, the source and character of the soluble substance contained in the liver cell extract; the whole process resembled a true digestion, a fermentative process, so much that it seemed rational to test the fluid for the presence of a ferment with digestive properties.

For this purpose fibrin flakes were placed into the liver-cell extract and the mixture slightly alkalinised with a 1% solution of soda; a partial digestion of the fibrin occurred at body temperature and at the end of 48 hours albumose, peptone and some tyrosin were found in the liquid; in an acid medium no digestive destruction of fibrin occurred; if the mixture was first heated to 65 degrees, the ferment became inactive and the fibrin remained intact.

These findings made it probable that the active substance in the liver cell extract was none other than trypsin; this suspicion was strengthened by a comparison of the chemic properties of solutions of the liver extract and of trypsin prepared in the same way.

Both solutions gave the following reactions:—the biuret reaction was positive in both, there was no precipitate on boiling, a precipitate followed the addition of acetic acid, no precipitate after the addition of equal volumes of a saturated chloride of sodium solution and nitric acid, only a slight precipitate on saturation of the solution with common salt and addition of nitric acid, no clouding on the addition of acetic acid and potassium ferro-cyanide, no precipitate on addition of neutral copper sulphate in neutral solution; the following reagents produced precipitation; corrosive sublimate in neutral solution (the heavy precipitate was soluble in acetic acid and in dilute hydrochloric acid); excess of picric acid; tannic acid (soluble in acetic

and excess of tannic); mercuric iodide in potassium iodide; phosphotungstic and sulphuric; trichloracetic.

These reactions characterize the two as albumose solutions, or to be more specific, as deutero-albumoses; further than this the chemical characterization and identification cannot be carried in the present state of our knowledge.

(It is variously stated that, in addition to the above reactions, trypsin gives other reactions of ordinary serum albumin, viz: coagulability by boiling in acidulated solution, a ring with nitric acid. This is true in the case of the ordinary commercial forms of trypsin—if these, however, are kept under alcohol for a time, in the same manner as the liver cells, and if the powder is then dried and extracted with water, it will be found that the solution contains no albumen that is precipitable by heat or by nitric acid; at the same time the solution contains active trypsin! we must assume, therefore, that the albumin is an impurity and that trypsin is, as nearly as we can determine chemically, a deutero-albumose).

In order to further establish the identity of the two a dilute solution of trypsin was added to a mixture of dextrose and hemoglobin-solutions prepared as above; at the end of a week this *fluid had become discolored and contained bile acids in solution*! *the sediment contained bile pigment and some of the sugar had been destroyed*; *no albumin was found in the fluid*! At the same time some lactic acid was formed making the solution distinctly acid and checking the action of the ferment. (Whether this lactic acid is a product of proteid—or of sugar destruction is not yet definitely determined; at all events the discovery of this by-product is interesting and suggestive and will be referred to again in the future publication on the formation of uric acid in the liver).

If no sugar was added to the mixture of hemoglobin and trypsin solution, the reaction described did not take place and the ordinary products of an incomplete tryptic digestion were found; no bile pigment and no bile acids were discovered.*

A pretty demonstration of these differences can be made *ad oculos* as follows:—

Three cylinders are prepared; the first contains hemoglobin solution, 1% dextrose and a measured quantity of a dilute trypsin solution; the second the same amount of hemoglobin and trypsin but no dextrose; the third hemoglobin solution alone; all three cylinders are colored exactly alike, viz: a deep cherry-red. At the end of a week the first cylinder will contain a colorless solution and a brown precipitate; the second one a brownish smear, the third will be unchanged, i. e., red. In this experiment the action of bacteria is not excluded and sometimes a growth will be found on top of the fluid in all three cylinders; hemoglobin is, however, very resistant to the action of bacteria and the fact that the color of the third cylinder remains unchanged is the best proof that bacterial action has nothing whatever to do with the changes observed in the first cylinder; in addition, of course, all necessary precautions were taken in the different experiments chronicled in this report to avoid contamination by bacteria or other micro-organisms.

*The unorganized substance, therefore, that causes the conversion of blood pigment into bile pigment and bile acids in the liver is apparently none other than trypsin.***

The question arises how does trypsin get into the liver? That the liver should form trypsin is of course, absurd; trypsin must reach the liver from the pancreas. There are two possibilities, viz: it can either leave the pancreas by way of the pancreatic duct and then be absorbed from the intestine, or it can leave the pancreas (possibly in the form of its "zymogen") (?) by way of the pancreatic veins or lymphatics; in the former instance it can only reach the liver in the portal vein, in the latter either, via the pancreatic veins, in the portal vein or, via the lymphatics, the thoracic duct, the jugular and the heart, in the hepatic artery.

(To be Continued.)

*The presence of bile acids was determined as follows: All albumen was removed by coagulation, filtered off and washed; washings and filtrate evaporated and precipitated with abs. alcohol to precipitate salts; alcoholic filtrate diluted with water, precipitated with basic lead acetate and ammonia, precipitate extracted with abs. alcohol and the extract filtered hot; this solution contains bile acids alone if they are present. Large quantities may be crystallized in the form of the Na-salts by evaporating the solution with soda and extracting the dry residue with abs. alcohol and precipitating with ether. Small quantities give the Pettenkofer reaction with furfurol; this test is only valid if the bile acids have been isolated as above; it must be typic, i. e., the characteristic color gradually merging into bluish-violet on standing, the green fluorescence, the spectrum; it must also be remembered that thymol may give a similar color reaction with sulphuric acid. Finally the physiologic action of the bile acids on the heart of a curarized frog may be tried in order to establish their identity beyond a doubt.

The presence of bile pigment was determined as follows: The brown sediment gives a typic Gmelin reaction when touched with nitric acid; after extraction with warm chloroform it no longer gives this reaction: the residue of the extraction, however, does; reduction of the latter yields hydrobilirubin; an alkaline solution standing in the air turns green; residue extracted with chloroform does not do this; the substance extracted by chloroform is almost insoluble in ether, alcohol and glacial acetic; readily soluble in alkaline solutions, not in water alone.

**In view of the undefined chemic and physic characteristics of the ferments we can identify them only from their manifestations, i. e., from their action on stated substances under stated conditions; if, therefore, in the case of two "ferments," all manifestations under equal conditions are found to be equal, we are justified, faute de mieux, in considering the two identical.

Fatal Intestinal Hemorrhage in Uremia.—At a recent meeting of the Society of the Paris Hospitals, (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, July 4, 1901. No. 23), A. Souques reported the case of a man of 58, with ancient Bright's disease and slight uremia who died suddenly with intestinal hemorrhage. The autopsy showed the mucous membrane of over four feet of the ileum uniformly hemorrhagic and livid. The ileum was filled with blood. There were no ulcers, nor was the rest of the intestines affected. The kidneys were large and sclerotic. The heart was very large, the left ventricle being especially hypertrophied. Souques quotes the few other cases reported, and believes that the hemorrhage was due to the large amount of toxic substances eliminated and the greatly increased arterial tension. [M. O.]

Hospital Contagion in Typhoid Fever.—Evariste Lafforgue reports the cases of a soldier who died of typhoid, and of his nurse, who developed typhoid two days after his death. (*L'Independance Medicale*, July 24, 1901. No. 30). Both case-histories are given in full. As the nurse never left the hospital, he must have contracted the disease there. The water supply was excellent. No other nurse developed typhoid. This nurse never gave the baths, nor even emptied the tub; but he removed all excreta, and washed the patient's mouth, nose, etc. From detailed observation, direct contagion was proved in this case. For this nurse became very lax in observing the rules of disinfection. Lafforgue recommends changing nurses about, as a means of preventing direct contagion. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended January 3, 1902.

SMALLPOX—United States.

			Cases.	Deaths.
CALIFORNIA:	San Francisco.	Dec. 15-22.	9	
	San Pedro.	Dec. 7, 1 case origin Randsburg, California.		
INDIANA:	Evansville.	Dec. 21-28.	5	
KENTUCKY:	Lexington.	Dec. 21-28.	4	2
LOUISIANA:	New Orleans.	Dec. 21-28.	1	
MAINE:	Portland.	Dec. 21-28.	1	
MASSACHUSETTS:	Boston.	Dec. 21-28.	27	8
	Cambridge.	Dec. 21-28.	1	
	Fall River.	Dec. 21-28.	1	
	Medford.	Dec. 21-28.	1	
	Quincy.	Dec. 21-28.	4	
	Woburn.	Dec. 15-21.	1	
MINNESOTA.	Minneapolis.	Dec. 15-28.	2	
	Winona.	Dec. 15-21.	3	
MISSOURI:	St. Louis.	Dec. 19.	1	
NEBRASKA:	Omaha.	Dec. 21-28.	9	
NEW HAMPSHIRE	Nashua.	Dec. 21-28.	1	
NEW JERSEY.	Camden.	Dec. 21-28.	16	3
	Newark.	Dec. 21-28.	20	5
	Passaic.	Dec. 15-28.	4	1
NEW YORK:	Binghamton.	Dec. 21-28.	1	
	New York.	Dec. 21-28.	19	1
OHIO:	Ashtabula.	Dec. 21-28.	1	
	Cincinnati.	Dec. 20-27.	9	
PENNSYLVANIA:	Hazleton.	Dec. 24-31.	11	
	Lebanon.	Dec. 21-28.	15	
	Norristown.	Dec. 21-28.	5	
	Philadelphia.	Dec. 21-28.	59	19
RHODE ISLAND:	Providence.	Dec. 21-28.	1	
SOUTH CAROLINA	Greenville.	Dec. 15-21.	2	
TENNESSEE:	McMinn Co.	Dec. 15.	24	
	Memphis.	Dec. 21-28.	2	
	Polk Co.	Dec. 15.	4	
UTAH:	Salt Lake City	Dec. 21-28.	2	
WISCONSIN:	Green Bay.	Dec. 22-29.	10	
	Milwaukee.	Dec. 21-28.	2	

SMALLPOX—Foreign.

BELGIUM:	Ghent.	Dec. 7-14.	7	
BRAZIL:	Pernambuco.	Nov. 1-30.	130	
	Rio de Janeiro.	Nov. 10-24.	170	
CANADA:	Halifax.	Dec. 21-28.	11	1
	Quebec.	Dec. 15-28.	56	
	Winnipeg.	Dec. 15-21.	2	
COLOMBIA:	Cartagena.	Dec. 9-15.	2	
	Panama.	Dec. 16-23.	15	
FRANCE:	Lyons.	Nov. 30-Dec. 7.	1	
	Paris.	Dec. 7-14.	8	
GREAT BRITAIN:	London.	Dec. 7-14.	256	25
MEXICO:	Merida.	Nov. 23-30.	1	
RUSSIA:	St. Petersburg.	Nov. 30-Dec. 7	4	4
	Warsaw.	Nov. 23-30.	2	
SPAIN:	Corunna.	Dec. 7-14.	1	1

YELLOW FEVER.

BRAZIL:	Rio de Janeiro.	Nov. 10-24.	3	
MEXICO:	Merida.	Nov. 23-30.	1	
	Vera Cruz.	Dec. 14-21.	10	9
WEST INDIES:	St. Lucia.	Dec. 16, present.		

CHOLERA.

JAVA:	Batavia.	Nov. 16-23.	21	15
STRAITS SETTLEMENTS:	Singapore.	Nov. 8-16.		10

PLAGUE—United States.

CALIFORNIA:	San Francisco.	Dec. 15-22.	1	

PLAGUE—Insular.

HAWAII:	Honolulu.	Dec. 11-14.	4	

PLAGUE—Foreign.

BRAZIL	Rio de Janeiro.	Nov. 10-24.	23	
MAURITIUS:	Mauritius.	Nov. 24-Dec. 7.	37	
SOUTH AFRICA	Mossel Bay.	Nov. 23-30.	5	
	Port Elizabeth.	Nov. 23-30.	1	

LA PRESSE MEDICALE.

November 6, 1901. (No. 89.)

1. General Enterococcus Infection. J. HULOT and G. ROSENTHAL.
2. Sodium Salicylate. ALFRED MARTINET.

1.—Hulot and Rosenthal report a case of septicemia due to the enterococcus, in a woman of 58, who had been ill only two weeks before reaching the hospital. She had diarrhea, vomiting, pain in both hypochondriac regions, dry mouth, and but little fever. Cough came on later, with jaundice as she grew worse. Headache, dyspnea, and pain in the lumbar region appeared the day before death, one week after admission to the hospital. The autopsy showed enteroptosis, sclerotic liver and spleen, atheroma ,etc., and cultures of enterococci were secured from blood from the heart. Hulot and Rosenthal believe that enteroptosis from mechanical causes predisposes to general infection by the enterococcus. [M. O.]

2.—Sodium salicylate is indicated as a specific in acute articular rheumatism, in the acute infectious diseases, especially with the uric acid diathesis, for its eliminating and anti-thermic action, and as a cholagogue. Intolerance to sodium salicylate is rarely noted. It may cause gastric disturbances, headache, and slight nervous symptoms. Rarely, when given in too large doses, it causes cardiac depression, delirium, and even death by syncope. The absolute contraindications to sodium salicylate are neuropathies such as alcoholism, organic heart disease, and nephritis; while pregnancy, old age, and recurring rheumatism with complications form the relative contra-indicatons to its use. [M. O.]

November 9, 1901. (No. 90.)

1. General Anesthesia by Rachicocainization. M. CHAPUT.
2. Two Cases of Death from Rachicocainization. F. LEGUEU.
3. The Technique of Rachicocainization. P. DESFOSSES and J. DUMONT.

1.—After reviewing the cases so far published upon rachicocainization, Chaput concludes that total anesthesia can be obtained by rachicocainization; that an injection of 4 cg: is a large enough dose for ordinary purposes; that this will not cause anesthesia of the face and skull; that an aqueous solution of cocain is to be preferred to an isotonic solution; and that accidents are neither severe nor frequent, even when 3 or 4 cg. are injected into the spinal canal. [M. O.]

2.—Legueu reports two cases of immediate death following rachicocainization. In both cases death occurred a few moments after the spinal injection, upon the operating table. Only 2 cg. of cocain solution (1 to 100) were injected. One patient was a man of 54, with rupture of the triceps tendon, in the left leg, following a fall with apoplexy. The other was a man of 61, with strangulated inguinal hernia. But these were the only deaths out of 200 cases. [M. O.]

3.—Desfosses and Dumont describe the technique of rachicocainization in full, with diagrams to explain the procedure. The details of the human anatomy, instruments, preparation of the anesthetic, preparation of the patient, the puncture, injection, and accidents which occur are given in order. [M. O.]

Late Cardiac Trouble Following Angina.—In the *Bulletin Medical* (July 27, 1901 No. 59), Busquet reports his cases of endocarditis following ordinary sore throat, of which he saw 46 cases. Cardiac murmurs were heard temporarily in 16 cases of simple tonsillitis. He reports in detail four cases of endocarditis following angina, two with streptococci and two with both streptococci and staphylococci. The cardiac symptoms first appeared four, five or six months after the sore throat. Five other cases of endocarditis following months after an angina which had not been examined bacteriologically, are also reported in full. Although the manner of the infection is as yet obscure there seems no doubt that endocarditis can occur some months after a simple angina, caused by the microbe found in the throat months before. The literature of the subject is cited. [M. O.]

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Puerperal Myelitis.—The paper with this title, contributed to this number of the Journal by Dr. Morell, is one of very great practical importance and of not a little academic interest. Such cases are rare in the puerperium, and Dr. Morell is one of the few physicians who have had an opportunity to study one. The opinion was once widely held that pressure by the child is the cause of these affections; and it is, indeed, probably true that in most cases the child's head, or the obstetric forceps, or both, are the causes of the symptoms. In this event, however, it is indubitable that the affection is not a true myelitis but is rather a pressure palsy of the sacral plexus and especially of the sciatic nerve. On the other hand the possibility of a secondary infectious myelitis, due to a primary puerperal septic infection, must not be ignored. To differentiate these various pathological states may be difficult, but is not impossible.

A German author, Hünermann, has described a peroneal type of puerperal paralysis, which usually occurs after dystocia or instrumental delivery. The symptoms are severe pain in the sciatic nerve, with numbness on the outer side of the calf and dorsum of the foot; and paralysis of the peroneal nerve. The foot cannot be dorsiflexed; extension of the toes is impaired, but flexion is usually not involved, and the movements of the knee and hip joints are not implicated. Hünermann explains this peculiar distribution of the symptoms as follows: the sacral plexus is formed from the first three sacral nerves and from a large nerve trunk coming from the last lumbar nerve, called the lumbosacral cord; the plexus lies on the pyriform muscle—a soft muscular cushion, and is not injured ordinarily by pressure; but the lumbosacral cord passes over the sharp border of the true pelvis, and is here exposed to pressure in obstetrical operations; now this lumbosacral cord, according to Lefevre and others, is the root of the peroneal or external popliteal nerve. Thus this type of puerperal paralysis is explained.

In all forms of postpartum paralysis the distribution of the symptoms—sensory, motor and reflex—should be carefully studied with this peculiar arrangement of the pelvic nerves in view. It may, and we believe it often will, be found then that the affection is not due to involvement of the spinal cord but of some nerve trunks within the pelvis. Hünermann believes that this injury to the lumbosacral cord may be caused by pressure of the child's head, due to the rotating or to-and-fro movements communicated by the forceps in cases of contracted pelvis. Still we must not ignore the possibility of a very rare secondary infectious myelitis.

Imbert-Gourbeyre wrote an elaborate treatise on puerperal paralyses, but his work is now behind the times, and was not sufficiently critical even when it appeared. It may be of interest to note that Churchill quotes instances, from veterinary writers, of cows and mares suffering with paralysis following the onset of metritis. In such cases we should suspect the presence of a local inflammation of the great nerves in the pelvis.

Pregnancy and the Acute Infectious Diseases.—It may be stated in general terms that the occurrence of any of the acute infectious diseases during pregnancy renders the prognosis unfavorable. Should the fever be high and long continued, the pregnancy is extremely likely to be interrupted, and this accident is the cause of the frequent unfavorable course of the case. It was formerly believed that the pregnant woman was immune to certain of the acute infections; modern exact observation has proven the fallacy of this view. It is, however, true that pregnancy frequently exaggerates a previously existing morbid condition, and more often perhaps the affection is deleterious to the pregnancy.

The acute infectious diseases are especially dangerous during the puerperal period, as they are liable to produce an inflammation of the endometrium, which, as a rule, is associated with a metorrhagia. Slavjansky (*Archiv. f. Geburtsh.*, IV, page 285) describes this condition in the case of Asiatic cholera. An abortion frequently happens, due to the continued high fever, death of the fetus and the previously mentioned endometritis hemorrhagica.

It appears as if the pregnant woman were more especially susceptible to variola. Nevertheless it is true that variola is an extremely dangerous compli-

cation. "The liability to abortion increases directly with the age of the fetus and the severity of the attack of smallpox." (MacCombie.) Should the patient live long enough in the hemorrhagic and confluent cases abortion invariably occurs. Great hemorrhage is the rule, and sometimes the placenta is retained and must be detached.

As regards scarlet fever, but few observations are at hand, due to the comparative rarity with which adults are attacked by this disease. In the cases, however, in which this complication has occurred, it has proven extremely dangerous.

In case of the occurrence of measles during the puerperal period, the main danger lies in the liability to contract pneumonia, which is always an extremely serious complication even when the measles is not associated with pregnancy.

Erysipelas and diphtheria are exceedingly dangerous to the pregnant women. Enteric fever in more than half the cases produces an abortion. Croupous pneumonia is comparatively rare, and when it occurs as a primary affection during the puerperium, it usually runs a favorable course. Malarial diseases are serious complications of pregnancy.

The Development of Monstrosities.—The occasional reports of interesting cases of fetal malformations that occur in the current literature arouse a more than passing interest as to the etiology of these peculiar miscalculations of nature. From the time of Geoffroy Saint-Hilaire,to whom are due the thanks of the medical profession for first scientifically grouping and classifying these teratisms, down to the present day, there have been attempts made to fathom the causation of the malformation. At one time they were almost unanimously attributed to the profound effect resulting upon the embryonic tissues from grave maternal impressions, usually of the nature of a fright, as from exposure of the pregnant women to some shocking sight or accident. A certain percentage of malformations may, and undoubtedly do, so result. It is probable, however, that this percentage is but a very small one, for a careful examination of the histories of these cases shows that generally the impression was made at a period too late in the course of the gestation to result in any profound alteration in the fetal structure. To be most effective such a cause must act in the earlier weeks of pregnancy before the embryological changes have occurred that result in the development of a normal fetus. Of the more recent writers upon this subject the distinguished German embryologist and obstetrician, Landau, is most outspoken against the theory of maternal impressions. He emphatically remarks that "Maternal impression is and remains a superstition, and despite Welsenburg's highly instructive work on the subject, it has not become worthy of scientific recognition."

H. L. Lewis inclines to the belief that all teratological developments can be explained by purely physical and mechanical causes entirely remote from psychical influences. This view is supported by the interesting results produced in the laboratory in the artificial production of monstrosities. Scientific study in this direction has developed so far that to-day it is possible by thus interfering with the growth of the ovum to produce different varieties of teratisms at will. Here we have a total abolition of the mental influences and a purely physical and mechanical explanation for the resulting deformities. The same explanation must be advanced to account for the numerous instances of malformation encountered in chickens and other domestic animals in whom it is reasonable to suppose psychical influences are at their minimum. It has been found that by disturbing hen's eggs or the eggs of serpents at different periods of incubation vastly different forms of teratism result, and that these forms were invariably reproduced if the agitation of the eggs in different experiments was accomplished on corresponding days. The later in the course of incubation that the disturbance occurred, the milder the degree of teratism and *vice versa*. In other words, all grades of malformation are merely arrests of development, and the earlier this arrest occurs, the graver the form of monstrosity. Thus, the rare condition of cyclops must of necessity be produced by some developmental arrest in the earliest days or weeks of embryonic existence before there has occurred a distinct differentiation of the optic tracts, while the various fissions, as exomphalos, hare-lip, and cleft palate are of much later development. As to what the causes of the developmental arrest in the human family are, there is but little known. Profound shock in the first days of gestation, poverty and want producing fetal anemia, and consanguinity and incestuous connections have been suggested. Barnes, of England, especially emphasizes the importance of marriages of near relatives as an etiological factor. A close study of the antecedents of each case of teratism as it results will be necessary to enable us to come to any sound conclusion as to the cause of such anomalies. Fetal pathology, while much better understood to-day than twenty-five years ago, is still a rich field for investigation and original research.

Lactose and Glucose in the Urine.—It is a matter of great importance to determine whether the sugar which is so frequently found in the urine of nursing

women, or late in the puerperium, is lactose or glucose; for upon this point will depend the gravity of the diagnosis, as well also as the prognosis and treatment. The presence of harmless lactose has been recognized for a number of years, and Dr. Carstairs Douglas, who has devoted considerable time to the study of this subject, and whose paper appears in the January number of the *Glasgow Medical Journal*, tells us that one of the earliest papers on this subject is that of De Sinéty (1874). The importance of the differentiation is at once evident, for in many cases, if the patient is a sufferer from diabetes and a surgical operation is indicated, the surgeon might well regard the case as an unfavorable one for intervention, while if the sugar reaction is due merely to lactosuria no such contraindication exists. Besides the, by no means rare, possibility of rendering an unwarranted diagnosis, great injustice might be done to such a patient in other ways, as for instance, declaring her an undesirable risk for insurance. Douglas states after a careful study of the urine of fifty-six cases that nursing mothers usually secrete a urine, at least in the later days of the puerperium, in which milk-sugar occurs in greater or less amount. He points out further the important fact that milk-sugar will be found for a few days in the urine of patients who have for any reason ceased to nurse their children. The differential determination of lactose from glucose affords a field of study of practical importance, for no precise method is known at present. Dr. Douglas concludes that the distinction must be made rather by exclusion than by any practical test. He is in the habit of saying that if a specimen of urine responds to Fehling's test, all fallacies having been excluded, but does not yield crystals with the phenyl-hydrazine test, and does not ferment, except very slowly, with yeast, the physician may be practically certain that it is lactose which the urine contains. This opinion is held also by von Jaksch, but was arrived at by Douglas independently.

Obstetrics and Surgery.—Every broad-minded man realizes that all branches of medical practice are more or less related to one another, much being said and written about the "borderlands" between them, and it seems to us that the field of obstetrics comes into closer touch with all the departments of medicine than any other one branch. The obstetrician must be a man of broad medical experience and reading if he would guide his patient successfully through the period of her pregnancy and the dangers and complications of parturition and a post-partum state. Although few of the other specialties overlap the obstetric field, yet the obstetrician must have more than an elementary knowledge not only of internal medicine but of dermatology, ophthalmology and particularly surgery. Few surgeons do much obsterical work, but every obstetrician must be "up-to-date" in his surgical technique and in the means he employs to combat infection, or else he must now and again meet with bitter disappointment. The mother will not only look to him for the care of herself but to him she will refer those conditions of the newborn which require surgical aid, such as imperforate anus, club-foot, cleft palate, etc., and he must be competent to meet the responsibilty himself, or else sufficiently informed to advise the proper treatment at the proper time. Doubtless many surgical conditions of infancy might be relieved and sometimes death averted if the obstetrician would realize the immediate danger or the result of delayed treatment. Many months of painful treatment for such conditions as club-foot could be saved the little patient if the attending physician only knew what is being accomplished every day by the orthopedic surgeon by early manipulation and massage. Not infrequently one meets with cases of imperforate anus or rectum carried far past the period when operation would bring relief. Traumatism too not infrequently brings the obstetrician and the surgeon into close contact as is well illustrated in a recent paper by Gloninger, which appeared in this Journal, and which dealt with gun-shot wound of the pregnant uterus. The obstetrician more than any other specialist needs to know of the progress being made in other departments of medicine than his own.

Difficulties in Smallpox Cases.—Some of the difficulties which beset health officers in tracing quarantinable diseases are well illustrated by an incident reported in the *Sanitary Record*. It occurred at Islington, England. A physician observed accidentally that a man, whom he was not attending, had a suspicious eruption about the wrists, and reported the fact to the local health officer, giving the suspect's name as "Halt". The inspector, on inquiring at the supposed residence, was told that no person of that name lived there, but later is was learned that the name was "Hatt", whereupon a second visit elicited the information that the man was in the house and he was found to have smallpox. The inspector attempted to ascertain the names and occupation of all the inmates of the house but the principal tenant concealed the fact that a young woman was teaching at a private school. Another resident would not give her occupation and it seems could not be compelled to give it.

We must consider as somewhat remarkable, the ease with which the parties concealed their employments and even their presence for a while. In this country, in any but the most sparsely settled

districts, the police know enough of each household to prevent such a condition and it would seem to have been an easy matter to shadow the young woman who refused to give her place of employment and discover it in a short time.

Ophthalmia Neonatorum.—Any subject affecting the health of the community will bear repetition. Especially is this true of a topic like ophthalmia neonatorum, which, in spite of the attention it has received from medical journals, is not yet sufficiently within the jurisdiction of preventive medicine. Many of the laity were a long time in learning that enteric fever may be largely prevented by boiling drinking water, and even that smallpox may be prevented by successful vaccination. Yet no existing law can compel an individual to boil his drinking water or to have himself vaccinated. Therefore the scientific appreciation of such subjects does not always entail their practical and rational application. But the law can and does hold medical men responsible for many acts that are due to their negligence, and that there is no law of sufficient universal importance to prevent preventable blindness seems hardly creditable to the thinker. We have repeatedly alluded in this Journal to the highly important subject of compulsory prophylaxis for ophthalmia neonatorum together with the convincing statistics of noted authorities, and we can only again refer the reader to Dr. Lucien Howe's article in this issue, with the hopes that it will stimulate legislation. The attempt to force the regulation and isolation of prostitution is inconsistent when we reflect how many cases of incurable blindness are the result of infected genital tracts. If we cannot reach the fons origo of ophthalmia neonatorum, we can at least save the offspring from a life of darkness, and protect the community from a source of burden and expense. That this can, to an enormous extent, be accomplished by prophylactic instillation, need hardly be repeated, and its negligence constitutes a sin of omission that deserves commensurate punishment. The enactment of such a law is feasible, its interpretation obvious, and its enforcement not difficult, provided the accoucheur receives the intelligent support of an intelligently instructed community.

State-Board Examinations.—The time is not beyond the memory of living persons when the poet could speak of a region,

"Where rolls the Oregon, and hears no sound
Save its own dashing."

but such quiet no longer obtains in the prosperous commonwealth that has risen in the far west. It has now all the conveniences and many of the inconveniences of civilization. Among the products of the effete east which have been imported into Oregon, and taken root and grown lustily, is a State Board of Dental Examiners. From the Portland *Oregonian* we learn that at a recent examination by this Board only one out of ten candidates passed. The blame for this is placed principally on the questions in chemistry, and from the list of these as given in the newspaper, we regard the complaint as fully justified. Ten questions, each covering several points, were given. Many of the requirements are highly technical and many other points are mere matters of memory, familiarity with which can be of no service in the applications of chemistry to dentistry nor of value as an evidence of education or intellectual ability.

This incident is but one of too frequent misuse of the opportunities of state examiners. Such boards, either under the provisions of law or by custom, are apt to be made up largely, often wholly, of persons not actively engaged in teaching or even familiar with teaching methods and their questions are too often drawn from text-books or based upon the recollection of professional studies many years before, without taking into consideration the changes which sciences and the methods of teaching have undergone. It is these circumstances that bring forth such a question as "give a test for strychnine" (without naming the conditions under which the test is to be applied) or questions upon melting or boiling point or specific gravity, none of these data being proper objects of memory for the dentist or doctor.

The fact is, examinations in physiology, chemistry, histology, bacteriology and materia medica should not be included in the list of state examinations. These branches are part of the preparatory work of the medical course, and all that is needed is a moderate scrutiny of the college methods to ascertain that the work is being done in its proper place. The state examinations should be limited to pathology, surgery, gynecology, obstetrics, practice and hygiene. This limitation would give opportunity for more thorough examinations in these branches than is now practicable and permit even some practical exercises. If it be thought necessary to continue the examinations in the theoretic branches, such examinations should take place just after the close of the study of them and not after the candidate has been at least two years engaged in other lines.

The questions of the Oregon examinations are an extreme instance of the defects of the present methods and we are not astonished that a protest has gone up against them. We venture to say that

not one professional chemist in one hundred, selected at random from among the chemists of this country, could have made a full mark in the examination. One question is, for example: Name the rare dyad metals; give their symbols, atomic weights, specific gravity and fusing points. It is difficult to understand the mental process by which an examiner developed such a question or rather series of questions. One feels curious to open such a mind and, like Helen's baby, "see 'e wheels go 'wound."

The Death of a Medical Journal.—In its December number the *American Gynecological and Obstetrical Journal*, announces that with the issue of that number it will cease to exist. This Journal was copyrighted by, and presumably owned by, Dr. John Duncan Emmet of New York, who was also its editor and proprietor. In his farewell editorial Dr. Emmet calls attention to the fact that his Journal was not owned by lay publishers, but was conducted exclusively in the interests of the medical profession. He does not quite claim, however, as is done in the case of some other private journalistic enterprises, that it was "owned by the Medical Profession". He also states that "during the past ten years, over 5,000 subscribers have received and contracted to pay for the Journal and have never paid." More than $30,000 have been lost through unpaid subscriptions by contracts freely entered into by medical men. The reproach to the whole medical profession implied in this statement, comes with peculiar significance from an editor who claimed that his journal was a private benevolent enterprise for the benefit of the professional public. That the medical profession did not support it, is the profession's own affair; and we cannot agree that it is necessarily blame-worthy for not supporting some particular private enterprise that was established for its benefit. The whole profession cannot be indicted for the failure of Dr. John Duncan Emmet's personal journal. This extraordinary point of view is the most noteworthy feature of Dr. Emmet's unfortunate failure. The true moral seems to be that a medical journal, in order to succeed, must be established on a sound business basis, and must attract a sufficient number of bona fide subscribers. The other kind of subscribers may be counted in the announcements, but they do not count in the receipts.

Two Bites to a Very Bad Cherry.—One day last week a physician in this city received a very polite note from an instrument-maker (also of this city) enclosing a one dollar bill. The instrument-maker begged the physician to accept the money as a commission on a case of umbilical hernia in a child whom the medical man had sent to be fitted for a truss. The money was promptly returned with an equally polite note in which the doctor wrote that in his opinion physicians should make their own charges and instrument-makers should make theirs. Even if no better ground existed, this were a good ground upon which to base the whole transaction. Such a commission business has the demerit of being *sub rosa*, and this is enough to condemn it in the minds of right-thinking physicians and surgeons. In this case the truss-maker charged five dollars, and disgorged 20% of the fee in an uncalled for attempt to soothe the palm of the physician. But a physician who can be bought for a dollar is not worth paying more for—and in our opinion such physicians were wise not to let their patients know how cheap they really are. The transaction seems to us to be exceedingly small. Even if the second party consoles himself with the belief that it is not dishonest, he cannot escape the conviction that it is mean.

We are fain to believe that the *Medical Record* speaks only for the New York medical doctors, and not for the profession in general, when it says that physicians have a special weakness for stock jobbing. There is probably something in the proximity to Wall Street that has a demoralizing effect on the doctors in Gotham; but we have never seen much evidence that doctors elsewhere are by nature stock gamblers. Such sweeping statements require to be revised in the light of a more general acquaintance with the medical profession than is to be obtained within the narrow limits of the metropolis.

According to the *New York Sun*, a new type of lawyer has sprung up in that city. He is called an "Ambulance Chaser." His aim is to drum up damage cases against firms and corporations. Since the recent frightful tunnel disaster in New York these men have been unusually active and bold. They have even tried to force their way into the hospitals to the bedside of injured and dying men in order to secure retainers in prospective damage suits. This is a new phase of medico-legal practice. We are credibly informed that the same thing is not unknown in the hospitals of Philadelphia.

Current Comment.

CAN THIS BE TRUE?

It is strange, but nevertheless true, that there is more stock jobbing among physicians than with any other class of professional men. And it is equally conceded that they can least afford to risk their hard-earned incomes in that way.

During the recent flurry in Wall Street it has been said

on reliable authority that the medical profession sunk enough money on margins to endow a hospital or place the Society for the Relief of the Widows and Orphans of Medical Men on the soundest possible footing. In one instance it was said that a medical man who had the so-called "nerve to hold on" during a sudden drop in values not only lost his little fortune but his home besides.—*The Medical Record.*

THE KING AND THE CRUSADE AGAINST CONSUMPTION.

His Majesty King Edward the Seventh throughout the long period during which he bore the title of Prince of Wales was unremitting in his efforts to do all that in him lay towards the solution of the most pressing of all social problems, the betterment of the conditions in which the people live and have their being. It is a signal proof of the King's practical insight that, at a time when leading statesmen treated such matters as outside the sphere of practical politics, he showed himself fully alive to the vital importance to the State of the question of the public health. His Majesty has also long been in advance of many of those who are now his responsible advisers in recognizing that it is to medical science that we must look for the solution of problems which so closely concern the well-being of the nation and the future of the race.

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The King, however, who is nothing if not practical, is not content to play the passive though important part of a Patron. He has quite recently found an opportunity of showing his sympathy with the movement against tuberculosis in a highly practical manner, and he has taken advantage of it with a readiness which shows how anxious he is to promote any plan to make for the good of his people. A large sum of money—we understand about £200,000—has been placed at His Majesty's disposal for charitable or utilitarian purposes by a philanthropist who for the present does not wish his name to be made public. This money, by the King's direction, is to be devoted to the erection of a sanatorium for tuberculous patients in England.—*The British Medical Journal.*

A LEGAL DEFINITION OF DRUNKENNESS.

A unique decision was recently given by Judge Dewey of the Central Municipal Court of Boston. One Brick, who is an alderman of Boston, and a political leader of some prominence, was recently brought before him. It was charged that while attending a political caucus he howled, knocked people down, broke furniture, and made himself a general nuisance. Upon these facts the police came to the conclusion that he was "tight," arrested him, and took him before Judge Dewey, where he was charged with drunkenness. The judge, after listening to the evidence, gave an exhaustive opinion upon the different degress of intoxication, finally falling back upon the definition found in the Century Dictionary: "Drunk—Intoxicated, inebriated; overcome, stupefied or frenzied by alcoholic liquor: used chiefly in the predicate." The police were certain that the defendant was drunk, inebriated, but they could not affirm that he was stupefied or frenzied by alcoholic liquor; hence Mr. Brick was discharged.—*Medicine.*

HEROIC IRISH DOCTORS.

The Dublin correspondent of the *Times* sends the following further particulars of the heroic work of Dr. William Smyth, whose death from fever contracted whilst he was engaged in his duties was recently reported:—Dr. William Smyth was the medical officer of the Burtonport (Donegal) Dispensary District, which includes the Island of Arranmore. An epidemic of typhus fever broke out in this remote and miserable spot, and found a fatal stimulus in the poverty and ignorance of the islanders and the unsanitary condition of the hovels. The neighboring people refused their help, and Dr. Smyth fought the fever absolutely single-handed. Every day he rowed his boat across the stormy waters of the sound to the island, a distance of four miles, and worked four hours in the cottages, devoid of windows, and therefore, owing to lack of sunlight and ventilation, reeking with foul air. In many cases he had to carry a lighted candle to enable him even to see his patients, who lay sometimes three and four in one bed. When at last he persuaded them that their only chance of recovery lay in removal to the mainland he was confronted with the difficulty that, owing to the terror of the contagion, no one would help him, or even lend him a boat. Fortunately the arrival on the scene of Dr. Brendan MacCarthy, the medical inspector to the Local Government Board, brought him at least one willing helper. Without any other help these two doctors brought the typhus patients down to the beach, embarked with them in a crazy boat, and rowed them across the sound. So defective was the boat that she was only kept afloat by the continuous baling of the strongest of the patients, and she sank five minutes after reaching her destination. All the patients were safely transferred, and are now on their way to recovery, but Dr. Smyth has himself died of the typhus from which he saved so many. He left a wife and eight children, the youngest of whom is six weeks old. They are without means of support, and an appeal on their behalf has been issued by the president of the Royal College of Physicians and Surgeons and other heads of the medical profession in Ireland.

FORMS OF INSANITY IN INDIA.

The total number of certified lunatics in all the asylums of India is small, probably not more than 5,000 in all out of the millions of the population of India. This is borne out by an examination of the Asylum Reports of four of the principal Provinces of India. Only 831 lunatics were admitted into the asylums of the Punjab, Bombay, Bengal and Madras in the year 1900.

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Considerably more than half the patients are admitted to asylums suffering from acute or chronic mania, next comes melancholia, then dementia, and idiocy and delusional insanity are much less common. The extreme rarity of general paralysis of the insane in India has often been remarked upon: in the reports of the above four Provinces only one case is referred to. This fact has long been known in India, and was discussed by Dr. Wise of Dacca in our columns many years ago. Dr. Wise was only able to discover three cases in the records of 1,576 cases of insanity. This rarity is in accordance with what is known of the etiology of this affection. Goodall, in his article on the subject notes that general paralysis is a city disease, and that it is rare among purely agricultural populations as in the Highlands of Scotland and in Ireland. If syphilis is a "proximate cause of great power" in this disease, it is strange that we do not see more of it in India.—*The Indian Medical Gazette.*

Correspondence.

A CRITICISM.

By EUGENE S. TALBOT, M. D., of Chicago.

To the Editor of the Philadelphia Medical Journal:

In response to the annotation to E. A. Spitzka's report, (Philadelphia Medical Journal, January 4, 1902), I would call attention of your readers to the parallel columns.

Talbot, (*Medicine*, Dec., 1901). It is admitted by E. A. Spitzka that the presented anomalies.

E. A. Spitzka, (*Medical News*, Jan. 4, 1902). The few brain peculiarities encountered in the course of the fissures, such as the confluence of the left precentral, by its anterior ramus, with the superfrontal—across the medifrontal gyrus, or the separation of the right cephalic paracentral limb from its stem while at the same time the inflected joins the paracentral as a feature found by the writer in 9 out of 160 hemispheres in which the inflected was present and also the smallness of the rolandic

A "peculiarity" which occurs in but 9 brain hemispheres out of 160 must be an anomaly if the term has any anatomic

significance whatever. I did not use the adjective *pithecoid* as the note implies.

In regard to the justification of the criticism as to microscopic examination, I would submit the following:

Talbot—No microscopic examination worthy the name was made.	C. A. Macdonald—It was impossible for the examiners to retain honorable possession of the brain for microscopic examination and study

Such a case is not complete without a microscopic examination of hardened, stained and cut specimens and no pathologist considers a microscopic examination of fresh tissue worthy the name. So far as they go the two reports fully justify the conclusions which I had arrived at (*Medicine*, December, 1901) "that there is no reason to believe him (Czolgosz) insane, but the logic employed to prove his sanity was not altogether scientific."

THE PALPEBRAL REACTION OF THE PUPIL.

By EDWARD JACKSON, M. D., Denver, Colorado.

To the Editor of the Philadelphia Medical Journal:

The editorial upon the so-called Westphal-Piltz Pupillary Phenomenon in the number of the Journal for December 28, 1901, tends to perpetuate an injustice, that could scarcely have arisen if the medical profession were as prompt to recognize scientific work done in this country as it is prone to give undue attention to that which is announced from the medical centres of Germany. Perhaps, too, such injustice would not have been done in the first place if neurologists were better acquainted with ophthalmic literature.

The symptom in question was announced by Westphal and Piltz in the *Neurologisches Centralblatt* for 1899. Four years before that under the title, "An Orbicularis Pupil Reaction," it had been fully described by H. Gifford, of Omaha, in the July number of *Archives of Ophthalmology*, 1895.

Dr. Gifford did not claim so much for the reaction as have the German neurologists; but his description of it was as complete as theirs, and his claims have the important advantage that they are readily verified by other observers; which does not hold with regard to all that has been put forward in connection with this symptom on the other side of the Atlantic.

Still, the credit for original discovery does not belong with Dr. Gifford. The first report regarding this phenomenon appears to have been made by Galassi, of Rome, June 11th, 1887, one year before Gifford had first observed it.

It is but just to Dr. Gifford, however, to state that his account of the symptom was somewhat more complete than Galassi's; and that when his attention was called to the claim of the latter to priority, Gifford hastened to give him full credit for the discovery in the journal in which his own article had originally appeared. This is something that I believe neither Westphal nor Piltz has yet done for their predecessors.

Such questions of priority are generally of very little importance. But in this case, beside doing justice to discoverers and insisting on more strict professional morality, there is an opportunity to discourage the undue reverence for what comes to us from a distance. Then, too, in this little bit of history, we have an excellent reason for discarding a cumbersome double eponym, and adopting a title that indicates the character of the symptom. The Palpebral reaction of the Pupil," (Galassi); or an "Orbicularis Pupil Reaction," (Gifford).

[Note by The Editor.—We fully agree with Dr. Jackson in all that he has said in his letter. There is a tendency in this country to give too much credit to foreigners and too little to American scientists. We should like to say, however, that the editorial to which Dr. Jackson refers, was written, not by a neurologist, but by an ophthalmologist.]

Reviews.

International Clinics.—A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and Other Topics of Interest to Students and Practitioners by Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A. Volume III. Eleventh Series, 1901. J. P. Lippincott Company, Philadelphia. Price, Cloth, $2.00.

The October Number of *International Clinics* cannot but commend itself to the profession on account of the wide scope of its articles, and the standing of its many contributors. The field of therapeutics, medicine, neurology, surgery, and diseases of the eye and throat have received due consideration in this volume. It is impossible to more than mention many of these contributors by title, yet, almost without exception, they are deserving of more detailed review. We may mention especially under the head of Therapeutics, the article upon Phototherapy after Finsen's Methods by Dr. Valdemar Bie, who is the Laboratory Assistant in Finsen's Institute in Copenhagen. This article was prepared at the request of Dr. Finsen, who has just received the Nobel prize of fifty thousand dollars for his valuable services to the medical sciences. Dr. J. W. H. Eyre contributes a paper upon Antitoxic Sera; Their Preparations and Standardization. While this is, perhaps, briefer than the subject demands, yet the facts are clearly set forth and will do much to explain to many writers the precise methods employed in obtaining various sera. Dr. E. R. Baldwin, whose work in the field of Pulmonary Tuberculosis in the Adirondacks is so well known, furnishes us with a Selection of Favorable Cases of the Sanatorium Treatment of this disease. The very many unfortunate results which have followed upon sending unfit cases to points distant from their homes emphasizes the necessity of a thorough understanding of the manner of selecting carefully those cases which are to be sent to sanatoria. Prof. Jullien contributes a paper of sociologic, as well as medical value, upon Gonorrhea and Marriage. Paul Reclus sounds a note of warning to the Spinal Use of Cocaine and the Accidents due to it. The Department of Medicine contains a paper on Convulsions in Infants and Children under Three Years of Age, from the pen of Dr. John Abercrombie. An interesting Case of Combined Echinococcus Disease and Tuberculosis is discussed by Dr. Charles F. Withington. Dr. James J. Walsh treats of the Prophylaxis and Early Diagnosis of Heart Disease; Palpitation and Organic Disease; Tobacco and Heart Lesions; Cure of Heart Lesions. Solomon Solis-Cohen furnishes the text of a Clinic held in the Philadelphia Hospital in which a case of Cardiac Disease due to Lead Poisoning, and a case of Syphilis of the Throat; Phantom Tumor of the Abdomen in a Male were shown and discoursed upon. Dr. T. D. Crothers details the Clinical Treatment of Inebriety, and handles the subject ably as we should expect from one who has devoted so many years to the treatment of the condition, and whose work in the field is so well known. There are several articles upon neurological subjects including one by Prof. Arnold Pick on: Areas of Softening in Both cerebral Hemispheres. One upon Cerebellar Degeneration due to Intestinal Intoxication by Augusto Murri, M. D. The field of Surgery is especially well represented, Appendicitis being considered from the Point of View of Prognosis by Dr. A. H. Tubby, of London; and the Surgical Treatment of the condition by Dr. A. R. Routier. Dr. John B. Deaver reports some Selected Cases of Appendicitis. George M. Edebohls reports Double Nephropexy and Inversion of the Vermiform Appendix. The article upon Points in the Diagnosis and Surgery of Lesions of the Conus Terminalis and the Cauda Equina by Prof. Demetrius Roncali is of especial interest. Dr. Edmund Landolt contributes a note on the Differential Diagnosis between Ptosis and Orbicular Spasm and Between Paralytic Ptosis and Hysterical Ptosis. He calls attention to the fact that it was he who suggested to

Charcot that this distinction was of great importance in nervous affections. The publishers' part of the work has been well done. The cuts are profuse, and typographically the work is all that can be desired. The editor has every reason to congratulate himself upon the character of the publication. [T. L. C.]

A Manual of Volumetric Analysis.—By Virgil Coblentz, Ph. D., F. C. S. 8vo. 173 pages and index. Philadelphia, P. Blakiston's Son & Co. $1.25 net.

In the preparation of this work the author has given considerable space to the explanation of some of the modern principles of physical chemistry, especially the nature and influence of ionization. As a consequence, the chapter on indicators is unusually full and valuable. The action of indicators cannot be understood, nor the extent and limit of their application properly appreciated, without a knowledge of the ionization theory.

After a brief introductory, a few pages are devoted to a description of the common forms of measuring apparatus and methods of making readings; directions for the preparation of standard solutions are then given in considerable detail, including numerous illustrative experiments. In the preparation of standard sulphuric acid, the barium and specific gravity methods are given; it would have been well to give the simple method with ammonium hydroxid. In assigning atomic weights the standard H=1 is taken which leads to material changes in the weights prescribed for some of the standard solutions as compared with those of many standard works. The quantity of absolute sulphuric acid prescribed for the normal solution differs by over one-third gram per liter from that prescribed in the "Method of Analysis," published by the Department of Agriculture and widely used in this country. The students attention is not called to the difference, except by an allusion in the preface, stating that the "didactic system (H=1) of atomic weights has been adopted on the consideration that it is the oldest, most familiar and most comprehensive to the student of chemistry." Unless Dr. Coblentz's pupils are more than usually alert they will not be likely to see the full application of this sentence. It is further doubtful if, for example, the figure 35.18 as the atomic weight of chlorin is more familiar than the figure 35.45. We think it would have been well to explain the matter a little more in detail and give both sets of numbers.

The work is illustrated with twenty-five good drawings of apparatus and is well printed on good paper. It contains several valuable tables, among which is one of multiples of important atomic and molecular weights, which should have been put in larger type. The book is intended for students, but gray haired professors will find it useful and their defective eyesight should be heeded. [H. L.]

A Manual of Medicine, edited by W. H. Allchin, M. D., Lond., F. R. C. P., F. R. S. Ed. Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital. Late Examiner in Medicine in the University of London, for the Royal College of Physicians of London, and to the Medical Departments of the British and Indian Army Medical Services. Vol. III. Diseases of the Nervous System, New York. The Macmillan Company, London: Macmillan & Co., Ltd., 1901 All Rights reserved. Price in Cloth, $2.00.

This third volume, Allchin's Manual of Medicine, is devoted entirely to diseases of the nervous system. The work comprises some 412 pages, and is illustrated with six well-executed colored plates, and 27 descriptive wood cuts which enlighten the text. The editor is responsible for the excellent chapters upon Headache and the Tropho-neuroses. Mr. Bertham Abrahams has contributed the Application of Electricity in Diseases of the Nervous System. Dr. James S. Collier treats of Aphasia and Other Speech Defects; Functional Diseases of the Nervous System. The latter subject has also been covered in part by Dr. Walter Stacy Colman. Dr. Joseph Arderne Ormerod has discussed Diseases of the Spinal Cord and the muscular Dystrophies. Dr. Charles Scott Sherrington has contributed the chapter upon General Anatomy and Physiology of the Nervous System and the Table of Spinal Segments. Dr. Purves Stewart has considered Lesions of the Cauda Equina, as well as Acute Ascending Paralysis and Diseases of the Peripheral Nervous System. Dr. James Taylor has furnished a short but lucid article on Medical Ophthalmology. Dr. William Aldren Turner has contributed: The Neurons in Relation to Diseases of the Nervous System, as well as Organic Diseases of the Brain and its Membranes. This work aspires to be nothing more than a Manual of Medicine, and as such we believe that it covers its field with an admirable fullness, and a degree of cohesiveness rare in works from the pen of a number of authors brought together to comprise one text book. In this respect Dr. Allchin deserves to be congratulated for the excellence with which the manual has been edited. The work does not enter into disputed theories or burden the reader with more than the needed facts. For instance, in the discussion of Locomotor Ataxia, the theories of the causation of the disease are dwelt upon scarcely at all. Indeed, so slight has been the consideration that no mention is made as to whether the sclerotic process begins as a lesion of the parenchyma or of the interstitial substance in the bundles of fibers affected. It is a pleasure to state, however, that reviewing the Manual from the standpoint of the object which the work essays to cover that this has been realized and a rare state of excellence has been maintained throughout. [T. L. C.]

Landmarks in Gynecology.—By Byron Robinson, B. S., M. D., of Chicago. Second Edition, revised and enlarged with over 100 illustrations. Pages, 400. Publishers, E. H. Colegrove, Chicago. Price, $2.50.

The second edition of Dr. Robinson's small volume has been thoroughly revised, and has been enriched by over 100 illustrations, many of them original and very excellent. The idea of the author in describing the subjects of gynecology that are touched upon as landmarks is unique, to say the least. Six of these are given, namely: Anatomy, Menstruation, Labor, Abortion, Discharges, and the Abdomen. As will be seen from this list no system has been followed, the material being grouped arbitrarily, but at the same time being presented in a very acceptable form. We do not know of any book, not even excepting the large anatomies, in which a more scientific and accessible description of the pelvic anatomy can be found. The chapter on Menstruation is most interesting and contains much condensed information that is generally to be found scattered here and there through the larger text-books on this subject. We do not endorse everything that has been said by the author. Notably, we do not believe that the pelvic veins frequently rupture postoperatively. In several hundreds of abdominal sections we can recall but two instances in which this accident has happened, as demonstrated by secondary operation or postmortem exploration. The volume is rich with the author's personality, and contains much that is new and instructive. It is well worth the reading. [W. A. N. D.]

Händedesinfectionsfrage, by Dr. Richard Schaeffer, Berlin, with 12 tables, 4 illustrations and 2 plates. S. Karger, Publisher, Berlin, 1902.

This valuable little volume of 110 pages will grace any medical library of a surgeon. It deals most thoroughly with investigations of hand disinfection. The introductory chapter discusses the subject of absolute asepsis. Chapter II scientifically shows the sources of error of previous observers. Chapter III and IV show an accurate compilation of experiments with a critical summary embracing the manner of germ transmission, the action of alcohol as a disinfectant, the artificial disinfection of the hands and

the results obtained with hot water and alcohol. Various other methods of disinfection are carefully considered up to Chapter VIII. Chapter VIII deals with other methods of disinfection, many being very particularly considered. The method of Mikulicz, bichloride of mercury disinfection, lysol and the recently lauded chirosol are also discussed. Four microphotographs of bacteriological specimens obtained after inoculations from hands, sutures, etc., accompany the book.

If another allusion to the miserable binding of these valuable monographs will succeed in having them supplied with more suitable and durable covers, the reviewer desires again to call attention to it. [M. R. D.]

Dose-book and Manual of Prescription-Writing with a List of the Official Drugs and Preparation, and Many of the Newer Remedies with their Doses. By E. Q. Thornton, M. D., Ph. C., Demonstrator of Therapeutics, Jefferson Medical College of Philadelphia. Second Edition Revised and Enlarged. Philadelphia and London. W. B. Saunders and Company, 1901.

The first edition of Dr. E. Q. Thornton's Dose-Book and Manual of Prescription-Writing gave it a recognized place among the works of this nature. In this second edition the chapters upon Prescription-Writing and Incompatabilities have been revised and much has been added. References have been included in the text of Newer Curative Sera, Organic Extracts and such of the synthetic compounds as Dr. Thornton believes have been found of unquestioned value. Chapters have also been added upon Synonyms and Poisons and their Antidotes. It will thus be seen that the subject matter in the second edition adds much to the value of the book. We cannot but express our admiration of the excellent chapter upon the Weights and Measures. The description and explanation of the Metric System is given with rare clearness. [T. L. C.]

The Coagulation of the Blood.—At a recent meeting of the Medical Society of the Paris Hospitals (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, July 11, 1901. No. 24.) G. Milian described the technique of his blood examinations. He noted that blood coagulates much more rapidly at the end of a hemorrhage than at the beginning; and that while retraction of the clot may not occur in the blood at the beginning of a hemorrhage, it is always present at the end. The blood should be taken from two fingers of one hand; that from one finger is taken drop by drop, that from the other in one larger mass. Millian takes 100 drops upon 100 slides and the time of the coagulation of each is noted, especially that of the first and last drops. The duration and rapidity of the hemorrhage are also noted. In the normal individual the hemorrhage lasts two to three minutes and 20 drops are secured; in atrophic cirrhosis of the liver it lasts 9 minutes, and 220 drops are secured. The larger quantity of blood shows the time when retraction of the clot follows. [M. O.]

The Employment of Antiseptic Mixtures of Castor Oil.—F. Blonski (*Nowiny lekarskie*, April-May, 1901; *Vratch*, Vol. XXII, No. 19) proposes to render castor oil antiseptic by the addition of such intestinal antiseptics as resorcine, benzonaphtol, salol, etc. In children he prefers benzonaphtol and resorcine as the least harmful. The former is decomposed in the intestines into benzoic acid and B-naphthol and has no effect on the stomach, while the latter exerts an antiseptic action on the stomach and, besides, is twice as strong as phenol. Salol is more or less dangerous on account of the large percentage (38%) of phenol it contains. He advises to permit the druggists to dispense without a prescription the following two mixtures: (1) Castor oil containing 6 2-3% of resorcine and benzonaphtol 20 grms. each to 260 grms. of oil; (2) the same mixture half the above strength. The dose is the same as that of ordinary castor oil. [A. R.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA NEWS.

Few American-Born Miners.—The reports of the eight mine inspectors of the anthracite coal region show that only about one-fifth of the miners and laborers are American-born. In the sixth district the number of Americans is 4292, Poles 6289, Hungarians 1742, English 900, Welsh 572, Irish 2310, Italians 617, Austrians 289, while other nationalities make a total of 2408.

Wiener Verein of Philadelphia.—At the second annual meeting of the Wiener Verein, an organization composed of physicians who have studied in Vienna, held Saturday evening, January 11, Dr. James Tyson was elected president and Dr. C. Y. White secretary and treasurer for the ensuing year.

Academy of Surgery, Philadelphia.—At the meeting of the Philadelphia Academy of Surgery, held January 6, officers were elected as follows: President, Dr. Richard H. Harte; vice-presidents, Dr. Henry R. Wharton and Dr. John B. Deaver; secretary, Dr. William J. Taylor; treasurer, Dr. William G. Porter; recorder, Dr. John H. Gibbon; council, Dr. Robert G. Le Conte and Dr. W. Joseph Hearn; business committee, Dr. J. H. Jopson and Dr. G. G. Davis.

Society Meetings Next Week.—The following societies will hold their meetings next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Tuesday evening, January 21, Section on Ophthalmology; Wednesday evening, January 22, County Medical Society; Thursday evening, January 23, Pathological Society.

Quarantine Board's Annual Report.—The report of the Pennsylvania State Quarantine Board shows that during 1901 1514 vessels were inspected and passed, and 39,005 passengers were examined. Two vessels were detained for observation, and six for disinfection, while 1872 passengers, officers and seamen were detained for observation. Officers and seamen disinfected numbered 137, and the medical cases examined and treated amounted to 635, while the surgical cases numbered 178. There were 2 births and 16 deaths.

University of Pennsylpvania.—At the meeting of the trustees of the University of Pennsylvania, January 7, Provost Harrison announced the receipt of $2500 from William Ivins for the new medical laboratories. General I. Wistar has paid to the City Treasury $12.000 for the triangular lot of ground at Thirty-seventh street and Woodland avenue, on which the Twenty-first District Station and patrol house now stand. The land will be presented to the University of Pennsylvania, so that the Wistar Institute of Anatomy and Biology may be enlarged. Under the ordinance by which the lot was sold, the police station may remain for five years, free of rent; but funds have already been promised the University, which will insure the building of a fireproof addition to the museum as soon as the ground shall be free.

The Samuel D. Gross Surgical Prize.—The Philadelphia Academy of Surgery has awarded the Samuel D. Gross prize for the best thesis on any surgical subject to Dr. Robert H. M. Dawbarn, of New York. The prize is $1000, and is awarded once in five years. Dr. Dawbarn's subject was "The Treatment of Certain Malignant Growths by Excision of the Carotids."

Smallpox in Philadelphia.—Last week broke the record for the number of new cases of smallpox during the present outbreak of the disease in Philadelphia. For the seven days ending January 11, there were reported 131 new cases and 15 deaths, as compared with 90 cases and 16 deaths the previous week. Last week 109 persons who had the disease were discharged as cured, and there were at the end of the week 447 patients under treatment. No new cases have developed at the Almshouse. The largest number of new cases previously reported was in the week ending December 14, when the record jumped from 72 in the previous week to 125. In the following week the number of new cases dropped back to 72, increasing in the week following to 79, and in the week ending January 4 to 99. The greatest number of deaths was in the week ending December 28, when there were 19, probably as a sequel to the 125 cases two weeks previous.

Philadelphia Charity Ball.—The Executive Committee of the Charity Ball, to be held in the Academy of Music, January 22, announces that the charities selected

are the children's medical ward of the hospital of the University of Pennsylvania, children's ward of the Jefferson Medical College Hospital, Rush Hospital for Consumption and Allied Diseases, and St. Timothy's Memorial Hospital and House of Mercy, Roxborough.

Number of Smallpox Cases in the Counties.—The State Board of Health has received reports showing the number of smallpox cases during December in the State by counties, exclusive of Philadelphia, to be as follows : Montgomery, 102; Delaware, 14; Schuylkill, 56; Chester, 4; Northampton, 15; Potter, 23; Perry, Carbon, Cameron and Northumberland, one each: Monroe, 250; Wyoming, 8; Montour, 2; Jefferson, 13; Snyder, 4; Lebanon, 55; Berks, 4; Luzerne, 17; Westmoreland, 2.

Alumni of Jefferson Medical College will confer a favor on the editors of *The Jeffersonian* by sending the names and addresses of the officers of their classes to *The Jeffersonian*, care of Jefferson Medical College, Philadelphia, Pa.

Contagious Diseases in Philadelphia in 1901.—Dr. J. Howard Taylor, chief medical inspector, announces that during 1901 a total of 3,478 cases of diphtheria had been reported, 3756 cases of scarlet fever, 3,669 cases of typhoid fever, 1156 cases of smallpox, 2268 cases of consumption, and only nine cases of cerebro-spinal fever.

NEW YORK AND NEW JERSEY.

New Biological Laboratory at Vassar.—The New England Building at Vassar College, named because the fund for its erection came from New England, was opened January 8. The biological laboratory is designed for geology and physiology. The building is colonial, of red brick with marble trimmings. In the basement are three rooms for geology, one for botany, an aquarium room, a dark room for photography and a dark room for plant physiology, besides storage and coat rooms. On the first floor are a geology lecture and a geology recitation room, a botany and a zoölogy room; on the second floor are the physiological laboratory, general laboratory, lecture room, preparatory room, office and museum.

Post-Graduate Hospital.—An anonymous friend of the New York Post Graduate Hospital has offered to donate $100,000 to the institution, providing an additional sum of $200,000 is raised.

New York Academy of Medicine.—At the meeting held Thursday evening, January 16, a paper on the 'food factor as a cause of health and disease during childhood' was read by Dr. Joseph E. Winters. This was discussed by Drs. Leroy Milton Yale, Wm. P. Northrup, John Dorning, Floyd M. Crandall, David Bovaird, Jr., Rowland G. Freeman, Allen M. Thomas, Thomas S. Southworth, and J. Milton Mabbott.

Neuralgia in Trenton.—Trenton physicians are kept busy prescribing for cases of neuralgia. One physician has fifty cases under his care, and the disease seems almost epidemic.

Norwegian Hospital, Brooklyn.—It has been announced that the Norwegian Lutheran Deaconesses' Home and Hospital in Brooklyn has received an endowment of $64,000 from a member of the Clark Thread Company of Newark. The money has been left in trust for the relief of the sick and needy, as a memorial to S. S. Skougaard, the Norwegian singer. The Norwegian Hospital was established twenty years ago, and last year it cared for nearly a thousand patients, besides furnishing medical assistance to nearly six thousand persons and giving over two thousand prescriptions. Plans for a new building, to cost over $100,000, have been completed. So far about a fourth part of the money required has been raised.

Smallpox in New Jersey.—The epidemic of smallpox which broke out in Hackettstown last week has spread to the surrounding towns. One case of smallpox having appeared in Princeton, the students of the University there have been ordered to be vaccinated immediately. Seven cases of smallpox are reported from Perth Amboy, and one case has broken out in the State Prison at Trenton. Another case is reported in the Essex County Jail at Newark. Both of these cases have been isolated.

Manhattan Dermatological Society.—At a meeting held January 3, the following officers were elected for the ensuing year: President, Dr. W. S. Gottheil; vice-president, Dr. I. P. Oberndorfer; treasurer and secretary, Dr. A. Bleiman.

New York Infant Asylum.—The new building of the New York Infant Asylum in West Sixty-first street was opened January 11, with a large reception. The new building adjoins the old asylum, the two structures accommodating 250 children. The institution was organized in 1865.

NEW ENGLAND.

Defective Children in Massachusetts.—There has recently been a great deal of discussion upon the subject of feeble-minded children, whom physicians believe should attend a school devoted exclusively to them. Dr. Walter Channing says there are over 5,000 feeble-minded people in Massachusetts. Thus far one school in every section of Boston contains one ungraded class, while in the north end district there are five such classes.

Smallpox in Bristol, Conn.—Dr. A. S. Brackett, who had charge of the four cases of smallpox in Bristol, has contracted the disease himself.

Open Air Treatment Checks Consumption.—The open-air treatment for persons in the early stages of consumption is shown to have been efficacious in about 67 per cent. of the cases which were treated during the past year at the Massachusetts State Sanatorium at Rutland, according to the annual report. There was but one death during the year, and the percentage of recovery and of marked improvement was considerably higher than for two years past. There were 1,109 applications and 399 patients were admitted. The average age of the patients was 28 years.

Bequests.—$12,000 was left by the will of the late Harriet Welsh, of Boston, to various charitable institutions, among which are Christ Hospital, Jersey City, and St. Luke's Home for Convalescents, Roxbury.

Smallpox in Massachusetts.—Smallpox in Boston has decreased, 40 cases and six deaths having been reported last week. A few cases have appeared in Salem jail, the first one occurring in a man sent from Lynn. More cases are reported in Malden and Northampton, while Newton [illegible] has a miniature epidemic, and vaccination has been made compulsory. The disease is supposed to have been brought from Canada by a family which recently arrived at Rockdale, a suburb of Newton.

Fire in a Stamford Hospital.—On January 8 the Sound View Hospital, Stamford, Conn., was seriously damaged by fire, but no one was injured. All the occupants of the institution were safely removed by the hospital attendants. The loss is fully covered by insurance.

CANADA.

(From our Special Correspondent.)

Queen's University, Kingston, is to have a new Convocation Hall to cost from $[illegible] to $[illegible], and the medical faculty though not likely yet to a considerable expense in connection with new buildings and equipment, has formed a committee to raise a medical faculty fund for this purpose.

Dr. J. George Adami, professor of pathology at McGill University, read a paper before the Toronto Pathological Society January 4 on the classification of tumors. It was an open meeting and a very large number of practitioners attended to hear the distinguished pathologist from Montreal.

The Canadian Field Hospital for South Africa, the offer of which has been accepted by the Imperial Government, will be in charge of Dr. A. N. Worthington, of Sherbrooke, Quebec, as surgeon-colonel, that officer having already seen active service in the South African campaign. Dr. Carleton Jones, of Halifax, will be surgeon-major, Dr. H. D. Johnston, of Charlottetown, P. E. I., surgeon-captain, and Drs. Roberts and Tremayne, of Toronto, surgeon lieutenants.

The Smallpox Situation at St. John, N. B., is becoming better. Within the past three months there have been 98 cases with 22 deaths, an unusually large percentage of deaths, as in every other centre in Canada the mortality has been light. There are now only 30 persons quarantined, and of this number half have fully recovered.

The Vital Statistics for Toronto for the year 1901 are as follows: Births 4415, marriages 2148, deaths 3408. In comparing these figures with 1900 it is found that there have been 85 births less, 270 more marriages and 146 less deaths.

The Staff of the Canadian Journal of Medicine and Surgery held their fourth annual banquet last week, with the business manager, Dr. W. A. Young, in the chair. In reply-

ing to the toast of the legal profession, the Crown Attorney made mention of the unusually large percentage of charlatans at present in Toronto, and hoped that the legislature at the coming session would enact legislation to overcome this unwonted evil.

An Epidemic of Quackery.—Almost every day a case is tried in the police courts of Toronto, of Christian Science, osteopathy, palmistry, or something of the kind. But the very latest and newest thing in chicanery of which there is any record in Toronto is the "Radiant Health Circle," one ray of which would be sent out to any part of the compass for a dollar per ray. These cases have resulted in sentences for obtaining money under false pretences.

The Montreal General Hospital admitted 175 patients to its wards during December, 159 were discharged, and 13 died. The average daily sick in residence was 159. There were 64 ambulance calls. In the out-door department there was a considerable falling off as compared with other months, there being fewer consultations and fewer minor operations.

Quebec Doctors Must Pay Annual Assessments.—This is according to judgment recently rendered in the case of the College of Physicians and Surgeons of that province against Dr. Auguste Bourbonnais, M. P. The judge ruled that a doctor must pay his annual $2 assessment to the college or cease practicing his profession. The plaintiffs received judgment for $24 with costs, as the doctor had been twelve years in arrears.

MISCELLANY.

Population of the World.—Certain considerations arising from the great increase of population in Europe and North America during the last century formed the subject of Sir Robert Giffen's address before the British Association for the Advancement of Science. Altogether the growth is from 170,000,000 to 510,000,000, or the space which at the beginning of the century was occupied by one person must now accommodate three. The white race need not trouble itself about either a yellow or a black peril; while in regard to its several members, as France now seems to be stationary, we have to concern ourselves, as far as numerical strength is concerned, only with Germany, Russia and the United States. Anxiety is often felt about food supplies, and it is true that of late years they have been imported more and more largely; but this is also true of other European countries, especially Germany. Such a country might, then, be in a serious plight in case of war, for it cannot be assumed that overland importation would be always possible, so it might suffer as much as we should from a blockade of the coasts. But during the later part of the century, while the increase of population has been universal, it has not been in an increasing ratio, even in the United States it has declined from something like 35% in the earlier part to only 21% in the last decade. It has also diminished in England, though the figures have been in all cases smaller. Such increase depends not only on the birth rate but also on diminution of the death rate. That is brought out by the present almost stationary condition of France; the birth rate is rather low, 219 per 10,000, but its death rate is 211. This means a very slow growth indeed, but if the latter were reduced to the English rate, 183 per 10,000, very substantial increase would speedily result. All these considerations show what important ideas were suggested by the most common statistics, indicating the need of a better statistical and economic education for our public men..—*London Standard.*

Fresh Air.—Fresh air is the fashion. Doctors prescribe open windows and an outdoor life in place of drugs. It costs nothing, and is within the reach of all. To one who has grown accustomed to living in the open air, whose windows are never closed night or day, it is actual physical pain to stay with a friend whose ideas on the subject have not progressed since the days of his grandparents. It is real misery for such a one to travel in a railway carriage with the windows closely shut, and many a play and concert is spoiled for him by lack of ventilation. Air hunger is a very real sensation, quite as much as the hunger for food, with which most people are more familiar. The purity and temperature of the air are of great importance to the eyes. It may be charged with dust, smoke, acid vapors or sharp particles; it may produce irritation or inflammation, either directly, or when the eyes are tired and heated, by abstracting too much warmth from them. Persons whose occupations expose them much to dust should often wash the eyes with cold water.

Light Waves.—The wave lengths vary between about thirty-two-millionths of an inch, which is the measurement of extreme red, and the fifteen-millionths of an inch, which is the measurement of extreme violet. Their speed equally defies grasp by the imagination, ranging from twenty billions to four hundred billions per second. But as the shorter waves take quicker steps than the longer waves, they all arrive together, combining to affect the eye as white light. As observed by Newton, the sun's spectrum appeared to be an unbroken band of colors, and it was not until 30 years after his observations that Wollaston noticed seven dark lines appearing at intervals across the spectrum. These he regarded as marking the boundaries between the seven colors. But in 1814, Fraunhofer, using improved apparatus, examined the spectrum more minutely, and detected the presence of no less than 576 dark lines, the position of more than one-half of which he mapped out, naming the few very conspicuous among them after the letters A. to H. They are known as "Fraunhofer's lines," but so many have been discovered since, that their wave lengths are now expressed in figures.—*New York Evening Post.*

Sulphur Dioxide for Disinfection.—Acting Assistant Surgeon S. A. Ransom, U. S. M. H. S., has recently reported the results of his experiments in San Francisco, in estimating the length of time required for the disinfection of vessels with 5% sulphur dioxide. He concludes that twelve hours' exposure is sufficient to kill all insects and all germs except the bacillus subtilis. Rats survived in but one experiment.

Smallpox in the United States.—The Surgeon-General reports that during 1901 smallpox has occurred in every State and territory of the Union with the exception of Arizona, from which no reports have been received. The number of cases reported for the six months ended December 30, 1900, was 7,796, with 137 deaths, a mortality of 1.75 per cent. For the six months ended January 30, 1901, 30,710 cases were reported, with 552 deaths, a mortality of 1.79 per cent. For the whole year the number of cases was 38,506 and deaths 689, showing a mortality of 1.79 per cent. During the year ended June 30, 1900, there were 15,053 cases reported with 735 deaths, a mortality of 4.8 per cent. It is believed that the cases reported this year, as well as the deaths, were more in accordance with the exact figures than those during the preceding year, and the percentage of deaths of 1.79 per cent. is deemed to be the correct mortality.

Electric Light.—A Russian medical man has decided that electric light is least injurious to the eyes. He says that the oftener the lids are closed the greater the fatigue and consequent injury. By experiments he finds that the lids would close with different illuminations per minute, candle light, 6.3; gas, 2.8; sun, 2.2; electric light, 1.8.

History of the Clinical Thermometer.—Currie, of Edinburgh, employed a thermometer in the treatment of typhoid fever patients with the cold douche as early as 1797. He was ridiculed by his German contemporaries as an instance of medical decay in English medicine. The first clinical application of the thermometer was made by Sanctorius, of Padua; he invented a thermometer open at the end; after being held by the patient it was plunged into cold water. Boerhave taught the importance of the thermometer. De Haen—1704 to 1776—must be given the honor of introducing the thermometer into current use at the bedside. It was not until 1850 to 1870 that it came into general use mostly through the studies of Traube and Wunderlich on temperature in disease.—*Jour. Amer. Med. Ass'n.*

Boiler Explosions.—The number of boiler explosions in the United States, the number of killed and of wounded are:

Year.	Explosions.	Killed.	Wounded.
1896	346	[illegible]	382
1897	369	398	398
1898	383	324	577
1899	363	298	456
1900	373	268	520

In 1900, there was about one explosion daily, on the average in the United States and there were 788 victims of explosions during the year. In Great Britain during the year

there were only 24 persons killed by boiler explosions and only 65 wounded, 89 victims. There are certainly not nine times as many boilers in the United States as in Great Britain. *New York Sun.*

Decline in Rum Drinking.—It has long been apparent that the people of this country do not drink rum as they used to in early days, when in New England even the clergy partook of it, and at ordinations and other pulpit celebrations it was a standard refreshment. It would appear from statistics that rum is much less a favorite than some other alcoholic beverages. The total abstinence people, delighted over the decline in the production of rum, would be saddened if they consulted the statistics of whiskey in the same connection. The one has increased more than the other has declined, and it has not been established that a gain in temperance has been made by the substitution. Rum certainly does not stimulate more than whiskey, and experts have declared the former to be the less harmful drink.

Suicide in the United States.—The record of suicides for the past year is something grim and ghastly. There were no less than 7245 of them in this country alone, and it is probable that a great many suicides are concealed. The published statistics show that the number of people who take their own lives is growing much faster, proportionately, than our population. As usual, poison heads the list of agencies, and as usual, likewise, physicians lead off in the list of victims in professional life.

Obituary.—Dr. Duncan McLeod, at Detroit, Mich., December 29, aged 53 years.—Dr. Lewis Evans Carson, at Prairieton, Ind., December 29, aged 77 years.—Dr. Leroy A. Merrill, at Lonsdale, R. I., December 23, aged 46.—Dr. Henry Fitzbutler, at Louisville, Ky., December 28, aged 64 years.—Dr. Frederick M. Barrows, at Clinton, N. Y., December 27, aged 79 years.—Dr. George D. McIlwaine, at Pittsburg, Pa., December 25, aged 35 years.—Dr. John Geyer, at Dayton, Ohio, December 29, aged 56 years.—Dr. Isaac T. Monroe, at Granville, N. Y., December 29, aged 61 years.—Dr. M. W. Hamilton, at Little Rock, Ark., recently.—Dr. T. H. Wright, at Washington, D. C., December 24.—Dr. Frank A. Farrell, at Deming, N. M., December 29, aged 35 years.—Dr. James L. Titterington, at Richland, Mo., December 25.—Dr. Frank M. Cronin, at Lancaster, Wis., December 25, aged 55 years.—Dr. Samuel C. Webb, at Homer, N. Y., December 29, aged 83 years.—Dr. Milton P. Mason, at Mansfield, Ohio, December 26, aged 72 years.—Dr. E. A. Benn, Ypsilanti, Mich., January 2, aged 41 years.—Dr. Abby J. Wolverton, at Ardmore, Ind. Ter., December 28.—Dr. Shannon McRillat, at Victoria, Ill., December 21, aged 31 years.—Dr. Thomas A. Carrico, at Bryantown, Md., January 5, aged 74 years.—Dr. Joseph M. Lawrence, at Los Angeles, Cal., January 5.—Dr. Edward Steese, at Brookline, Mass., January 6, aged 58 years.—Dr. E. F. Whitman, at Roxbury, Mass., January 3, aged 53 years.—Dr. William Augustus Pierrepont, at Brooklyn, N. Y., January 6, aged 46 years.—Dr. Robert Hall, at Concord, N. H., January 10, aged 91 years.—Dr. Grove H. Wilson, at Meriden, Conn., January 10, aged 78 years.—Dr. George Covert, at Clinton, Wis., January 9, aged 73 years.—Dr. W. W. Young, at Nanticoke, Pa., January 6, aged 30 years.—Dr. J. B. Buchanan, at Newport, R. I., January, 12, aged 25 years.—Dr. William C. Dixon, at Philadelphia, Pa., January 10, aged 63 years.—Dr. Alfred N. Mahon, at Pittston, Pa., January 11, aged 25 years.

GREAT BRITAIN.

An Expert on the Plague.—Dr. Ashburton Thompson, who made a careful study of the plague in Sydney, N. S. W., announces that rats were practically responsible for the spread of the plague. From his experience at Sydney, where there were 300 cases, he found that the plague did not spread like other diseases, and he was able to trace almost every fresh outbreak in different parts of the city to the rats. He was even inclined to think that the plague was primarily a disease of the rat, which was communicable to some other animals, among which man happens to be included. He recommended that all vessels coming from suspected ports be fumigated with sulphur, and that shields should be used on the springs and hawsers fastening the ship to the dock. All gangways connecting the ship with the land should be hauled up at night, or when not in use, and if one is used at night it should be brightly illuminated and watched by a man put there for that purpose. He also advised that the number of rats in non-affected places be kept down, for such diminution naturally lessened the chances of infection.

The Gloucester Infirmary.—The Governors of the Gloucester Infirmary have decided to make large alterations in the institution buildings to cost as much as $50,000.

New Consumption Hospital at Norwood.—The foundation stone of the country branch of the Mount Vernon Hospital for Consumption will be laid by Princess Christian in May.

The Newport and Monmouthshire New Hospital, which was recently opened, is a large and beautiful building, with accommodations for 84 patients in its six large wards. These are built in the two end pavilions which are joined to the administration building by corridors. The operating room is modern and well equipped; there is a large out-patient department, and laundry, heating, ventilating, and electric lighting apparatus are provided.

The Royal College of Physicians, Edinburgh.—On December 5, 1901, the following officers were elected for the ensuing year: President, Dr. T. R. Fraser; vice-president, Dr. J. Andrew; treasurer, Dr. Peter A. Young; secretary, Dr. R. W. Philip, and librarian, Dr. George W. Balfour.

Alfred Hughes Memorial Medal.—$9000 has been given to the Cardiff College Council to provide a medal to be awarded annually to the best student of anatomy, in memory of the late Prof. Alfred Hughes.

London's Smallpox Epidemic.—The present outbreak of smallpox in London remains very serious, figures showing no sign of decrease. Since May of last year 2,273 cases have been reported. The number now being treated at the institutions of the Metropolitan Asylum Board is 878. Some facts have been brought to light by the epidemic in London. Out of 81 children attacked under 15, 57 had not been vaccinated, and 38 died. Of these 38, one child only had been vaccinated. In another group, out of 24 vaccinated children who contracted the disease, only one died. Of the cases in London one in three has proved fatal, the mortality being three times as great among the unvaccinated as among those who were protected by vaccination. The medical officer of the county of London compares the recurrence of smallpox epidemics to great waves. There was one in 1838 and another in 1871. He argues that another is now due, which will probably become general throughout the world, as did the previous epidemics. The patients in London are not treated in hospital buildings, but in a number of hospital ships fifteen miles down the Thames or in shelters erected in unfrequented districts on the banks of the river. The Health Board has resolved to build a new smallpox hospital capable of accommodating 800 patients. This will make the total number of smallpox beds in the hospitals 2,540. The Statistical Committee of the Board reported that the death-rate in 1901 was 14 per cent. in the cases of persons who had been vaccinated, 65 per cent. in doubtful cases, and 50½ per cent. when the patients had not been vaccinated. There is an enormous demand for the lymph used by doctors. One laboratory which turns out lymph ready for use cannot supply its own customers, though it manufactures 5,000 tubes a day. This is but one single establishment.

Bequests to Hospitals.—$250,000 has been left to the Edinburgh Royal Infirmary by the late David McCosh, and the Italian Hospital, London, has been promised $2,500 to meet the expenses of the hospital.

The Depopulation of Ireland.—According to the figures of the Registrar-General, Ireland is still losing in population, the decline for 1901 being figured at 31,425. This is entirely accounted for by emigration, for there was an excess of births over deaths amounting to 13,863, making the loss by emigration for the year 45,288. The Registrar's figures show that last year there were 21,450 marriages, 101,459 births and 87,606 deaths. There has been, in comparison with previous years, a slight decline in both the birth- and marriage-rates while the death-rate shows an increase. Among the applicants for marriage certificates there has been a marked increase in the number who can read and write. During the past year 88.8 per cent. of the husbands and 80.8 per cent. of the wives were able to read and write, figures much higher than those shown by the report of ten years ago.

Appointments. Dr. Welsh, head of the pathological department of the Edinburgh Royal Infirmary, has been appointed professor of pathology at Sydney University, N.

S. W.. Dr. Taylor has been selected for the position of Director-General in the Army Medical Service.

London During 1901.—The year 1901 has been very healthy in London. The average death-rate, in a population of over four and a half millions, was 17.4 per 1,000. The aggregate deaths were 79,601, which is 9,874 fewer than the average for the last ten years. During the first half year there were 7,438 fewer deaths than usual. The rate was above the average throughout November, due to deaths from diseases of the respiratory organs. This was the result of excessive changes in temperature and spells of cold weather, accompanied by fogs. The worst week's rate was 22.3, in November, and the best 13.7 in June.

English Notes.—England has 28 cows for every 100 inhabitants; Australia has 270. England has eight horses for every 100 people, Russia 21, Algiers 117.—Water pipes underlie 1819 miles of London's streets.—Ireland is astonishing criminologists by the remarkable decrease in the number of its criminals. The statistics for 1900 show a decrease of 10.2 per cent, as compared with the figures of 1899.—According to Dr. Sidney Jones, 16,000 consumptives are moving about Australia annually.—During the last fifty years the suicidal tendency in England has grown to a formidable disease. Suicide has steadily increased 200 per cent.—Since 1881, when Russia passed laws against the Jews, the Jewish population of Great Britain has risen from 70,000 to 160,000.—British medical journals of high authority insist that ozone can be artificially produced at reasonable expense to purify the air in tunnels, sewers and other places in London.—In London during the autumn there were 864 cases of smallpox, one-sixth of them fatal.

Obituary.—December 16, 1901, at Bedford, Lieut. Colonel H. D. Cook, I. M. S., retired, died, aged 55.—Dr. R. S. Bright, of Hobart, Tasmania, president-elect of the Sixth Intercolonial Medical Congress, to be held in Hobart in February, died suddenly two weeks ago.—Dr. Thomas Aspinall, who died near Christmas, at Darwen, left $375,000. —Dr. C. H. W. Ellerman died at Rotherfield, December 26, 1901, from the effects of a bicycle accident, aged 37 years. —Dr. Watson, medical officer of health in the city of Rochester, died recently, aged 50 years.—On December 28, 1901, in Manchester, Dr. Henry Browne died, aged 84 years.—Robert Cromie, a graduate of Glasgow University, died at Clough, Ireland, December 18, 1901.—Dr. J. J. Tracy a graduate of Queen's College and the Royal University in Ireland, died at Cork, December 26, 1901—Dr. Woodsworth Poole, medical attaché of the British Legation, Pekin, died of typhoid fever in Pekin, January 9. During the siege of the foreign legations of July and August, 1901, his professional services were of great value to the English and Americans.

CONTINENTAL EUROPE.

The Hundredth Anniversary of the "Internat."—On the 12th and 13th of April will be celebrated the hundredth anniversary of the foundation of the "internat" (service as resident physician in the French hospitals) in Paris, although the celebration really should fall on the 2nd of February. Former resident physicians will attend the celebration in great numbers, there will be a banquet with speeches, and a monument, erected in memory of those residents who have died of diseases contracted during their hospital service, will be unveiled in the court-yard of l'Hôtel-Dieu. Prof. Guyon is vice-president of the committee which is organizing the reunion.

Algiers Medical School.—Dr. Gémy, professor of dermatology and syphilography, aged 70 years, died recently, and Dr. Blaise, professor of pathology, died suddenly of heart disease during his lecture.

Surgery in the Angers Medical School, France.—The surgical service at Angers, under the direction of Professor Monprofit, contains small rooms accommodating 60 men and as many women. The operating rooms are modern, with sterilizing and dressing rooms adjoining. Chloroform is generally used as the anesthetic. The operating room for private cases is superb, having glass walls upon three sides. Monprofit uses an operating table which can easily be inclined at any angle, and an anesthetizing table upon wheels, both of which, while commonly seen in America, are rare in France. He also has sterilizing apparatus, washstands, etc., copied after improved American models. It is probable that a gynecological clinic will soon be established at Angers.

Professor Lannelongue Honored.—A banquet was given December 23, 1901, by the Committee of Organization of the International Medical Congress of 1900, in honor of the president of the congress, Professor Lannelongue. 250 persons attended the banquet, where a medallion, engraved by Chaplain, was presented to Dr. Lannelongue, who is professor of Surgery in the Paris Medical School.

Still Another Cancer Cure.—Dr. Leroy has communicated to the Academy of Medicine, Paris, a cure for cancer that he has discovered. The cure consists of the simultaneous internal use of arsenic and quinine in quantities proportionate to the gravity of the case.

Emigration From Germany.—Emigration from Hamburg and Bremen during the year 1901 amounted to 203,298 persons, as against 180,488 persons in 1900. Of the emigration from Bremen during 1901, 103,214 persons out of a total of 110,606 went to the United States.

Notes.—Of five hundred cadavers recently examined by Fiedler, of Dresden, ten per cent. were found to contain biliary calculi; and of this number five per cent. were men and fifteen per cent. women.—A society has been organized in Moscow, the members consisting of both physicians and laymen, for the purpose of preventing tuberculosis by putting into practice those means which science has indicated as effective.—The average yearly damage to French crops by hail is $7,000,000.—Spain has a smaller foreign population than any other country in Europe, Norway being second in this respect.—Typhoid is at present epidemic in many Russian cities, notably in St. Petersburg, Samara, and Krementschug.—In the middle of November the population of Berlin numbered 1,900,651. It has increased by some 12,000 since December 31 of last year. For the year 1900 the increase was 42,943, a disparity which is to be explained by a fall in the immigration and a rise in the emigration. —There have been over 500 deaths from plague in Russia.—Rome, although capital of Italy, is now only third city in size. It has only 462,000 people, while Milan has 490,000, and Naples nearly 700,000.—The ratio of mortality in Switzerland has decreased one-fourth in thirty years.—M. Floresco has communicated to the Academy of Sciences at Paris proofs that there is a fixed relation between the quantity of iron in the liver of animals and the color of their skin and hair. Animals of dark hair contain nearly twice the amount of iron and pigment in the liver and skin as those of white hair.—In Russia you must marry before 80 or not at all, and you may marry only five times.—At the St. Petersburg Eye Dispensary a child three years old was recently treated who, while asleep in the barn, had had one eye enucleated by a rooster.—Portugal has only 300 Jews, a smaller number than any other European country.—In five years the population of Prussia has increased by 2,617,386 persons. There are now 600,000 more women than men.—A certain sect in Russia considers hair sinful and baldness a sign of sanctity.—There is a gradual increase of women physicians in Russia. At the last State examinations 54 women were granted the right to practice.—Holland has 10,100 windmills, each of which drains 310 acres of land, at an average cost of 25 cents an acre a year.—The Charkow Medical Society has established an annual prize, named after Virchow, for the best work on pathological anatomy.—Russia, Germany and Roumania have entered into a mutual agreement that in the future no passports will be issued to persons with pulmonary affections.—The rag-pickers of Paris have been making a trade of selling all the old corks picked up in cafés, dust-bins, and ash-heaps. After cleansing them they sell them to manufacturers for the ordinary purposes of business, but the Committee of Public Health has vetoed the trade.—Fifteen million bottles of champagne are exported yearly from France.

Obituary.—On December 13, 1901, Dr. Hans Hensen, chief of the medical clinic of the University of Kiel, died suddenly after a few days illness.—Dr. F. Melendez y Herrera, professor of topographical anatomy, died suddenly in Cadiz. —The death is announced in Stockholm of Dr. Axel Key, formerly professor at the Caroline Institute.—At Ghent, Belgium, Dr. F. J. Soupart, professor of surgery at the University of Ghent from 1835 to 1893, died at the advanced age of 91. A graduate of the University of Louvain, and formerly Senator; his works upon amputations, plastic surgery, ligating the axillary artery, etc., are well known.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

(December 28, 1901. No. 2139.)

1. An Address on Localization in the "Motor" Cerebral Cortex. C. S. SHERRINGTON and A. S. F. GRUENBAUM.
2. On the Quantitative Estimation of Chloroform in Animal Tissues. A. D. WALLER.
3. Theories of Inheritance. GEORGE ARCHDALL REID.
4. Direct Introduction of Purgatives into the Large Intestine in Cases of Operation for Septic Peritonitis. A. MARMADUKE SHEILD.

1.—Sherrington and Grünbaum have recently had the opportunity of making physiological experiments on all the known species of anthropoid apes, in order to determine **the motor area of the cerebral cortex.** The majority of the experiments, however, were made upon the chimpanzee. In this animal the authors found that the motor area occupies the entire length of the precentral convolution and that, in most places, it also includes the greater part of the whole of its width. It extends into the bottom of the fissure of Rolando, occupying its anterior wall and in some places its floor. In some locations it even extends to the deeper part of the posterior wall of the fissure. In the examination of 19 hemispheres the authors have never found the motor area to extend to the superficial surface of the postcentral convolution. The motor area extends down upon the mesial surface of the hemisphere, but in no case did it reach the callosomarginal fissure. The anterior limit of the motor regons is, as a rule, not coincident with any fissure. But it is not the extent of the motor area that appears to be variable but the sulci themselves are the variant features. The great variety exhibited by the fissures and the convolutions of the brains of the higher animals render these structures useless from the point of view of strict localization. As a result of this variability in the markings on the surface of the cerebrum, the authors have always depended upon the reaction following stimulation of the cortex rather than upon the anatomical markings for localization. In the anthropoid apes faradism elicits movements from the so-called motor region with ease. If it is really necessary to employ intense faradization for the human motor region, the human animal presents a very marked difference in this respect to the apes of all classes. In the majority of animals upon which the authors experimented cortical epilepsy was easily produced. From below upward in the motor region the areas for the different segments of the body have the following relation: Tongue, mouth, nose, ear, eyelids, neck, hand, wrist, elbow, shoulder, chest, abdomen, hip, knee, ankle, toes, perineal muscles, anus and vagina. The movements of the eyeballs do not appar in this list, but there is a frontal area, which extends into the middle and inferior frontal convolutions, excitation of which gives conjugate deviation of the eyeballs to the opposite side. The extirpation of a great part of the hand area from the right hemisphere caused an immediate, severe crossed brachioplegia. The paresis diminished quite rapidly and in 6 weeks' time the animal had largely recovered the normal usefulness of the limb. Similar results were caused by a lesion in the leg area. There is greater integration of localized representation of movements in the anthropoid than in the lower apes. The so-called motor area in the anthropoid brain forms, altogether, a smaller fraction of the total surface than is found in the lower types of monkey. The results on the gorrilla and the orang entirely confirm those obtained on the chimpanzee. This is a matter of interest because the gorrilla's brain is the highest form of brain, excepting only that of man. [J. M. S.]

2.—Waller has found that the weight of **chloroform recoverable from the body of a small animal,** killed by the inhalation of choloroform, amounts to one part in 10,000 of the body weight, a quotient which is about twice that estimated by Snow as being lethal to the human subject. [J. M. S.]

3.—Reid reviews the **theories of inheritance.** He believes that the transmission of acquirements is exceedingly improbable and that in no case has such an occurrence been proved. He believès that if we adhere to known facts we shall be able to say that although inborn traits are transmissible, acquirements are not transmissible. [J. M. S.]

4.—Sheild advocates the **direct introduction of purgatives into the intestines, at the time of operation, in cases of septic peritonitis.** Hitherto he has used this method in cases of perforative appendicitis only. The nozzle of a small syringe was introduced into the stump of the appendix and 3 drams of magnesium sulphate with 10 drops of tincture of nux vomica and a dram of glycerin in an ounce of water were injected into the cecum. Two hours later a turpentine enema was given, and the result has been excellent. The author has used this method in 5 bad cases of septic peritonitis associated with perforative appendicitis with good results. [J. M. S.]

LANCET.

December 28, 1901.

1. A Lecture on Hemiplegia. JAMES TAYLOR.
2. A Clinical Lecture on the Early Diagnosis of Pulmonary Consumption, etc. ARTHUR LATHAM.
3. The Differential Diagnosis of Smallpox. J. MacCOMBIE.
4. Three Cases of Early Infantile Tabes due to Congenital Syphilis and Hereditary Neurosis. G. T. BROOKSBANK JAMES
5. Some Points in the Prognosis of Mental Disturbances. W. J. HANFIELD BASCOE.
6. Tuberculosis of the Heart. H. NEWTON HEINEMAN.
7. The Detention of Lunatics in Workhouses. SYDNEY DAVEY
8. The Prevention and Cure of Phthisis. GODFREY W. HAMBLETON.
9. The Plague in India. ALEX. GRAHAM-SIMPSON.

2.—Latham delivered a clinical lecture **on the early diagnosis of pulmonary consumption with especial reference to the value of tuberculin,** at the Brompton Hospital for Consumption on Nov. 6, 1901. An early diagnosis may be made under a number of circumstances. 1. When diminished resonance and increased resistance to the finger are elicited and associated with fine rales in those situations where tuberculosis commonly starts in the lungs, namely the apices. 2. The early diagnosis is also justifiable when suggestive symptoms of tuberculosis are present and tubercle bacilli exist in the sputum although on physical examination the lungs seemed apparently sound. 3. The early diagnosis may be made when hemoptysis, even when small amounts of blood are expectorated, occurs in cases in which there is no evidence that the bleeding is due to morbid conditions of the heart or great vessels or of the lungs or of the chest other than tuberculosis. He emphasizes that the physician should not overlook some trivial cause for the hemorrhage and he relates Dr. Wilson Murray's interesting experience who was consulted by a gentleman on account of an attack of blood spitting. The gentleman saw the blood in the bath and immediately his thoughts headed themselves and he began to feel pain in the left apex. The patient was treated accordingly. The patient afterwards stated that the bleeding was from a spongy area, which he had accidentally located with his tooth brush. [illegible] diagnosis may also be made when there are suspicious physical signs in the lung with tuberculous disease in some other part of the body. The author lays great stress upon the value of the tuberculin test which he thinks should be made in all cases in which the disease is so slight that a diagnosis cannot be made from physical signs or when tubercle

bacilli can not be demonstrated in the sputum. Under such circumstances one, two, or three small injections of Koch's tuberculin may be given without danger. The author as a rule injects the smallest amount of tuberculin which will cause a rise in the temperature. When patients are weak and physical signs are extremely suspicious, he begins with .001 of a cubic centimeter of tuberculin in the case of an adult or .0005 of a cubic centimeter for children. If within three days no reaction occurs, five milligrams for adults are injected, but only 3 milligrams if there has been some oscilliation of temperature without a definite reaction. If after the second injection no reaction occurs, a third injection of one centigram for adults is given. After waiting for three days, if no reaction occurs, tuberculosis may be excluded. In robust patients or in those in whom the symptoms and signs are very indefinite, he advises using larger injections, five milligrams for the first, one centigram for the second and two centigrams for the third. After the injection patients should be kept in bed for from 24 to 48 hours. He draws the following conclusion: "In my deliberate opinion we have in Koch's old tuberculin a most valuable means at our disposal for making a possible diagnosis in a large number of cases, which present suspicious symptoms and signs, at a much earlier stage of the disease than we can by any other means. We are thus enabled to impress upon our patients the vital importance of living under suitable conditions and amongst ideal surroundings and to place them on the road to an almost certain arrest of their disease." [F. K. J.]

3.—MacCombie writes on **the differential diagnosis of smallpox.** He discusses the diagnosis of smallpox in the pre-eruptive and in the papular and vesicular stages. He states that the prodromal rashes of variola can be distinguished from scarlet fever and measles by their local distribution. The measly rash can also be differentiated from true measles by the fact that it disappears on stretching the skin and is only slightly, if at all, raised above the surface. The occurrence of Filatow's spots in measles is an important differentiating point. He thinks it important to mention that in smallpox prodromal rashes are rare in persons under the age of 10 years. The majority of the cases of scarlet fever and measles are observed under that age. Typhus fever and influenza may be differentiated from variola by the characteristic eruption of smallpox. The initial symptoms of smallpox are sufficient to distinguish this disease from German measles, copaiba rashes and lichen. Smallpox in the vesicular stage may be differentiated from chickenpox by the distribution of the eruption, the shape of the vesicles, the rate of growth of the vesicles, and the unilocular character of the vesicles of chickenpox as compared to the monolocular nature of the smallpox vesicles. In varicella, as a rule, the first thing noticed is the vesicular eruption on the trunk, the limbs, and the face, without the occurrence of such initial symptoms as backache, malaise and pyrexia. The vesicles of chickenpox are unilocular, they readily collapse when punctured, are glistening, hemispherical, dome shaped and transparent. These vesicles attain their full growth within the first 24 hours and the eruption is found to be most abundant on the trunk, less so on the face and extremities. Confluent smallpox on the first or second day is sometimes mistaken for measles. The eruption of measles is soft and velvety, while that of smallpox is hard and shotty. Syphilitic eruptions are occasionally mistaken for smallpox, because the observer fails to examine the whole of the eruption and does not obtain sufficient data of the history of the case. The absence of initial symptoms in herpes, eczema, impetigo, pemphigus, urticaria papulosa and acne which are common to smallpox differentiate these conditions from variola. In rheumatic sudamina, the eruption occurs usually upon the trunk, and sweating is a symptom of this disease. Glanders may be distinguished from smallpox by the fact that the severity of the constitutional symptoms are disproportionate to the amount of eruption. He contends that, when making a diagnosis of smallpox the following rules should be observed: "1. It should never be forgotten that the initial symptoms of smallpox are most constant both in vaccinated and unvaccinated subjects. 2. When called to a case the practitioner should never take for granted that the eruption on the trunk is like eruption on the face and extremities, but in every case he should examine the whole eruption. Disregard of this precaution leads to many mistakes. 3. It should not be assumed that because a case of smallpox has occurred in a house, therefore a vesicular eruption appearing on another inmate of the same house about the same time is smallpox. I have known cases of chickenpox and smallpox occurring simultaneously in the same house, and smallpox and enteric fever cases in the same family at the same time. 4. It should be remembered that in a very large number of vaccinated subjects smallpox is so mild that as soon as the eruption—consisting sometimes of not more than a half-a-dozen spots—has appeared, the patient feels well. 5. Care shoud be taken to avoid ascribing the spots on the face in a mild case to digestive disturbances and sending the patient to the seaside for a little change of air. This may not be the custom, but it is done." [F. J. K.]

4.—James reports three cases of early infantile tabes due to congenital syphilis and hereditary neurosis. [F. J. K.]

5.—Haslett discusses some points in the prognosis of mental disturbance. He contends that the majority of cases which come to the general practitioner will probably prove to be suffering from mania or melancholia, because nearly all the forms of chronic insanity begin with one or other of these conditions. He emphasizes that mania *per se* is a very curable disease. The prognosis is, as a rule, most favorable in those cases in which the onset is sudden and marked by violent excitement, raving speech, and subconsciousness to surroundings. A case with an obscure indefinite onset, running a prolonged insidious course, is not apt to recover. He also contends that a neurotic or insane ancestry does not necessarily militate against recovery, although predisposition to relapse may occur. When the patient's general health is poor, this makes the prognosis more favorable, because with the improvement of his physical condition his brain will also clear. When the general health improves and his brain does not begin to clear, the prognosis is less favorable. When the delusions are very numerous and changeable, we may feel more hopeful than when they are fixed. Hallucinations of sight have little significance. Those of an auditory character generally pass away as the acute symptoms subside, but when they persist for over a year, the condition is likely to become chronic. Hallucinations of taste and smell seem to indicate permanent brain injury and render the prognosis extremely grave. The author has never known a case to recover which presented hallucinations of taste and smell. Acute delirious mania requires prompt and vigorous treatment in order to save the life of the patient. He believes that puerperal mania is the most common and most curable variety of mental disorder. The insanity of adolescence, particularly in girls, shows a peculiar disposition to relapse, but recovery is common. A definite cause, a definite onset and early treatment, all favorably influence the prognosis of melancholia. The majority of the cases which recover do so within the first twelve months and only five or six per cent of the unimproved after that period ultimately recover. The insanity caused by alcohol offers a favorable prognosis if the poison can be cut off, which is very difficult to accomplish. He emphasizes "that we should never readily condemn a patient as suffering from dementia after an acute mental attack. There is a period of exhaustion and reaction after a brain storm and the patient is stuporous and restless. He cannot employ himself. He is careless, perhaps dirty, in his habits, his volition is weak and he has no self confidence. The condition is very much like true dementia, but the cloud will pass, the paralyzed neurones will revive and a good recovery will ensue. This condition

has deceived me—let it not deceive you—into making a prematurely gloomly prognosis." [F. J. K.]

6.—Heineman discusses tuberculosis of the heart. He mentions that the heart has been considered the most infrequent seat for the development of tuberculosis until Weigert called attention to the fact that, according to his experience, the majority of cases of acute general tuberculosis exhibited discrete small tubercles in different portions of the heart. Tuberculosis of the endocardium has been observed almost exclusively in cases of general miliary tuberculosis, as occurring in two forms: First, as small nodules, and second, a cheesy mass. Tuberculosis of the myocardium also occurs in two forms. 1. As fine transparent miliary nodules. 2. As large yellowish nodules, varying from the size of a pea to a walnut. The favorite seat of miliary tubercles in the myocardium is in the ventricular wall. The majority of cases of tuberculosis of the myocardium occur as a part of a general miliary tuberculosis. The blood vessels are the avenues of infection. The author reports two cases of tuberculous heart. One occurred in a man 36 years of age in whom the parietal pericardium was covered with numerous gray miliary nodules. The pericardial sack contained one and one-half litres of thick bloody fluid. The visceral layer was covered with a series of layers of grayish cheesy nodules, fibrous tissue, and partly formed by fibrinous layers. The second case occurred in a woman, 68 years of age. The lungs contained a few small old fibrous tubercles. The pericardial sac was totally obliterated by dense adhesions which contained yellowish tuberculous nodules. The article is concluded by a discussion of the staining methods for the demonstration of tuberculous nodules and tubercle bacilli. [F. J. K.]

7.—This article deals with some of the English laws pretaining to lunacy. [F. J. K.]

8.—Hambleton gives an outline of a practical and efficient system of prevention and cure of phthisis and he makes a plea for its general adoption. He contends that the prevention of phthisis may be brought about by adequate development of the lungs. He thinks that the important object in the treatment of phthisis is to eliminate the tuberculosis toxin and prevent its further spreading, and to develop the lungs to an adequate extent. The activity of the skin, kidneys, and alimentary canal should be increased by bathing, the use of diaphoretics, diuretics, and saline aperients. No attempt should be made to develop the lungs until the disease in the lungs has been arrested for some time. [F. J. K.]

MEDICAL RECORD.

January 4, 1902.

1. The Trial, Execution, Autopsy, and Mental Status of Leon F. Czolgosz, alias Fred. Nieman, the Assassin of President McKinley. CARLOS F. MacDONALD.
2. The Post-mortem Examination of Leon F Czolgosz. EDWARD ANTHONY SPITZKA.
3. A Case of Facial Hemiatrophy. LOUIS F. FRANK.

1.—See Philadelphia Medical Journal, January 4, 1902.

2.—See Philadelphia Medical Journal, January 4, 1902.

3.—Louis F. Frank reports a case of facial hemiatrophy. The patient is twenty-four years of age and unmarried. At thirteen years she suffered from severe scarlet fever, but otherwise has always been in good health. The present disease began to show itself on the forehead of the left side of the face in the formation of pigmented patches accompanied at their appearance with considerable pruritis. At present the most conspicuous feature is the presence of irregularly distributed patches of chloasma below the general level of the integument of the left side of the face. Notes are given of the condition of the nose, eyes, ears and hearing. Generally such cases present symptoms of hyperesthesia of the trigeminus, paresthesias in the region of the skin lesion, and spasms of the masticator muscles. Rarely the sympathetic causing dilatation of the pupils and the innervation of the face is affected, but exceptionally there is lessening of susceptibility. As to its etiology it seems to bear some connection with the attacks of certain of the infectious diseases. [T. L. C.]

January 11, 1901.

1. On the Progress of Public Health Organizations in the United States. STEPHEN SMITH.
2. Official and Private Phthisiophobia. S. A. KNOPF.
3. A Contribution to the Pathogenesis of Narcolepsy and Other Forms of Morbid Sleepiness. HEINRICH STERN.
4. Are the Tonsils to be Regarded as Normal Physiological Organs of the Body? FRANCKE H. BOSWORTH.

January 11, 1901.

1.—Stephen Smith, the first president of the American Public Health Association, narrates the progress of public health organization in the United States. The paper in part is an historical résumé of what has been accomplished and a tribute to the men who have had to do with these results. [T. L. C.]

2.—S. A. Knopf presents a paper on official and private phthisophobia, in which he takes the ground that the government should not exclude consumptive immigrants; that pulmonary tuberculosis is not a dangerously contagious disease, but only a communicable malady, that the contact *per se* could not transmit the disease and that the ordinary precautions with the patient's sputum and other secretions would do away with all danger of infection. He believes it is proper that pauper immigrants, whether tuberculous or not, should be by all means excluded, but by excluding consumptive aliens we may subject ourselves to retaliatory measures on the part of other governments and wealthy American pulmonary invalids may no longer be allowed to enjoy the hospitality of foreign health resorts. The exaggerated fear of tuberculosis he terms phthisophobia, and he believes that this is a new malady which should not be encouraged privately or officially. Unfortunately we have not yet in this country a Superior Board of Health with its seat in Washington which shall deal with such problems. [T. L. C.]

3.—Heinrich Stern contributes a paper on the pathogenesis of narcolepsy and other forms of morbid sleepiness. He has devoted considerable attention to the subject of autointoxication with reference to the production of morbid somnolence. In a case which he now reports he finds (1) Diurnally recurring morbid somnolence; (2) free perspiration on hands, feet and forehead at all times and particularly so before attacks; (3) the physical condition remains uninfluenced by the attack; (4) physiologic sleep does not refresh the patient; (5) weak, slightly hypertrophied heart; (6) Dilated stomach and hyperchlorhydria; (7) High urinary density and acidity; (8) urinary chlorides greatly in excess; (9) salts of sulphuric and uric acid, carbamid, creatinin, and calcium oxalate in excess in the twenty-four hours' urine; (10) diminished blood alkalescence; hemoglobin somewhat reduced in amount; (11) low degree of relative urinary toxicity before as well as after the attack of somnolence. He concludes in reference to this case that not a single symptom could be detected pointing to any of the pertaining and known types of autointoxication, but he states that it by no means follows that the primary cause of this instance of pathological sleep is necessarily also the underlying factor in the production of any or all other cases of morbid somnolence. [T. L. C.]

4.—Francke H. Bosworth discusses the question: "Are the tonsils to be regarded as normal physiological organs of the body?" He inclines to the view that this is not the case. He believes that the so-called tonsils are rather the result of diseased processes. In the operation of tonsillotomy he advises the use of a snare rather than a tonsillotome. [T. L. C.]

MEDICAL NEWS.

January 11, 1901. (Vol. 80, No. 2.)

1. Chronic Myocarditis. I. Morbid Anatomy and Physical Signs. JOHN H. MUSSER.
2. Prolonged Medication, with Special Reference to Digitalis. ABRAHAM JACOBI.
3. Heart Strain; Its Results and Treatment. J. M. G. CARTER.
4. On the Action of Digitalis. ARTHUR R. CUSHNY.
5. Bacteriological Diagnosis of Typhoid Fever. HENRY A. HIGLEY.

1.—John H. Musser, in his article on **chronic myocarditis**, notes the following: (1) Myocarditis secondary to pericarditis has the symptoms of dilatation or of dilated hypertrophy, and sometimes of that curious group of symptoms associated with mediastinitis, hepatitis and splenitis, in which the predominate or unequivocal symptoms are hepatic and splenic with ascites; (2) myocarditis following valvulitis or peripheral obstruction (lung or kidneys) is associated with symptoms of dilatation; herewith are intertwined, on the one hand, the symptoms of emphysema or nephritis; or, on the other hand, those of valvulitis; the physical signs of the latter condition obtain; it is most difficult often to go beyond the diagnosis of dilatation of the heart; (3) myocarditis of toxic and anemic origin; the fatty heart is associated with symptoms of grave secondary or pernicious anemia or of toxemias, as from tobacco or mineral poisoning or from chronic infections; (4) fibrous myocarditis—coronary artery disease. The author concludes his article with the statement that chronic myocarditis may exist (1) without definite physical signs (rare); (2) with signs of moderate cardiac hypertrophy, marked reduplication being the only physical sign and of significance only when coupled with signs of endarteritis; (3) with physical signs of dilatation; (4) with physical signs of fatty degeneration; (5) with the physical signs mentioned, which in the aggregate are of great significance. [T. M. T.]

2.—A. Jacobi advises large doses of from ten to twenty grains of **digitalis**, given at intervals of three or five hours, in bad cases of dilatation of the right heart, with cyanosis and orthopnea. On the other hand, in chronic conditions of weak heart, of either muscular or nervous origin, or of insufficient action caused by pulmonary obstruction, as in chronic bronchopneumonia or in tuberculous infiltration, small doses are advised, say four to six grains daily. This dose can be given for weeks and months without fear of any bad effects. In phthisis the use of digitalis is invaluable in all stages, healing in the first and relieving in the last. As to the disagreeable results, very little care is required if the solid extract is used in the form of a pill in combination with either extract of nux vomica, iron, arsenic, or belladonna. The author advises the use of this drug in chlorosis in addition to the iron and the mild vegetable purgatives. It influences the circulation of the body in general and the heart vessels in particular. The diseases in which digitalis is especially indicated in the dosage mentioned are: (1) Insufficiency of the heart muscles; (2) incompetency of the mitral valve; (3) chronic myocarditis; (4) acute myocarditis (in early stage); (5) aortic insufficiency. [T. M. T.]

3.—J. M. G. Carter divides the treatment of heart strain into (1) prophylactic; (2) hygienic; (3) dietetic; (4) medicinal. In the first division the elimination of corsets and belts, a quiet, well-regulated life, avoiding overexertion or any exercise that would produce profound impression upon the heart. In military life the adjustment of accoutrements and exercise as will prevent overwhelming the heart in its efforts to carry on the circulation. In the second division he includes well-regulated exercise, fresh air and sunshine, a well-ordered life and avoidance of excesses in any direction, systematic bathing of such temperature and character as will not produce shock, regular meals, sufficient sleep, avoidance of all dissipation. Dietetic treatment is very important in advanced cases. Foods that have a tendency to produce gas in the stomach or intestines and those which produce digestive disturbances of any kind should be avoided. The interval between meals should be long enough so that one meal is digested before another is taken. In mild and initial cases the diet need not be changed. If work of the heart is increased, liquids should be limited. Hot water acts as a stimulant, not only washing out the stomach after digestion, but also strengthening a flagging heart. In cardiac asthenia when dilatation is present, a dry diet is indicated. If the kidneys are not affected, a nitrogenous diet is advised, such as mild, eggs, meat, gluten bread, etc. If the disease is not of a severe type, vegetables, such as onions, asparagus, lettuce, and tomatoes may be allowed. Supper should be the lightest meal. Patients on a dry diet when thirsty should take hot water between meals, milk and lime water, lemonade or a weak solution of phosphoric acid may be substituted. Dry foods should be masticated thoroughly. Sudden dilatation requires rest in bed and a milk diet. Hypertrophy may require rest in bed and a non-stimulating diet. Well-cooked fruit may be given. The bowels should be kept open. If hypertrophic congestion of the liver occurs, some depletion may be required and a diet of milk or whey and soda and lime water given. Medicinal treatment in the first stage does not have to be resorted to if the other measures are carried out. When it is necessary, digitalis and strychnine are the most important drugs. The duration of the treatment depends upon the individual, and treatment must not be discontinued as long as dilatation exists. If the above drugs do not give the results desired, convallaria, strophanthus or caffeine can be substituted. Nux vomica can be substituted for strychnine. In hypertrophic overaction aconite is advised, but must be used with care. Gelsemium and aconite are sometimes necessary as cardiac sedatives. For distress at night belladonna, hyoscyamus and cannabis indica are valuable remedies. Occasionally the bromides and opium may be required, but they are not advised. [T. M. T.]

4.—Arthur R. Cushney's experiments show that the administration of therapeutic doses of digitalis to animals was followed by slowing of the heart, an increase in the strength of its contractions and an increase in its dilatation. The slowness of the heart is due to its spending a longer time in rest between the contractions, or as it is generally stated, to a prolongation of the diastolic pause. This slowing pulse is not due to any direct action on the cardiac muscle fibres, but for the most part to stimulation of the inhibitory center in the medulla oblongata. The increase in the dilatation of the heart results in an enlargement of its cavities during diastole and permits more blood to enter them than before the administration of the drug. This appeared more marked in hearts that were normal to begin with than in those that were already dilated. The increased dilatation is due to inhibitory action and not to any direct action on the cardiac muscle. The increase in the strength of contraction results in the heart's attaining a smaller size at the end of systole than before the drug was administered. It is generally recognized that the ventricle does not empty itself completely at each stroke. This action of digitalis is not confined to the ventricle, but extends to the auricles and both right and left hearts undergo the same changes in rate, strength and dilatation. Roy and Adami, in their experiments, have shown that the papillary muscles are also involved and contract more strongly than before the use of the drug. The greater strength of the contraction of the walls naturally leads to an augmented pressure in the interior. [T. M. T.]

5.—Henry A. Higley gives in the order of their reliability three available methods for establishment of the existence of any disease produced by a given micro-organism as follows: (1) The isolation and identification of the micro-organism producing the disease; here we receive the microbe from the body of the diseased person; (2) the application of certain staining reactions to the micro-organisms received from diseased persons, which reactions are peculiar to these micro-organisms and shall differentiate them from all other micro-organisms; (3) the effect or reaction produced by certain body fluids of persons suffering from bacterial diseases when these fluids in certain dilution are brought into contact with the micro-organisms of the same species with which the person is infected which micro-organism has been artificially cultivated in the laboratory. Such a method is the Widal reaction. In the Widal reaction the following factors must be considered which govern its production: (1) What are the substances which produce these reactions and whence do they come? (2) when and under what conditions are the substances pro-

duced and what relations do they bear to the disease; (3) what are the conditions, if any, up to which the laboratory organisms employed in the test must measure in order that the result shall be of standard clinical value? (4) are the agglutinating substances present in atypical cases of typhoid with equal frequency as in typical cases; (5) are special agglutinating substances present in conditions other than typhoid and in normal blood? [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

January 11, 1901. (Vol. LXXV, No. 2).

1. The Operative Treatment of Traumatic Intracranial Lesions. CHARLES PHELPS.
2. On the Feasibility and Management of a Hygienic Cure of Pulmonary Tuberculosis Outside of Closed Sanatoria. CHARLES L. MINOR.
3. The Plastic Use of the Uterus in Cystocele Operations. JOSEPH BRETTAUER.
4. Inflammation and Sclerosis. CLARENCE L. KILBOURN.

1.—Charles Phelps gives in his article on the treatment of traumatic intracranial lesions the classification of primary traumatic intracranial lesions as follows: (1) Hemorrhages; subdivided into (a) supradural or epidural; (b) pial; (c) cortical; (2) contusions; subdivided into (a) meningeal; (b) cerebral; (3) brain lacerations. In the treatment he says the justifiable use of operation in head injuries is very limited. It is general in depressed cranial fractures, frequent in comparatively uncomplicated dural hemorrhages and exceptional in subdural lesions, whether of the brain or pia arachnoid membrane. If in the general class of intracranial injuries operation is to be but infrequently done, the question of operation will often be raised and decision as to the course then to be pursued will entail grave responsibility, since error in judgment may deprive the patient of a chance for life by increasing the danger of an already critical condition. [T. M. T.]

2.—Charles L. Minor in his article emphasizes the fact that patients suffering from tuberculosis can be as readily treated outside of a sanatorium as in one. He takes up the various conditions necessary to carry out the treatment, such as (1) application in private practice; (2) study of locality; (3) locating patients; (4) arrangement of quarters; (5) cooking and diet; (6) family surroundings; (7) the study of cases; (8) explicit directions; (9) record keeping; (10) temperature study; necessary paraphernalia, including wraps, underclothing and sputum cup; (11) hydrotherapy; (12) amount of rest; (13) exercise; (14) amusements; (15) medicinal treatment. [T. M. T.]

3.—Joseph Brettauer states that the most troublesome cases and the ones which are very seldom radically cured are those in which at times of, or after, the climacterium, the cystocele forms the larger part of the proposed organ and either the vagina is atrophied or its tissue is edematous from constant exposure. The author says that the majority of operations consists in denuding the vaginal walls to a greater or less extent, in a variety of shapes and figures, and uniting the raw surfaces either in layers, or by one row of sutures; in addition to this, operations on the uterus, either for lacerations or hypertrophied cervix, and colporeineorrhaphies are perfectly unsatisfactory, inasmuch as a recurrence of the condition takes place in a large percentage of cases. He advises the fastening of the uterus to the vagina or bladder, either to cure retroflexion, or as an additional safeguard against the recurrence of prolapse. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 9, 1902.

1. Remarks on the Diagnosis Between Acute Appendicitis and Some Atypical Cases of Typhoid Fever. MAURICE H. RICHARDSON.
2. Unnoticed Fractures in Children. F. J. COTTON and R. H. VOSE.
3. Notes on X-Light. WILLIAM ROLLINS.
4. A Case of Attempted Criminal Abortion in Extra-Uterine Fetation. W. D. SWAN.

1.—Maurice H. Richardson lays particular stress upon the importance for the surgeon to make a correct differential diagnosis between appendicitis and typhoid fever, thus saving valuable time on one hand and avoiding a useless operation on the other. Even if the surgeon is already acquainted with enteric fever and its atypical aspects, the co-operation of an experienced clinician is indicated in such cases. As three considerations of importance, he mentions the confounding of cases of enteric fever, associated with abdominal pain, for appendicitis and its results, thus ensuing from hesitation or precipitous intervention. He quotes a series of instructive cases as illustrating these points. Furthermore, symptoms should not be individually underestimated in obscure cases, neither should they be overestimated. The result of ten years experience leads the author to state that surgical disasters in acute abdominal affections are the result of too late rather than too early interference. He advises that extreme caution should be exercised in extreme cases; that a case should be exhaustively investigated before an operation is resorted to, and that particularly in cases of suspected typhoid fever only the most forcible indications should lead one to operate. [M. R. D.]

2.—F. J. Cotton and R. H. Vose allude particularly to these unnoticed cases of fractures in children, in which the relative absence of symptoms is responsible for their not being noticed. The disproportionate pain and reaction in fractures of children, both of which are hard to explain, especially cause errors. Even in the absence of pain there may be impaired function and limitation of motion. Palpation always reveals a spot of localized tenderness, even if the tender spot is quite small. Occasionally there is crepitus. Eighteen cases are reported, in some of which the X-Rays substantiated the presence of the fractures, although symptoms were absent. The most rigid examination is required in these cases, in order to avoid oversight and humiliation. [M. R. D.]

4.—W. D. Swan reports a case of attempted criminal abortion in extrauterine fetation resulting fatally in a woman 25 years of age. Autopsy showed a ruptured tubal pregnancy, no sepsis and a peritoneum filled with 3 pints of dark fluid and clotted blood. There was no direct evidence of a criminal operation, and only the unsupported statement of the woman's husband. The patient menstruated seven weeks previously. It is a question whether the tube ruptured as a result of instrumental intemperance, or whether it was due to a rupture of the tube as it invariably occurs before the end of the twelfth week. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 11, 1902.

1. Treatment of Myocarditis. JOHN H. MUSSER.
2. The Influence of Some of the Commoner Drugs upon the Gastric Functions. BOARDMAN REED.
3. Treatment of Chronic Round Ulcer of the Stomach. G. FUETTERER.
4. Gastric Hyperesthesia and its Management. CHARLES G. STOCKTON.
5. State Supervision of Marriage. W. H. HEATH.
6. Injuries of the Choroid, with Report of Case. ELLETT ORRIN SISSON.
7. A New Combined Electric-Cautery Incisor for the Bottini Operation for Prostatic Obstruction. HUGH H. YOUNG.
8. Lichen Planus Hypertrophicus. DAVID LIEBERTHAL.
9. Notes on Recent Cases of Extragenital Syphilitic Infection. L. DUNCAN BULKLEY.
10. Traumatic Arterio-Venous Aneurysms of the Subclavian Vessels, with an Analytical Study of Fifteen Reported Cases, Including one Operated Upon. RUDOLPH MATAS.

1.—See Philadelphia Medical Journal, June 22, 1901, page 1188. [F. J. K.]

2.—See Philadelphia Medical Journal, June 22, 1901, page 1191. [F. J. K.]

3.—See Philadelphia Medical Journal, June 22, 1901, page 1191. [F. J. K.]

4.—See Philadelphia Medical Journal, June 22, 1901, page 1191. [F. J. K.]

5.—See Philadelphia Medical Journal, June 22, 1901, page 1193. [F. J. K.]

6.—Sisson discusses injuries of the choroid. He states that injuries of the choroid with the exception of rupture, are rare. Foreign bodies can often be detected in the

choroid with the ophthalmoscope, which have pierced the sclerotic or the cornea and the lens and lodge in the choroid. Hemorrhages into the choroid and retina produce marked imprairment of sight if the macula region is affected. Rupture of the choroid may result from contusion or direct compression of the eye-ball, as a consequence of a shock that has been imparted to the orbital or periorbital bones by a blunt body. Rupture of the external layer of the retina often complicates choroid rupture. He remarks that double, triple, and quadruple ruptures have been reported. The author reports a case in which an extensive rupture of the choroid was situated to the nasal side of the papilla. The patient also suffered from a spinal lesion in the lumbar region. [F. J. K.]

7.—Hugh H. Young in discussing the **Bottini operation for prostatic obstruction** presents a description and illustrations of a **new electro-cautery incisor.** Although this operation was introduced by Bottini it was perfected and made popular by Freudenberg, who has reported 752 cases in which there was a good result in 86.5 per cent., a failure in 7.5 per cent., and a mortality of between 4 and 6 per cent. Young considers castration for this condition practically valueless. A thorough and complete prostatectomy is, on the contrary, entirely satisfactory. A number of cases, however, are not suited for this operation, particularly the small and sclerotic varieties of hypertrophy. Again, patients are frequently too old and too feeble to undergo the shock of a satisfactory prostatectomy. It is in these cases particularly that the Bottini operation is indicated and has given such excellent results. Besides death from uremia, shock and sepsis, there has been the danger in this operation of burning an opening into the rectum, and of carrying the incision too far forward and thus injuring the ureter with the possibility of producing a fatal hemorrhage. Young thinks that it is dangerous ever to make the incision longer than 3½ to 4 cm. He thinks that the accidents just referred to may be attributed largely to the shape of the Freudenberg instrument, which, however, is much preferable to that of Bottini. The angle of the instrument is so obtuse that injury to the urethra is made very easy, even when the finger in the rectum is used as a guide. Young's instrument has four blades, any one of which may be attached to suit the individual case. The blade most frequently used is one presenting a much more acute angle than that of the Freudenberg instrument. Another advantage claimed for the instrument is that the handle does not become heated, as is the case in the old instrument. The right angle character of the beak does not interfere with its introduction. During the past five months Young his employed his instrument in 16 cases with satisfactory results. Before operating upon a case of prostatic hypertrophy it is the writer's custom not only to make a general physical examination of the patient but also to make a careful rectal examination of the bladder to determine the amount of residual urine and the position and size of the hypertrophy. If possible, the bladder should be examined with a cystoscope and besides an inspection of the prostate the condition of the bladder wall should be carefully studied. The urine should be thoroughly examined in order to discover the character of the infection. Young reports at some length 8 cases which illustrate the use of his instrument. After an experience with 41 cases in which he has employed the method he is very favorably impressed with the results of the Bottini operation. In closing he lays particular stress upon the fact that it is a mistake to follow any fixed rule in incising with the cautery but that each case should be studied carefully and the incision planned to relieve the particular form of obstruction. Illustrating this remark it is shown that when the middle lobe is enlarged and more or less pedunculated the ordinary operation is entirely inadequate. [J. H. G.]

8.—Lieberthal contributes an article on **lichen planus hypertrophicus.** He remarks that this affection is of rare occurrence. The symptoms, diagnosis, etiology, and prognosis are discussed, and reports of two cases are given. The following conclusions are drawn: (1) The absence of typical elementary lesions does not justify the exclusion of hyperthophic lesions from the class lichen planus. (2) The elementary lesions will be found at one time or another during the course of the affection. (3) This verrucous manifestation of the process may be due to circulatory derangements. (4) For cases in which elementary lesions are also present, and especially more extensive in distribution, the prospect of treatment seems better than for those which present the verrucous growths only. (5) In some cases only repeated surgical interference will remove the affection and arsenic is more likely to prove serviceable at the periods when typical elementary lesions are also present. [F. J. K].

9.—L. Duncan Bulkley, in presenting **notes on recent cases of extra-genital syphilitic infection** refers to the great frequency of this condition. During the 18 months previous to the presentation of his paper he has seen 21 instances of extra-genital chancre, 12 occurring in private practice and 9 in public. The distribution of these cases was as follows: Lip 9; finger 5; anus 2; hand, nostril, hard palate, tonsil, and eyelid, 1 each. A brief history of a number of these patients is presented. The cases are reported, as he thinks others should be, to show the general profession that the accidental and innocent acquirement of syphilis is not unusual. [J. H. G.]

10.—To be abstracted when concluded.

AMERICAN MEDICINE.

January 11, 1901.

1. The Operative Cure of Procidentia Uteri. CHARLES P. NOBLE.
2. Gonorrheal Vulvovaginitis in Young Children. REUBEN PETERSON.
3. Removal from Bladder, through the Cystoscope, of a Needle which had been Swallowed Nine Years Before. HUGH H. YOUNG.
4. The Impropriety of Cesarean Section in Placenta Previa, with Remarks on a Rational Method of Treatment. HUGO EHRENFEST.
5. The Effects of Ventrofixation and of Ventral Suspension on Subsequent Pregnancy and Labor, with Report of a Case. ARTHUR C. JACOBSON.
6. The True Value of Local Treatment in Gynecic Practice. FRANK C. HAMMOND.
7. Congenital Malformation of the Vagina with Report of Cases. WILLIAM EDGAR DARNALL.
8. Dystocia Following Ventrofixation. FRED. H. BLOOMHARDT.

1.—Noble defines the various degrees of **procidentia uteri** and gives an extensive review of the etiology. He has notes of 130 cases treated by operation. He remarks that in this condition curettage is usually of but little importance. Amputation of the cervix promotes involution of the uterus when this organ is much hypertrophied. Resection of the anterior vaginal wall serves to remove the redundance of overstretched tissue, and thereby prevents further descent of the uterus. The restoration of the supporting function of the perineum or sacral segment of the pelvic floor is secured by means of modified Emmet's perineorrhaphy. Suspension of the uterus restores that organ to its position of antiflexion. Noble describes this operation in full. [W. A. N. D.]

2.—Peterson concludes his article on **gonorrheal vulvovaginitis** in children as follows: 1. Vulvovaginitis in the young girl may be divided into simple and gonorrheal. 2. Simple catarrhal vaginitis is due, in a large majority of cases, to lack of cleanliness, and subsides when the proper treatment is instituted. 3. Gonorrheal vulvovaginitis in young children is more common than is generally supposed. 4. It is more frequent below the age of 6. 5. In the large majority of cases the specific form arises from actual contact of the patient with some infected person. The disease may be spread by other means, such as a common bath, towels, and bed linen. 6. The ordinary staining methods will prove satisfactory in making a differential diagnosis between specific and other forms of vulvovaginitis. 7. The parts affected in their order of frequency are, the labia, urethra, vagina and cervix; the vagina is more frequently affected in the child than in the adult. 8. The tubes, ovaries and peritoneum may be involved in the pathological process. 9. Purulent ophthalmia and rheumatism are quite

frequent complications. 10. The treatment of specific vulvovaginitis must be specific to be of avail. [W. A. N. D.]

3.—Hugh Young reports the case of the **removal from the bladder of a needle** which had been swallowed nine years before. The patient was placed in the knee-chest position and the needle was removed through the **Kelly cystoscope** by means of a slender alligator forceps which had been especially provided for this purpose. At a previous examination the bladder was filled with fluid and a **Nitze cystoscope** introduced. The needle was seen sticking in the bladder cavity on the right lateral wall of the bladder. It was not found possible to extract the needle with the Nitze instrument but this was successfully done with the Kelly cystoscope. [T. L. C.]

4.—Ehrenfest gives a summary of reported cases of **Cesarean section for placenta previa.** After a thorough examination of the literature on the subject he concludes as follows: The result of Cesarean section at large are worse than is usually stated. 2. In contradistinction, the results obtained by the usual treatment of placenta previa are by far better than is genrally believed. 3. There is every reason to expect that the result of Cesarean section performed in cases of placenta previa will be much worse than those of the classic operation. 4. If Cesarean section as a means of treating placenta previa is contemplated, the Porro operation may have to be performed in the majority of cases; 5. the treatment of placenta previa by means of Cesarean section does not seem to hold out a promise of considerably augmenting the number of children saved. [W. A. N. D.]

5.—Jacobson reports a case of **pregnancy and labor following ventrofixation.** He has reviewed the literature of the subject in part and recounts the difficulties which are to be expected in labor following this operation. Up to 1899 eight Cesarean sections had been performed **to overcome** obstruction following the ventral operation. He believes that this operation (ventrofixation) reduces fertility. [W. A. N. D.]

7.—Darnall reports two cases of **congenital malformation of the vagina,** in one of which there was a cul-de-sac situated just behind the hymen on the posterior vaginal wall a little to the left of the median line. In the second case there was found a hymen biseptus. [W. A. N. D.]

8.—Bloomhardt reports three cases of **dystocia following ventrofixation,** in one of which after severe labor pains the woman delivered herself of a breech presentation. It is probable that some of the adhesions had yielded permitting the labor to proceed. In the second and third cases Porro operations were necessary. [W .A. N. D.]

VRATCH.

November 3, 1901. (Vol. XXII, No. 44).

1. On Rupture of the Liver. B. K. FINKELSTEIN.
2. On Casuistics of Punctured and Incised Wounds of the Liver. I. I. GREKOFF.
3. The Influence of the Condition of the Apparatus of Accommodation of the Eye on the Degree of Curvature of the Cornea. V. A. DOBROSLAVIN.
4. Diagnosis and Non-Operative Treatment of Complete Rupture of the Uterus During Labor. D. D. POPOFF.
5. A Case of Polyneuritis of Gonorrheal Origin. I. I. KANKAROVITCH.
6. The Chair of Normal Anatomy in Warsaw. M. D. TSHAUSOFF.
7. Professor Markel Vilgelmovitch Nentski. S. S. SALAZKIN.

1.—Finkelstein reports 5 cases of **rupture of the liver as a result of severe injuries.** In one, the patient died ½ hour after admission to the hospital, in the others operative intervention was resorted to. One patient died as a result of shock, the others recovered. In all cases the extensive **hemorrhage was controlled by means of tampons.** [A. R.]

2.—Grekoff reports 3 cases of **punctured and incised wounds of the liver** caused by knives. In all these cases the patients were women. One of them received also wounds of the thorax and abdomen and was in the fifth month of pregnancy. All three made an uneventful recovery after surgical intervention. The pregnant woman gave birth to a healthy child at term. In 2 of these cases the wounds of the liver were closed by **sutures,** in the third the hemorrhage was controlled by tampon. [A. R.]

3.—Dobroslavin found by experiments on animals that the **cornea changes the radius of its curvature** under the influence of spasm or paralysis of accommodation caused by injection of eserine or atropine. Such changes, he believes, also occur under normal conditions of accommodation. [A R.]

4.—Popoff discusses the **symptomatology and treatment of rupture of the uterus during labor.** He cites the observations of a numberof authorities, showing that the non-operative treatment is preferable. His own method is to introduce a gauze tampon into the uterine cavity and apply a tight band over the abdomen. 2 illustrative cases are described. [A. R.]

5.—Kankarovitch reports a case of **gonorrhea** in which **polyneuritis** developed on the third day of the acute attack. The case was also complicated by lymphangitis, lymphadenitis and epididymitis. The occurrence of the polyneuritis the author ascribes to the **gonotoxin.** [A. R.]

6.—An address giving a historical review of the development of the teaching of normal anatomy at the Warsaw University. [A. R.]

7.—A biographical sketch and a review of the most important work done by the late Prof. Nentski. [A. R.]

November 10, 1901. (Vol. XXII, No. 45).

1. The Success of Light-treatment by the Method of Prof. Finsen. O. V. PETERSEN.
2. Comparative Estimation of Some of the Appliances for the Determination of Blood Pressure. Based on Data Obtained From the Literature and Clinical Observations. L. I. USKOFF.
3. On the Treatment of Eclampsia. V. V. STROGANOFF.
4. A Modification of Gabritshevski's Syringe for the Injection of Antidiphtheritic Serum. P. V. TIMOFEEFF.
5. Parascorbutic Affections of the Bones and Joints. V. V. SIZEMSKI.
6. On the Subject of Intrauterine Injections. B. A. LIBOFF.

1.—Petersen reviews the progress of **Finsen's discovery** in Russia. The first laboratory for the application of Finsen's method was opened at the Military Medical Academy by the aid of the Tsarina. The results obtained there in the treatment of **lupus** were brilliant, and several important publications already issued from that laboratory. During the same year (1900) a second laboratory was established at the Institute of Experimental Medicine. There the method has been fully tried and favorable results obtained in **lupus and beginning epithelioma.** Less favorable results were obtained in **lupus erythematosus,** this being in accord with Finsen's experience. Another laboratory was established during the past year at the Dermatological Clinics at Khasan. With the brilliant results obtained everywhere in the treatment of **lupus,** the only objection which remains is the enormous cost of the apparatus and the treatment. The various modifications devised by a number of investigators have so far not proved sufficiently perfect **to replace Finsen's apparatus. A brief review of the results** obtained by Forchhamer, Sabourand and others is given. [A. R.]

2.—Uskoff found by a series of comparative tests that **of all the devices for measuring the blood-pressure Riva-Rocci's sphygmomanometer is the most reliable.** The others are difficult to handle and give variable results. Gärtner's tonometer indicates the **peripheral resistance** and thus completes the information concerning the heart's action obtained by the sphygmomanometer. To use the two in conjunction, the author connected by means of a T tube the pneumatic ring of Gärtner's tonometer with the system of tubes of Riva Rocci's apparatus. The great objection to these appliances is that they are not portable. To overcome this the author devised a modification which renders the apparatus light and portable. The precautions to be observed in the application of the various instruments

are pointed out and a series of observations given in tabular form. [A. R.]

3.—Stroganoff replies to the **criticism of Menge and Kroenig**, the latter asserting that some of the author's cases might have been cases of severe hysteria or epilepsy. This assertion the author repudiates by the statement that the diagnosis in all instances was established by a number of physicians and the clinical picture was so marked that no possible mistake could be made. During the past 4 years **he treated over 100 cases of eclampsia without a single death**, except in a few which were too far gone at the time the treatment was commenced. He refers to his paper in the *Vratch*, No. 38, 1900, in which the treatment is described.[1] [A. R.]

1 Stroganoff's treatment of eclampsia as seen from the paper referred to is based on the assumption that it is an acute infectious disease gaining entrance into the body through the lungs. The treatment in the main consists of (1) administration of morphine and chloral hydrate, (2) removal of mucus from the nose and throat, inhalation of oxygen, application of dry cups, injection of large amounts of normal salt solution and administration of digitalis, (4) avoidance of any irritation.—A. R.

4.—Timofeeff suggests a modification of Gabritshevski's syringe for the injection of antitoxin. It consists of a conical rubber stopper which can fit any bottle, and a double metal tube passing through the perforation in the stopper. The tube is branched at its upper end, and to one branch a needle is attached by means of a rubber tube, while to the other a rubber bulb for forcing the fluid out. The whole is very much like the mechanism of a spritz-bottle. [A. R.]

5.—Sizemski observed a number of cases of **joint affections and tuberculosis of the bones following scurvy.** Among the Tartars, where scurvy is prevalent, tuberculosis of the bones is also very common, and the author finds an etiologic relation between the two. 4 illustrative cases are reported. [A. R.]

6.—Will be abstracted when concluded.

UNIVERSITY OF PENNSYLVANIA MEDICAL BULLETIN

November, 1901.

1. The Blood in Infancy and Childhood. ALFRED STENGEL and C. Y. WHITE.
2. The Condition of Papilloma of the Caruncle. W. C. POSEY and E. A. SHUMWAY.
3. A Bacteriological Study of Dissecting Room Cadavers. NATHANIEL GILDERSLEEVE.
4. The Recovery of Mercury from Animal Tissue. E. McD. STANTON.
5. The Natural Method of Draining the Peritoneal Cavity. JOHN G. CLARK.

1.—Alfred Stengel and C. Y. White contribute a valuable article on **the blood in infancy and childhood.** They furnish a careful summary of the general blood state, including number and varieties of the erythrocytes and the variations in the hemoglobin, specific gravity, and leukocytes in health and also the pathological conditions of the blood in infancy. Their own methods of examination of blood in childhood are given, including the specific gravity of the blood which has not been obtained as a routine practice. In the histological examination of the blood various methods of preparation were employed; the films were fixed with heat, mixtures of absolute alcohol and ether, solutions of bichloride of mercury, picric acid, etc. They state that these various methods were used because they particularly wished to discover any signs of neuclear change which might have escaped detection by the ordinary method of fixation with heat. The stains used were eosin and hematoxylin, Canon's stain, and Ehrlich's triple stain. They state that their examinations have shown practically no differences in the morphology of the red corpuscles in childhood as compared with the adult. There were slight irregularities in the shape and size of the red cells, and nucleated red corpuscles were found in some cases in which the degree of anemia would not have led them to expect their occurrence in adults. In no case was granular basic degeneration observed. As to the leukocytes certain peculiarities were noticed that deserve mention. There was a decidedly greater tendency to basic staining than in the blood of adults. The lymphocytes stained with Canon's mixture, in many cases presented a coarse granular protoplasm while the nucleus stained a light blue. Occasionally this granular character assumed the appearance of distinct granulations and in some instances these granulations were extruded from the cell, suggesting artefacts, but they state that if these were artefacts, the occurrence of the coarse granular bodies in the protoplasm indicated that there was, before the extension, a differentiated condition of the protoplasm, and that the excluded particles represented performed elements and not artefacts pure and simple. In the large mononuclear cells they found in a large number of instances minute basic or amphophilic granules, which were closely set and gave the protoplasm of the cell a fine dusted appearance. The coarse basophilic granules were occasionally found in the cells, but never distinct mast-cell granules. The polymorphonuclear cells in a few instances contained very sharply defined and quite abundant basophilic granules These were larger than the neutrophile granules usually observed, but were smaller than mast-cell granulations. They stained with great intensity and therefore gave the cell a very striking appearance. Mast-cells were found occasionally, but not in abundance in any instance. In their series of cases basophilic granules were much more conspicuous in the blood of childhood than they have usually been found in the blood of adults. In 10 out of 49 cases, myelocytes were found to which they could attach no significance. They observed that in one of the most severe cases of pneumonia ending fatally, the blood examination showed as many as 2.2 per cent. of myelocytes at one of the examinations. The number of leukocytes was usually high as compared with the numbers in adults excepting in the case of typhoid fever, in which the leukopenia usually observed was found. Transitional leukocytes were estimated with the large monoculears. They present a table of 60 cases in which a thorough blood examination was made in various pathological conditions including **pneumonia, typhoid fever, pertussis, varicella, tuberculosis, caries with cold abscess, acute rheumatism, noma, bronchitis, pleural effusion, enteritis, mitral heart diseases, reachitis, eczema, focal, epilepsy, convulsions, spastic cerebral palsy, and chronic meningitis.** [T. L. C.]

2.—W. C. Posey and E. A. Shumway discuss the condition of **papilloma of the caruncle**, with the report of a case occurring in a man of 60 years, at the inner corner of the right eye. There were three small growths in the inner canthus. They were about the size of small mulberries. The growth was removed, and the restoration of the inner three-fourths of the lower lid was accomplished by taking a flap from the glabella and forehead. The result was satisfactory, healing occurred by first intention, and the resultant scar was very slight. The danger of recurrence seems remote, as more than a year had elapsed since the operation, without any evidence of its return being observed. The microscopic structure of the tumor is given together with the bibliography of the condition. [T. L. C.]

3.—Nathaniel Gildersleeve contributes a paper on **a bacteriological study of dissecting room cadavers.** In all, 24 bodies were examined. The cause of death in these cases was known. Cultures were made from the nasal cavities, the skin surface, from the lungs, the intestines, the abdominal fluid and a pelvic cyst. The results of these bacteriological examinations are given in the article, and Gildersleeve suggests that the positive findings of many virulent organisms leave no doubt as to the advisibility of careful precautions against infection during practical work in the dissecting room. The bacillus of tuberculosis and staphylococcus pyogenes aureus were found in properly embalmed bodies for as long a time as six months after the preparation and deposition in the vaults. [T. L. C.]

4.—E. McD. Stanton gives the results of his studies on **the recovery of mercury from animal tissues.** The technique of his experiments is given. As the result of his investigation he concludes that the method ordinarily employed for

the separation of mercury from all organic tissues does not yield accurate results. He states it is possible that in the treatment of the tissue with hydrochloric acid and potassium chlorate and heating the mixture, some volatilization of mercuric chloride occurs; and, further, that the mercury enters into combination with albumin of the tissue to form insoluble albuminates of mercury, and thus some mercury is lost by volatilization, and some is lost by being retained as an insoluble albuminate resisting extraction with the mass of treated tissue on the filter. For his experiments he used 2000 grammes of finely-cut ox liver, thoroughly stirred with a solution containing 0.271 gramme of mercuric chloride, equivalent to 0.200 gramme of metallic mercury. After adding the mercuric chloride, the organic matter was disintegrated by warming with dilute hydrochloric acid and small portions of potassium chlorate. The quantities of materials employed were as follows: Tissue, 2000 grms.; strong hydrochloric acid, 200 c.c.; distilled water, 1250 c.c; potassium chlorate, 45 grms. In three determinations he was only able to secure 25.18 per cent. of the amount of metallic mercury which had been placed in the original tissue. Three analyses were then made in the effort to recover the amount of mercury which had been placed in the original solution. In these experiments the mercuric chloride used was practically pure, and it was found that when the mercuric chloride was in aqueous solution, from which organic matter has been excluded, it can be recovered as sulphide with a high degree of accuracy, even when in very dilute solution. Experiments were made to determine the amount of mercury lost by the volatilization of mercuric chloride when evaporating its aqueous solution on a water bath. The table accompaning the article and recording the experiments performed show that the loss is slight, but increase very rapidly as the solutions become concentrated. These causes will not account for all of the loss of mercury in the determinations made in recovering the mercury from organic tissues, but they do show that loss of mercuric chloride by evaporation from aqueous solution is a very important factor, and that this factor must be eliminated before accurate results can be obtained in this work. A third system of experiments were carried out, the endeavor being to reduce the loss by volatilization and to secure the disintegration of the organic matter by the use of hydrochloric acid and potassium chlorate. This having been done, 61.6 per cent. of the original mercury employed was recovered. [T. L. C.]

5.—John G. Clark discusses the **natural method of draining the peritoneal cavity.** He states that the routine use of normal salt solution in the peritoneal cavity, under the conditions which he advocates, is not only free of danger, but is of the greatest value, both as a life-saving and as a prophylactic measure against general or local peritonitis. In 1896, in connection with Dr. Charles Norris, he carried out a series of experiments to determine the movements of granules from the peritoneal cavity and confirmed Muscatello's statements. He discusses the action of streptococci on the lungs, liver and kidneys, from which he concludes that these organs normally may withstand and eliminate comparatively large quantities of infectious matter when carried quickly from the peritoneal cavity to these organs. It is the continued action of infectious matter carried hour after hour from a generating focus in the peritoneal cavity which works destructively on these organs, and secondarily on the general system, presenting especially characteristic conditions in the lungs. He concludes that the peritoneum has an enormous absorbing function, being capable of taking up in an hour 3 to 8 per cent. of the entire body weight, and that numbers of solid particles are carried in a very short time from the peritoneal cavity through the diaphragm into the mediastinal lymph vessels and glands, and thence into the general circulation. At first the granular bodies are largely transported as free bodies, swept along by the lymph currents, but later the leukocytes act as the carriers. Normally, there is a force in the peritoneal cavity which carries fluids and foreign particles to the diaphragm, regardless of posture, although gravity may greatly favor or retard the current. After the introduction of microorganisms into the peritoneal cavity, there is a great decrease in their number within the first hour, both through their intraperitoneal destruction and through their rapid absorption into the general system where they are dealt with. There is, therefore, no possibility of limiting free infectious matter to any part of the peritoneal cavity by mechanical means. Vigorous streptococci which remain behind develop within six hours a repellent or destructive quality for leukocytes, and the lethal combat is inaugurated and well under way before drainage, as ordinarily employed, is superfluous, or even dangerous, and that the rational method is to remove all possible debris and infectious matter by thorough irrigation, and then leave one litre of salt solution (0.6 per cent.) in the abdominal cavity. In order to promote and hasten natural drainage, he would supplement this by an enema of a litre of salt solution given while the patient is well under anesthesia and in the Trendelenburg position. This method stimulates the patient, minimizes shock, increases the urinary excretion, intestinal peristalsis is promoted, and consequently tympanitis is of less frequent occurrence. These factors combine to reduce the mortality after abdominal sections, to decrease the pain, discomforts and complications of the first forty-eight hours, and to hasten the recovery of the patient. Ascites accompanying the surgical lesion, and general purulent peritonitis contraindicate the use of salt infusions. He now believes that gauze packing is indicated in a much fewer number of cases than he has before stated. He does not believe that the gauze is of any great service as a conducting medium, but acts as a plug to keep the external opening patulous and prevent the closure of the drained area by normal granulation tissue. He believes that the most painstaking technique, the performance of which will indicate the greatest surgical skill, will do away with the necessity of a gauze packing with the exception of a very few conditions among which he names: **localized collections of pus in the pelvis, certain cases of suture of the intenstine, excision of fistulous tracks,** leading from the intestines to the abdominal wall, and **purulent peritonitis.** [T. L. C.]

AMERICAN JOURNAL OF MEDICAL SCIENCES.

December, 1901.

1. Penetrating Gunshot Wounds of the Abdomen. R. LE CONTE
2. Report of a Case of Sporadic Trichinosis. JOHN DA COSTA
3. Histological Description of an Eyeball, with Dropsical Degeneration of the Nuclei and Protoplasm of the Rod and Cone Visual Cells of the Retina which Clinically Simulated Glioma. G. De SCHWEINITZ and E. SHUMWAY
4. Combined Clinical Report of Two Cases of Aortic Aneurysm Treated by Means of Silver Wire and Electricity. L. FREEMAN and J. HALL.
   A Case of Syphilitic Insanity and One of Paralytic Dementia Simulating Syphilitic Insanity. W. WALKER, T. DILLER and R. BURNS
6. A Case of Myxedema. T. PROUT.
7. A Fatal Case of Acetanilid Poisoning. P. BROWN
8. Ligation of the Common Carotid Artery. F. STEWART
9. Report of a Case of Tetanus. J. N. HENRY
10. Mastitis Complicating Typhoid Fever. F. DAVIS, JR., H. PATTERSON and A. HEWLETT
11. Lymphocytosis Without Glandular Enlargement Complicated with Pneumonia. W. WHITE.
12. The Necessity for Operative Interference in Mastoid Suppuration. W. PHILLIPS
13. Infection of the Rectum with Secondary Infection of the Liver, Caused by the Bacillus Influenzæ Similis. W. OPHULS.
14. Sarcoma of the Large Intestine. J. JOPSON and C. WHITE
15. Erythema Induratum Scrofulosorum. A. WHITFIELD (London)

16. A Case of Lupus Erythematosus Cured by the X-Ray. R. WOODS.
17. A Case of Lymphatic Leukemia Culminating in Streptococcus Infection. G. WENDE.
18. Clinical Observations of Blood Pressure. H. CARTER.

1.—Le Conte reports the case of a man 27 years of age who was shot in the back the bullet passing through the **abdominal cavity.** When seen a few hours later, the abdomen was tender, distended, and tympanitic in front and dull in the flanks. A preliminary incision was made, following the course of the bullet from the back; when it was found that the ball had entered the peritoneal cavity, this incision was closed and a median incision on the anterior surface of the abdomen was made. A considerable amount of fluid blood was found, and perforation of the small intestine and a tear in the transverse colon. The cause of the bleeding was a wound in one of the mesenteric arteries. All the injuries were repaired, the patient washed out with hot saline solutions and subsequently vigorously stimulated. At the end of 24 hours the patient received calomel and water, and then, after an effective enema, was given peptonized milk. On the twenty-second day the patient had recovered. The bullet has not yet been removed. In treating these cases it is necessary first, to have a clear idea of the general condition of the patient; second, a realization that the modern small calibre bullets do not necessarily produce fatal wounds when they pass through the abdominal cavity. The old-fashioned lead bullet, when it enters the abdominal cavity, produces a wound that is nearly always fatal without operation, and very dangerous under any circumstances. Shock due to hemorrhage or even to very severe nervous impression should not be a contra-indication for operation. If due to hemorrhage it is urgently important to stop the flow of blood; if due to nervous impression it at least enables us to repair the damage which has been done and give the patient a better chance. It is always important to examine the wound of entrance carefully to determine penetration of the abdominal cavity, for sometimes this may not occur when the wound seems to be most dangerous. The operation of course should be done as carefully as possible. The skin should be thoroughly cleansed, and the incision is usually median, but sometimes may be made in other situations, and the general character of the operation will then be determined by the nature of the injuries. It is unnecessary to delay operation for the purpose of searching for the bullet. Drainage is usually important. Gun-shot wounds may always be treated as septic, and if the alimentary canal has been opened there is additional reason. Speed is very important. The subsequent treatment should be generally that used in the present case. [J. S.]

2.—Da Costa and Dorset report the case of a man 20 years of age whose right leg had always been larger than the left. At the age of 19 he received an injury to the calf of the right leg which subsequently was swollen and painful. Later, there was hemorrhage "through the pores" from this leg. The sweling increased, the muscle was sore without acute pain, and at night there were cramps. Cutaneous veins were dilated, the thigh and foot were slightly larger than on the left side; there was no temperature and moderate leukocytosis, but no eosinophilia. As the condition was gradually progressive, involving the other muscles, incision was made and a piece of the calf muscle removed, and found swarming with **trichinæ.** It is possible that the injury constituted a place of least resistance and that migration of the larvæ took place there. Dr. Rosenberger appends a description of sections of the muscle, the differential count of the leukocytes, and some remarks upon the history of trichinosa. [J. S.]

3.—De Schweinitz and Shumway report the case of a boy, 2 years of age, who lost the sight in the left eye. The pupil was semi-dilated and fixed, although the iris responded to a mydriatic. A yellowish pink mass could be seen in the vitreous chamber resembling a glioma. The left eye was normal. The ball of the right eye was enucleated and since that time there has been no recurrence nor indication of metastasis. Microscopical examination showed that the mass was a **detached and thickened retina** which had been folded in the centre of the globe. The subretinal space was filled with a homogeneous exudate containing a large number of swollen cells, some of which contained pigment. The retina itself contained a cyst, and consisted of a mass of flattened cells with distorted nuclei. A number of explanations are offered to account for this appearance. In all cases the authors believe that an eye presenting the clinical appearance of glioma should be enucleated. [J. S.]

4. Freeman and Hall discuss the **treatment of aneurysm with silver wire and electricity.** They believe that some of the experiments of Hunner and Stewart have led to false conclusions because they used bottles with smooth hard sides. Experiments which Freeman made with a hollow turnip convinced him that in the majority of instances the coil of wire remain entangled in the wall of the aneurysm. He has found that soft silver wire is as well distributed as hard wound wire, and therefore prefers it, because it offers less resistance to the clot and is less rough. The quantity of wire he believes should be considerable, as the more that can be used the more rapidly the clot can be formed, and the firmer it will be. He thinks this treatment should be always employed on account of the inefficiency of medical treatment, and because in many cases the wire seems to be of advantage. A strong electric current is preferable to a weak one, and the cannula should be inserted just within the aneurysmal wall and no further. Hall reports 2 **cases of aortic aneurysm treated by wire electrolysis.** The first, a man of 36, had had syphilis, typhoid fever, pneumonia, and acute articular rheumatism, and had always done hard manual labor. There was a pulsating tumor at the base of the neck about the size of a goose-egg. Tracheal tugging and diastolic shock were present. As no improvement occurred upon gelatine treatment or upon ligation of the right carotid and subclavian arteries, 5 or 6 feet of number 27 silver wire were introduced and a current of 75 milliamperes applied for 30 minutes, and subsequently gelatine was again employed. There was some burning of the skin around the point of insertion, and a soft tumor filled with serum projected from this place. The tumor steadily diminished. The patient was also given moderate doses of potassium iodide, and made a fairly good recovery. The tracheal diastolic shock disappeared some weeks before the tracheal tug. The second patient, a man of 56, had a good previous history. There was a bulging tumor in the second right interspace with visible and palpable pulsation. There was a slight treacheal tug but no diastolic shock. The patient improved rapidly on rest, and later 22 feet of number 27 silver wire were introduced and a current of 70 milliamperes was applied for 65 minutes. At the end of the operation pulsation was less; later the patient was given a subcutaneous injection of 2 per cent. gelatine, and potassium iodide. Two months later the pulsation began to increase in the tumor and 8 feet of wire were again introduced. At a later period wire was again introduced, and finally, when the patient had practically recovered, there was a slight systolic murmur and an accentuated aortic sound, but nothing else. Seven months later the patient was still in good health. In conclusion Hall states that gelatine should always be tried as it is safe and may do good. He has not been able to obtain any information from the fluoroscope. [J. S.]

5.—Walker, Diller and Burns report 2 interesting cases. The first, a man of 35, had contracted syphilis at the age of 31, for which he was under continuous treatment. He suffered a severe accident, contracted malaria and later became unable to work, was sometimes dazed and complained of severe pain in the head. He then became suspicious, occasionally violent, and most of the time was sullen and stupid. He was finally admitted to the asylum, was delirious, had defective speech and difficulty in swallowing. Finally he became comatose and died. Microscopical examination of the brain showed perivascular cellular proliferation apparently proceeding from the adventitia of the artery, and moderate degeneration of the cells. The second patient, a man of 37, had had 2 attacks in which the left side of the body became numb. Finally on one occasion he fell to the floor unconscious and the left side became paralyzed. Later he was operated for varicocele and made a good recovery, but after this he had a severe convulsion lasting 15 minutes. The paralysis was somewhat variable; the patient became demented and finally died in a convulsion. Changes characteristic of **paretic dementia** could be seen both by the naked eye and by the microscope. A differential diagnosis was not made

positively, although paretic dementia was suspected on account of the defect of speech. [J. S.]

6.—Prout reports an interesting case of **myxedema.** The patient gained flesh very rapidly. The skin became dry; the hair became brittle and began to fall out. The patient was irritable and sometimes became unconscious. At times she was violent. At the age of 38 she suffered from metrorrhagia. Examination showed edema of the skin; the heart was slow; the hearing was poor; memory defective, and the weight was 201 lbs. The patient was placed upon thyroid extract and rapidly improved. Hearing returned, the weight decreased, the red blood-cells diminished; the moderate trace of albumin which had been found in the urine remained; the urea increased considerably. Menstruation became normal, and the patient gradually improved. The blood was carefully counted and showed no very important changes. The albumose that was present in the urine at the first examination was not found after the thyroid medication was commenced. The blood plates were very large at this time, but subsequently became reduced to normal size. In regard to the administration of thyroid extract in these cases Prout states that it should not be crowded at first; and should be reduced whenever the pulse becomes rapid or compressible. [J. S.]

7.—Brown reports the clinical history of a man 27 years of age, who had been found slightly delirious, had a fluid evacuation of the bowels, moderate temperature, general cyanosis and soft pulse. The urine was alkaline and nearly black in color. This was due to the presence of hematoporphyrin. The temperature gradually fell, became subnormal, and the patient died of heart failure. There was pronounced anemia and leukocytosis, and a large number of nucleated red cells; myelocytes were also present. The history showed that the patient had been given 60 gr. of **acetanilid** in 6 powders to be taken for his headache, and had taken them all within a very brief period. The autopsy showed some swelling of the kidneys and edema of the lungs. [J. S.]

8.—The patient, a laborer of 39, had received a fist blow on the left cheek on July 4th. From that time **hemorrhage** had been almost constant **from the cheek,** and in spite of pressure, ligatures round the lacerated area and ligation of the facial arteries. It was therefore resolved, 8 days later, to ligate the main carotid, which was done. When the patient recovered from the anesthesia it was noticed that there was right hemiparesis and difficulty in speech. On the 14th of July bleeding recurred and the patient died with a temperature of 105°. The cause of death was apparently anemia and fatty degeneration of the heart. The persistent bleeding was probably due to infection and not to hemophilia or purpura. [J. S.]

9.—The patient, a boy of 19, while working in the stable ran a nail into his left foot. Twelve days later he noticed that there was some stiffness of the jaw, followed by a stiffness of the neck and back. There was moderate elevation of temperature, exaggeration of the reflexes, and **tetanus** was diagnosed. The scars on the foot were opened and swabbed with pure carbolic acid. 2 grs of carbolic acid were given hypodermatically every 2 hours, and this was increased finally to 50 grs. daily. The temperature gradually increased, albumin appeared in the urine, which also contained a small amount of carbolic acid, and the patient became unconscious and finally died. The case shows the tolerance for carbolic acid that exists in tetanus and the uselessness of the treatment in this instance, because, although it was begun early, it certainly did no more than perhaps slightly prolong life. [J. S.]

10.—The patient, a woman of 34, passed through a typical attack of typhoid fever. On the 39th day of the disease, 3 days after the temperature had fallen to normal, she complained of pain in the left breast, and 3 days later, in the right breast also. An abscess developed in the left breast, which was opened. The patient's temperature then fell to normal and the right breast gradually diminished in size without suppuration. From the pus of the left breast pure typhoid bacilli were obtained. Only 4 cases of **suppurative mastitis associated with typhoid fever** have been hitherto recorded. [J. S.]

11.—A woman, 38 years of age, a chronic epileptic, gradually developed a severe diarrhea which finally caused death from exhaustion. Sections made from the tissues showed an enormous number of lymphocytic cells mingled with red blood cells in the blood vessels, and the case is therefore supposed to be one of **lymphatic leukocythemia.** The lymph glands were not enlarged. The lungs showed pneumonic consolidation, and there were ulcers in the lower part of the ileum and in the large intestine. [J. S.]

12.—Phillips discusses the conditions indicating the need of **operative interference in mastoid disease.** In all acute cases of middle ear suppuration, he thinks that the pus should be carefully examined and if staphylococci and streptococci are present mastoid infection carefully sought for on account of its great frequency in these conditions. When mastoid infection has occurred or is suspected, brain involvement should be suspected and watched for. Symptoms of mastoid disease are pain, usually not as severe as in middle ear disease; tenderness, fever (a common symptom), an anxious expression, the head hanging forward and somewhat toward the healthy side, external periostitis with edema of the overlying tissues, and tenderness upon pressure over the region of the antrum. This when prolonged, and combined with bulging of the attic and of the superior wall of the canal is a sufficient reason for operative procedure. Symptoms of brain disease are of course chills, vomiting, choked disk, aphasia, etc. Early operation is usually to be desired, as there is considerable danger from delay and hearing is better preserved. Of course the operation should consist in the removal of all diseased tissue. Phillips does not approve of a simple incision over the mastoid process. [J. S.]

13.—A man of 36 had a chill and was taken sick. Subsequently he developed icterus, nose-bleed, rapid respirations, and towards the end a very high temperature. Death occurred apparently as a result of dyspnea. There was no leukocytosis. There were numerous hemorrhages in the tissues. The bile duct was patulous; there were some jagged, longitudinal folds just above the anus with sloughs upon the surface; there were also some abscesses in the liver. Numerous minute **bacteria** were found in the abscesses in the liver and in the necrotic areas in the lung, which did not produce spores, did not stain by Gram's method, were not motile, but grew freely on media that did not contain hemoglobin. They appeared to belong to the **influenza group,** but are not similar to any hitherto described in it. They were not pathogenic for animals. [J. S.]

14.—Jopson and White report the case of a boy 4 years of age who had been sickly for some time. There was a large tumor in the abdomen occupying the anterior and median aspect. The case was treated expectantly, and on one occasion the child passed a piece of fleshy tissue by the bowels. Emaciation progressed; there was moderate fever; the child had some convulsive attacks and finally died. A huge sac was found in the abdomen whose walls were yellowish white and homogeneous. It represented a portion of the ascending colon. Microscopical examination showed that it was a sarcoma, and nodules found in the kidney were evidently metastatic. The authors have collected 22 cases of **sarcoma of the large intestine** from which they deduce the following facts. Age ranges from 2 to 60 years. 12 males and 10 females. Not all of these cases certainly involved the colon alone the majority being in the ileocecal region. The size is variable but they are often large. About half were certainly round-cell sarcomata. Only one was a spindle-cell sarcoma. The abdominal lymphatic glands were generally involved by metastasis, the other organs being the lungs, kidneys, spleen, liver, etc. The etiology is unknown. The starting point is usually the mucosa or submucosa. Degeneration is common. The symptoms are usually emaciation, moderate fever, edema of the lower extremities, and the presence of a tumor. This latter is usually movable and the liver is sometimes displaced. Occasionally the tumor is tender on palpation. Patients have pain, anorexia and vomiting, and rarely there are symptoms of obstruction of the bowels. The duration of the disease cannot be certainly determined. The treatment consists in operation, and some cases apparently recover. The diagnosis is of course always difficult and the prognosis unless operation is employed, is hopeless. [J. S.]

15.—Whitfield reports 2 cases of Bazin's disease. The first was a girl of 14, one of 13 children 8 of whom had died in infancy of convulsions. The patient about a month before admission noticed some small red lumps on the back of the legs which were slightly painful, enlarged and finally ulcerated. Otherwise her condition and gen-

eral appearance were excellent. These ulcers were cleanly cut, deep and moderately large. The patient was given thyroid extract and the ulcers treated locally with mercurial ointment. As they did not heal rapidly some of them were excised and examined microscopically and inoculated into guinea pigs. There were the histological changes characteristic of tuberculosis, but the guinea pigs did not die. Finally the remaining ulcers were cured. The second patient, a woman of 37, noticed some small lumps on the back of the legs about 9 weeks before admission to the hospital. These were extremely painful. Below the knees over the internal and external saphenous veins there were some lumps varying in size from a pea to a nut. These were exquisitely painful. Two of these were excised, one examined histologically, and the other inoculated into a guinea pig. The guinea pig did not die of tuberculosis, and the histological changes were also negative. The case was certainly not tuberculous, and Whitfield believes that there are at least 2 forms of Bazin's disease. [J. S.]

16.—Woods reports a case of **lupus of the face cured** after 5 applications of the **Röntgen rays**, the exposures being each time for 10 minutes. [J. S.]

17.—A man of 26 developed a small hard nodule on the skin of the right temple which first grew slowly and then rapidly, resisted treatment, and similar lumps appeared in other portions of the integument. Then the lymph glands in the left side of the neck became involved; areas of induration appeared in the skin of the chest and grew rapidly, but the patient did not suffer in any way. The spleen was not enlarged; the blood showed 27 per cent. of lymphocytes and was otherwise normal with the exception of slight changes in the red blood cells. The primary growth was excised, found to be lymphomatous in character. The patient was then given Fowler's solution, the lesions ceased to grow, changed to a darker brown and finally began to contract. This continued for some time, when the glands suddenly enlarged again, and a new growth appeared upon the skin. The general condition of the patient remained good. A little more than a month after this one of the enlarged cervical glands was excised and found to be soft. The patient became weaker, developed drowsiness and was stupid. Petechia appeared in the skin and rapidly became confluent. The blood examination at this time showed a profound anemia with a proportionate reduction of hemoglobin, and considerable leukocytosis. The small lymphocytes had increased to 95.5 per cent. There was hypertrophy of the tonsils and hemorrhagic diathesis, and the patient suffered from persistent coughing. The anemia continued to grow very profound, the differential count was practically the same, the polymorphonuclear neutrophiles being reduced to 2⅛ per cent. of a leukocytosis of 45,000. The patient developed nausea and vomiting and there was moderate fever. This became more severe, the anemia more profound, and finally the patient died of exhaustion. The autopsy made by Professor Williams showed lymphomatous tumors of the pleural cavity, enlargement of the peribronchial lymph glands, which were quite hemorrhagic, great enlargement of the spleen with large Malpighian bodies and a mottled liver. The histological examination showed infiltration with large cells of the Malphigian bodies of the spleen and lymph glands, and of the connective tissue of the liver, similar to the changes in the skin. Cultures from all the organs gave the streptococcus pyogenes. The case therefore apparently represents **Hodgkin's diseas** which developed into **lymphatic leukemia**, and death occurred as a result of **terminal streptococcic infection**, although at the present day in view of the uncertainty regarding the distinction between pseudoleukemia and lympho-sarcoma, it is possible that some other interpretation might be put upon it. [J. S.]

13.—Carter has performed experiments with the sphygmometer of Hill and Bernard which is essentially the same as the tonometer of Gärtner. He found that in nephritis, whether acute or chronic, there is nearly always an increase of blood pressure, although in secondary parenchymatous nephritis this increase is often slight. In chronic nephritis the pressure is sometimes excessive. He then studied the effect of drugs upon certain diseased conditions, particularly of nitroglycerine and sodium nitrite, and the effect of phlebotomy and intravenous injections of hot salt solution. He then studied the blood pressure in such conditions as endocarditis, pneumonia, etc., and in cases of anemia. He concludes that the mean arterial pressure is in males 116 mm. of Hg.; in females 113 mm. The blood pressure is about 62 mm. of Hg. higher in chronic than in acute nephritis. The most valuable drug for lowering pressure is sodium nitrite given in doses of 2 or 3 gr. every 2 or 4 hours. In cases of uremia with high blood pressure the most rapid method is phlebotomy followed by saline infusion and sodium nitrite in full doses. Blood pressure is low in aortic regurgitation, but may be normal if mitral regurgitation is present. It is diminished in all cases of anemia, and possibly there is some relation between low pressure in chlorosis and the production of gastric ulcer. [J. S.]

THE PRACTITIONER.

November, 1901.:

1. Relations between Disease of the Kidney and the Cardio-vascular System. SIR W. H. BROADBENT.
2. Uremia. J. R. BRADFORD.
3. Mental Conditions Associated with Bright's Disease and Uremia. T. B. HYSLOP.
4. Nephritis in Certain of the Specific Fevers. I. I. CAIDER.
5. Skin Eruptions in Bright's Disease. J. J. PRINGLE.
6. Clinical Forms and Diagnosis of Bright's Disease. R. T. WILLIAMSON.
7. Biography of Richard Bright.

1.—Sir W. H. Broadbent discusses the **relations between disease of the kidney and the cardio-vascular system.** The primary and dominant effect of disease of the kidneys on the motion of the blood is obstruction in the capillaries and arterioles. This is no doubt provoked by the presence in the blood of nitrogenized waste which it is the office of the kidneys to eliminate. It is a question of great importance to determine whether the primary obstruction is in the capillaries, or caused by the stop-cock action of the arterioles. Broadbent inclines to the opinion that the primary seat of obstruction is in the capillaries, and that the contraction of the arterioles is secondary to this. Given the obstruction to the onward flow of blood through the arterio-capillary net-work, there is first a contraction of the small arteries which we assumed to be protective. The resistance being present, and all the channels through which the blood must pass being narrowed, if the blood is to circulate at anything like the normal rate there must be an increased driving power, which can only be supplied by the heart. The heart rises to the occasion, and contracts with greater vigor. Thus high blood pressure is present. Describing contracted granular disease of the kidney he mentions the characteristic pulse, stating that the special character of a renal, or of a high tension, pulse is not the condition of pressure required to compress the artery, not the force or violence of the beat as it impresses the finger; these depend on the vigor of the heart's systole: the point to observe is the fulness of the artery between the beats, the absence of the sudden subsidence of the vessel under the fingers as the beat passes. The pulse, in the early stages of chronic Bright's disease, will usually be small, the artery being in a state of contraction. The beats will be inconspicuous from the small size of the vessel, and from the fact that it is not readily flattened on account of the internal pressure. Such a pulse is often described as weak, yet it can be felt between the beats, and can be rolled under the finger, and when the attempt is made to extinguish the pulsation and compress the artery the pulse seems to become stronger as the increasing pressure is applied. Dilation of the arteries as well as fibroid change and muscular hypertrophy in their walls gradually occurs, producing the characteristic "renal pulse;" large, the pulse wave long and dwelling on the finger, gradual in its rise and fall; or more sudden if the arterial system generally has undergone much degeneration. Along with these changes the heart is also affected. There is gradual hypertrophy of the left ventricle, displacement of the apex downwards and slightly outwards, general systolic heave as well as distinct apex push. Fibroid change supervenes, and the heart may undergo dilatation. One of the early indications of the latter occurrence is reduplication of the first sound best heard to the inner side of the apex, denoting a failure of synchronism between the two ventricles in their systole. As the changes in the heart and vessels advance, the symptoms attending the disease of the kidneys develop—headache, troubles of the digestion, loss of flesh, breathlessness, bloodlessness, irregular action of the heart, and in late stages, perhaps, attacks of noc-

turnal dyspnea. Edema may come on at a late period indicating heart failure, or it may be determined at any time by an attack of bronchitis, or of influenza attended with cardiac asthenia. Retinal hemorrhage may occur, which condition Broadbent believes to be found in cases with high tension of the pulse in which advanced arterial change has not been traceable. Edema is usually an early symptom in tubular nephritis, but there is no definite relation between the dropsy and the proportion of albumin present in the urine, nor is the dropsy always explained by the diminution in the quantity of urine passed. The prognosis of the case of tubular nephritis depends greatly on the development of real arterial tension. So long as the pulse remains flaccid and the heart weak, there is no effort on the part of the constitution towards recovery. As the pulse becomes firm and long, the amount of urine passed in the twenty-four hours increases, and the proportion of albumin diminishes, and the first step towards improvement is taken. In chronic nephritis, whether primary or consequent upon an acute attack, a moderate degree of arterial tension usually prevails, and it is not through cardio-vascular changes that a fatal termination is usually reached. Convulsions are not produced by the experimental introduction into the blood of urea, or of any other of the constituents of urine. Convulsions do not all occur in old standing disease of the kidneys when the blood may fairly be supposed to be completely laden with renal impurities from imperfect elimination. On the other hand they may supervene at a quite early period of acute tubular nephritis when there has been no time for the accumulation of any large amount of urenic matters. Broadbent believes the explanation of this [illegible] to be found in stasis of the cortical cerebral circulation. He believes that Cheyne-Stokes breathing, which is [illegible] commonly met with in renal disease than in any other condition is caused by the high arterial pressure. The general treatment of renal conditions is included in the article. [T. L. C.]

2.—J. R. Bradford treats of **uremia**, which he defines as a toxic condition usually arising in cases of acute or chronic renal disease. Uremia, like acetonemia, may be the first symptom that directs the attention to the existence of a serious underlying disease which has not produced obvious symptoms up to the time of the onset of the final toxic state. It may also arise as a sequel to operative interference in patients suffering from the chronic diseases that give rise to this condition. The condition may occur in the course of the chronic diseases liable to be complicated by them as the result of indiscretion of diet. The view that uremia depends on the sense of toxic substances in the blood has not received quite the same degree of acceptance as the view that acetonemia is due to such a cause. Pathologists however have been unable to correlate uremia definitely with those forms of renal disease in which high tension is the leading feature, and, further, the cerebral edema required by Traube's hypothesis has by no means been found at autopsy. The pathology of the condition can be investigated from both the experimental standpoint and that of clinical medicine. He details the experiments which have been performed for the purpose of determining the manner in which uremia occurs, including the symptoms which follow the double nephrectomy, the removal of a large quantity of renal tissue, the symptoms produced by calculous obstruction, and the toxicity of the urine. He discusses the effects of renal disease on the metabolism of the body. He discusses the theory of the effect of the internal secretions of the kidney, but he does not believe that there is any satisfactory evidence to confirm the hypothesis that uremia is dependent on the arrest of an internal secretion. He considers the chemical state of the blood and fluids of the body generally in uremia. They are loaded with extractives, and it is no uncommon phenomenon for the blood to contain 0.5% of urea instead of the normal 0.03. A very considerable amount of further work is required before it can be definitely stated that the disintegration of the tissues leads to the production of toxic bodies capable of causing the clinical features of uremia. The only [illegible] established facts in the opinion of the writer at the present time are that more retention of the normal constituents of the urine is not capable of producing uremia, that in uremia there is an excessive [illegible] of the muscular tissues of the body, and that [illegible] in many cases of uremia [illegible] the final stage [illegible] secretion, this is by no means invariable, and that certainly fatal uremia may be seen with an abundant secretion of urine. From the clinical point of view, **uremia** may be divided into the **acute**, the **chronic**, and the form described as the **latent**. These forms he discusses laying especial stress upon the **cutaneous eruptions** of very different types which are not infrequently present in uremia. The prognosis and treatment are also considered. Treatment with renal extracts, either prepared from the kidney or from the serum of the renal vein, as has been used by some observers, is not one which has afforded any definite evidence of its utility. [T. L. C.]

3.—T. B. Hyslop contributes a paper on the **mental conditions associated with Bright's Disease and uremia.** Cases of Bright's disease and uremia are occasionally met with in asylums, and the kidneys of many insane persons are affected by pathological changes. He records briefly many of the cases of Bright's disease associated with mental disorder which have been reported. Any defect in the renal system associated with arterial degeneration and a tendency to cardiac failure is apt also to be attended by brain failure. Renal cirrhosis is thus frequently associated with adhesion and thickening of the dura mater. Renal disease is associated with insanity in two ways: (1) Acute transient delirious mania, an acute toxemia, or uremic insanity; and 2, a progressive cerebral degeneration, with chronic renal disease as the primary cause. In this type the mental symptoms during the earlier stages vary from a mild dementia to mania or delirium. In due course, however, complete dementia results not unlike paralysis of the progressive type known as general paralysis of the insane. In some cases the spinal symptoms become marked, and changes in the spinal cord are found after death.

[T. L. C.]

4.—F. F. Caider discusses the occurrence of **nephritis in certain of the specific fevers**, together with its prognosis and treatment. In **scarlet fever** the incidence of nephritis varies considerably in different outbreaks. He believes that it is necessary clearly to define the term "nephritis" when used in this connection. In certain cases the symptoms of onset are sufficiently pronounced to warrant the designation acute nephritis. In these, which constitute the minority, the condition is characterized by drowsiness, headache, vomiting, occasionally a rigor, sudden elevation of temperature, a rapid excitable pulse of high tension, heat and dryness of the skin, and hematuria, as evidenced by smokiness of the urine, a frequent desire to pass water, and a variable degree of suppression. Some degree of anasarca is usually present at an early stage, of which, however, the only indication may be a waxy pallor of the complexion, and slight sub-conjunctival edema. In some instances the onset is more gradual, pyrexia being absent altogether, and the hematuria and suppression preceded by several days of malaise and gradual [illegible] anuria. While recognizing the appropriateness of including cases of scarlatinal albuminuria under the term nephritis, the writer believes that it would be a great mistake to refer to this category [illegible] in which albumin is found in the urine [illegible] or the time of its appearance. In many cases of scarlatina slight albuminuria is present during the febrile stage, which disappears when the temperature reverts to normal, and it should be remembered that albuminuria is apt to be produced by the administration of a diet rich in diffusible albumin, and that in some cases it is the result of some slight inflammation of the genital organs. It is a mistake to overrate the importance of such cases and to consider them to the [illegible] of renal inflammation. The [illegible] of nephritis in scarlet fever and [illegible] under hospital conditions is not as frequent as is commonly supposed. According to the [illegible] in the article [illegible] of the 67 [illegible] patients [illegible] scarlatinal [illegible] nephritis. Albumin was [illegible] in the urine in [illegible] cases. He [illegible] the [illegible] in 40 cases of scarlet fever [illegible] [illegible] scarlatinal [illegible] [illegible] [illegible]

pressure may be somewhat increased, and actual edema, associated with marked anemia, be present, hematuria is rarely seen, and recovery is in most cases complete. The treatment of nephritis consecutive to diphtheria calls for no special mention, but the very fact of its occurrence during convalescence from a throat illness should suggest the possibility of at least a coexistent scarlatina having been overlooked. In the course of **enteric fever** albuminuria is of common occurrence. It is very rarely that symptoms of renal impairment are sufficiently pronounced as to justify the term nephritis, and even should the albuminuria persist in the form of a mere trace for several months, complete recovery may be expected. [T. L. C.]

5.—J. J. Pringle treats of **skin eruptions in Bright's disease.** The deduction that diseases of the renal and cutaneous organs, on account of their correlation of function, should stand in equally close relationship to one another is most natural, and this is probably further supported by the anatomical resemblances between the minute structure of the renal tubules and the sweat coil-glands. He adopts the convenient classification of skin eruptions in Bright's disease which has been suggested by Thursfield. (1) The affections which characterize or may arise in the early stages of renal disease: pruritis, urticaria, eczema; (2) those which occur in the final stage and in uremic conditions: the universal erythematous, bullous, or desquamative eruptions and (3) purpura and other hemorrhagic eruptions. Thursfield's fourth classification, those affections which are seen only with marked edema, is excluded by Pringle. He believes that such conditions result from invasion of the pyogenetic cocci on skin rendered vulnerable by its sodden and stretched condition. He describes the chief points of clinical interest in the conditions named in the classification. So little is known of the immediate causation of skin eruptions in Bright's disease that its discussion may well be brief. Probably the process is similar to that by which eruptions are caused in septicemia or ptomaine poisoning, toxins acting through the vasomotor and trophic nerve systems. It is certain that neither urea nor uric acid is the toxic substance at play.

6.—R. T. Williamson describes the **clinical forms and diagnosis of Bright's disease.** The following classification indicates the kidney diseases which are usually included amongst the forms of Bright's disease: (1) Acute nephritis, or acute Bright's disease (sub-variety, the nephritis of pregnancy). Under chronic Bright's disease the following forms are usually recognized: (2) chronic parenchymatous nephritis (sub-variety, chronic parenchymatous hemorrhagic nephritis); (3) chronic interstitial nephritis: (a) contracted white kidney (secondary cirrhotic kidney); (b) primary cirrhotic kidney (small red or granular kidney); (c) arteriosclerotic kidney. Some authors include amyloid kidney amongst the forms of Bright's disease, but this is unusual; the pathological lesions are, of course, of a different nature from those of Bright's disease. The primary cirrhotic kidney and the arteriosclerotic kidney are usually included amongst the forms of Bright's disease, though some authors would exclude them. Acute Bright's disease has to be diagnosed from the temporary albuminuria of kidney origin occurring during fevers. Though there is no sharp line between the two, because acute Bright's disease is so often excited by an acute fever, the following are the points of diagnostic importance: Febrile albuminuria is transitory, and disappears with, or immediately after, the febrile condition; dropsy does not occur, and blood is either not present in the urine, or the amount is very small. When Bright's disease dropsy is present, the amount of blood in the urine is often large, and the albuminuria is of much longer duration. He gives the distinguishing points of differential diagnosis and devotes some space to the diagnosis of Bright's disease and other forms of albuminuria. He states that in any case of albuminuria in which there appears to be other sign of kidney disease before a diagnosis of functional albuminuria is made, a most careful general examination is necessary. Many cases regarded as functional albuminuria are probably due to pathological states of the prostate and possibly prostatic fluid with the urine; others are due to [illegible] kidney [illegible] or an early stage of a chronic Bright's disease.

[T. L. C.]

7.—This [illegible] is in the [illegible] Bright's disease, fittingly includes the biography of Richard Bright. [illegible] [T. L. C.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

October 3, 1901.

1. On the Treatment of Anthrax. F. SCHULTZE.
2. Sweating in Electric-Light and Hot-Air Chambers. KREBS.
4. A Peculiar Form of Stenocardia (Pseudo-Stenocardia Rheumatica). G. VON VOSS

1.—Schultze reports an interesting case of anthrax to show that active surgical interference is not always necessary, but active treatment is usually imperative. The patient was a man who had the mixed occupation of butcher, layer-out, grave-digger. He had cut up a cow, which, he learned several days later, had died of anthrax. He disinfected himself as thoroughly as possible, but about 10 days after he had been occupied with the animal a postule appeared under the left eye, which rapidly swelled, and soon took on the characteristic appearance of anthrax, and in scrapings from this the anthrax bacillus was found. The man became extremely sick; the pulse was very rapid; the temperature high, the swelling spread widely, and there was an ulcer the size of a dollar. There was albumin and many casts in the urine, and all the evidences of a severe nephritis. Examination of the blood for anthrax bacilli showed their absence. In spite of profound nervous symptoms the man recovered, and his recovery is attributed to the use of aplications of 1 to 1000 corrosive sublimate in 70% alcohol over the ulcer. 5 grains of quinine every 3 hours, and naphthalin for the diarrhea. Schultze belives that this application is better and safer than the carbolic acid injections recommended by Strubell. In spite of the extensive infiltration and ulceration in so important a region, the man recovered with no bad results excepting a moderate scar and a slight extropion. [D. L. E.]

2.—Krebs gives an extended description of the electric light chamber which he uses, and discusses its use in various conditions, and its effects. He states that the chief value of the procudure lies in the fact that the patients sweat much more quickly and with a much lower temperature when exposed to the arc light baths than they do when other procedures are used. The general factors active in producing this effect are the heat rays from the arc light. Incandescent lights are not so well suited for the purpose. The frequency of the pulse practically always rises quite markedly when the bath has been continued as long as 20 or 25 minutes, while the blood pressure as a rule sinks. He considers that these baths are by no means free from danger in cardiac cases, and therefore he hesitates to recommend them for any persons who have organic heart disease, and never does so unless the patient can be watched carefully, and even then he uses but few lamps at first. Many changes are necessary in the construction of the electric-light chamber for baths. [D. L. E.]

4.—Voss reports 2 cases, both of them persons in rather advanced life, who had not been neurasthenic; both of them had had painful cardiac attacks which resembled the picture of a moderately severe stenocardia, the only symptom absent being typical pain in the left arm. The pain had radiated toward both arms. One very striking symptom in both cases was marked tenderness of the muscles of the back. Because of the presence of this pain, and because of the good effect of massage, and the fact that the heart was apparently about normal, and there was no dyspnea, Voss decided that the pains were pseudo-angina, and were due to rheumatism of the deep muscles of the back. This opinion was made stronger by the observation that muscular movements greatly increased the pain, and that one patient had previously had rheumatism. [D. L. E.]

5.—Oeder describes the case of a man who five years previously had [illegible] the signs of a marked infiltration of the left lung toward the apex, and his sputum contained large numbers of tubercle [illegible] [illegible] [illegible]

The lower lobe of the left lung was also much infiltrated. The man also had a fistula in the colon presisting after several operations which had been undertaken as a result of perityphlitic abscess. He also had subsequently profuse hemoptysis which was several times repeated. The man improved under treatment and disappeared from observation, but when seen about 5 months after the beginning of treatment was found to have improved so greatly that for a long time he had not been under medical management at all. He ate rather freely of everything. In the beginning of 1901 the left apex still showed slight but very slight signs of infiltration; the urine showed 3.3% of sugar in a daily quantity of 1½ litres of urine, but the man seemed in good health and wholly capable of work. The case is reported as a contrast to the statement very frequently made by writers on diabetes, that patients with diabetes who acquire tuberculosis are likely to live but a very short time. This man has not only lived 6 years since he first had the glycosuria, but has very greatly improved or almost recovered from a severe tuberculous infiltration of the left lung. Tubercle bacilli were, however, present in the sputum at the time of the last examination. [D. L. E.]

October 10, 1901.

1. Rudolf Virchow. R. RIBBERT.
2. Virchow as a Hygienist. ERISMANN.
3. Virchow as an Anthropologist. A. LISSAUER.
4. The Point of Entrance of Tubercle Bacilli and Their Localization. GRAWITZ.
5. On Over-Growth of Neuroglia. BABES.
6. Gliomatous Change in the Olfactory Tract and Bulb, Together with Gliosiscerebri. CHIARI.
7. On the Investigation of the Feces. URY.

4.—Grawitz considers that when we reflect upon the small number of cases in which primary tuberculosis of the digestive tract occurs, and likewise cast out from the reckoning those cases in which the infection was evidently secondary, and due to swallowing bacilli in the sputum, we must believe that the number of cases in which tuberculous meat or other food has caused tuberculosis of the intestine is extremely small. But he states this conclusion is not justified if you look at the matter in another way. In the pathological laboratory at Greifswald in the last 1104 postmortems there were 18.66% of cases which showed active tuberculous processes, and 8.68% with healed residua of tuberculosis. In only 3 children and one man were there ulcers in the intestines or tuberculosis of the mesenteric glands without lung lesions from which the infection might have occurred. The intestinal mucous membrane, one must, however, remember, is not very susceptible to tuberculosis, and often remains intact when the mesenteric glands are diseased, and when for years tuberculous sputum has been swallowed. He insists upon the importance of the tonsil as a point of entrance for the bacilli, and states that he has more and more constantly investigated the tonsils and found that one may discover not only residua, but fresh tubercles with giant cells and bacilli in many instances when the tonsils are small and apparently normal. From the tonsils the bacilli readily pass into the lymph stream and into the cervical glands, and they may from here involve the lungs, pleura, or pericardium, and the patients may die without any appearance of tuberculosis of the intestine or mesenteric glands, and yet in these cases in many instances the food is certainly the source of infection. It is very difficult to demonstrate with absolute exactness that the infection in these cases takes place through the food. Any reasonable man must however believe that it does occur when there is so much testimony to that effect. He believes that we should give more attention to the condition of the tonsils when there is chronic, probably tuberculous swelling of the lymph glands of the neck and there should be careful clinical observations concerning the course which tuberculosis has taken in involving one organ after the other. It is only in rare cases that postmortem examinations alone can bring definite evidence that the original source of the infection was the food. [D. L. E.]

5.—Babes writes an article chiefly laudatory of Virchow, and describing the results which he has obtained in the investigations of the neuroglia by the older and simpler methods, and by the method of Weigert. He believes that the new methods of examination have not caused us to alter the first original statements of Virchow. They do add to our knowledge concerning the cell processes, the fibrils, and some points concerning the finer structure of the neuroglia and their relation to the blood vessels, and they have given opportunity for many new theories. They have not, however, in any way lessened the value of Virchow's original teaching, and have in only unimportant ways altered the teaching concerning the pathology of the neuroglia. [D. L. E.]

6.—Chiari reports the case of a man of 52, who was wholly demented, the dementia having followed marked alcoholism and epilepsy. The pupils reacted only slightly to light; he had marked tremor of the tongue and hands; the patellar reflex was much reduced; his gait was atactic; the movements of the eyes were normal, but there were no other marked symptoms excepting occasional epileptic attacks; which, however, had decreased in number. Toward death he had repeated vomiting, death occurring after clonic convulsions which were followed by sopor. He was thought to have had an apoplexy just before death. No definite clinical symptoms of the loss of the olfactory function were elicited. The most remarkable part of the post mortem was the discovery that the olfactory tract and bulb on the right side were about 4 times their normal thickness and 4 times the thickness of the same structures on the left side. They were also hard. On cutting the brain there was found an extensive gliomatosis of the neighboring portion of the brain involving chiefly the median basal part of the right hemisphere. There were fresh hemorrhages in the tumor which had probably been the immediate cause of death. It was very remarkable that the gliomatosis had involved the olfactory tract and bulb without involving the immediately surrounding tissues. [D. L. E.]

7.—Ury in his investigations of the feces has used a method suggested by Salkowski, which the latter author has himself used in a similar series of experiments. It depends upon the fact that the substances contained in secretions or excretions from the intestine are in soluble form, while those contained in the food remnants are practically entirely insoluble organic combinations. One of the most important objects of his research was to tell how much of the nitrogen which is regularly found in the feces is derived from the unabsorbed food, and how much is contained in the intestinal excretions. This has been a subject of repeated discussion by physiologists and other students of metabolism. His results in general show that the soluble substances containing nitrogen yield from 18 to 32% of the total nitrogen of the feces, a result which corresponds fairly closely with the statement made previously by Rieder as to the amount of nitrogen contained in the stools after administering food free of nitrogen, and contradicts the statement of Preussnitz that the greater part of the nitrogen in the stools is derived from the intestinal excreta, and not from the food remnants. The dry residue from the soluble portion of the feces was from 14 to 17% of the total dry residue. Of the total nitrogen in the watery extract, that is that derived from intestinal excreta about 34% was derived from substances which apparently belonged to the nuclein class because they were substances which, while not soluble in water were soluble in alkalis. He also makes an interesting statement that nearly all the calcium found in the feces was in insoluble form and therefore derived from the food and from this he draws the conclusion that calcium is not excreted chiefly through the intestines as has previously been taught, but that the calcium which is derived from the body tissues passes out chiefly through the urine while that found in the stools is derived almost entirely from the food. He also gives a description of a number of special methods which he used in his experiments and a method for determining the lecithin phosphorus in the feces. [D. L. E.]

DEUTCHES ARCHIV FUER KLINISCHE MEDICIN.

Vol. 70, Heft 5-6.

20. Alkaptonuria. MEYER.
21. A Case of Multiple Dermatomyomata. JAMIN.
22. Investigations upon the Physiology and Pathology of the Formation and Excretion of Oxalic Acid in Human Beings. MOHR and SALOMON.
23. Gangrene of the Arms and Legs After Scarlet Fever and Other Infectious Diseases. EICHHORST.
24. Investigations Upon the Presence of a Microörganism in the Blood of Persons Suffering from Pneumonia. PROCHASKA.
25. Some Cases of Black Tongue. REINECKE.
26. Contribution to the Knowledge of the Metabolism of Calcium and Magnesium in Cases of Phthisis. OTT.
27. A Case of Anadenia Gastrica in Carcinoma of the Stomach. OTSUKA.
28. Investigations upon the Processes of Solution in Cases of Croupous Pneumonia. SIMON.
29. Book Reviews.

20.—Meyer discusses the formation of **homogentisinic acid** which he believes is derived from gentisin, and then reports a case in which **alkaptonuria** was present. The patient, a boy, with healthy parents, when first seen at one and a half years of age, had suffered on various occasions from intestinal catarrh, otherwise he was perfectly healthy. His urine, however, from the time of his birth, had occasionally a dark color, and produced brown spots on his clothing which could not be removed by washing. He also had nocturnal enuresis. The longer the urine remained exposed to the air, the darker it became. When examined the patient was found to be active, intelligent, and well developed. There was an excessive amount of cerumen in the external ears. The urine, examined at frequent intervals for a period of two years, showed practically the same features. It was, when not exposed to the air, of a straw-yellow color; when exposed to the air, the upper surface rapidly became brown, a change that could be hastened by the addition of ammonia or other alkalies. If solution of ferric chloride was added to it, it became transiently colored a dirty green. It reduced an ammoniated solution of silver when cool. The bismuth test was always negative. There was no fermentation of yeast, and no turning of polarized light, proving that it was unquestionably a case of alkaptonuria. Meyer, therefore, undertook a series of elaborate chemical investigations in order to determine the nature of alkapton. He added sulphuric acid to the urine, concentrated it upon a water bath, extracted it with ether, allowed the ether to evaporate, dissolved the crystals in water, and precipitated again with acetate of lead. The lead was then removed by hydrogen sulphide, the residue again extracted with ether, then evaporated and the remainder placed in water, and upon cooling fine crystals were precipitated that gave a typical alkapton reaction. Further purification produced white needle-like crystals that differed from homogentisinic acid, the melting point was lower, and they did not absorb moisture from the atmosphere. They correspond in all respects to the thylester of homogentisinic acid. These were evidently produced in the course of the manipulations. Further experiments showed that it was possible to increase the quantity of homogentisinic acid in the urine by adding plasmon to the diet in order to increase the amount of nitrogenous food. Investigations of the urine itself showed that there was no increase in the ethereal sulphates, nor a pathological increase in the excretion of ammonia. He concludes that although phenol and its derivatives are usually combined with the ethereals, homogentisin is usually excreted as a salt, which apparently proves that in the human organism homogentisin is less poisonous than its lower homologues. It does not apparently act as an acid because the amount of ammonia excreted is not increased, and there does not appear to be any reason to suppose that it represents any profound morbid alteration in the organism. [J. S.]

21.—Jamin reports the case of a man, 42 years of age, who at the age of 17 noticed a small lump upon the skin of the right leg. Later similar nodules appeared upon the thigh and the breast. Ten year later he had occasional pains in the right leg. They were sticking, burning, or tearing in character, and strictly limited to the nodules. They were more frequent and more severe in winter, and gradually increased as time went on. The duration was from 10 to 20 minutes and the intervals 2 or 3 hours. Occasionally the nodules on the breast were also painful. There was moderate edema of the right foot and ankle, but no abnormal symptoms. The nodules were elevated, hard, and upon section proved to be white in the interior. Microscopically they consisted of masses of connective tissue in the midst of which were numerous nonstriated muscle fibres. The blood vessels showed considerable perivascular cellular infiltration. A diagnosis was made of **multiple dermatomyomata.** The muscle fibres apparently were developed from the arrectores pilorum; the pain was apparently the result of the contraction of the muscles. It could be produced by muscular irritation or cold. Pigmentation of the skin was noted in this case, and is apparently associated with this form of skin disease. The tumors were benign, but also painful, and the pains they produce are refractory to all forms of medication. They do not recur after removal, and therefore it is impossible, if the disease is recognized sufficiently early, to produce perfect cure; however, an early diagnosis is very rare. [J. S.]

22.—Mohr and Solomon have performed an extensive series of experiments in order to determine the **quantity of oxalic acid excreted in the urine.** They used the method of Salkowski, which they proved to be accurate by making control tests upon specimens of urine to which a definite quantity of oxalic acid had been added. The details of the paper are circumstantial and only the results can be given. Patients suffering from gastric ulcer continued to excrete from 1.5 to 6 milligrams of oxalic acid every day, when kept upon a diet that did not contain the acid in any form. Alimentary oxaluria appears to occur to a limited extent. Experiments showed that more than 90% was retained in the body and probably oxidized. The addition of hydrochloric acid to the diet increased the excretion of oxalic acid either by causing a greater formation, or by stimulating the elimination of that already formed. The administration of alkalies such as calcium carbonate caused a great diminution in the amount of oxalic acid excreted. The administration of gelatine caused an increase. The source of oxalic acid appears to be the nitrogenous food, and this accords with the observation that the carnivora excrete more than the herbivora. The consumption of connective tissue also produces the same result. The consumption of foods rich in nuclein such as thymus, which always increase the amount of uric acid, had no effect upon the amount of oxalic acid excreted. Having determined that oxalic acid excretion is influenced by connective tissue, gelatine, and acid, the authors have undertaken a series of experiments to determine what its relation is in patients suffering from various pathological conditions. In cases of neurasthenia with hyperacidity increase in oxalic acid sometimes occurs. In diabetes the quantity of oxalic acid excreted is not affected. In catarrhal icterus it may be increased or remain normal. In chronic interstitial nephritis it is not affected. In gout it is apparently reduced; in pneumonia and leukemia, both of which are diseases characterized by profound leukocytosis, the oxalic acid appeared to be approximately normal, usually increasing after the crisis, when the diet was also increased. In myelogenous leukemia the oxalic acid was normal. In cholelithiasis it appeared to be normal. There appears to be no relation between the excretion of oxalic acid and that of uric acid in all these diseased conditions. [J. S.]

23.—Eichhorst reports an interesting case of scarlet fever occurring in a girl of 4 years. The patient suffered from severe sore throat, from which streptococci and staphylococci were obtained, but diphtheria bacilli could not be detected. There was considerable albumin in the urine. The patient gradually improved, but finally on the 17th day of the disease there was a renewed elevation of temperature, the patient complained of pains in the legs, and on the 21st day the left leg and foot became absolutely pale and cold. The feet and toes were entirely paralyzed, and the plantar reflex was lost on this side. Pulsation was absent in the popliteal and dorsal arteries of the foot on the left side, and gangrene gradually supervened in this part. The patient also had severe otitis media on the left side with perforation of the membrane, the staphylococcus aureus was found in the pus. Amputation of the left leg was finally required. An organized thrombus was found in

the popliteal artery 1 cm. above its division. Eichhorst calls attention to the extreme infrequency of gangrene in scarlet fever, and reports several cases that he has been able to collect from the literature. He also reports a case of a woman of 64, with advanced arteriosclerosis, who, after an attack of influenza, developed severe pain in the right arm, which became paralyzed, cold, and gradually gangrenous. The patient died and a thrombus was found in the right axillary artery. Eichhorst then gives an analysis of all the cases of **gangrene following infectious disease** that he has been able to collect from the literature, 166 in all. The most frequent causes were typhoid and typhus fever, and after these influenza, puerperium and pneumonia in the order named. Scarlet fever was the cause in only 3 cases, and diphtheria in only one. The commonest seat is in the legs, 122 cases having gangrene in this situation. There appears to be no difference between the right and left legs, and gangrene of both legs is less common than of either separately. In 128 cases of which the result is known 42 patients died. The percentage is much higher among women than among men. In 65 cases autopsy showed thrombosis in the main artery of the limb. In many of the others investigation was not made. [J. S.]

24.—Prochaska has made a series of investigations upon the **bacteriological contents of the blood in cases of pneumonia.** In general the blood was taken from the median basilic vein and inoculated upon agar and then in bouillon. In 6 fatal cases he was able to obtain the pneumococcus in all, and in 34 cases that recovered he was equally successful. In 2 cases there seemed to be a pleomorphous organism that appeared something like the pneumococcus at first, and subsequently became more like the streptococcus. Both patients had small abscesses in the lungs that contained streptococci and staphylococci. In 2 cases, in addition to the pneumococcus, the staphylococcus pyogenes aureus was found. In one of the fatal cases there was purulent encephalitis and ulcerative endocarditis. From both lesions the pneumococcus was obtained. In another of the fatal cases an abscess had formed in the lung, and in the pus from this the pneumococcus was present. The condition may be complicated by empyema, abscess of the muscle, acute hemorrhagic nephritis, but other complications were not present. In one case the pneumococcus was found on the day after the crisis in the blood, and, in one case, 2 days after the crisis. The conclusion to be drawn from this study is that in all cases of pneumonia bacteremia exists. [J. S.]

25.—Reinecke discusses **black tongue,** a peculiar disease in which the upper surface of the tongue appears to be covered with a thick layer of blackish or brownish material. He reports 7 cases occurring in persons of both sexes and of various ages. The discoloration is due to elongated masses of epithelium of the particular tint that the tongue shows. In one case these hair-like projections were over 1 cm. in length. In 5 cases the condition was associated with acute syphilis, and the pigment appeared to be in the form of black or brown masses. [J. S.]

26.—Ott has performed careful metabolic experiments upon 5 cases of pulmonary tuberculosis in order to determine whether **calcium** and **magnesium** are **excreted** in excessive quantities. All the patients had good appetites and ate sufficient quantities of food. The results showed that when a sufficient quantity was administered the decomposition of albumin was almost entirely checked. In another case there was no loss of calcium and magnesium. In 2 cases there was calcium and magnesium equilibrium, and in another apparently slight retention. The only conclusion to be drawn is that when the nourishment is sufficient severe loss of albumin from the body may be prevented, and that the softening of the bone with the loss of calcium and magnesium does not occur in pulmonary tuberculosis. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

December 2, 1901. (38 Jahrgang, No. 48).

1. Abdominal Injuries. ERICH LEXER.
2. The History of the Invention of the Ophthalmoscope. RICHARD GREEFF.
3. A New Stereoscopic Ophthalmoscope. THORNER.
4. The Value of Recent Investigation Methods in the Diagnosis of Renal Insufficiency. JULIUS KISS.
5. The Scientific Basis of Clinical Cryoscopy. A. von KORÁNYI.
6. The Question of Diabetes due to Suprarenal Capsules. G. ZUELZER.

1.—Will be abstracted when concluded.

2.—On November 11, 1851, in Königsberg, **von Helmholtz first demonstrated his ophthalmoscope.** Yet he had already made a preliminary announcement December 6, 1850, in Berlin. His pamphlet appeared in 1851, and an article followed in 1852, in Vierordt's Archiv. This article is an address delivered upon the fiftieth anniversary of von Helmholtz's discovery. [M. O.]

3.—Thorner describes a **new stereoscopic ophthalmoscope.** He gives the details of the complicated instrument, with an explanation of how he overcomes the corneal reflexes. While the light is projected above, observations are made through two adjustable tubes below. The great advantage of this instrument is that not only one, but both eyes are employed. [M. O.]

4.—Kiss believes that **cryoscopy, the methylene blue, and phloridzin tests** for renal insufficiency, **while valuable discoveries, are truly "functional" diagnostic methods,** but that **they owe their value to cystoscopy, catheterization of the ureters,** and the old methods of **urine analysis.** For the molecular concentration of the urine and blood will in many cases show no difference at all, or a kidney may be functionating even though anuria exist. Besides, Kiss shows that the estimation of the freezing-point of urine does not demonstrate how well the kidney may functionate. Nor are any facts found to substantiate von Korányi's sodium chloride theory, as is shown by the table of cases collected by Kiss. The determination of the specific gravity by Westphal's scales gives as good results as cryoscopy. The indications for operation, dependent upon cryoscopy of the blood, are as yet not clear. Failure of the methylene blue test can occur without any affection of the kidney; while it may appear normally with uremia. Nor is the phloridzin test any more reliable. For without cystoscopy, catheterization of the ureters, and analysis of the urine, no conclusions could be reached. [M. O.]

5.—**Von Koranyi** contends that his sodium chloride theory is well proved by facts, and reviews the experiments upon which he bases his theory. He **considers cryoscopy a "functional" method,** together with the other methods. And there is no doubt that it is a valuable method in the determination of renal insufficiency. [M. O.]

6.—When **suprarenal capsules** are **injected subcutaneously into** animals, **glycosuria results.** When phloridzin is given, renal glycosuria follows. But hyperglycemia does not exist with the latter, while it accompanies the former, as Zuelzer's experiments show. Therefore he considers that glycosuria following the injection of suprarenal substance is not renal in character. Cutaneous pigmentation occurred in animals injected for four weeks, but disappeared when the injections ceased. It is also interesting to note that when fed upon levulose no levulose appeared in the urine; when given grape sugar, the glycosuria increased. No conclusions are reached. [M. O.]

December 9, 1901. (38 Jahrgang, No. 49).

1. Lumbar Hernia and Related Conditions. M. BORCHARDT.
2. The Westphal-Piltz Pupillary Phenomenon. A. WESTPHAL.
3. A New Caustic Holder. L. LEWIN.
4. The Present State of Biological Light Research and Light-Therapy. SOPHUS BANG.
5. Abdominal Injuries. ERICH LEXER.

1.—Will be abstracted when concluded.

2.—Replying to an article by Schanz in the *Berliner klinische Wochenschrift* No. 42, Westphal says that he does not believe that the **Westphal-Piltz pupillary phenomon** is mechanical, due to congestive disturbances which cause an unequal pressure of the lid muscles upon the eye-ball, as Schanz states, but that it is simply a complementary movement. He does not believe that it is as yet possible to conclude whether the reaction is of diagnostic significance or not. [M. O.]

3.—Lewin describes a **holder for a caustic stick.** The handle, like a certain kind of lead pencil contains the caustic, which can be dropped down, just as the lead is

dropped in the pencil, when ready for use. Diagrams make the description of the instrument very plain. [M. O.]

4.—The **effects of light** locally were studied in 1859, when Charcot noted an erythema due to the sun's rays. Finsen has noted that continued exposure to light caused hyperemia, which lasted long after exposure. Histologically blood vessels dilate, and an exudate is formed, mainly of leukocytes. Pigmentation follows, from the exudation of erythrocytes. **Research** shows that the violet and ultraviolet rays cause distinct inflammation of the skin, increase the reflexes, and are strongly bactericidal. **Light-therapy** is either positive or negative, the latter when red light only is used, since it is indifferent. The positive treatment may be general or local, by sunlight or electric light. The positive treatment is best employed locally. This has been used mainly upon cases of lupus, not one patient out of 640 failing to show some improvement, and only 11 (2%) not showing much improvement. 456 cases were absolutely cured, 130 of which had not had recurrence while under observation since receiving the treatment. Cicatrices are very small, and there is no pain, but the applications must be continued a long time, and the apparatus is expensive. A detailed description of his recently invented inexpensive **electric lamp** for local treatment follows. [M. O.]

5.—Lexer states tnat only in simple cases of penetrating **wounds of the abdomen** is the expectant plan best, for when symptoms of pulmonary, pleural, or pericardial complications appear, **laparotomy** is indicated at once. Even more difficult is the determination upon operation when no external wound exists, yet extensive internal injuries are present. A symptom which should lead to the diagnosis of grave internal abdominal injury is the vomiting of bile. Even though improvement for 24 hours follows, typical signs of perforative peritonitis appear. When internal hemorrhage occurs, the diagnosis is not so difficult. After reporting a large number of case-histories in full, Lexer divides the abdominal injuries which need operation into four groups, those in danger of perforative peritonitis from late necrosis; those with circumscribed abscesses causing symptoms about them; those with cicatricial stricture or stenosis; and those with intraperitoneal and mesenteric hematoma. In all these subcutaneous abdominal injuries an early operation may be needed. All cases should be constantly under observation, so that operation may be undertaken at the appearance of the first unfavorable symptom. [M. O.]

ZEITSCHRIFT FUER KLINISCHE MEDICIN.

Band 43. Heft 5-6.

1. Observations Concerning the Condition of the Bone Marrow During Hibernation. PAPPENHEIM.
2. Reduction of Body Temperature, Light Therapy, and Increase of Metabolism. SPECK.
3. On the Fat-Splitting Ferments of the Stomach. VOLHARD.
4. Contribution to Hematology. BLOCH.

1.—Pappenheim has made a study of the alterations in the bone marrow occurring during hibernation, and after hibernation, because he believed that this might give an opportunity to learn something of the breaking down and regeneration of blood during normal conditions. An animal while hibernating would be expected to need much less activity of the blood than during active life. His material was provided by a gift of 8 marmots, 5 of them old, and 3 of them born within the year. He first discusses the best method of staining blood and bone marrow, and states that excellent results were obtained in fixing by using alcohol and platinum chloride. Sections of the bone marrow were most satisfactorily fixed in the same solution, or in phenol aceton, the latter being also very satisfactory for fixing the blood smears. Sections of the spleen were also studied, giving particular attention to the amount of hemosiderin. Of the stains good results were given by hemotoxalin and then counter-staining with triglycerin mixture. Also by staining with methylene blue, or better, toluidin blue and counter-staining with methylene green tri-acid. The blood of the marmot under normal conditions is first described. The changes found during hibernation were decided emaciation of the whole body; marked reduction in weight; acetonuria, and very striking enlargement of the spleen. The long bones showed total fatty change of the bone marrow, and in the bone marrow of the ribs there was much hemosiderin. This was also found in the spleen, and many of the muscles in this region contained red blood corpuscles or remnants of them. The blood showed no nucleated red cells, no notable leukocytosis, no reduction of hemoglobin or hydremia, and so far as could be told, no concentration. There were no other changes that were notable. Pappenheim decides that in hibernation there is certainly no primary change in the bone marrow or blood which causes the emaciation, reduction in metabolism, etc., but that sleep is the primary alteration, and the others are the direct consequences. The regeneration of the blood was the same when the animals awakened spontaneously in the spring, or when they were artificially awakened in a warm chamber. The examination was undertaken a few hours after awakening and free administration of food. The blood contained nucleated red cells; the bone marrow was the typical red marrow, and while during winter sleep the changes in the marrow had taken place from the distal portion toward the proximal, in regeneration it took place from the proximal toward the distal. Microscopically one old marmot was notable in that it showed a majority of red cells in the marrow, while the white cells were chiefly those with a large round nucleus. There were also numerous lymphocytes and young megaloblasts, and in the latter a number of mitoses were discovered. The condition differed from that in the young marmot chiefly in the fact that there was an immense number of small normoblasts. One of these young marmots, however, showed similar numbers of normoblasts. Therefore in the young animals the changes found after hibernation are practically the same as those found before hibernation. In the older animals there was first a midway stage in which there were granulated normoblasts, and marked proliferation of cells and then normal conditions. In the older animal, therefore, there was evidence of a temporay insufficiency of the marrow, under the influence of the sudden change in metabolism which occur with the awakening. Pappenheim then makes some observations concerning the anemias. He considers that in all anemias there is evidence of more or less marked relative insufficiency of the hemoglobin-producing function of the bone marrow, and that all anemias are secondary, even pernicious anemia; the latter differing from some others in being cryptogenetic. The mere fact that megaloblasts appear in the blood is not distinctive, because there may be many of them in the bone marrow, and yet they may not appear in the blood stream, and hence they may or may not appear in pernicious anemia, and may sometimes appear in other conditions; and they are certainly produced in the bone marrow in other conditions besides pernicious anemia. He divides anemias into the following groups: (1) Those which are primarily hemophthisical, in other words those in which the amount of blood is decreased; these are sub-divided into (a) those with normal or increased blood production, chiefly traumatic anemias; (b) those with abnormal blood regeneration, the toxogenic anemias. In the latter class he includes pernicious anemia, the anemia of intoxication from metals and drugs, the anemia of gastric carcinoma, syphilis, etc., and those forms due to parasites. (2) Those which are primarily myelophthisical, or in which the blood buildings organs are reduced in amount—(a) simple traumatic extirpation of the bone marrow which practically never occurs; (b) the elimination of the marrow or its substitution by means of lymphatic growths, etc., as in lymphatic anemia, pseudoleukemia, etc.; (c) anemia due to heterogeneous circumscribed neoplasms which exert a toxic action upon the remaining bone marrow; (d) diffuse, direct specific intoxication of the bone marrow itself. [D. L. E.]

2.—Speck gives a critical discussion upon the influence of light baths and the attempt to increase metabolism by

this and other means which have excited so much attention lately. He presents no new work, but bases his discussion upon his own previous publications and those of other authors. He claims in the first place that it is to the utmost degree improbable that mere exposure to light would have any very notable effect upon metabolism in man, since many human beings have been habituated to wearing clothes over the greater part of the body, while others wear little if any clothing, yet no physical difference in these 2 classes of human beings which can be attributed to the use or lack of the use of clothing, has ever been demonstrated. He further states that his work showed an entire absence of notable effect of light baths upon the oxidative process, upon the body temperature, or upon the general metabolism, as a result of these baths. He states finally that there is an entire absence of testimony that the baths have any influence upon the nitrogen metabolism, or oxidative processes, and he believes that those who have recommended the light baths have done so without good reason, and that the baths as far as concerns the testimony is concerned, are not known to have any definite influence.

[D. L. E.]

3.—Volhard adds a further contribution to his previous work on the fat-splitting ferments of the stomach. He finds that the ferment when contained in the gastric juice is very sensitive to the action of alkalies, while the ferment of glycerine extract of the mucous mebrane is not sensitive to alkalies in small quantities; on the other hand, the ferment contained in the gastric juice is much more affected by HCl. than is the ferment obtained from an extract of the mucous membrane. He concludes that the gastric juice contains the fat splitting ferment while the mucous membrane contains the zymogen of this ferment. The fat-splitting done by this ferment does not increase in proportion to the time of its action, but rather in irregular intervals. This action has no relation to the amount, but rather to the character of the fat present. He finds that in achylia gastrica the secretion of the fat ferment is reduced, as is the secretion of the milk-curdling ferment and pepsin. Marked grades of hepatic activity decrease the fat-splitting action of the gastric juice. [D. L. E.]

4.—Bloch gives a very extensive study relating almost solely to the basophilic granulation of the red blood cells, the manner in which they are produced, and questions directly related to these matters. In referring to various methods of producing basophilic granulations experimentally he states that subcutaneous injections of methylene blue in mice were followed by the appearance of a small number of granules in some of the red cells. He believes that none of these granules that appeared in the red cells as the result of the use of stains are evidences of pre-formed structures, and that this is not in any case a vital staining. On the contrary, he considers that the granulation was the result of the precipitation of some substance which under normal conditions is in solution in the cells. He believes that there is no evidence that the red blood cells have any finer structure than that easily observed, in other words they are homogeneous. He has investigated the effect of potassium chlorate, concentrated salt solution, turpentine, toluylendiamin and pyrodin on the red blood cells of warm blooded animals, and has compared the effects with those of pyrodin. With all the first mentioned substances, whether the poisoning is acute or chronic there is the appearance in the red blood cells of a few granular to fat-like bodies which do not stain readily, or there are very delicate fine spots in the protoplasm which also do not stain. He discusses the diagnostic and prognostic importance of basophilic granulations of the red blood cells and expresses his opinion at once by the statement that they have scarcely any definite diagnostic or prognostic value. He believes that they have a definite theoretic but no clinical importance. They are of value in indicating that there are blood changes when other signs are absent and also show that there is probably some intoxication. He admits that with patients who have marked abdominal echo the discovery of these granulations in the red blood cells would speak with some positiveness in favor of lead colic. But he finds that the granulations are not constant in lead poisoning, and hence a negative result would not be at all impos[illegible] a case of lead poisoning. He finds them present in most cases of pernicious anemia, but they are also present in severe conditions that [illegible] are of course not a diagnostic sign of pernicious anemia. They are found in many secondary anemias, such as in carcinoma and syphilis, and in tuberculosis and malaria. They are believed not to be constant even in pernicious anemia. He mentions the fact that he has examined [illegible] because of pathological changes and was struck by the fact that granulation of the erythrocytes was extremely rare. Chronic suppurative processes quite frequently were associated with the presence of the granules, but these were absent in the instances also frequently absent. He does not believe that in these conditions it is the focus alone that produces the granulations, as he has frequently found them absent in such conditions when fever was present. They are sometimes present in leukemia and in splenomas. He has not seen them in 3 cases of hemorrhagic diathesis; he has not found them in [illegible] of the liver, nor in 2 cases of pernicious anemia. He has found them in many cases in children, chiefly in those instances of severe rachitis or congenital syphilis associated with [illegible] where they often present the clinical picture called splenic anemia. But the granules were also very inconstant in children with these diseases. He has not found them, as a rule, positive in [illegible] nor in two cases of acute yellow atrophy of the liver. He administered toluilendiamin for a long time to rabbits and was readily able to find the granules afterward. He then discusses his results in lead poisoning; first as to the white cells and the changes in their number, which he does not find to be at all characteristic, for there is often a marked leukocytosis. He agrees with some others in that there is absolutely nothing characteristic in the anemia of lead poisoning. It is a simple secondary anemia, from which he believes it is possible for pernicious anemia to develop, though he has never seen it. He believes that the anemia is due to the metal itself and its direct action; the changes in the blood in nephritis are in part due to the intercurrent conditions of the patients, and the abundance of the granules in the red blood cells is also due to peculiarities in the nature of the disease as he has found them in any case, in fact, in some severe acute as well as chronic cases they were almost wholly absent, apparently [illegible] in exactly the same way that they were present. They are much more likely to be present in acute than chronic cases, indeed in those who have for a long time suffered in such a way that they are very frequently absent. He gave tolulendiamin for a long time and states that only very rarely was he able to find granules of red blood cells. He believes that the results of such experiments are very valuable, however since other authors have obtained other results. He attributes this fact to difference in the susceptibility of the different animals. The granules have also been observed in other diseases, for instance Stiness found them in [illegible] poisoning. Bloch has not however found them in the cases of poisoning of which he has had charge in Russia. Cases recently he has found them constantly present in arsenic poisoning. They were also found sometimes in poisoning by [illegible]. He then discusses Ehrlich's original work, and the various theories that have been advanced as to the nature of the granules and their origin, and he believes positively that they are products of degeneration of the nucleus, because of the frequent appearance of nuclear divisions and granules in one and the same cell, because of the staining properties, because of the absence of granulated red cells in the blood-forming organs, because of the method in which hemorrhages are followed by the nucleus take place. These various statements are discussed at length. He then gives various reasons for be-

lieving that the erythroblast loses its nucleus by casting it out from its cells, and not by other methods which have been suggested. As to the nature of the granulations he does not make any attempt to state what they are. He, however, makes the following statements: That fixation in heat is not necessary for demonstration, they can be seen in preparations merely dried in the air, without the use of chemicals. They are not altered by being subjected to the action of absolute alcohol for days; they are not soluble in ether or in alkalies. They become indistinct when placed in acetic acid; they are not affected by distilled water. It is highly probably that the granulations are due to some degeneration of the hemoglobin. He then gives a discussion as to the origin and meaning of the granulated erythocytes found in the blood stream of mice. [D. L. E.]

ANNALS OF SURGERY.

July, 1901.

1. Radical Cure of Inguinal and Femoral Hernia, with a Report of 845 Cases. W. B. COLEY.
2. Two Cases of Ligation of the External Carotid for Severe Hemorrhage—One After Tonsillotomy, the Other After a Slight Intranasal Operation. W. W. KEEN.
3. The Operative Treatment for Exstrophy of the Bladder. F. HARTLEY
4. The Treatment of Fracture of the Neck of the Femur. J. RIDLON.
5. Wounds of the Venous Sinuses of the Brain. An Analysis of 70 Cases. H. R. WHARTON.
6. Splenectomy in Splenic Anemia or Primary Splenomegaly. M. L. HARRIS and M. HERZOG.
7. The best Incision in Operations for Mammary Carcinoma. W. L. RODMAN.
8. Aneurysm of the Thoracic Aorta of Traumatic Origin: Treatment by Introduction of Wire and Electrolysis. DE FORREST WILLARD.
9. Left Cecal Hernia, With a Report of Two Cases. J. H. GIBBON.
10. The Treatment of Suppurating Hematocele Due to Extra-uterine Pregnancy. G. E. SHOEMAKER.
11. The Mortality of Operation for Obstructive Jaundice. J. B. DEAVER.
12. Report of a Case of Recovery from Perforating Typhoid Ulcer of the Intestine After Operation. W. JONES.

1.—Coley says the mortality after hernia operations is practically *nil*. He advocates operation in all adults under 50 years of age, excepting large irreducible hernia or in large reducible hernia when replacement of the gut interferes with respiration. He rarely operates under 4 years, and after the fourth year truss treatment is tried for one year before operation is considered. Adherent omentum or fluid in the hernial sac calls for operation. He slightly modifies the Bassini method by using chromicized kangaroo tendon instead of silk for sutures and by inserting one stitch above the cord. A dressing of 10% iodoform and moist 1 to 5000 bichloride gauze is placed on the wound, and in children a plaster of Paris spica is applied. Rubber gloves are considered a valuable adjunct to primary healing. In operating for the radical cure of inguinal hernia in the female the round ligament is neither resected nor transplanted, but is allowed to drop back in the lower angle of the wound. Cutting the internal oblique weakens the canal and increases the danger of relapse. In the cure of femoral hernia the purse-string method is employed. Two deaths occurred, one from ether pneumonia and one from intestinal obstruction. In 1334 cases collected by Galeazzi, 2.16% relapsed. Of the 54 operations for femoral hernia in Coley's series, one relapsed. Of the 500 cases of inguinal hernia that were traced, 6 relapsed. In the 30 cases that were associated with undescended testicle, that organ was not removed in a single instance. By allowing the cord to come out of the lower angle of the wound, one-half to three-fourths of an inch will be gained in the length of the cord. There were four operations for interstitial hernia, four for inguinoperineal hernia associated with perineal testicle, and 32 for hernia of the cecum and appendix. F. T. S.]

2.—Keen's first patient was a male aged 23 years. An enlarged left tonsil was amputated with the tonsillotome. Bleeding was not severe at the time of operation, but it persisted, and ligation of the external carotid became necessary five hours later. The second case suffered recurring hemorrhages after a curettage of the nasal septum. The external carotid was tied 19 days after the nasal operation. Both cases recovered. [F. T. S.]

3.—Hartley reviews and discusses the various operative procedures for the cure of extrophy of the bladder, and reports 5 cases which he has operated upon with a satisfactory result in two. In children under 6 years of age, in whom the bladder is large, and the pubic diastasis slight, Hartley recommends osteoclasis of the sacro-iliac joint (Koch) and closure of the cleft by the Kuster method. This method restores the relations of the corpora cavernosa to each other and to the urethra and separately sutures the mucous and muscular coats of the bladder. In older children and in adults more radical measures must be adopted if the pubic bones are to be brought together. Division of the horizontal and descending rami of the pubic bone with their displacement to the median line (König) would seem to give the best chance of continence of the bladder; but the safety of this plan remains to be proven. When the bladder is deficient in children, and in adults with a small bladder and wide separation of the pubic symphysis, uretero-intestinal anastomosis should be employed, providing the condition of the ureters and intestine does not contraindicate. If this procedure be inadvisable, extirpation of the bladder with anastomosis of the ureters with the urethra (Sonnenberg), may be undertaken as a last resort. Of all the cases reported as having continent bladders, Hartley has been able to find but one which is well confirmed; this case, eight years after operation, could retain urine two hours. [F. T. S.]

4.—Ridlon maintains that death after fracture of the neck of the femur in the aged is not due in the majority of the cases, to the shock of the accident nor to the confinement in bed, but to the pain and suffering resulting from irrational treatment. The fragments should be replaced as accurately as possible and maintained in position by an apparatus which will least irritate the patient, will permit of cleansing of the skin, and which will allow the use of the bed-pan without the pain consequent to movement of the fragments. An apparatus which meets these requirements may be made by adding to the Thomas hip-splint, a hip band and perineal straps, so that traction may be made by adhesive strips running from the sides of the limb to the calf band. The younger the patient, the longer must be the mechanical control. Individuals over 70 years of age are kept in bed with the splint in place for 6 weeks after the cessation of night pain, and after the splint has been removed they remain in bed 4 weeks longer. The head of the bed is raised to militate against congestion of the lungs. [F. T. S.]

5.—Wharton publishes the results of a study of 70 cases of wounds of the venous sinuses of the brain, including 5 instances which came under his observation. His conclusions are as follows: (1) Wounds of the venous sinuses of the brain should be classed as dangerous injuries, being followed by a high mortality, from external or intracranial hemorrhage or septic infection; (2) they are especially liable to infection, resulting in septic thrombus and pyemia, therefore the greatest care should be taken to render them aseptic and preserve them in that condition; (3) the most satisfactory and generally available method of treatment consists in controlling the bleeding by aseptic gauze packing; (4) ligation of the venous sinuses presents definite dangers in itself, is only available in certain wounds when free exposure of the injured sinus is possible, and cannot be employed with advantage in ordinary accidental wounds of the sinuses; (5) the application of a ligature to a wound of a sinus is less difficult and dangerous than ligature of the sinus, but is only available to small wounds; (6) suture of sinus wounds is a valuable procedure in a certain class of cases, namely, small wounds which can be freely exposed; (7) forcible pressure is also a ready method of controlling hemorrhage from wounds of the sinuses, but possesses no decided advantages over some of the other methods, and its employment is accompanied by certain dangers. [F. T. S.]

6.—Harris and Herzog report in great detail two cases of splenectomy for splenic anemia or primary splenomegaly and add a summary of 17 cases given by Sippy. The pathology is shrouded in great mystery, but the chief histologic changes found in the spleen consist of an endothelial

proliferation or hyperplasia which may be looked upon as a process similar to a diffuse lymphangioma. The treatment of this condition from a medical standpoint has proved unsuccessful, and attention is called to the value of excision of the spleen in these cases. Of the 19 splenectomies studied, 14 recovered, 4 died, and in one the result is not stated. As the difficulty and danger of operation increase with the size of the spleen, splenectomy should be undertaken as soon as a correct diagnosis is made and as soon as the futility of medical treatment has been demonstrated. [F. T. S.]

7.—Rodman says the prognosis in **carcinoma of the breast** is more unfavorable the younger the patient, and the nearer the growth is situated to the sternum, the mediastinal glands being early infected in the latter instance. It is essential to excise the skin covering the breast; this leaves a large surface to be covered either by skin grafting or by a plastic operation. The grafting of skin prolongs the operation, does not always accomplish its purpose, and leaves an unsightly scar. Rodman practices and recommends the Warren method slightly modified: a Y-shaped incision is made in each lip of the wound resulting after excision of the breast, the tail of the Y merging with the original wound, and the flaps thus made are undermined so as to permit of approximation. [F. T. S.]

8.—Willard reports a case of traumatic **aneurysm of the thoracic aorta** occurring in a male aged 23 years **treated by wiring and electricity.** A vulcanite cannula enclosing a steel trocar was inserted into the thinnest portion of the sac in the fourth right interspace just outside the sternum; upon the removal of the trocar blood spurted three feet in the air. Twenty feet of a No. 24 silver wire were inserted and the electric current was gradually increased from 5 to 85 milliamperes. Two small burns upon the back resulted. The pulsation of the sac, in the course of a week, was diminished 25% and the patient was markedly improved. Of the 24 cases thus far reported, one was alive 11 years after operation, one was a demonstrated cure by autopsy three and one-half years after operation, one was well ten months after operation, three were living when last heard from, and one died at the end of nine months from dysentery; 16 were positively benefited, 1 is uncertain, and the remainder died at various periods within a year. All who survived the immediate effects of the operation were rendered decidely more comfortable. [F. T. S.]

9.—Gibbon reports **two cases of left scrotal hernia in which the cecum was found in the sac.** The first patient, 70 years of age, had suffered with a large irreducible rupture for several years; on the day of operation the hernia suddenly became much larger following efforts at coughing, and symptoms of strangulation ensued. There was a large quantity of small intestine in the sac and just without the external ring lay the cecum. The patient died on the 19th day from failure. The second case was 55 years of age, had an enormous hernia, and was operated upon under spinal narcosis. Not only the cecum and appendix, but also a large portion of the ascending colon, were found in the sac. The patient recovered from the operation, but died from what was supposed to be pyonephrosis. Although commonly asserted to be partially covered with peritoneum, cecal hernia, as demonstrated from a study of the 65 cases collected by Gibbon, is rarely found without a complete peritoneal investment. In children the condition is congenital and is caused by some adhesions between the testicle and cecum. In adults it is usually acquired and is due to a freely movable cecum being drawn down into the sac by a previously existing hernia of the small bowel. The condition is extremely rare in the female, one instance only being recorded; nine cases of left cecal hernia have been recorded. Excepting perhaps the congenital reducible variety found in children, cecal hernia in all instances requires operation because of the frequency of inflammation and strangulation. Of 65 cases, 29 were strangulated, two incarcerated, 12 irreducible, 10 not stated, and only 11 reducible. [F. T. S.]

10.—Shoemaker advises vaginal incision and drainage in those cases of **extrauterine pregnancy** which have been thoroughly walled in, where there is no undrained tube mass, and where previous abdominal incision has demonstrated strong incarceration of the clots. All other cases should be dealt with from above. When suppuration has occurred, further hemorrhage will not cease. In the early stages hemorrhage is the rule and this cannot be satisfactorily combated through the vagina. In the 3 cases referred to in the paper, there was no instance of a missed period and none had actual collapse. In two of the cases, the tube had not ruptured, the blood coming from the fimbriated end of the distended tube; these were removed from above. In the third case there was a mass of infected clots extending to the umbilicus; after investigating this mass through an incision in the abdominal wall and finding it to be surrounded by firm adhesions, the abdomen was closed and the clots evacuated through a vaginal incision. [F. T. S.]

11.—Deaver reports 5 deaths following operation for **obstructive jaundice:** 1 due to sepsis after a choleycystotomy for suppurative choleycystitis due to gall-stones, 1 due to secondary hemorrhage, 1 to exhaustion, and 2 due to cholemia. Robson reports 22 deaths: 7 from hemorrhage either consecutive or secondary, 5 from exhaustion, 4 from shock, 3 from heart failure, 1 from abscess between the liver and diaphragm which was not discovered at the time of operation, 2 from peritonitis, due in 1 instance to rupture of the colon in breaking up adhesions, and in another instance to the slipping of a ligature from the cystic duct after amputation of the gall bladder. Death from exhaustion and heart failure may be classed under cholemia, and death from shock may be attributed to hemorrhage. Early operation before cholemia has become a factor as the only method of reducing this mortality. [F. T. S.]

12.—Jones's patient was a female aged 20 years. The **perforation of the intestine** occurred during the fifth week of an attack of **typhoid fever.** Operation was performed 16 hours after the onset of symptoms, a diffuse suppurative peritonitis found, the abdominal cavity flushed with hot saline solution, and gauze drainage instituted: the perforation was not discovered. A fecal fistula developed at the end of 2 days and [illegible] of fever resumed. The patient ultimately recovered. [F. T. S.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

No. 45.

1. The Treatment of Gonorrhea with Protargol. JESIONEK
2. A Case of Delayed Meningitis After Injury to the Skull. K. FUJISAWA
3. The Significance of Individual Statistics in Regard to the Question of Inheritance in Neuro- and Psycho-Pathology. W. STROHMAYER.
4. Occupation Neurites in the Brachial Plexus. L. HOEFLMAYR
5. A Case of Rheumatic Disease of the Maxillary Joint. HAMM.
6. Two Cases of Foreign Body in the Accessory Cavities of the Nose. LOEHNBERG
7. The Combined Sessions of the General Medical Groups and the Twentieth Session at the National Science Assembly for the Present Year. E. WINCKLER
8. The Activity of the Physician in Invalid Insurance. J. SENDTNER

1.—Jesionek calls attention to the fact that solutions of **protargol** made with warm water are in the majority of cases valueless and that it is particularly important that they should be made fresh and not formed by dilution of a concentrated stock solution. He usually commences with a solution of ½% and gradually increases the strength to 2%. His experience includes the results of his observations upon 387 cases: 113 of anterior urethritis and 274 of posterior urethritis. The results showed that of 113, 30 were cured, that is to say after a period of 10 days the gonococci were not found. Of the 274, 87 were cured, 103 may have been cured, but the observations were not continued for as long a period as 10 days and 87 still continued to show gonococci. That is to say, of the total number 47% were cured, 27% were probably cured, and 26% were not cured. There seemed to be no particular rule about the period of time required for cure, many cases apparently recovering after the second day and others at later periods and Jesionek suggests that we should be very careful in drawing any conclusions from statistics. The number of cases that showed no traces of disease when they were finally discharged was remarkably small, only 2 of the entire number. Of the others the symptoms varied from shreds to a moderate secretion throughout the day. The symptoms

were often more severe than in those cases in which gonococci could still be found. The technique of treatment was not particularly original. In nearly all cases astringents must be used, although it is impossible to give any rule when their use should be commenced. A valuable assistance was the introduction of elastic bougies covered with cocoa butter which contains 10% of protargol. These were allowed to remain from 10 to 30 minutes in the urethra, and from day to day the size was gradually increased in order to stretch the folds and release the secretion. In the cases of obstinate posterior urethritis it is advised to over-fill the bladder with the solution in order to distend the posterior portions of the urethra. [J. S.]

2.—Fujisawa reports the case of a boy 10 years of age, who, 12 weeks previously had fallen from the second story of a house, injuring the left frontal region of the head. Subsequently the wound healed with the expulsion of a sequestrum and the patient was able to return to school. However, vomiting, fever and convulsions led to the suspicion of brain injury, and there subsequently developed paralysis of the left side of the body, including the face. There was slight retraction of the head and choreic movements of the right leg and arm. A diagnosis of acute leptomeningitis was made and at the autopsy a purulent exudate was found between the pia and the arachnoid, and there was a moderate area of softening at the base of the left frontal lobe. In this area a small fragment of bone was found in addition to the change characteristic of softening, and a considerable quantity of pigment. It seems likely that hemorrhage must have occurred earlier, and the case apparently represents a **focal encephalitis** of aseptic character that had become **infected after the injury** as a result of the presence of a microorganismal condition in other parts of the body, and this was found to be tuberculosis of the lungs. [J. S.]

3.—(See Editorial).

4.—Hoefler describes a peculiar form of **occupation neuritis** affecting hand workers such as cabinet-makers, watch makers, etc., usually more than 40 years of age, that gave the following symptomatology. Difficulty in rotating the arm inwards or in elevating the arm laterally as high as the shoulder. There appeared to be a paralysis or paresis of the latissimus dorsi or of the deltoid muscles. As there were no evidences of inflammation of the muscles, it seems likely that a neuritis was the cause. Treatment consists of rest and galvanic electricity which must continue for at least a year before it is safe for the patients to return to their work. [J. S.]

5.—Hamm reports a case of a man 45 years of age, who had severe pain in the right ear and difficulty in moving the jaw. A small collection of blood was found in the right tympanic cavity which was removed, but the pain in the jaw continued. Although there were no local signs he ordered sodium salicylate which rapidly caused abatement of all the symptoms. He concludes therefore that there was a **rheumatic inflammation of the jaw joint**, perhaps associated with the hemorrhagic diathesis. [J. S.]

6.—Löhnberg reports the following cases. The first, a man of 40, complained of complete obstruction in the right nasal cavity. This was found to be due to polypi, after the extraction of which a hard body could be felt in the anterior cells of the ethmoid. This was finally dislodged and found to be a small iron plate about 2 sq. cm. in area, and 2 mm. thick. Inquiry developed the fact that it had passed into the nose through the eye which had been destroyed, 20 years previously. The second case, a man of 32, was injured in the head with a screw-driver and noticed that when the wound was dressed and washed the water flowed through the nose. A diagnosis was therefore made of empyema of the right frontal sinus, which was accordingly opened. A piece of felt was removed from the cavity which the patient recognized as having come from the brim of his hat. An uninterrupted recovery ensued. Altogether only 4 cases of **foreign body in the accessory cavities of the nose** have been reported, 3 involving the antral cavity, and one the splenoidal cavity. [J. S.]

7.—Winckler complains that in Germany occasionally scientific assemblies are not as well managed as they might be. In particular one in which he took part was so arranged that one division was unable to get its full share in the discussion. [J. S.]

8.—Sendtner calls attention to the obligations of physicians who fill applications for accident insurance to answer intelligently and accurately such questions as may be asked them. He gives illustrations of the foolish statements made by some physicians. [J. S.]

ARCHIVES OF PEDIATRICS.

(*October, 1901*, 18th Year. N. 10.)

1. Tuberculosis of the Female Internal Genital Organs—Secondary Infection of the Peritoneum and the Intestine. J. L. DUENAS.
2. Acute Recurring Respiratory Failure in the Newly Born, with Symptoms Apparently of Bulbar Origin. IRVING M. SNOW.
3. The Feeding of an Incubator Baby. CHARLES W. TOWNSEND.
4. An Analysis of Thirty-two Cases of Congenital Heart Disease. JOHN LOVETT MORSE.
5. Appendicitis in Children of Two Years and Under. P. J. CROZIER GRIFFITH.
6. Maternal Impressions—Report of a Case. B. K. RACHFORD.

1.—Duenas reports the case of a colored girl, aged 11 years, who 7 months previously had had a severe attack of measles. During convalescence a moderate anasarca appeared with scanty urine, both of which phenomena disappeared in 2 weeks. For 4 months the patient had fever attended by diarrhea and loss of flesh; then for 3 months apyrexia but increasing distention of the abdomen. Paracentesis abdominalis was done and 2800 gm. of yellowish, slightly turbid, alkaline fluid with 6.95% albumin was collected; and 3 weeks later the same quantity was again obtained. Laparotomy was done and the parietal and intestinal peritoneum was found covered with tubercles. Large tumors of both ovaries and Fallopian tubes were found. A total extirpation was done and patient is in good health at the present time. Microscopic examination of the ovaries showed thick masses of interlacing connective tissue cells, several large distinct cavities filled with caseous material and surrounded by typical granulation tissue, giant cells and a few areas of beginning tubercular infiltration. The right tube was filled with a mass of cheesy material, the mucous membrane proper having apparently been destroyed. Pathogenetically the author considers the genital lesion on this girl as primary and that the infection was spread through the blood. [J. M. S.]

2.—Three apparently normal infants, 4, 7 and 8 days old, suddenly presented the following symptoms: (1) The frequent stoppage of respiration with intense cyanosis and no spontaneous effort at natural breathing; (2) the frequent occurrence of convulsions which seem closely associated with the respiratory pause; (3) opisthotonos; (4) intense exaggeration of the pharyngeal and anal reflexes. Life was sustained only by artificial respiration, the continuous administration of oxygen, and whiskey and chloral hypodermically. Later, in one case, the mother's milk was administered by gavage, from which time improvement began, the attack lasting 26 hours. In the second case gavage was unsuccessful and the child died after 14½ hours. The third case developed the day following a circumcision under a poorly taken anesthetic. Convulsions were absent; the respiratory failure and cyanosis were severe for 14½ hours; superficial breathing, cyanosis with fever continued for about 72 hours longer. None of the children were born after a difficult labor; none were asphyxiated, had trismus, or had an infected umbilicus. The author thinks the cases were afflicted with a rare and unnamed disease of the newly born, and that the **cessation of breathing was due to some powerful inhibitory stimulus upon the respiratory centers in the medulla.** [J. M. S.]

3.—See **Philadelphia Medical Journal**, Vol. VII, No. 23, p. 1072.

4.—The diagnosis of patent foramen ovale was made in 6 cases of **congenital heart disease**, defect in ventricular sep-

tum in 6, lesions of the pulmonary orifice in 17 and in 2 no diagnosis. In 14 the cardiac condition was discovered during a routine physical examination. The symptoms of the onset were cyanosis in 17; dyspnea in 6; cough in 5; convulsions in 2; and edema in 1. No case of patent foramen ovale died; 5 cases were lost sight of; 12 died of their respective heart conditions. The condition of the 15 living includes hydrocephalus 1; cyanosis 1; backward 1; rachitic 1; dyspnea on exertion and subject to colds 4; apparently normal 7. Morse notes particularly the considerable proportion of cases, 44%, in which the cardiac lesion was discovered during a routine physical examination, the length of time which the condition may exist without development of any symptoms, the comparative mildness of the symptoms in case of patent foramen ovale, and the recovery from lesions which were apparently the same as those in cases which resulted in chronic invalidism or death. [J. M. S.]

5.—See Philadelphia Medical Journal, Vol. VII, No. 23, p. 1071.

6.—Rachford reports the case of a woman, 2½ months pregnant, who after undergoing appendectomy, vomited almost uninterruptedly for 48 hours. On the 5th day a stitch abscess developed and although the stitches had been taken out on the 7th day, sepsis gradually extended through all the stitch wounds, producing considerable sloughing on both sides of the scar marking the line of incision. Convalsecence followed with two very pronounced scars on either side of the incision scar. At term she gave birth to a normal, well developed, 9 pound girl baby. After a couple of months the child developed a low grade fever of obscure origin with enlarged liver and continued imperfectly nourished for about 6 months. At the age of 1 year a mark resembling a stitch-scar located over the appendix appeared. During the next 6 months three more stitch-scars appeared, 4 in all, located exactly in the region corresponding to the mother's scar, but no scar marking the line of incision. The markings show neither pigmentation nor scar tissue, but are depressions in the skin. The maternal impressions occurred about one week prior to the termination of the 3d month of gestation; the author believes the impressions were caused by the strain on the stitches in the abdominal wound of the mother during the 48 hours of vomiting. [J. M. S.]

November, 1899. (18th Year, No. 11.)

1. Milk-Sugar in Infant Feeding. A. JACOBI.
2. Adenoma of Both Adrenals in the Newborn. Associated with Retrogressive Changes in the Adrenals of Marchand. ALFRED S. WARTHIN.
3. Infantile Scurvy and Marasmus. FRANCIS HUBER.
4. An Unusual Case of Spasmus Nutans. SAMUEL AMBERG.
5. A Case of Severe Secondary Anemia in a Child of Two Years. L. E. La FETRA.
6. Report of a Case of So-Called von Jaksch Anemia. CHARLES HERRMAN.

1.—The identity of **milk-sugar** in woman's and in cow's milk is very doubtful and the milk-sugar of the market is quite often impure. For these reasons it is desirable or advisable to use **cane sugar in milk mixtures for babies,** if it can be done without disadvantage. The greater part of the milk sugar of the milk is changed into lactic acid by the bacillus lactis aerogenes and perhaps by a number of other different organisms, and it appears, therefore, that it is easier to give too much milk sugar than too little. Jacobi adds cane sugar instead of milk sugar to the artificial food of the infant. Large quantities of the latter substance often cause diarrhea and the author has observed for a long time that a small amount of sugar, even of cane sugar, dissolved in warm water is an effective purgative for a baby. The greater part of the article is devoted to refuting criticisms by foreign authors on the authors method of using cane sugar in milk mixtures instead of milk sugar. [J. M. S.]

2.—Warthin reports the case of a male infant, four days old, who was born after a normal labor. On the fourth day after birth the infant ceased to pass urine and after total suppression for 24 hours, it died. At the autopsy the chief interest centered in the suprarenal bodies; the left one was replaced by a tumor about the size of a hen's egg and the right one presented a tumor as large as a cherry at its apex. The structure of both tumors was identical, both showing a hypoplasia of the fascicular zone followed by marked fatty changes and necrosis. In the case of the growth in the left suprarenal body, liquefaction of the necrosed central portion gave rise to a cyst which was filled with cell debris. Both growths were considered to belong to the group of adenoma. As a result of pressure upon the left kidney, that organ was atrophied; and cloudy swelling found in both kidneys indicated an acute, parenchymatous, degenerative nephritis. Similar parenchymatous changes were found in the liver, in connection with marked fatty degeneration. There were retrogressive changes in the adrenal tissue situated along the spermatic veins. Considerable space is devoted to a consideration of the adrenal tissue found in the course of spermatic veins in the male and in the broad ligament in the female, which the author designates as the adrenals of Marchand. He considers these structures to be be normal and believes that careful search of these regions in the new born would show that they were constantly present. The cause of death of the child must be regarded as an intoxication, the source of which may have been the altered adrenal function or the absorption of poisonous products from the necrosed portions of the growth. [J. M. S.]

3.—Huber reports a case of a boy, aged 13 months, who had been fed on condensed milk since he was 4 months old, after which he was given cream and water in undetermined proportions. About 3 weeks before he was taken to the hospital, hemorrhagic spots were observed on the lower portion of the abdominal wall, and, later, his gums began to bleed and became spongy. On admission, the anterior aspect of the chest and abdomen was covered with large hemorrhagic infiltrations and smaller hemorrhages were found scattered over the rest of the body. There were bed sores over the sacrum and the right knee was swollen as high as the lower third of the femur. The red blood-cells were diminished in number and there was a disproportionate diminution in the amount of hemoglobin. Under proper treatment and in spite of extremely hot weather and diarrhea, the condition improved and after 6 week's treatment the child was practically well. [J. M. S.]

4.—Amberg reports a case of **spasmus nutans** in which, in addition to the nodding movements of the head, there were rotary movements, blepharospasm, nystagmus and twitching movements of both arms and legs. The head movements were increased when the child was frightened and did not cease when he fell asleep. Under treatment by sodium bromide the child was cured. [J. M. S.]

5.—La Fétra reports a case which he considers represents the most frequent form of **anemia in infancy** and which illustrates the rapid improvement resulting from proper treatment. The patient was a girl, aged 2 years, who had always been fed artificially, although she increased in weight, she was always pale and, during the summer of 1898, she had an attack of bronchitis and cholera infantum which lasted for several months during the winter of 1898-1899 she was fed on undiluted cow's milk, on which she thrived until summer when she began to lose weight rapidly on account of another attack of diarrhea. From August until December, 1899, the child was fed upon diluted condensed milk and increased in weight. Although iron had been administered the anemia increased and dropsy of the feet developed. Blood examination showed loss of hemoglobin, 210,000 red corpuscles and 13,200 leukocytes but there were no nucleated erythrocytes and no deformed red corpuscles. Under proper diet and treating with one drop of Fowler's solution and half a teaspoonful of potassium the child improved and was finally sent home cured. [J. M. S.]

6.—Herrman reports the case of a girl, aged 1½ years, who had always been pale. At the age of 16 months, the baby became anemic, thinner and weaker and the abdomen became enlarged. The child was markedly rachitic, the red blood-cells were reduced, the hemoglobin was disproportionately reduced and there was a considerable degree of leukocytosis. The liver was enlarged and there were adenoid growths in the pharynx. A differential count of

the leukocytes showed 30.3% of polymorphonuclears, 29% of large lymphocytes, 31% of small lymphocytes and 2.1% of eosinophiles. After the patient had been under treatment for about 2 months she had an attack of double pneumonia from which she recovered. About a months later, a vesicular eruption, which was partly hemorrhagic, developed, following which the patient grew steadily worse and finally died. The spleen was markedly enlarged, the liver and the lymph-nodes were enlarged, the red corpuscles were deformed and some of them were nucleated. The case is considered by the author to be one of **anemia peculiar to infants**, first described, in 1899, by **von Jaksch.** There was no autopsy. [J. M. S.]

ARCHIV FUER VERDAUUNGS-KRANKHEITEN.

Bd. VII, Heft 4 and 5.

1. Chronic Hypertrophic Gastritis of Syphilitic Origin Associated with Hyperplastic Stenosis of the Pylorus. JOHN C. HEMMETER and WILLIAM ROYAL STOKES.
2. The Influence of Sodium Chlorid upon the Excretory Power of the Diseased Kidney. JULIUS MARISCHLER.
3. On Idiopathic Dilatation of the Esophagus. MAX EINHORN.
4. The Diagnostic Importance of the Gastric Splashing Sound. SHUELE.
5. The Stigmatic Importance of the Costa Decima Fluctuans. B. STILLER.
6. The Diagnostic Importance of Microscopic Blood Examinations in Carcinoma and Gastric Ulcer, with Especial Consideration of Digestive Leukocytosis. (Conclusion.) ROMAN RENCKE.
7. A Contribution Concerning Carcinoma of the Stomach. J. BOAS.

1.—The case described was that of a man of twenty-four, who had a distinct history of syphilis and who had been treated for that disease. His gastric symptoms had consisted in general dyspeptic symptoms, with pain and vomiting, the absence of hydrochloric acid and ferments, and the evidences of reduction in the size of the stomach. He was operated upon for stenosis of the pylorus, the Heineke-Miculicz operation being performed. He subsequently developed an abscess of the jaw, and died of general infection. The postmortem showed great thickening of the wall of the stomach, particularly in the neighborhood of the pylorus, and on the cut surface there was evident a very thick inner layer of dense white tissue next to the muscular layer. The pylorus was very much contracted; the gastric mucous membrane was brownish green in color, and showed localized hemorrhages; the general surface was rough and granular. The other organs showed nothing of marked importance. The authors give a general review of the recent literature regarding gastric syphilis, and then give a description of the histologic appearances in their case, which were those typical of syphilis. There was a diffuse atrophy of the mucous membrane, with marked infiltration of embryonal cells, the atrophy being most marked along the greater curvature and toward the pylorus. The infiltration was most marked in the region of the pylorus. There was also some necrosis in small areas, which was evidently a coagulation necrosis, varying from karyolysis and the production of fibrin to actual destruction of the tissues. The infiltrating cells had a special tendency to arrange themselves around the blood-vessels. Some of the vessels were occluded and some not. [D. L. E.]

2.—Marischler's studies were carried on by calculating the intake and outgo of nitrogen, chlorids, phosphorus, calcium,and ammonia, throughout a preliminary period; then administering sodium chlorid (6 grams daily) throughout a second period; and afterward carrying the investigation through a third period in which no extra NaCl was given. His results seemed to show that in parenchymatous nephritis the kidney excretes sodium chlorid well, even when the diuresis becomes reduced. Occasionally there is a relative reduction in the chlorids, or even an actual retention as compared with the previous period. This is explainable upon the basis of retention of water. After the administration of sodium chlorid, the diuresis may be much reduced in parenchymatous nephritis, even when the amount of water is decidedly increased; on the contrary, in interstitial nephritis, the water-excretion becomes very much more marked than it was before. [D. L. E.]

3.—Einhorn gives a careful and interesting review of the literature of idiopathic dilatation of the esophagus, and then reports ten new cases—a large number, since in the previous reports there were only 15 cases. In but two cases was there any definite etiologic factor to be found; in one traumas, in the other a benign stricture of the cardia. The main causes of the condition are paralysis or atony of the esophagus, spasmodic contraction of the cardia, and a lack of reflex relaxation or opening of the cardia during the process of swallowing. The symptomatology is, in brief, as follows: Difficulty in swallowing, sometimes very slight, and more marked when swallowing hastily; a feeling of pressure or fulness in the chest, which may increase to actual severe dyspnea; oftentimes a marked feeling of suffocation while eating; frequently a more or less constant, troublesome cough, which is more marked when in the recumbent posture, vomiting or regurgitation of the contents of the esophagus is likely to accompany the cough. The patient takes less and less food, because of the fear of producing the above symptoms, and is likely to emaciate decidedly, the appetite itself being uninfluenced. The swallowing sound is not audible—at least, in Einhorn's experience. The use of the stomach tube shows that, from 30 to 35 cm. from the teeth, a cavity containing fluid is met with, the fluid being undigested, neutral or slightly acid, and containing no gastric ferments. Pushing the tube further, one comes into the stomach and obtains true gastric contents. By using fluids of different colors, one may show that there are two distinct cavities. The diagnosis may be made when there is prolonged dysphagia, the swallowing sound is not present, there is no organic stricture, and the esophagus is partly filled with unchanged food. The differential diagnosis must exclude malignant growths, a diverticulum of the lower part of the esophagus, and an antrum cardiae. Malignant tumor, that has not advanced to the production of stricture, does not cause dilatation, and the swallowing sound will be present. There will also be signs of cachexia. Diverticulum of the lower portion of the esophagus is rare, and can be excluded when the bougie or tube always goes readily into the stomach. The use of two tubes may be helpful in cases in which it is difficult to pass the tube into the stomach, one being introduced into the dilatation or diverticulum, and the other into stomach. Antrum cardiae may be excluded when the cavity is found to contain 200 c.c. or more. The prognosis as to life is good, as to entire cure, bad. The diet should be chiefly fluid, or half fluid, and should carry out compression of the chest and deep inspirations with each meal, in order to try to force the food from the esophagus into the stomach. Each evening before going to bed, the esophagus should be emptied and washed out with a tube. Einhorn has seen no satisfactory results from the use of electricity. [D. L. E.]

4.—Schüle considers that a splashing sound obtained by superficial succussion is not a normal phenomenon. It indicates an atonic condition of the gastric wall, such as occurs in gastroptosis, gastric myasthenia, and gastric neurosis. It is incorrect to draw any conclusions concerning the grade of the atony from the intensity of the splashing sound, since the latter can often be found very pronounced, even in the slighter grades of weakness of the gastric wall.

5.—Stiller goes into an extensive discussion of his stigma, and offers proof, which is not very different from what he has previously brought forward, that the floating tenth rib is a sign of a general neurasthenic tendency, and that it is a stigma not only of enteroptosis, but also of the existence of, or the tendency to, a very much broader condition, to which he prefers to give the name general congenital asthenia. He considers the latter condition a morbus sui generis. [D. L. E.]

6.—Rencki concludes his paper with a discussion of the white blood corpuscles. He goes into the literature of the subject, and then states that in his own cases of carcinoma, with the exception of two the blood corpuscles varied between 4,100 and 8,000. In two cases only was there any distinct leukocytosis, and in one of these there was a complicating condition. He, therefore, decides that gastric carcinoma of itself causes no leukocytosis. As to the relative numbers of the different forms of white corpuscles, he concludes that no marked changes can be found, and

that differential counts have no diagnostic importance. He then discusses the question of digestive leukocytosis and describes his own [illegible] of more than usual interest because he examined the blood every half-hour to every hour and, if leukocytosis were absent, continued his examinations for as long as eight to twelve hours, or occasionally even longer. The patient received no food for about 18 hours before the investigation was undertaken; and, if there were symptoms of stenosis of the pylorus, the stomach was carefully washed out the evening before. All the patients received the same meal. The author considered digestive leukocytosis to be present if the number of white cells rose to the extent of 2,000 or more. Of twelve non-carcinomatous cases, he found digestive leukocytosis in all but three. These three were, respectively, a case of atony, one of intestinal catarrh, and a normal man. The percentage relation of the different forms of white cells remained about the same. In gastric carcinoma, 11 cases of which were examined, he found absence of leukocytosis in 4 instances; and in the other 7, a distinct digestive leukocytosis. The striking point, however, was the fact that in 4 cases the leukocytosis appeared only when from 6 to 14 days had elapsed. In 10 cases of ulcer and benign stenosis, leukocytosis appeared seven times. In 4 of these cases, its appearance was delayed as long as 9 hours, and the leukocytes did not appear with the normal regularity. The cause of the absence of digestive leukocytosis in many cases of gastric carcinoma has been a subject of discussion. Rencki does not believe that it can be attributed to the wide extent of the changes in the gastric mucous membrane. In one case, for instance, in which the carcinoma involved the greater part of stomach, digestive leukocytosis appeared rapidly and to a marked degree. Cachexia, also, cannot be considered responsible. The author then discusses the possibility that the absence of digestive leukocytosis is pronounced by stenosis of the pylorus. He directs attention to the fact that in cases of stenosis of the pylorus it is especially likely to be absent; and also to the fact that as the signs of stagnation in the stomach improve, digestive leukocytosis is likely to appear, when it has previously been absent. Noticing this to be the case in his patients he gave nutritive enemata in such cases, and watched their effect upon the white corpuscles. He found in one case that a pronounced digestive leukocytosis appeared; in two, that the increase of leukocytosis was, respectively, 1500 and 1600; and in the fourth, that there was no increase. He then investigated cases in which operation had been undertaken for pyloric stenosis, and in 6 instances found that digestive leukocytosis was present after operation. He believes that absence of digestive leukocytosis is in most cases to be attributed to stenosis of the pylorus. When the physiological digestive leukocytosis in apparently normal persons is absent, he believes that the cause is usually incontinence of the pylorus, the result being that the food reaches the intestine constantly in small amounts, instead of being passed into the intestine at a particular time and in a larger quantity. The consequence of this is that digestive activity is going on all the time, and is not increased at any special time to far above the usual point, hence there is no occasion for a distinct digestive leukocytosis. [D. L. E.]

7.—Boas contributes an interesting article based upon a study of 141 cases of gastric carcinoma. These include only carcinoma of the pylorus and of the fundus; not of the cardia. As to the early symptoms of carcinoma, he agrees with others that, as a rule, it comes on slowly; but he insists [illegible] a striking rapid onset of symptoms, when gastric symptoms [illegible] unusual form of commencement is that with sudden he[illegible] cer of the stomach or intestine, a carcinoma following ul[illegible] these are carefully kept clean, the appetite is likely to be fairly good. As to the course of the disease, this depends largely upon the nature of the tumor itself, and upon its seat. There is a distinct difference between the course of a fundus carcinoma and that of a pylorus carcinoma. Severe motor insufficiency comes on very rapidly in the latter [illegible] former. This is not always true, however, and the signs of stenosis may be absent in pyloric carcinoma. Evidences of motor insufficiency may appear with the utmost suddenness. One important fact is that a decision as to the presence or absence of stagnation in the stomach may be reached only after repeated examinations, as the conditions in this respect vary greatly from time to time. The cause of stagnation in carcinoma of the fundus is doubtful, but it is unquestionable that in certain instances it is seen. Coffee-ground vomiting Boas believes to be much more frequent in those cases with marked stagnation and with much lactic acid: on the contrary, he finds slight hemorrhages and pus most frequent when stagnation is absent. He notes that carcinoma, particularly when there is absence of stagnation, may run a course such as to allow the subject to continue at his occupation almost to the end of his life. In discussing complications, the author first mentions disturbances of the intestinal function, and states that in 53 cases of which notes were at hand, there were only 10 instances in which the intestines were not disturbed. There was usually marked constipation; diarrhea [illegible] to be by some other authors. Edema of the ankles was found 6 times in the early stages of the condition; 8 times, later. The presence of such an edema speaks, to some extent, for malignant disease as against other conditions. He found marked ascites 4 times; less marked, once. Its infrequency [illegible] patients were ambulatory. He has seen two cases in which there was epigastric hernia, and he believes that he has [illegible] Swelling of the supraclavicular glands was not observed once, and Boas considers this an extremely rare and a very unimportant early sign. Umbilical carcinoma may occur in the form of small nodules about the umbilicus, or as a compact, hard infiltration of the whole umbilical region. He thinks the small glandular enlargements about the umbilicus are of decided importance in diagnosis, although they are not common. Metastases in the liver was found in only 21 cases; its infrequency also [illegible] due to the fact that the patients were ambulatory cases. The author insists upon the frequency of metastasis to the liver in carcinoma of the esophagus and cardia. As to the urine, albuminuria was very rare, and was seen in but three cases. Sugar was found only once, but Boas states that he has not rarely observed glycosuria or diabetes with carcinoma of the rectum. He found tuberculosis of the lungs in 4 cases. Severe pericarditis was a complicating condition in four instances. The importance of this [illegible] symptoms are due to nervous dyspepsia, rather than to an [illegible] which are exceedingly technical in chara[illegible]

WIENER KLINISCHE WOCHENSCHRIFT.

[illegible] (XIV Jahrgang, No. 44.)

[illegible] MORO.

1.—Moro's in[illegible] that the good weight of nursing infants [illegible] that of artificially fed infants. [illegible] the child n[illegible]

acteristic reaction with human milk, espcially with homologous milk, that from the same individual. [M. O.]

2.—Schmit reports a case of **malignant chorio-epithelioma** of the vagina, in a woman of 41, who had had two miscarriages. Metrorrhagia persisted, and a tumor was palpable on the anterior vaginal wall, while retroversion existed. The uterus was curetted and the nodule extirpated. The uterus was found perfectly healthy. The vaginal tumor was a hematoma containing chorion remains and malignant chorio-epitheliomatous tissue. Schmit believes that ordinary benign chorion cells can become imbedded in the vaginal tissue during pregnancy or parturition,and may give rise to primary malignant chorio-epithelioma of the vaginal wall. Very few such cases have been published. While they are generally malignant, these hematomas may discharge their entire contents, and the patient may then recover. [M. O.]

3.—**Lumbar puncture** renders no services therapeutically **in tuberculous meningitis.** For diagnostic purposes, however, it may be of use in some cases, for a clear, watery fluid with the early signs of meningitis denotes tuberculous meningitis, and tubercle bacilli may be found. That these are not more often discovered, Friedjung believes to be due to too early puncture. But by the time the bacilli are found, the clinical diagnosis is certain. Therefore Friedjung concludes that lumbar puncture should only be performed when it is necessary for therapeutic purposes or to settle the diagnosis. [M. O.]

JOURNAL DES PRATICIENS.

October 15, 1901. (15me. Année, No. 42.)

1. Herpes Zoster. DEBOVE.
2. The Extirpation of Tubercular Lymph-Glands. A. BROCA.
3. The Contamination of Water. CHARLES FIESSINGER

1.—Debove reports a case of **herpes zoster** in a man of 45, who has been in an insane asylum for three months, 15 years ago. He has always drunk to excess. The eruption of tiny vesicles was preceded by pain and redness two days before, along the lower part of the left side of the thorax. He had no fever. The eruption stopped short at the median line anteriorly, but passed to the spinous processes of the vertebrae of the other side, posteriorly. The eruption was localized to the region innervated by the lumbar and intercostal nerves. The vesicles appeared in crops, though the pain ceased in a few days. Neuralgia, crossed hemiplegia, facial diplegia, and ocular paralyses may complicate herpes zoster. They are found upon the same side as the eruption. The condition is generally easily cured. Landouzy believes that herpes zoster is an infection, while Debove considers it a symptom of various conditions, as poisoning, pneumonia, etc. Lumbar puncture failed to show anything abnormal in the cerebro-spinal fluid. Morphine is given for the pain. Injections of cocaine into the arachnoid cavity of the cord have not been overly successful as a method of treatment. Secondary infection should be prevented by an antiseptic powder. [M. O.]

2.—Will be abstracted when concluded.

3.—**Cholera and typhoid** fever are **spread** generally mainly **by drinking water.** The spring may be affected, or the pollution may occur somewhere along the conduit line. Filters such as are now in operation at Albany, N. Y., confer a great service in preventing the dissemination of the bacilli of these diseases. [M. O.]

October 25, 1901. (15me. Année, No. 43.)

1. Hydramnios With Twin Pregnancy. A. BOISSARD.
2. The Extirpation of Tubercular Lymph-Glands. A. BROCA.

1.—An increased amount of amniotic fluid is the rule with a twin pregnancy. The diagnosis is often simple hydramnios, the twin pregnancy being overlooked. In cases of large hydramnios it is hard to be certain that pregnancy exists, since fluctuation alone can be felt. No matter how great the quantity of fluid when uterine contraction is felt upon palpation, the form and consistency of the uterine walls settle the diagnosis. While "ballottement" is generally noted upon vaginal examination, it is absent when the hydramnios complicates the lower of the twins. Boissard reports a case of hydramnios complicating twin pregnancy in a woman five months pregnant, in which case the diagnosis of peritonitis was made, and laparotomy was performed. Later abortion was induced and she recovered slowly. This case shows how exceedingly difficult is the diagnosis of this condition. [M. O.]

2.—Broca believes that the **great majority of the cases of cervical adenitis is to be treated medically,** since they only come under observation after suppuration has occurred. In the cases of tubercular adenitis which are not yet suppurating, extirpation through a small incision is indicated at once with medical after-treatment to prevent recurrence. When one hard, caseous nodule exists, it should at once be extirpated, unless the resulting scar will cause marked deformity. When these are multiple, immediate extirpation is the treatment to be followed. Should the adenitis become purulent, extirpation is only indicated after all other methods of treatment have failed. Local injections are advised, with a long sojourn at the sea-shore, especially should fistulae occur. Clean dressings must be applied to the fistulae to prevent secondary infection. When extirpation is done, it should be complete. It is a much more effective procedure when done early, before suppuration occurs, when healing can follow by first intention. The technique of the operation is given in detail. It is a difficult, though not at all dangerous, operation and torticollis from the section of muscles, paralysis from the section of muscles, paralysis from the section of nerves, edema from the obstruction of lymph vessels, or cicatrices may result. Cases have been reported of general tuberculosis following the extirpation of tubercular lymph-glands. This, however, may result from any other aseptic operation. It is a fact that enlarged lymph-glands recur after extirpation, but only when extirpation has occurred too late, after the appearance of suppuration and fistulae. [M. O.]

LA SEMAINE MEDICALE.

October 23, 1901.

The Rare forms of Tetany. LEWIS GUINON.

The rarer forms of tetany are discussed by Guinon. One case occurred in a child of four and a half years, who had been under his care on four separate occasions, once suffering from whooping cough, complicated by polyneuritis, then successively from erythema nodosa, a scarlatina associated with diphtheria, and finally from a vague state of infection which was neither typhoid fever nor tuberculosis. The condition appeared to be a sequence of the scarlet fever and was partially explained by the presence of lymphangiotic ulceration of the buttock and the right labium. The onset was sudden and occurred as a rigidity of the extremities. After nine day the hands and feet had assumed the classic attitude. The tetanic rigidity was exasperated at times under the influence of medical examination or contact or even spontaneously. A very violent contraction of the affected extremities would follow the slightest stimulation. The cure was brought about gradually. During the course of convalescence a singuar complication occurred consisting in a double and symmetrical arthropathy of the metacarpo-phalangeal articulation of the index finger. Another case which he reports occurred in a boy of four years and a half, whose family were neuropathic. He was seized suddenly with pain from the knees to the epigastrium. A number of convulsive seizures followed this, which lasted for a number of days. The cause was ultimately traced to a purulent otitis media, which occurred about the tenth day. He divides the simple forms of tetany and those cases which [illegible]

October 30, 1901.

The Differential Diagnosis between Epithelioma and Syphilis [illegible] DE CASTEL.

[illegible]

gressed until the tip of the nose had entirely disappeared. The patient denied all history of syphilis, had never suffered from miscarriages and presented no signs of syphilitic eruption nor were there any bodily signs of the disease. The examination of the mouth, however, changed the picture completely, at the level of the palatine arch a small perforation was observed opening from the cavity of the mouth into the nasal fossa and the uvula was destroyed. A picture of undoubted pharyngeal syphilis was presented. The patient was placed upon mixed treatment and the nasal ulceration began to improve forthwith. Du Castel states that it is not infrequent that a syphilitic lesion is mistaken for cancer, but that it is far less common that cancer is mistaken for a syphilitic lesion. The syphilitic lesions which are confounded with malignant tumor are the initial chancre and the gumma. A chancre sometimes appears in the region of the lips, frequently in the lower portions of the face, particularly the chin. It may attain considerable volume and may closely resemble malignant disease. Gummata may also appear in the same region. The author goes on to describe the differential diagnosis of syphilitic lesions from epithelioma. [T. L. C.]

November 6, 1901.

1. The Treatment of Diabetes Mellitus.
PROFESSOR R. LEPINE.
2. Parallel and Simultaneous Auscultation of the Lungs.
PROFESSOR BOURGET.

1.—Lepine emphasizes the fact that diabetes is a disease more or less complete and that in the treatment the indication is not merely to treat the glycosuria which is but a symptom. Diabetics may be divided into those whose urine contains diacetic acid and those in whom it is not present. In the first class of cases proper diet and drug-treatment will diminish very greatly the glycosuria or even cause it to disappear, but when diacetic acid is present in the urine the glycosuria is quite of secondary importance and the prime indication is now to cause the disappearance of the acid. Should efforts in this direction be unavailing the prognosis is most grave. It is necessary before being able properly to treat this disease to study carefully the habits of the patient. The ingestion of foods rich in albuminoids must be reduced to the smallest possible amount, whether the glycosuria is due to a hyperglycemia or to an exaggerated renal permeability. Fats may also be a source of oxybutyric acid and its derivatives diacetic acid and acetone. A carbohydrate diet will diminish the diacetic acid in the urine but unfortunately this increases the amount of sugar. Glycerin has been recommended but has not borne out its theoretical claims. Schwarz advises that partially oxidized glucose, gluconic acid, will be found of great value in diminishing diaceturia and a case is cited which goes to show that gluconic acid is of service not only in coma, but that is also a valuable preventive measure. Lépine has found that large doses of sodium bicarbonate are most to be depended upon in the treatment of this condition and he proposes to rely upon it until gluconic acid has been fully tested. [T. L. C.]

2.—Bourget advises simultaneous auscultation of the lungs bilaterally with the separate stethoscope consisting of a rubber tube with an ear piece and the proper end piece for transmission, for each ear. When the lungs are perfectly normal no difference of note is detected but minute differences, if they exist, are readily determined by this method. [T. L. C.]

November 13, 1901

Prolonged Lodgement of the Fetus Labor in An Enormously Dilated Cervix. O. RAPIN.

O. Rapin reports an interesting case of prolonged lodgment of the fetus in an enormously dilated uterine neck. The patient was a primipara of twenty-five years who began to menstruate at seventeen and who had always suffered from dysmenorrhea. She had always been obliged to walk slowly and complained of weakness in the legs. Her pregnancy had been without special incident. The first movements were noticed early in September and ceased about the 20th of January. At this latter date she suffered from violent abdominal pains which disappeared after some hours. These were repeated during the succeeding week. On January 30th severe uterine pains were felt. These pains were absent during the next day but on the following day returned and were referred both to the stomach and lumbar region. A midwife was called on January 31st, who found that the abdomen was distended equally, that the uterine cervix was completely dilated and the head was engaged. The heart sound could not be heard. When the patient had been in labor seven and a half hours the midwife observed the sudden appearance of a rounded tumor the size of two fists and situated between the symphysis and the navel. The pains returned but the head did not descend and the midwife sent for medical assistance. It was found that the uterine orifice was completely dilated with the head presenting in the L. O. A. position. The patient was rachitic and had a generally contracted pelvis. There was a marked succedaneum on the presenting head. The round tumor referred to was at first believed to be due to the retention of urine, but catherization produce no perceptible change. The child was delivered with difficulty and the tumor like mass had vanished. The child was found to present no abnormality. After the expression of the placenta by the Credé method the tumor was found to have disappeared. It has been pointed out that the tumor appeared very late during the pregnancy, and suddenly several hours after complete dilatation of the womb, and that it disappeared when the infant was extracted. Rapin believes that this tumor was in reality the retracted body of the uterus which contained the placenta and part of the fetal trunk. In explanation of this case the author states that the lengthening of the cervix probably abnormally long naturally was still further lengthened, as is often observed when the external orifice resists dilatation, or when there is some obstacle to the descent of the head. Nothing indicated in this patient that either of these conditions existed but it is well enough known that the generally contracted pelvis can produce a [illegible] of the neck at the [illegible] and the difficulties of extracting the head with forceps demonstrated the difficulty offered by the contracted pelvis to the expulsion of the fetus. In such conditions the uterine contractions have no other effect than to extend further toward the body of the uterus the ring of contraction which is nothing else than the internal orifice. This condition is very apt to lead to rupture of the womb. The posterior portion of the neck which [illegible] appears to have extended itself without having to permit the ring of contraction to pass over the body of the fetus and to have caused the womb to contract in the anterior part of the abdomen on the back of the infant where the womb formed the swelling which had appeared so suddenly. When the forceps were applied the fetus was entirely in the cervical canal which was enormously dilated. The uterine contractions thus had no effect upon promoting the expulsion. A case of abortion has been reported in which the neck was very much distended so much so that the uterus repeatedly contracted itself above it and without any result. The immediate application of the forceps undoubtedly prevented the rupture of the uterus which was imminent. The other conditions which might have simulated this case were a uterus bicorna, a fibrous tumor occupying the [illegible] of the uterus and a hernia of the fetus into [illegible]. Rapin cites another case of an enormously dilated cervix which bears out the theory he has advanced in the case [illegible]. [T. L. C.]

Hedonal as an Hypnotic.—[illegible] May 1901, [illegible] No. [illegible] gum rises in [illegible] pain, [illegible] bility, [illegible] from [illegible] The results were in all very favorable. No [illegible] [A. S.]

Society Reports.

THE NEW YORK OBSTETRICAL SOCIETY.

Meeting held December 10, 1901. Dr. Malcolm McLean in the chair.

Dr. G. L. Brodhead presented a new **aseptic syringe** which he devised for inflating the bags of Champetier de Ribes, although it can be used for many other purposes. The instrument resembles the Frank modification of Janet's syringe, but is superior to it.

Dr. H. C. Coe narrated the history of a case of **accidental hemorrhage,** due to tamponing the lower uterine segment. The patient had had one child eight years before. The present pregnancy had been complicated by intractable dyspepsia, extreme nervousness, and the inability to take exercise without pain and exhaustion. As the urea excreted was decreased, labor was induced. Under anesthesia the lower uterine segment was packed with gauze. Three hours later slight uterine contraction occurred, accompanied by considerable hemorrhage. The vagina was firmly packed, causing pain in the back and lower abdomen, but the hemorrhage continued. An anesthetic was then given, and the cervix dilated manually. A vigorous male infant, weighing seven pounds, was delivered with forceps, the entire operation consuming 40 minutes. The uterus contracted firmly, but hemorrhage followed. While removing the placenta, an interstitial fibroid tumor, the size of an orange, was discovered projecting into the uterine cavity. As the bleeding was not checked, the cervix was exposed, a deep tear being found in the left side, which was closed with chromicized gut. An examination of the placenta confirmed the diagnosis, an old adherent blood clot over its lower half showing that it had been detached. Dr. Abram Brothers spoke of a similar case, and Dr. W. S. Stone spoke of a case in which the diagnosis of placenta previa had been made. It occurred to Dr. Coe at the time that there might be some connection between the hemorrhage and the fibroid, but he had been unable to trace it. The placenta was in the anterior wall, the tumor in the posterior, and uterine contractions were perfect.

Dr. Coe then proposed a discussion upon the **rapidity with which gonorrheal infections travel from the uterus to the tubes.** He had a patient under observation, infected not more than six weeks ago, on whom he had operated eight days before, and he had seldom met a more solid exudate in old chronic cases. Dr. H. J. Boldt stated that gonorrheal infection is sometimes disseminated very rapidly, exudates being found in the tubes and pelvis within two to four weeks after infection. He does vaginal section with drainage, keeping the patient under observation for two to six months. Then, if cure has not been effected, he performs a more radical abdominal operation.

Dr. W. M. Polk read a paper on **vaginal incision and drainage in acute pelvic peritonitis, salpingitis and cellulitis.** He excluded recurrent cases, and divided acute cases into three groups, septic, specific and benign. The prevailing treatment is the expectant plan, hot vaginal douches, poultices or the ice bag, etc., and when pain is pronounced, anodynes, with cleansing of the uterine cavity in the septic group. This treatment gives good results in the benign group only. When the organs are so diseased as to be a danger to life and a constant source of ill health, radical operation is demanded, but some effort should be made to restore the parts to their integrity. Dr. Polk has treated 18 cases by vaginal incision within the past eight years, all of which were distinctly acute initial attacks. In 3 the treatment lasted less than two weeks; in 8 less than four weeks; in seven less than six weeks. In each instance the patient left the hospital sufficiently well to resume work. 3 of these cases were benign, 5 were specific (gonorrheal), and 10 were septic (abortions). These results have confirmed the wisdom of early incision. If benign, expectant treatment will no doubt suffice, the exudate rarely becoming purulent, adhesions disappearing or causing no permanent damage. If specific or septic, free incision should be made into Douglas's cul de sac. The tubes should be brought down and their contents forced out through the fimbriated end. If the general cavity of the peritoneum has not been walled off, gauze should be packed above them before this is attempted. After carefully cleansing the field of operation, the gauze should be withdrawn, and a large perforated rubber drainage tube fixed in the vaginal opening. Dr. B. McE. Emmet said that in cases in which the tube is filled with pus he advocates the vaginal route only when the tube can be well brought down. Dr. J. E. Janvrin uses both the vaginal and abdominal routes. Dr. E. H. Grandin used the expectant plan in acute cases, and found that non-infectious cases convalesced. If an exudate formed, he incised per vagina. Dr. Boldt believes that no benign cases exist. There must be some form of infection, whether specific or septic. In acute pyosalpinx with the tubes at the floor of the pelvis, he preferred the vaginal route. Dr. G. T. Harrison agreed with Dr. Polk. He preferred the Mikulicz tampon as a hemostatic, for producing absorption, to produce a reactive inflammation, and to isolate infected areas. Dr. Coe recalled three or four cases in which he had really performed the operation, but supposed at the time he had operated prematurely. Dr. Ralph Waldo said that the best procedure was to evacuate the products of infection early, in order to avoid further damage. Dr. Polk, in closing the discussion, said that such an incision acts practically as the puncturing of the drum head in acute otitis media. In speaking of acute pelvic peritonitis, he referred to cases in which the tubes are down in the true pelvis. The term benign is only relative and includes such mild cases as occur from arrested menstruation due to cold, or when there are no evidences of ordinary sepsis associated with abortion or specific infection. The real reason for using the drainage tube was that the rubber tube need not be removed on the second day and replaced, as would be necessary with gauze. He ventured to say that the operation would not be accompanied by a higher mortality than one-tenth of one per cent.

Saturine Encephalopathy and Amaurosis.—Hayem recently reported a case of chronic lead poisoning (*Bulletin Medical*, July 20, 1901, No. 57). The patient was a man of 40, who was well up to two years ago. Then he noticed failing sight, vertigo, troubles of speech, etc. He never had lead colic or paralysis. Now he is totally blind, with albuminuric retinitis, his memory has failed, he is thin and feeble, and cannot speak correctly. There is no paralysis, but the knee jerks are much diminished. There is a distinct blue line on the gums, and there has been acute delirium at times. The urine constantly contains albumin, the sign of an interstitial nephritis due to the lead. The liver is somewhat enlarged, probably from congestion. Oddly enough there are no tremors, neuritis, or hemianesthesia with the amaurosis. Hayem therefore diagnoses this case saturnine encephalopathy due to the direct action of the lead upon the nervous centers. As yet there are no signs of uremia, all of his symptoms being explained by the chronic lead poisoning. His treatment is cleanliness of the mouth and gums, sulphur baths, potassium iodide, and salts daily. [M. O.]

Slow Uremia of the Bulbar Type.—Paul Londe reports the case of a woman of 42, with albuminuria and a well compensated mitral stenosis, who had attacks of vomiting, suffocation with feelings of great distress, and tachycardia, followed by uremia. The albumin increased in quantity, there was nocturnal pollakiuria, and edema developed in the legs. The crises with suffocation and anxiety persisted, and insomnia appeared, followed by paroxysmal dyspnea, bloody expectoration, and Cheyne-Stokes respiration. These improved when bleeding was practiced. She was alternately depressed or delirious, with hallucinations. She would not lie down, and the edema increased. Intestinal hemmorrhage occurred, and Cheyne-Stokes respiration reappeared. She died with symptoms of bronchopneumonia following labio-glosso-laryngeal paralysis. She had emaciated greatly and had a large sacral decubitus. Opium in small doses diminished her anixety and the Chyne-Stokes respiration. Londe believes this to have been a form of slow uremia of bulbar type. (*Bulletins et Memoires de la Société Medicale des Hopitaux de Paris*, July 11, 1901, No. 24.) [M. O.]

Original Articles.

RESULTS OF OPERATIVE TREATMENT FOR THE DIFFERENT FORMS OF PUERPERAL SEPSIS.

By BARTON COOKE HIRST, M. D.,
of Philadelphia.
Professor of Obstetrics, University of Pennsylvania.

No department of gynecology shows a more gratifying advance in recent years than the operative treatment of puerperal sepsis. Conditions that were well nigh hopeless ten years ago are easily amenable to a surgical treatment that has steadily improved in precision of technique and certainty of results. As examples of what can be done and of the conditions demanding surgical intervention eleven cases are selected from the writer's hospital services of the last season, from October to July. They include two cases of septic salpingitis with streptococcic infection and necrosis of the uterine cornua and fundus and perforation of the bowel. One case of gangrenous ovarian cyst, a case of streptococcic infection and necrosis of a submucous myoma. Three cases of septic salpingitis, a case of pelvic peritonitis binding down the uterus and appendages firmly in a subsequent pregnancy, a case of suppurative cellulitis, resulting in a large abscess between the bladder and the uterus and two cases of pelvic abscess localized in Douglas's pouch. Two operations were performed (for the ovarian cyst and fibroid tumor) within six days of labor. The woman with an ovarian tumor was profoundly septic; delirious, with a rapid pulse. The tumor was black in color and necrotic from the twists in its pedicle. Its removal was followed by prompt recovery. The patient with a fibroid tumor had been infected by the manual extraction of the placenta. Her temperature was 104 degrees, her pulse 140. She had septic pneumonia, and phlebitis of both legs, but she recovered from the hysterectomy which removed the primary source of infection in tumor and uterus. The two cases of necrosis of the fundus and the cornu of the uterus associated with salpingitis were particularly interesting. One was operated on four, the other six, weeks after labor. The whole infected area was removed by salpingectomy and by excision of the diseased portion of the uterus. A wedge shaped piece was removed from the latter, the wound being united by interrupted catgut (formalin) sutures. A few years earlier the writer would have performed hysterectomy for such a condition, but recent experience has taught him that a less mutilating operation often suffices. Both of these women recovered and possess one normal tube, an ovary, and a uterus capable of further child bearing. In one woman there was the embarrassing complication of a fecal abscess in Douglas's pouch, and a large perforation of the lower portion of the sigmoid flexure of the colon. The mistake was made of putting stitches in the necrotic bowel to close the opening. They did not hold and the patient had for a time a fecal fistula. In another non-puerperal case in the hospital at the same time with an enormous abdominal abscess and a large perforation of the lower bowel, the whole pelvis was packed with gauze and drained with a glass tube. No attempt was made to close the jagged hole in the bowel surrounded by necrotic tissue. The gauze was removed at the end of 48 hours, the glass tube replaced by a rubber one and the pelvis irrigated daily. Within two weeks the fecal fistula closed and has remained healed. The three cases of salpingitis were easily cured and were not particularly interesting except as demonstrating that this form of puerperal sepsis is not so very infrequent, although it is often exceedingly slow of development, and in the early puerperium is often associated with necrosis of the uterus, cellulitis and suppurative oöphoritis.

The pelvic peritonitis following a labor and only manifesting serious symptoms in a subsequent pregnancy, 9 months later, is an interesting example of the late manifestations, subsequent complications and recrudescence of puerperal sepsis. The woman was admitted to the hospital in a bad condition. She gave the history of a sharp attack of pelvic peritonitis following her last labor, from which she had apparently made a good recovery. She had fever and pelvic pain that quite incapacitated her. There had been an amenorrhea for more than two months. She was found to be pregnant, the uterus and appendages firmly fixed in a retrodisplacement. The abdomen was opened, the adhesions freed and the uterus replaced. The woman was symptomatically relieved and pregnancy continued.

In the case of pelvic cellulitis the patient, a young primipara, had been delivered by a difficult forceps operation. The cervix, vaginal vaults and vaginal walls were badly torn. Symptoms of sepsis soon appeared, steadily but slowly becoming worse, until some six weeks after labor there was extreme emaciation, exhaustion, delirium and every manifestation of profound septic intoxication. The physical examination was unsatisfactory. All that could be felt was the firm exudate in the pelvic connective tissue indicating cellulitis. No focus of suppuration could be made out. As it was evident that the patient would die if not relieved, an exploratory section was determined upon, with the idea that if the intra-abdominal organs were not affected the abdomen should be closed and multiple incisions should be made in the vaginal vaults. As soon as the fascia was cut and the rectus muscle separated, pus gushed out of the space beneath the anterior reduplication of the peritoneum. The abscess cavity was washed out, a counter opening was made in the anterior vaginal vault and a drainage tube was passed through by which the abscess was irrigated. A vesical fistula developed but closed spontaneously, and the patient made a perfect, though a slow recovery.

The two cases of abscess in Douglas's pouch both followed a premature interruption of pregnancy, one at five months, the other earlier, and the result no doubt of a criminal abortion, for the posterior wall of the uterus was perforated and pus flowed out of the cervix. There were the usual symptoms of a pelvic abscess, a large mass in Douglas's pouch, fever and profound septic intoxication. A transverse incision was made in the posterior vaginal

vault, a large quantity of pus evacuated, the pelvic organs explored by a forefinger passed into the pelvis and the abscess cavity drained by a T-shaped rubber drainage tube for two weeks. The cavity was flushed out daily through the tube. This form of drainage is much more efficient and much less painful to the patient than gauze packing. Both patients made a rapid and complete recovery.

DECREASING FECUNDITY CONCOMITANT WITH THE PROGRESS OF OBSTETRIC AND GYNECIC SCIENCE.

By GEORGE J. ENGELMANN, M. D.,

of Boston, Mass.

General Considerations.

The question of the fecundity of woman, of the country's birth-rate, deeply concerns us one and all, from both a civic and a professional standpoint, and in a discussion such as this, as we depict the progress of obstetric and gynecic science, we have every reason to ask for the practical, demonstrable results of such progress, which we might well expect to find in a healthier activity of the reproductive function, in the greater fertility of woman, in an increased birth-rate.

The progress of medical science, of sanitary science if you will, is revealed in positive, tangible results,—in the control of infectious diseases and epidemics, and in a decreasing death-rate throughout the civilized world. May we not reasonably look for corresponding general and positive results from the progress of obstetric and gynecic science,—that science which has for its object the treatment and relief of conditions which cause suffering and prevent the healthy performance of the sexual function, of menstruation, ovulation, and parturition? We should reasonably expect a betterment of such functions as indicated by greater fecundity, by an increasing birth-rate; but this is not so. *On the contrary*, the rate of sterility, the numer of miscarriages, is increasing, and the birth-rate is growing less, most so in this country.

Startling as these facts are, they have escaped general observation, and naturally so. The country is in a most flourishing condition, rapidly progressing, its population increasing much as that of other countries, though of late it may have been observed that the population is no longer increasing so rapidly in numbers, the increase is less regardless of migration, and even less than it was before the period of foreign influx. The increase is less now, notwithstanding the addition to our numbers by immigration, than it was when dependent upon birth-rate alone before immigration began, in fact the change is such that the growth of some European cities is now greater than that of our own. The present increase in population of the United States is due in a large measure to immigration from foreign countries, and when we study the birth-rate, we will see that it is lower than that of most European countries, much like that of France, in some States more, in some States less. This should suffice to tell us how serious the condition is.

The thinking men of France know well that the present retrogression of that country is due in a great measure to the *low fecundity of her women*. the remedy, a question so essential to the future of the country, now engrosses the minds of her public men. At the beginning of the century, the population of France was more than *twice* that of Great Britain. The census of 1900 shows it now to be less by two millions. Her neighbors to the North, on the other side of the channel, have outgrown her, as have those to the East, on the other side of the Rhine, notwithstanding the loss by emigration from both to this and other countries, whilst France is entirely without this drain. In the early part of the century, the call to arms brought French conscripts into the field far outnumbering those of Germany. In 1872 the French parliamentary commission placed the number of conscripts registered at 302,000, the corresponding figures in Germany being 330,000. The census of 1900 tells us that in France the figures have remained practically as they were, while the German conscripts have risen to nearly 450,000. Laws of all kinds are proposed to remedy this retrogression; bachelors and maids over a certain age are to be taxed, families without children are to be taxed, and a premium is to be paid for every child after the fourth. Even the wearing of a corset, as injurious to the reproductive function, is to be forbidden by law. Such and many other similar suggestions are now made.

It is only by a comparison with conditions existing in France that we may clearly realize the significance of conditions we have to meet in this country. Possibly the birth-rate in the United States is greater than that of France, but if so, it cannot be much. In six States of this Union, for which we have the most accurate records, is it a trifle less.

But such general statements are most unsatisfactory; to obtain a proper understanding of existing conditions we must analyze the results: Birth-rate in this country is a compound, made up of heterogeneous factors, of the birth-rate of the *native-born Americans* and of that of the *foreign-born population*. The birth-rate of the native American population in every State is far below that of France, and it is the higher birth-rate of the foreign population which re-establishes the equilibrium. The birth-rate of the American population is such that those familiar with its fluctuations call out in warning. Kuczynski,[1] from a study of the census of Massachusetts, tells us that the native population is fading away. He says, "As the tables of fecundity of Berlin show that, with an annual special birth-rate of ten for every one hundred women in child-bearing age in 1891-1895, the births were on-ninth behind the number necessary to keep up the stationary population of Berlin,[2] it is therefore probable that the native population of Massachusetts, with a special birth-rate of only 6.3 births for every one hundred adult women in child-bearing age and a mortality of the female sex not correspondingly lower than that of Berlin, cannot only not hold its own, but is *dying out* at an alarming pace."

Such are the conditions in one of the older States, and that it is not far different in younger and more vigorous communities is shown by Wilbur, who, in

his careful studies of the census of Michigan,[3] says, "In view of the best statistical evidence obtainable it appears that the native population of Michigan does not afford enough children per marriage to maintain itself intact;" in another place he tells us that thirteen counties of that vigorous young State show an actual loss of population between the census of 1880 and that of 1890.[4] Eleven of these were old counties, and their population largely native. He adds, "The condition of a low birth-rate, with unimpaired marriage rate is characteristic of many of the older settled counties of the State, which were inhabited almost exclusively by native Americans (in part the loss is due to migration westward). That, in a country so young as ours, and long before the density of population can begin to press upon the means of subsistence, such a tendency to stoppage of growth should exist certainly calls for inquiry."

Indeed it does, and whatever the view we may take of the subject, we must familiarize ourselves with the facts, and these I desire here to present.

Difficulty of Securing Absolutely Reliable Data.—In foreign countries, where registration is imperative and certificates of all kinds essential to the civic life of the individual, statistical data of a reliable character are readily obtained. Not so in this country. Much as has been done to perfect the details of the United States Census, the birth-rate has so far not been considered. Very few of our States have investigated Vital Statistics, and even in those in which the greatest attention has been given to this subject, enormous corrections are necessary for omissions, in order to approximate, at least, the actually existing status. In Michigan, as much as 60 per cent. has thus been added. In the State of Massachusetts, likewise, extensive corrections are necessary. Earnest efforts are being made in several States to remedy existing deficiencies in the records, greater scope and precision in registration is attempted and in Massachusetts a premium of 25 cents is paid for every birth recorded in order to stimulate parents and physicians to carry out the dictates of the law, and in Chicago the same method has recently been inaugurated with a view of perfecting the registration of births.

The records I have used are those of Massachusetts as presented by Kuczynski, the Vital Statistics of Michigan prepared by Wilbur, and my own records from private and dispensary practice. In the results given I place faith not alone by reason of my knowledge of the careful studies of these eminent statisticians, but because the figures obtained correspond so perfectly with my own, from the cities of St. Louis and Boston, which alone positively and directly give the data desired, that is the number of children to each married woman: once only was this question asked in a State census, and that in the census of Massachusetts of 1885; usually the data are computed by a comparison with the number of marriages and additions made for supposed omissions.

Fecundity and Rate of Child-birth.—The thorough study of fecundity and rate of child-birth is one bewildering, almost, in its statistical details, varying greatly in method, and especially in the use of the constant for purposes of comparison. For the sake of brevity, I will here present only such estimates as appeal most keenly to us all.

First, *the birth-rate per thousand of the entire population* which is perhaps most satisfactory for general comparison, as it gives us an idea of the general birth-rate of the country in its relation to the existing population, and it is that which is perhaps most generally used by the economists.

Second, *the fertility of the individual woman*, or the fecundity per marriage, which best answers the purpose of the medical inquirer. This, in the various reports of Vital Statistics, is obtained either by a comparison of the number of births with the number of marriages in the same year; or, as some consider it more correct, by comparison of the births of a given year with the average of the number of marriages in the five preceding years or in one of these preceding years; whilst my own investigations give what I deem the most positive and reliable results, that is, the actual number of conceptions, of births, and miscarriages for the individual woman. The numbers, as compared with registration reports of the State, are of necessity comparatively small, but the results are positive, direct and precise, and the perfect correspondence of my results so obtained in different cities, and their correspondence in the different classes of population, give me faith in the facts evolved, moreover as I believe that the study of comparatively small numbers, if correct, is of greater value than that of more uncertain data in larger numbers. As my own records harmonize so fully with those of Kuczynski from Massachusetts and those of Wilbur from Michigan, there can be no doubt as to the correctness of the figures as a whole.

Birth-rate per Thousand Living Population.—Table I shows us the birth-rate (still births excluded) per thousand living population in various European countries, as given by Rasen.[5] The birth-rate is highest in Russia, somewhat less in Austria, Prussia and Italy, but in France far below that of any of these countries. In all there is a decrease since 1870. As we have no record for the United States as a whole, I have represented the birth-rate in this country by that of the six States which present the most complete record of Vital Statistics. These are Connecticut, Massachusetts, Michigan, New Hampshire, New Jersey and Rhode Island, as tabulated in the Vital Statistics of Michigan for 1898, Table VI, the average birth-rates for these six States in the year 1800 was 22.1 per thousand population: somewhat lower than that of France, which is 22.4 for the years from 1890-94. 22.1 per thousand population is the birth-rate for these six States, and although somewhat lower than that of France, it may not strike us as alarming; we have in mind the growth of the country, and perhaps attribute the result in part to imperfect registration, but we must

remember that this is the birth-rate of the *entire population*, which includes both that of the *native* and the *foreign-born*.

TABLE 1.

Births Registered per 1000 Living Population.

(Still Births Excluded).

	1870-74	1890-94
EUROPE. [a]		
Russia (in Europe)	49.9	48.5
Austria	39.4	37.2
Prussia 1865-69 .	37.6	36.9
Italy	36.3	36.3
England and Wales	35.3	30.3
France 1865-69	25.9	22.4
UNITED STATES.		
b Ct., Mass., N. H., N. J., R. I. and Mich. 1881-93 and 1890	22.2	22.1
c Massachusetts 1893-97.—Native born .		17.0
Foreign born		52.16
d Michigan 1894.—Native born of native parents . . .		12.0
Foreign born		37.2
e Estimated from parent numbers 1896 Native born		14.1
Foreign born		50.0

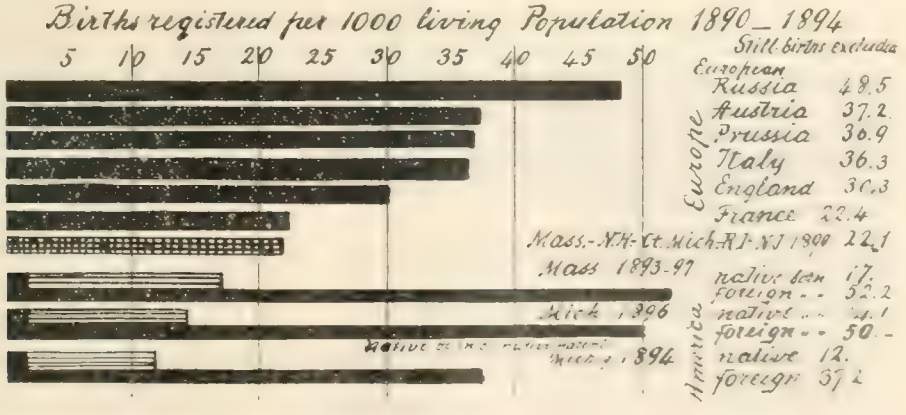
a Raseri p. 2.
b Mich. Vital Stat. 1898, Table VI.
c Kuczynski
d Mich. Vital Stat. 1894, p. 120.
e Mich. Vital Stat. 1896 p. 25.

The question of most interest to us is the *birth-rate of the native American contingent*; as I cannot secure this for all of the six States here named, I will consider that of Massachusetts and of Michigan, of an Eastern and a Western State, an old and a new civilization. In Massachusetts, in which State the birth-rate is higher than the average here given for all six, according to the refined and critical figures of Kuczynski, the birth-rate of the native-born is only 17.03 per 1000 population, whilst that of the foreign-born is 52.16. This is for the years from 1893-1897. In the State of Michigan, with a general birth-rate somewhat lower than the average of the State here named, that of the American-born of American parents is, according to the statistics of 1894, *only 12 per thousand population*, whilst that of the *foreign-born is 37.2*, more than *three times* that of the native. These are the figures given by Wilbur and for the smaller group of Americans of native parentage the rate is somewhat lower than it is for all native-born, which includes many of foreign parentage. My own estimate from his table of parentage for 1896 would make the birth-rate of the native-born 14.1 per thousand, and that of the foreign-born nearly 50, and much the same figures appear for other years with 20 per thousand for the entire State.

The table speaks for itself, and Chart I depicts the startling lesson it teaches more emphatically,—a decreasing birth-rate in all European countries, lowest in France; about the same, or even somewhat less in the United States, far below that of France for the American-born of this country, much higher for the foreign-born, 2½ times the rate for the native-born, and among the foreign-born of this country higher than it is in their native land, as is but natural, these same people, more fortunately situated in their new homes, better housed, better fed, are more fertile than under the more stringent conditions in their native land. Upon further details we need not enter, this will suffice to indicate the danger which threatens. The population of France is known to be almost at a standstill: it is immaterial whether it is just holding its own or increasing or decreasing by a trifle. It is practically at a standstill, and the condition such as to have aroused anxiety throughout the land, and to have called forth investigations in the search of a remedy for the danger conceded by all to be threatening the country.

The birth-rate of the United States, or to be more exact, of the six representative States for which reliable statistics exist, is about the same as that of France,—immaterial whether a little less or a little more,—and the birth-rate of the native-born population, even in States with a total rate distinctly higher than that of France, is far below, only 17 per 1000 population in Massachusetts and 14 in Michigan. It seems needless to ask the question, whether the American population can hold its own or not as we see that its birth-rate is so far below that of France, which is trembling in the balance. It is immigration and the higher birth-rate

Chart I



of the immigrant, of the foreign-born, which removes us for the time being from the threatening predicament, but barring immigration we are upon the very brink. As the foreign-born element, much as it may astonish many who read this, forms the greater part of the population in many of the States of our Union, the high birth-rate here found thoroughly covers and more than covers the deficiency produced by the low fecundity of the native-born. "In many States the Americans are largely in a minority. In Minnesota they form less than 22 per cent. of the total population; in New York, Massachusetts and Michigan they are less than 45 per cent. and in many of our large cities the proportion of foreigners and their children is so great as to completely overbalance the American contingent. In Milwaukee only 13 per cent. are native American, the remainder being of foreign nativity and descent. New York, Chicago, Detroit, San Francisco, Buffalo, St. Paul, Cleveland, Jersey City, St. Louis, Cincinnati, Brooklyn, Pittsburg and Boston have not over 30 per cent. native inhabitants." This we are told by Wilbur, and I sincerely hope that he may soon be induced to publish the splendid article on the "Passing away of the native American" which he has kindly sent me in manuscript. He further says, that the charts of the United States Census of 1890 are very suggestive of the diminishing importance of the native American race, and if the birth-rate now existing should continue, as decrease seems hardly possible, these conditions will soon be greatly exaggerated.

Fecundity per Marriage and Fertility of the Married Woman.—It may be well again to refer to the countries of Europe for the purpose of comparison. Table II indicates much the same relative status of the different countries in fecundity as that found in the birth-rate per thousand, but it does not show the same decrease from 1870 to 1890. This is in part due to the large proportion of illegitimate births; in European countries varying from 3 to 14 per cent., mostly 8 or 9 per cent.; in this country we may say with pride mostly under, or only a trifle above 1 per cent., but always in largest proportion among the native-born. Fecundity per marriage is apparently not decreasing throughout quite as much as is the birth-rate; we find the greatest fecundity, as we find the highest birth-rate, in Russia,[6] 5.5 births to each marriage, with about the same, between 4.1 and 4.4 in Austria, Prussia and Italy, in England somewhat less, and in France least, 2.1 children to the marriage.

TABLE 2.

Fecundity per Marriage.

a. Number of Children to each Marriage in the Same Year.

EUROPE.			
Russia [illegible]		4.9	5.5
Austria		4.7	4.1
Prussia 1875-1880		4.0	4.2
Italy		4.5	4.4
England and Wales		[illegible]	[illegible]
France 1895-1899		[illegible]	2.1
UNITED STATES.			
Massachusetts 1885	Native born		2.7
	Foreign born		4.5
Michigan 1870-94	Native born		2.1
	Foreign born		4.4
Michigan 1890-94	Native born		1.8
	Foreign born		4.1
Same corrected	Native born		2.9
	Foreign born		6.6

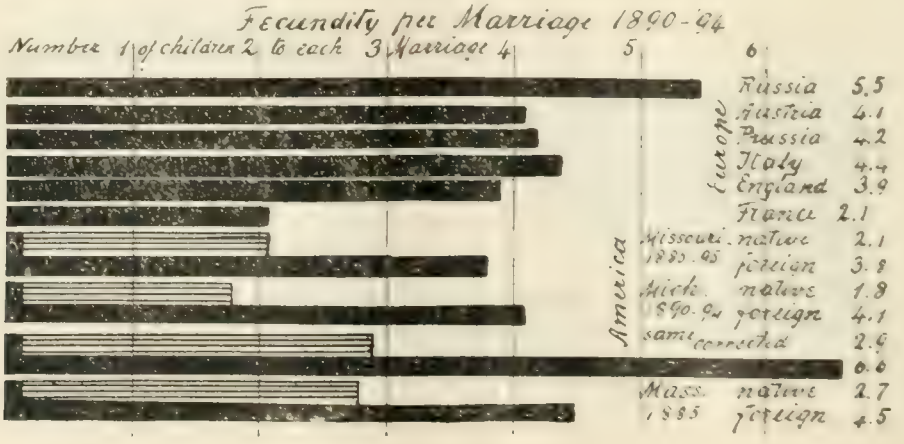
a. Kiaer: [illegible]
b. Kuczynski
c. U. S. Stat. Mich. 1895, p. [illegible]
d. U. S. Stat. Mich. 1894, p. [illegible]

TABLE 2.

b. Number of Children to Each Married Couple. Stillbirths Excluded.

Engelmann	St. Louis	Laboring Class	1452	2.1
		Higher Class Am. parents	228	1.8
Chadwick	Boston	Labor Class Am.-Irish parents	634	1.9
		American parents	874	1.7
Engelmann	St. Louis	" Foreign born . .	487	3.8
Chadwick	Boston		867	3.0

Chart II.



With these figures I can only compare those of Massachusetts,[7] Michigan[8] and Rhode Island,[9] and these show the fecundity of marriage for the entire State greater than that of France, but less than that of all other European countries, and the fecundity of the native American also greater than that of the French woman. This, I presume, is deceptive, as in the computation of foreign statistics we must consider the large number of illegitimate births which reduce the birth-rate per marriage relatively much below the general birth-rate per 1000 population, illegitimates being included in the latter.

The refined statistics of Massachusetts for 1885 show 2.7 births to a marriage among the native-born and 4.5 among foreigners. In Michigan, throughout the twenty-five years from 1870 to 1894, we find 2.1 births to the marriage among native Americans and 4.4 among foreign-born. From 1890 to 1894 fecundity is 1.8 children to marriage for the native and 4.1 for the foreigner. These are the actual figures and when corrected by the addition of 60 per cent. for supposed omissions, we find very different conditions, though relatively there is no change,—2.9 for the native and 6.6 for the foreigner. In the State of Rhode Island, for 1899, the proportion is much the same,—1.98, nearly 2, children to the marriage among natives and 5.6 among foreigners. My own investigations in St. Louis show in absolute figures a fertility of 2.1 children to each American married woman, and 3.8 to each foreign woman. Among the higher classes of the American-born, the rate is somewhat less,—1.8, and about these same figures are found by Dr. Chadwick in Boston, both for the native and foreign population, 1.9 for the American and 3 for the foreign, and this among the laboring class.

These figures represent the fecundity per marriage and the fertility of the married woman, which includes all children born at term. Some die before reaching maturity, so that the number of surviving children is always somewhat less. In the State of Massachusetts, according to Kuczynski, the *surviving* children, or the number of children living at the time of the taking of the census, was 1.9 for the American and 3 for the foreign wife, with an average for both throughout the State of 2.3, (Table 3), the relative proportion of native and foreign-born children being somewhat reduced by the greater mortality of the latter. The number of surviving children to each American mother throughout the State of Massachusetts is given as 1.9. Among the highest and wealthiest class of the city of Boston it is 1.8; among college women, according to observations of Prof. Mary Roberts Smith,[9] it is 1.6; whilst among non-college women of a corresponding social class she finds it to be 1.8, to be precise 1.86, exactly what I find among the higher class of the city of Boston, 1.85. The total birth-rate among college women is lower than that of any other group; according to the investigations of Carroll D. Wright[10] in 1885, among a number twice as large as that from which the data of Prof. Smith are taken, a fecundity of only 1.3 children to each married graduate was found.

TABLE 3.

Average Number of Children Living for Each Married Woman.
STATE OF MASSACHUSETTS. Census 1885.

Native		2.3
Foreign born		4.5
Entire State		2
ALL AMERICAN BORN		
1885.	Kuczynski, Massachusetts Census	1.90
1895.	Engelmann, Boston, Highest Class	1.85
1900.	Smith, Highest Class	1.86
1900.	Smith, Non-College Women	1.69
1885.	Wright, 188	1.2

A consideration of the fecundity per marriage, of the fertility of the married woman, presents much the same results as that of the general birth-rate per thousand population. Fecundity in the United States is lower than that in any foreign country excepting France, that of the native-born is about the same, somewhat higher perhaps than that of the French married woman, whilst the fecundity of the foreign-born woman is, like the general birth-rate of her nationality, greater than it is in her European home. If we consider the fecundity of the various classes among American women, we will find it highest in the laboaring class, less among the higher classes, as found in private practice or in the wealthy districts of the large cities, and still less, least of all, among college women.

Table 4.

Michigan 1894 and 1895.

Comparison of Number of Children Born of Given Nationality, with Number of Marriages of the Same Year for the Same Nationality.

Wilbur Vital Stat., Michigan 1895, Table 15, p. 34.)

Birth-place of Fathers.	Birth-place of mothers.	Number of Children per Marriage 1894	1895
UNITED STATES	**United States**	**1.8**	**1.8**
	England	1.7	1.8
	Canada	1.9	2.0
	Ireland	2.6	2.5
	Germany	2.3	2.4
	All Countries	1.8	1.8
CANADA	**United States**	**1.9**	**2.0**
	Canada	**4.9**	**4.5**
	England	3.1	2.6
	Ireland	3.7	4.3
	Germany	2.3	4.8
	All Countries	2.9	2.9
ENGLAND AND WALES	United States	**1.9**	**1.6**
	Canada	2.6	2.4
	England	**4.5**	**5.8**
	All Countries	2.7	2.6
IRELAND	United States	**2.9**	**3.9**
	Canada	5.1	4.5
	Ireland	**5.1**	**6.6**
	All Countries	3.6	3.9
GERMANY	United States	**2.7**	**2.5**
	Canada	2.5	3.6
	Germany	**6.7**	**7.0**
	All Countries	5.0	5.0
ALL COUNTRIES	United States	**1.8**	**1.8**

Some most interesting and instructive facts are presented in Table IV (abstracted from Table 15, Vital Statistics of Michigan for 1895), which gives the fecundity of marriage among the different nationalities represented in the State of Michigan. Marriage among males and females of the same nationality always yields the highest fecundity, with the exception of the American, intermarriage among different nationalities results in a somewhat lower fecundity, and intermarriage with an American male or female invariably depresses the fecundity to the American standard, or very nearly so. But I would call attention to one fact,—and a fact which is as gratifying as it is important,—that *it is not the American wife who reduces fecundity* as much as it is the American husband. Intermarriage of a foreign male with an American-born woman yields a higher fecundity than that of the American husband with a foreign wife, though both closely approximate the American standard. This is shown in the mixed marriages in both of the States of Michigan and of Rhode Island, where such investigations have been made, and I deem this observation most important as indicative to some extent of the cause of low fecundity in the American population.

Conclusions.

Be these figures absolutely correct or not, they are relatively correct and sufficient to establish beyond a question or a doubt the fact that the birth-rate in this country is lower than that of any European country excepting France; that the birth-rate of the American-born population is much below that of France; and that the fecundity of the American woman is lower than that of the woman of any other country. France is alarmed at her condition; we are indifferent, for we are constantly recruiting our population from Russia, from Sweden, from Germany, from Ireland, or from Canada, as the Rev. Dr. Dilke well explains the inexplicable ignoring of this unfortunate condition.

I have here presented these facts, not so much from an economic point of view, as from the professional standpoint. They concern us as men engaged in the study and treatment of conditions which interfere with the healthy performance of the female sexual function. We take pride in the progress of our profession, which has developed with giant strides, but we cannot prove the general and tangible results corresponding to the decreasing death-rate consequent upon the progress of sanitary science, such as we should like to demonstrate, that is, an increased birth-rate and a diminished death-rate in childbirth for both parent and offspring. I have here confined my observations to fecundity, and this has not increased, it has decreased in spite of gynecic progress, from 4.5 children to the marriage at the close of the 18th century to the present low rate of 2 or 2.5. Our science is an element subordinate to far more powerful factors in our civilization, such as financial aspiration, the craving for luxury and social dissipation, which are the evil influences dominant in this declining fecundity. The cause cannot be sought in climate or in loss of reproductive power, though it has been truly said that this does exist, but as an effect rather than a cause of the declining birth-rate, a result of the various methods of prevention and family limitation.

The causes are evident to every medical man; above all to the obstetrician, who is called upon to complete the abortion inaugurated by criminal hands when methods of prevention have failed and accidents have occurred, and it is equally evident to the gynecologist whose consulting rooms are populated by women suffering from the consequences of their efforts to escape maternity. Dr. Billings[11] tersely and forcibly says, "The increased demand for luxury in daily life no doubt is influential, and the most important factor is the deliberate and voluntary avoidance, the prevention of child-bearing, on the part of a steadily increasing number of married women, who not only prefer to have but few children, but who know how to obtain their wish." And the Rev. Dr. Dike[12] sums up the result of his observation in much the same *sense*. "It looks as if there is a prevalent and growing intention, even at the cost, if need be, both of good morals and law, to let the inferior class rear most of the children. Many of the families which are best fitted for the rearing of children, so far as pecuniary means and social opportunity are concerned, are deliberately choosing to be unfruitful, and it is the testimony of gynecologists that more of their patients come from this class than from those to whom maternity has brought its natural ills."

This is true, and I but refer to it here as it is one of the fallacious and deceptive arguments advanced by those who justify the preventing of conception in the interest of woman's health.

On the contrary, health is far more common as the badge of motherhood, while early exhaustion and premature decrepitude are much more likely to issue from the various methods resorted to for the prevention of conception and such methods. Bigelow[15] rightly characterizes as "conjugal onanism," which brings suffering to husband and wife, most so to the wife, whose entire reproductive apparatus remains unappeased, and "the unrelieved congestion which arises from incomplete intercourse is a prolific source of uterine and hepatic disorder."

There is no question as to the baneful sentiment which is gradually developing among young people that bearing and rearing children "belongs to low life and is degrading, which now and then becomes evident in aspersions cast upon those with large families implying their life to be vulgar and sensual."

Dr. Nathan Allen,[16] who has carefully observed the condition in the eastern States, says, "There seems to be a settled determination among many New England women approaching marriage not to be troubled with the encumbrance of children, or at least to limit their number: it is a sentiment, whilst rarely proclaimed in public, which is well understood by the parties themselves, and is a general sentiment of what is called "cultivated and refined society." This is not confined to New England. Of the native American of Michigan Dr. Wilbur says: "You will often hear him prating of the obligation of parents to limit their children not only to the number that they, in their wisdom, predict they can maintain in their own station of life,

but to the number that they think they will be able to raise high above their own social and financial condition." And as a result we see the perpetuity of the race in danger, "the perpetuity of that race of men who planned the principles of civil and religious liberty upon this continent, who gave us the constitution, and who preserved the integrity of the young republic in its long struggle for liberty."

Statistical data indicate the prevalence of such sentiments and medical observation verifies it; upon woman the blame is usually cast, but wrongfully so; that the fault is the husband's rather than the wife's appears from the greater fecundity of mixed marriages in which the wife is native born; the number of children is always less, both in Michigan and in Rhode Island, in mixed marriages in which the father is an American.

No doubt is left as to the cause of decreasing fecundity by the publically expressed sentiments of those who openly advocate the limitation of the family, and there are such who ridicule the belief that the object of marriage is the establishment of the family and plainly tell us that insistance on the duties of motherhood "is an impertinent intemperance with private rights,"[13] and who justify the desire of married couples to avoid child-bearing by saying that children interfere with their plans, their pleasures or studies; to quote such an argument: "the society of little children is not mentally stimulating, and there is nothing so wearying on the nerves as their constant care;"[13] hence they are to be eliminated, and in cold words we are told by another, an eminent advocate of woman's rights: "what this world needs is fewer children, and those better taken care of, better born and bred." Decreasing fecundity is viewed with evident satisfaction, and this to her progressive steps in the economics of the country is ascribed to "the increase in the intelligence of women," heedless of the fact that such decrease is inevitably linked with increase of sterility, and miscarriage not due to physiological causes.

It is needless to add to these misguided expressions, which I have merely introduced in corroboration of the evidence, a proof of intentional limitation of the family with which every practitioner is familiar.

The avoidance or prevention of conception, if possible, the premature termination of pregnancy, if need be, are factors more potent by far in the causation of decreasing fecundity than is the progress of gynecic science for the contrary.

The object of this paper has been to present clearly the existing conditions, the facts in the case, which as a rule are to be found in statistical rather than in medical studies, and I have disgressed somewhat in briefly sketching the views of those who urge the limitation of the family, as I believe it to be essential that the obstetrician and gynecologist should recognize all the various phases of this question, that he may be fitted as far as it is in his power to stay the dangerous and criminal practices which are the main determining factors of decreasing fecundity and which deprive woman of health, the family of its highest blessings and the nation of its staunchest support.

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THE OBSTETRICAL FORCEPS.

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When first requested by the editor to contribute an article on the obstetrical forceps the writer was about to reply that he was not a teacher of obstetrics and that he had only used the forceps about two hundred times including consultation cases and, consequently, that there were many others who were much more able to write on this subject than he; but on thinking over his own experience, especially as a gynecologist who has taken the histories of a great many women who have been injured by the forceps and who has repaired these injuries, he came to the conclusion that he might do some good by giving his experience of the abuse of the forceps as well as by expressing his views as to when and how they should be used. No attempt, therefore, will be made to write a classical or library article, and no books will be referred to or quoted; the opinions he will express are based on about twelve hundred and fifty obstetrical and seven thousand gynecological cases, which of course is a very small number when compared with the vast aggregate of cases which might be drawn upon for information. And yet the careful consideration of even these few cases may be of value to the younger and less experienced of our readers to whom it is especially addressed, while the older ones may take some interest in approving or condemning it in the light of their much greater or knowledge of the subject.

The Use of the Forceps.—If any general practitioner of mature years were asked which of the many instruments in his possession he could least afford to do without, he would on looking around his various shelves and bags finally rest his eyes on his long black bag and, almost affectionately reply; the forceps, as he thinks of the many lives and the amount of suffering it has enabled him to save. But it cannot be denied that the forceps is an agent which is as potent for evil as for good, according to the motives which prompt its employ-

ment and the skill with which it is empolyed. The forceps has saved the lives of hundreds of mothers, but it has shipwrecked the lives of thousands. And while it has saved the lives of thousands of children who would have perished from prolonged compression in a narrow pelvis, it has killed a great many who would have passed safely through if they had been allowed a little more time. The object of this paper will be to point out how the forceps may be made to accomplish the maximum of good with the minimum of harm. There are a few simple rules which the writer has laid down for his own guidance, and which he has often pointed out to his students at his gynecological clinics when examining severe lacerations of the cervix, vagina and perineum.

1. Never use the forceps until the woman has been twenty-four hours in labor if a first confinement, or twelve hours if a second or subsequent one, unless there is some urgent indication to do so.

2. Never use the forceps to save one's own time.

If these two rules were invariably followed, there would be a tremendous falling off in the number of women with lacerated cervices and perineums, and consequent puerperal infections and uterine displacements. In taking the histories of nearly four thousand cases at the Montreal Dispensary I have learned that a great many women, who stated that they had never been well since their first confinement, were delivered with the forceps in from one to six hours after the first pain of their first labor. The following extreme case appears among the histories: A woman who came with a laceration through the perineum and sphincter ani and about two inches up the bowel, as well as having a star shaped laceration of the cervix and bands of scar tissue running across the vagina in every direction, stated that she had the first pain of her first confinement at eleven P. M., while spending the evening at her father's house, which necessitated her going home. She walked thither a distance of half a mile and as she and her husband had to pass the door of the physician who was to attend her, the unlucky idea occurred to them to stop at the doctor's and let him know that labor had begun. Instead of telling them to go home and go to bed, and that he would call around in the morning, he unfortunately got up and dressed and arrived at her house before twelve. By midnight he had put her to bed, examined her and decided to apply the forceps forthwith. During the next four hours, she said, he applied the forceps thirty times, although, as he did not use any anesthetics, she was unconscious most of the time from fainting, but her husband told her that several times the doctor fell on his back on the floor owing to the instrument slipping off the child's head. At last at four o'clock in the morning he told the husband that he could do no more as he was exhausted, and that he had better get another doctor. Dr. Gaherty, who sent the patient to me afterwards, then took charge of the case and found her in a very dangerous condition. By eight o'clock he had revived her enough to give her an anesthetic and terminate the delivery with instruments. This, of course, was an extreme case, but there were many other women who stated that the instrument was applied in two or three hours after the first pain. The majority had been attended by a physician whose fee was cut down so low that it was impossible for him to devote the necessary time to the case and yet make an honorable living.

I am almost ashamed to mention such a thing in a paper on the abuse of the forceps, but it must be truthful in order to be of any use, and so I must say that there are many women and still more children lying dead and buried to-day who would have been alive and well if the physician had demanded and been paid a sufficient sum to remunerate him for the time which should have been spent in order to do good work. Rather than reduce our service to the level of an absurdly small fee, would it not be better to educate our patients up to the level of paying a reasonable fee, if they can afford it, or attend them for nothing at a maternity hospital, if they are poor? The forceps, of course, will not be employed too soon in such a place, either to save the medical director's time or to give practice to the medical student. I have made it a rule not to attend a woman in her confinement unless she has engaged me several months beforehand, among the many reasons for this being the importance of seeing her a few times in order to instruct her on the time required for a safe delivery. The writer has saved himself much annoyance and his patients much danger by the following method of [illegible] the use of the forceps to some: Each primipara is given three one-grain opium powders, one to be taken every hour as soon as the pains begin, and if the pains begin in the night she is told not to awake her husband until the usual hour in the morning, nor let the doctor know until 9 A. M., as it is most important that her first confinement should take at least twenty-four hours if possible. Then she is told the reason why; that if she has a natural confinement she will have better health than ever, while if it is hurried artificially she may become a chronic invalid for life. The result is that, supposing she is taken with her first pain at 11 P. M., she takes her powder and perhaps goes off to sleep only waking for a minute at long intervals; she may not even have to take the three powders. In the morning she takes an enema and a bath, puts on clean clothes, has her breakfast and then sends me word. I make my first visit about 10 A. M. and after sterilizing my hands I make the first examination and find perhaps that the os is opened to the size of a quarter-dollar. I tell her that everything is going on well and that the baby will probably be born before midnight. She is told to busy herself with her household duties between her pains, and that I will return again in the afternoon. On no account should the doctor remain in the house all day, for if he does he will almost surely be urged to do something which his judgment tells him would be detrimental to the patient's welfare. At the afternoon examination the os will perhaps be dilated as large as the palm, and at the evening visit the head will probably be entering the pelvis and I then remain if I have no other visits to make. But even then I do not remain all the time in the sick room, nor do I make any more examinations, but I order the nurse to call me every time she sees the head showing a little at the pelvis. At [illegible] the

with a sprinkler on it, filled with a. c. e. mixture (alcohol one, chloroform two, and ether three parts) may safely be handed to the patient, with a cone made with brown paper and a towel, and she may take a whiff of this whenever a pain comes on if it is strong; just before the head comes through the vulva I take the cone and bottle from her and put her quite asleep for a few minutes. When the confinement is managed in this way the forceps will be used very rarely. It has been mentioned above that three examinations should be made, but if the physician sees any way in which one or two of them can be avoided, let him do so, *for the woman's safety increases with the fewness of the digital examinations*. If none at all were made, puerperal sepsis would be almost unknown. So much importance should be attached to this that the writer tells the woman when she engages him not to allow any one but him to examine her, and not even him more than two or three times.

It is well also to warn the patient that we are going to make as few examinations as possible *for her sake*, in order to circumvent the machinations of the old women who call us in to make an examination every time the patient has a pain. After the lapse of so many years it is amusing to look back upon the scenes of one's early confinements, although at the time they were tragic enough; as one entered the darkened and ill-smelling rooms one felt like an innocent man on trial for his life by a jury which has already made up its mind to convict him, when through the gloom we saw the pessimistic faces of the six old women with tea-tanned faces who were there for no other purpose than to sit in judgment on the young doctor. What a howl of condemnation they set up when after an examination he announces that he is going home, as the labor has just begun. More than once the writer has weakly stayed only to be harassed and tormented for twelve weary hours by the disparaging remarks of the jury, such as, "Can you do nothing for her?" or, "Hadn't you better call a more experienced doctor," until weary and goaded to desperation he has committed the almost unpardonable crime of applying the forceps in the very middle of a normal labor. Many a time the blame for using the forceps too early and thereby wrecking the woman's life should be laid at the door of these old women, rather than at that of the young physician.

Are the injuries to the mother due to the use of the forceps, or to the abuse of it? The fact that, in my own experience at least, I caused more damage with the forceps in my earlier years than I do now, would make me believe that much of the terrible injury which the forceps inflicts is due to the too early and too violent use of it. I once saw a practitioner apply the forceps early in labor and, bracing his two feet against the woman's buttocks, he extracted the child by sheer force. During the last ten years I have caused very little damage with the forceps. In fact, when properly used, the forceps not only does not cause lacerations of the perineum but actually saves the perineum by taking the weight of the head off it as the handles are raised, and guiding the head forwards and upwards instead of leaving it to obey the forces which are driving it down upon the perineum.

When to remove the forceps? As the forceps, no matter how delicate in structure it may be, must take up some room, I think it is best to remove it before the longest diameter of the head comes through the vulva. As soon, therefore, as I am sure that the upper jaw of the child can be reached by the right finger in the rectum, the screw holding the blades together is unloosened with the left hand and first the female and then the male blade is removed, the right finger in the rectum all the time keeping the head down on the perineum. When the next pain comes, the head is pushed forward under the arch of the pubis and it is thus born without the perineum being torn. When the rectum has been washed out by a soap and water enema there is nothing unpleasant about putting the fingers in it; but the enema is of advantage for another reason, namely, the saving both patient and attendant the mortification of having the bowels moved in the bed as the head comes down.

No force should be employed in applying the forceps. While studying in London twenty-five years ago, the writer received a lasting impression by reading the report of the trial of a doctor for malpractice, who, while partially intoxicated, forced a blade of the instrument through the vagina into the peritoneal cavity, and then, when several feet of small intestine prolapsed, he cut the latter off thinking that it was the cord. Whenever I am introducing the forceps this case comes to my mind and I am extremely careful not to use any force; if I cannot get it on without force I will not use the instrument at all. In fact, in most of the cases the blades drop in by their own weight.

How to apply the forceps. Although I have often seen them applied, while I was in England, while the patient was in the left lateral position, I think there is no comparison between that and the dorsal or lithotomy position, with the hips well over the edge of the bed and the feet on two chairs, or, better still, held by a leg holder, or failing that, by two women. I never attempt to apply the forceps while the woman is in the bed and lying on her back. The male blade is taken between the thumb and finger of the left hand and allowed to hang vertical, while two fingers of the right hand guide it between the head and cervix, when the handle is allowed to fall a half a circle, and the blade will be above the brain. The hands are again quickly washed and the same thing done with the female blade, only in different hands. When the two handles have fallen or are depressed a good half circle, the locks will come together and the screw is tightened. The blades are then applied transversely to the mother's pelvis where there is most room, but as the child's head has to rotate forwards in the pelvis I sometimes take the forceps off when I get the head in the pelvis and reapply them to the sides of the child's head before beginning to raise the handles.

Forceps undesirable. Having in my earlier years of practice called several senior practitioners to my assistance in difficult cases, and having in turn been called by a great many younger men since, I have had opportunities of comparing the various makes of forceps, and so far I am personally convinced

if I had to buy a new pair now I would choose the same pattern as those I bought a quarter of a century ago and have used constantly ever since, namely the Baudeloque. (I have several other kinds, but keep them merely as curiosities.) This instrument is a foot and a half long and a pound and a half in weight. The handles are roughened and each has a hook on it, which, with the rough handles, is a great help when traction is required, although I seldom use the forceps in this way, preferring as much as possible to employ it as a lever, with the arch of the pubis as the fulcrum; the long handles enabling one to exert sufficient force in this way with only one or two fingers of one hand on the instrument. One might fear that this would injure the soft parts covering the pubic bones, but such has never happened in my hands. In many cases, when the head was arrested in the pelvis, I have been able to deliver without applying a single ounce of traction. Laying the handles on the open palm of my hand, I have raised them until they touched the woman's abdomen, describing exactly half a circle by which time the head had passed the vulva. But it is in cases where there is a narrow pelvis, with the head arrested at the brim, and the uterus is lashed into an ineffectual fury by the pains, threatening every moment to rupture itself, that I have found these forceps so useful. When they are applied in these cases, we must pull downwards until the head enters the pelvis, and after every pull wait a moment to see in what direction the handles point before making the next pull, when they will be found each time to point a few degrees of a circle higher up. These forceps have this great advantage, that they will do equally well in the most difficult and in the easiest cases. One woman I remember, who had had two confinements, each time requiring the assistance of three doctors and the child having to be killed both times. She came to me for her third delivery, and as she was anxious to have a living child, I advised symphysiotomy, to which she consented. As soon as labor set in, she entered my private hospital and all preparations were made to operate, but before cutting the pubic arch I made one attempt to deliver by applying the forceps high up. This was easily done, the male blade catching the child's forehead and the other the occiput. It was the projecting promontory of the sacrum which held the head back, but on applying some considerable traction downwards I felt a clicking sound as though the right parietal bone had bent or cracked, and the head came down. On raising the handles delivery was easily effected without any injury to the mother and with a living child which the parents so much desired. I looked for a fracture of the parietal bone, but there was no sign of it; it may have been elastic enough to bend without breaking. I attribute my success in this case entirely to the long forceps.

Care of the forceps. This same pair of forceps has been in use for nearly a quarter of a century, but it has been well taken care of. I have never once entrusted it to any one else to clean for me, but immediately the child has been born I have returned it to the jug of hot water from which I had taken it, and as soon as the mother and child had been cared for I have washed and dried the forceps myself, finishing the drying by sterilizing it on the hot stove. Every few years they are re-silver-plated, and now they are as good as the day they were bought.

Danger of using the forceps when there are no uterine contractions. I have already mentioned the danger of using the forceps to terminate labor when labor has either not begun or is only half over, from the point of view of lacerations of the cervix, vagina and perineum, but I wish to say a few words about inversion of the uterus, from this cause. I have noticed that this terrible accident is more common in the practice of those energetic but misguided gentlemen who convert their normal labors into *accouchements forces* in most of the cases in which the child is not borne before they reach the house. Either there is uterine inertia, and they have to apply the forceps for this reason, or else there is retained placenta, and they have to introduce their hand and arm as far as the elbow to remove it. Now it is absolutely and mechanically impossible for the uterus to contract itself inside out. If it is inverted, it is because it has been pulled inside out by some one, and the only two people who can do that are the baby and the accoucheur; neither of them can do it except in one way, and that is through the cord. And not even then, unless while the uterus is relaxed between the pains. Sometimes it is unavoidable because the cord is abnormally short, or it is twisted around the child's neck several times so that it becomes abnormally short, and as the child drops out of the vulva the fundus is pulled down with the placenta as soon as the uterus relaxes. Or the fundus is pulled down during an interval between pains by tractions on the cord while delivering the placenta. But when the forceps is used in the total absence of contractions, there is absolutely no reason why the uterus should not invert every time. I was telegraphed for to come to the country to help a medical friend where, the forceps having been applied in the absence of pains, the child was immediately followed by the placenta still attached to the fundus. Before I could get there the woman was dead from hemorrhage and shock. In this case the cord was wound three times around the child's neck, and before it could be undone the uterus was inverted.

Injury to the child's head. There is no doubt that many children have been killed and many others maimed for life from injuries to the head caused by using undue force with the forceps. But all these deaths must not be charged to the forceps alone: many of these children would have perished as well as their mothers, had delivery not been terminated by their aid. In the writer's own hands, out of over twelve hundred deliveries, about twelve children, or one per cent., have died from instrumental deliveries, but he has only seen one case of severe injury to the brain among those who survived. This was a large boy, whose mother had a generallly small pelvis, and after waiting twenty-four hours the forceps was applied at the superior strait and the child delivered with great difficulty. Just over the right parietal bone a hole was found through which about a teaspoonful of brain substance exuded. The wound was carefully treated and, instead of the child dying as was expected, it made a good

recovery. This case was followed up with interest until the child was five years old, when he disappeared from view, but when last seen he had a small pulsating tumor at the spot referred to as large as a quarter of a dollar, but he was not paralyzed in any way. I have heard of several cases in Montreal where idiocy, imbecility, paralysis and convulsions have resulted from forceps injuries to the brain.

There are many other things about this instrument which I would like to say, but the space at my disposal is limited and I must bring my paper to a close, with the hope that what I have said may induce many young practitioners to give nature a fair chance before resorting to the forceps.

PRIMARY CARCINOMA OF THE UTERINE FUNDUS.

By J. M. BALDY, M. D.,
of Philadelphia

The old adage that "it never rains but it pours," holds good with surprising frequency in surgery. Primary carcinoma of the uterine fundus is comparatively rare. In a paper, read before the American Gynecological Society last spring at the Chicago meeting, I reported a series of twenty-four cases, twenty-one cases operated upon in an experience of sixteen years' practice in gynecology. I have now to report to your society three additional cases which occurred in my practice in the course of three weeks during the present fall.

(1) Mrs. B., aged 54 years, had passed the menopause some six years ago, the function being completed, in that no blood was seen after that time until about one year ago. At this time (one year ago) she had vaginal show of blood with symptoms of bearing down, backache, and pain in abdomen. She had a beginning prolapse of the uterus and vagina. The symptoms being attributed to this condition, a successful operation was performed and the prolapse relieved. Subsequently she passed into the hands of another physician and her symptoms continuing he curetted the uterus, sent the specimen to the laboratory and diagnosed cancer of the fundus uteri. He referred her (with the microscopic slides) to me for a confirmation of his diagnosis and an operation. On submitting the slides to the Ayer Laboratory of the Pennsylvania Hospital the disease was pronounced carcinomatous. I removed the uterus and appendages completely by abdominal section and the patient died promptly from a quick septic infection of the wounds due to the foul putrid condition of the uterus.

(2) Mrs. B., aged 51 years, married 21 years and always regular with her menstrual period. Four years ago the uterus had been curetted for too free bleeding, when the menstruation ceased altogether for two years. For the past two years she had been seeing a little flow at three or four weeks' interval, irregular and uncertain as to time or quantity. She had lost a good deal of flesh during the past eight months. Early in June last her physician sent me (from Virginia) scrapings from her uterus, saying he suspected cancer. The report from the Ayer Laboratory of the Pennsylvania Hospital was as follows: "Sections show irregular growth of large masses of epithelial cells in form of alveoli penetrating into the wall of the uterus. Diagnosis cancer of the uterus." The results of the examination were forwarded by mail to the physician with instructions to send the patient to me at once, in order that the operation could be performed before I left the city for the summer. This fall I received a letter from the physician stating that his patient and he were waiting anxiously to hear from me. My letter had been miscarried, causing a delay of three months or more. On removal of the uterus there was found that the disease had passed through the fundus at one point and had infiltrated the tissue just over the sacrum. The operation is too late, I fear, to be of permanent benefit.

(3) Mrs. A. was sent me from the interior of Pennsylvania for an opinion as to her condition. She had fully completed the menopause and several years afterward had begun to bleed irregularly and slightly. Indefinite pains in the back and pelvis with loss of strength and flesh gradually showed themselves. The cervix had completely disappeared and the fundus was somewhat enlarged. Cancer of the fundus was diagnosed from the symptoms and a vaginal lysis which my furnished the specimens which at the Ayer Laboratory of the Pennsylvania Hospital were pronounced carcinoma.

Three cases, all of which had suffered with a single symptom for a year or more which in itself makes it inexcusable that an operation was delayed for so long a time. It is to be remembered that in each of these cases the physician who finally brought the patient to the operating table did so within a few weeks after first seeing the women. The one exception was the Virginia patient and the delay there was caused solely by a miscarriage of the U. S. mail. The doctor did his full duty. But what can be said of the physicians in whose hands these three cases rested for the year prior to their operation? They had all three passed the menopause, the monthly flow had ceased entirely and completely and after an interval of years (two at the shortest) a show of blood had occurred from the vagina. The day has passed, gentlemen, when any man practicing medicine can justify himself for such a neglect (that is the very mildest term possible under the circumstances). There is little use trying to mince words on this subject and there is no possibility of our shirking our duty in the premises. Such a history means cancer and nothing but cancer in ninety-five cases out of one hundred. The symptom of bleeding after the natural bleeding has ceased is such a grave symptom that no practitioner of medicine of average intelligence should overlook it and having once observed it, no possible excuse should be accepted for not acting upon the hint, not in a month, not in a week, but instantly.

In my paper read before the American Gynecological Society and in one read before the American Medical Association last spring, I called particular attention to the woeful lack of early diagnosis in cases of cancer of the uterus, both of the cervix and of the fundus, and at that time layed particular and emphatic stress upon this symptom of irregular, otherwise unexplainable bleeding. At times the symptom is not so plain and its significance so apparent as in these three cases, and yet often is sufficiently so to put a careful man on his guard in time to save his patient.

Our hope of saving cancer cases rests largely in the ability of physicians to diagnose the disease early enough for us to operate with success. What of these three cases? One dead from septic infection of the wounds due to advanced cancer which could easily have been diagnosed a year earlier, before the tissue was in such a condition as to be dangerous from the foul discharges. A second one with adherent fundus to sacrum and infiltration through the point of adhesion; practically certain recurrence. A diagnosis, which should readily have been made a year earlier, would have found the disease with no adhesion and no infiltration. A third case in an extremely doubtful condition as to recurrence, a year earlier at which time the diagnosis should have been made, there would have been the greatest chance for a permanent cure.

A year's delay, unnecessary, unjustifiable in each of these cases with a probable result of their deaths; is it pleasant to contemplate? Is it a credit to our profession that such terribly fatal neglect amongst physicians can exist in this age and in the full knowledge of the importance of these symptoms?

I ask the question advisably—where lies the fault? Is it in ourselves as teachers, or in the profession at large as pupils? In answer I am free to confess that fault lies in both directions. If self-condemnation will add one atom to our teaching of the future, let us not spare ourselves for failing to insist at all times and in the most vigorous manner on the supreme importance of a close and critical study of the bleedings of every woman who passes through our hands professionally, in order that we may the more freely and unhesitatingly condemn such palpable neglect as that to which these three women have each been subjected.

A NEW METHOD OF TAMPONING THE UTERUS POST PARTUM: THE WOOD-HOLMES INTRODUCER

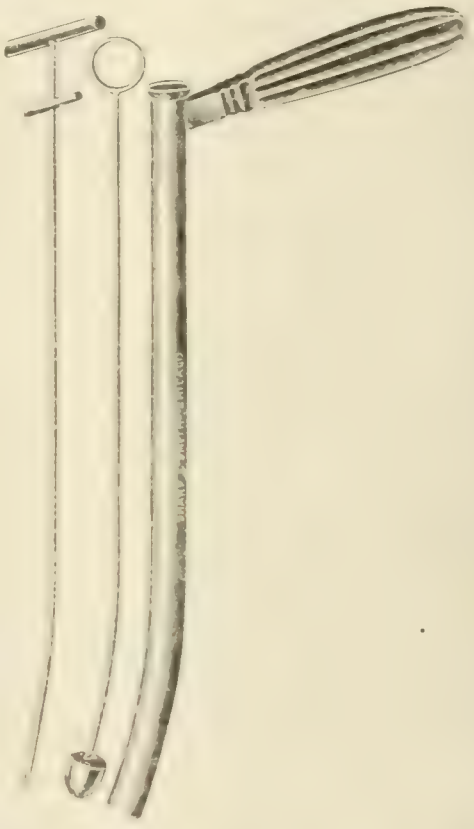
By RUDOLPH WIESER HOLMES, M. D.

of Chicago.

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At the present moment practically all authorities are agreed that the intra-uterine tampon post partum is a useful method of treating post partum hemorrhage, and in severe cases almost an absolutely indispensable measure for controlling the bleeding. Practically, we have only one procedure for introducing the gauze, the method of Duhrssen, who was the one to popularize this treatment for post partum hemorrhage. Duhrssen's method is carried out as follows: the anterior and posterior lips of the cervix are drawn down to the vulva by means of volcella; the left hand is introduced into the lower uterine segment, and with this hand as a guide the right hand, armed with a stout dressing forceps pushes the gauze to the fundus uteri. Broadly there are two modifications of Duhrssen's method: one, to replace the hand by broad specula anteriorly and posteriorly in the vagina, and the cervix drawn down by volcella—then the gauze is pushed home with a dressing forceps. Schauta dispenses with the volcella and specula; otherwise the method is that of Duhrssen. One of these three methods probably always will be used in severe hemorrhage where time is the primal object. In an almost incredibly short time the uterus may be tightly tamponed by the method of Schauta, which requires the least preparation of the three methods. The great objections to these methods are that the gauze rubs more or less against the vulva and vagina, and carries some germs into the uterine cavity; and the friction of the gauze, and repeated introduction of the forceps into the uterus may increase the abrasions normally present post partum or even injure the uterus. The danger of infection is probably less when volcella and specula are used. With an atonic uterus, and when the os and retraction ring are widely dilated, the danger of injury is reduced to a minimum by these methods. But when the orifices of the os and retraction ring are constricted, and possibly the cervix has not been effaced, as is seen in cases of rigid os (particularly of premature labors), the dangers and difficulties of tamponing are present. For these cases especially a substitute of Duhrssen's methods is to be desired.

Recently the writer had a case in which it was expedient to tampon the uterus for constant oozing of blood from the uterus and cervix; the firmly constricted retraction ring offered a considerable obstacle to a proper tamponade of the utero-vaginal tract. The principle of *Wood's Packer* suggested itself as a means to be utilized in similar cases. The instrument which I present for your consideration is Wood's Packer, modified to suit the needs of post partum work.



The instrument comes in three parts, the tube, the obturator, and the introducer. The tube has a length of twenty-eight (28) centimeters, and a calibre of eighteen (18) millimeters; on the proximal end is a handle similar to that on Kelly's graduated urethral specula; there is a pelvic curve to the tube of five (5) centimeters—this curve is in the distal half of the tube, and its measure is taken from the centre of the distal opening to the prolongation of the line coincident to the external surface (lower) of the straight portion of the tube; a greater curve than this prevents proper working of the introducer. The obturator has a conical shape and closely fits the distal end of the tube—its use is merely to facilitate the introduction of the tube. The introducer is a very strong highly tempered steel rod with three sharp prongs on its distal end (the cleft between the prongs must be so rounded that by no chance can the gauze be caught) near the proximal

* Presented to the Chicago Gynecological Society, November 15, 1901.

end is a small cross bar at such a distance from the prongs so as to prevent their appearance beyond the distal end of the tube; some six (6) centimeters further is the handle; the rod should be number twelve (12) French scale.

Method of Use.—The tube with obturator in place is pushed up to the fundus uteri, guided by the left hand introduced into the cervix or retraction ring. The obturator is withdrawn without removing the hand from the vagina. An assistant brings the jar of properly prepared antiseptic gauze within an inch or two of the proximal end of the tube; the end of the gauze is picked up with any forceps and pushed a short distance into the tube; then the introducer is pushed home, carrying the gauze with it; rapidly withdrawing the introducer not more than two inches it again is pushed home, repeating the maneuver until the uterus and vagina are full. It is a useful expedient while packing gently to oscillate the distal end of the tube from side to side to throw the gauze in folds in the uterus. Two facts must be kept in mind: one, if the introducer is withdrawn too much, the gauze will be packed in the tube, thus preventing further working of the instrument, or at least hindering the progress of the gauze; second, that the gauze must be of proper size, and so "felted" (not rolled) in the container that it feeds out easily. The method of using the instrument may be modified by holding the handle in the left hand, and proceeding as before; my experience has taught me it is not so effective as described above.

Its Advantages and Disadvantages.—By this means of packing it is unnecessary for the sterile gauze to touch living tissue from the time it leaves the container until it is *in situ*—therefore it is an absolutely sterile method. The soft parts receive a minimum amount of injury. The only assistance needed is for some one to hold the jar of gauze near the tube. To tampon with volcella and specula requires at least two assistants, one of whom must be versed in asepsis, and fairly skilled. Schauta's method compares with mine in that no trained assistants are needed, desirable though it may be to have such help. The disadvantages are two: that it is slower than Duhrssen's method, requiring twice or thrice the time, and the uterus cannot be so tightly tamponed. For these two reasons it is entirely inappropriate in severe hemorrhage. It is particularly efficacious in rigid os at term, or more especially in premature labors from the third to the seventh month; in cases where the retraction ring is tightly constricted; in lacerations of the vagina or cervix where it is inexpedient to repair the tears; in cases of rupture of the uterus where we wish to make as few intra-uterine manipulations as possible.

Since the instrument was made I have had four opportunities to test its virtues between October fifth and November twelfth.

The first case was a deep tear of the cervix extending into the broad ligament where the uterus was firmly contracted. The second was in a woman five months pregnant—the woman had bled for a month. A continuance of the vaginal tampons for forty-eight hours made no impression on the rigid os. After dilating with Hegar's sounds to admit two fingers, further dilatation could not be secured by Barnes' bags; evisceration and craniotomy were performed in turn, and the fetus delivered through the rigid cervix. After the third stage the packer was introduced and the tampon applied. In this case the cervix firmly held the tube. The third was similar to the second case. The fourth case was that of placenta previa lateralis—the lower border of the placenta just touched the retraction ring. When the hand was passed in to perform version after the expulsion of Braun's colpeurynter, the placenta was found almost entirely separated, prolapsed in front of the head, and hanging by a rim of placenta near the fundus, requiring later manual removal. As a douche did not stop the flow of blood, and the uterus tended to relax, I tamponed with my instrument. At the moment of packing the retraction ring admitted the tips of three fingers.

At the present time there is no gauze on the market suitable for tamponing the uterus post partum, either by the method of Duhrssen, etc., or by the method suggested above. My earlier tamponades were done with gauze a yard wide and five yards long—such a width makes a too bulky mass for an effective introduction, and its subsequent removal is attended with great discomfort to the patient. The most convenient dimensions for tampons by Duhrssen's method are one-half yard widths folded into a strip two to two and a half inches wide, and ten to twelve yards long. The full twelve yards may be placed in the utero-vaginal tract in cases of atony at term; obviously the amount in all cases will vary with the tightness of packing and the size of the uterus. The tube of my instrument will easily carry the above gauze strips.

The writer, however, cannot too strongly enter his remonstrance to the use of corrosive sublimate and iodoform gauzes for intra-uterine tamponade; both are so highly toxic that the danger of placing them in such a large cavity as the uterus is ever present.

I have been using Chinosol (6%) to impregnate the gauze, it is strongly antiseptic, non-toxic, and almost inodorous. It is needless to state that the tampon must be antiseptic and aseptic. I would also declare it my conviction that any obstetrician who does not have at hand at every confinement the requisites for treating post partum hemorrhage is grossly negligent: and tamponades are the most potent means of checking bleeding. I agree with Dr. King in holding laws should be enacted covering this most essential requirement.

I have to thank Messrs. Sharp and Smith, of Chicago, for making the instrument for me.

THE IMMEDIATE REPAIR OF INJURIES OF PARTURITION.*

By A. L. BEAHAN M. D.,
of Canandaigua, N. Y.

The violence done to the genital tract by the act of parturition should be remedied at the earliest possible moment. The great school of plastic surgery originated in this city and the great teachers, Sims, Emmett and their followers placed womankind under lasting obligation to the scientific skill that brought certain benefit to the conditions caused

*Read before N Y. State Med. Society, at New York City, Oct. meeting.

by a pathological labor. It is a pity that the work of this school has not more devoted followers. It was perfect enough to be classical and no flap-splitting suspending intra-abdominal operation or ligament shortening method can take the place of the operations exemplified and perfected at the Women's Hospital in this city. The principles taught were correct and were the honest interpretations of the needs and limitations of the work. This was from the standpoint of the gynecologist and was to meet the consequences of neglect and long suffering conditions. The further away from the occurrence of lacerations of the cervix uteri or perineum the time for repair was placed, the less successful was the result and the more strenuous the criticism of the Emmet operation, especially of the perineum. From the standpoint of the obstetrician the operative technique is that of the beginning of mischief, not its consummation. There is not a general descensus of organs with consequent interference with circulation and the congestion following. There is not urethrocele, rectocele and an elbowing into the vagina of the rectum with their consequences. There is not cervical hyperplasia or a spool of cicatricial tissue at the old lacerated angle of the wound. The condition is simply one in which from sudden dilatation tissue is torn, its continuity violently broken. The cause may occur as the result of an inherent spasm of muscle or their deterioration due to the incident of conditions associated with a higher civilized life. It is not to be presumed that any obstetrical skill can avoid the laceration of parts when such a condition underlies the cause, in fact in the lacerations of the lying in women it should not be considered an approbrium that they do obtain in the hands of the accoucheur. The ability to diagnose lacerations and to make repairs that shall restore the parts to their original integrity far outranks the ability to demonstrate by statement alone that any practitioner has had such and such a number of confinements with no lacerations. It is extremely doubtful if in the majority of labors severe abrasions, contusions and solution of continuity of tissue do not occur. Every suspected case should be inspected in a good light, preferably upon a table that the eye may assist the tactile sense in determining the facts. Nothing should be left to chance or inference. Gynecology may lose by this teaching, but obstetrics, the leading science of the two will gain its true position. It is often easy to gain the consent of the patient and parties interested immediately following severe labors for such repair as is indicated. It is not easy to obtain the privilege of later operative procedure and the proneness of women by nature to cover their troubles militates against their interests in this respect and when the question becomes a gynecological one, different principles of correction are often applied and sometimes the effort is at least a partial failure.

As to the perineum, the injuries from parturition are of varied degree from nicks of the anterior portion of the vulva to laceration of parts, including the so-called perineal body and the contiguous sphincter muscles through the rectum. Lacerations may occur in any or several directions. Their immediate effects are increase of discomfort and danger from an invited sepsis. The tears are direct. The separation of muscles on lateral walls causing the rectocele comes later. The normal rectum follows the curve of the sacrum and fecal matter is ejected forward. The elbow of a rectocele gives a forward bend into the vagina and the normal rectal current is reversed. This does not occur at once after a laceration. It is a consequence of neglect of repair. The method of suturing a laceration is from above down and from within out and the uplift of tissue toward the tuber ischi, though not so intensely essential as in the repair of old lacerations, will do no harm. We prefer silk worm gut well shotted because softer material cannot be kept as tense and does not continue aseptic. A continuous suture of silk worm gut shotted at either end applied within the rectum may be used in rectal tears, or the interrupted silk suture. The ends of the sphincter ani muscle must be sought and approximated. This is easily closed. Dead spaces must be carefully avoided. Cris-crossing of sutures will cause a sinus. The use of a Peaslee needle from the outside alone is, as says Emmett, only as useful as sewing together the drawers below. If the skin were never approximated and the inner parts placed in apposition, the operation would be anatomically a success. The posterior vaginal wall must be made to fit the curve of the anterior vaginal wall very closely. No speculum should be used, except for inspection, especially after the sutures are placed. A wide Sims speculum will not allow the parts to come together properly. The removal of sutures of the perineum should be considered at the end of two weeks and should also be effected gently and without speculae.

The repair of the recently lacerated cervix should become as popularizd as that of the perineum and both should be pushed forward in professional esteem.

The paucity of literature on early repair of cervical laceration and the small amount of work done in this direction is surprising. It is probable that one reason for this condition of affairs lies in the appearance of the cervix immediately succeeding labor; an edematous, misshapen, frilled opening with no semblance to a normal cervix presents itself? It will be much changed in 24 to 48 hours, and, in my experience, both cervix and perineal tears should properly wait for at least this period and with as good results as if repaired immediately. Manual compression of uterus and the use of ergot are to be conjoined. The uterus contracts rapidly. Then place the patient on a table in a good light with uterus cleared of clots, a mild antiseptic douche being used, as when the placenta is removed after miscarriage or abortion. With the supplementary use of a large dull irrigating curette, when necessary, it is a gratification to see the uterus contract firmly, the cervix presenting a greatly improved appearance and the work begins with every problem well in hand. The Sims speculum and the dorsal lithotomy position may be used, though it is better to draw the uterus well down with volsellum forceps and make the operation practically outside the body. The sutures should be placed as in the Emmett gynecological operation, that is in V directions, that the tissue

may be drawn upward and the last suture passing into the presenting edge of laceration prevents the formation of a nick in the restored cervix. Silk worm double shotted sutures are best and these may be left for any considerable length of time as from 2 to 4 weeks without harm if a careful aseptic toilet is maintained. If the care of these cases falls much below a good standard, only a partial success can be hoped for, while with proper care a poor operation will yield satisfactory results. The benents of the operation are prevention of subinvolution, lessening of infection, avoidance of reflex caused by cicatricial tissue at the point of healing and its associated anemia, destructive changes in fibrous and muscular tissue of cervix and endometrium by chronic inflammation, according to the known law that fibrous tissue when inflamed hypertrophies and contracts, and muscular tissue when irritated gives fibroid degeneration and atrophy.

Dr. R. M. Moore, in a recent paper before the Rochester Pathological Society, gave the result of operative work in immediate repair of cervices and cited the results of Dr. Baldwin's work in the same direction in that city. It was the consensus of opinion evidenced in the later discussion that the operation should have a brilliant future. The results in the hands of these operators were satisfactory. The operations done in the series of cases reported indicated that from 24 to 48 hours night profitably and preferably elapse after confinement, before restoring the parts to their normal relations; that the same thought and plans should be given and devised as for any other surgical work with sufficient help and simple, direct, clean technique.

The popularizing of cervix repair is much advanced by free discussion of its merits. The repair of the perineum was early criticized severely. It is not safe to watch lacerated cervices for possible malignancy. It is bad surgery. Emmet says 95% of perineal lacerations repaired early are cured and the other 5% fail from poor nursing. The same rule holds more eminently in the case of recent simple tears of cervix because infection cannot come from the rectum and external sources. Parturient injuries of every kind should have immediate attention. It is a crime not to restore the vulva and cervix to perfect anatomical structures. A gaping vulva, wide vagina, everted os mean invalidism to women. Approximation of parts is all that is required. The sutures will hold if the simple half curved needle with small cutting point is used and the scythe like Hagadorn is not employed. Grasp plently of tissue and do not bite it hard. The silk worm suture never fails in its work. A heavy pair of forceps that will crush a shot, one or two tenacula and scissors with a Sims speculum, shot and sutures are all the necessary instruments and appliances needed for the work. Use an anesthetic, have good light, and, if possible, good assistance, especially a clean nurse, who will keep parts clean and an Emmet result is assured. The prevention of the accidents and sequences of child bearing, thus removing the reproaches cast upon the obstetrician by such measures as shall restore all the parts of the parturient canal to their original integrity, is demanded. There is no more important work to be done for child bearing women by their physicians, none more easy, if the proper principles are applied in the best way.

REMARKS ON EARLY ECTOPIC GESTATION,*

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In presenting this subject before the Society I have no apologies to offer, as in my opinion this subject is of first importance and deserves your consideration. In my estimation the sudden onset of this dreaded condition (ectopic pregnancy), the grave consequences and quite frequently an utter helplessness of medical or surgical aid can be fully compared with the dread of appendicitis, pulmonary hemorrhage or eclampsia.

The purpose of this paper is to show and bring forth discussion on the point that three classical gross symptoms of ectopic pregnancy, i. e., pain, hemorrhage and pelvic tumor, are **not** the absolute essentials of an *early* ectopic gestation. That there frequently exist masked cases which baffle the skill of the most prominent gynecologist and that, with the exception of hemorrhage—all other symptoms or signs, as pain, tumor, enlarged uterus, fainting spells, darkened areolae of the breast, pulsation of blood vessels in vault of vagina, blue discoloration of vagina, etc., etc., are only adjuvants and *may or may not* exist in a given case.

Our best authorities of the gynecological world still differ as to the real symptomatology of *early* ectopic gestation. Some boldly assert that they can *always* point out a case of extra-uterine pregnancy and the existing symptoms are the above mentioned three cardinal signs; others again, and these are in the minority, assert that "we have no absolute symptoms by which we can recognize a case of an early ectopic gestation."

At a recent meeting of the Section of Obstetrics and Gynecology a paper on "Early Diagnosis of Ectopic Gestation" was read. The speaker, among other things, said "of the ordinary symptoms of pregnancy, one should note the enlarged veins and papilla of the breasts, the darkened areola, the blueness of the vagina and the softness of the cervix. The most important sign is *hemorrhage*, which occurred earliest in cases in which gestation is situated near the distal extremity of the tube. Next to bleeding as a diagnostic symptom is a sharp darting *pain* in abdomen. The third diagnostic point is a *tumor*, and this could be best determined by examination under anesthesia." In order to clear up the doubtful diagnosis of an ectopic, some advise an exploratory laparotomy in a case of every suspicious hemorrhage following retention of menses. Others are in favor of making a posterior vaginal incision. Some advise chloroform narcosis, especially in fat women, in order to come to a more substantial diagnosis. I desire to bring before you cases that came under my notice previous to the fifth week of pregnancy in which symptoms of *pain or tumor* were en-

* Read at the meeting of the Eastern Medical Society on June 1st, 1901

tirely absent, and the only sign was the untimely oozing of blood from the uterus.

I can also relate cases where at the close examination under chloroform no sign of any tumor could be revealed in any of the Fallopian tubes and three weeks hence, a timely laparotomy saved the patient from death from a ruptured tube.

If we will also take in consideration that the majority of these cases do not present a clear history which, in absence of other "subjective" symptoms, is essential for the establishment of an absolute diagnosis; that we often come across non-intelligent patients, in which the observation and subsequent treatment of ectopic gestation in tenement house districts is not always in the hands of one physician only, we will come to the conclusion that a clear diagnosis is by no means an easy task.

The most difficult and doubtful cases of early ectopic pregnancies usually fall to the lot of the general practitioner.

He is the first to be called and witness its first and treacherous manifestations.

Later on, in the run of its grave development, the consultant specialist is summoned to the case, still later, when rupture of the tube takes place—the hospital doors embrace the unfortunate woman. With little or no surgical aid at his command at the time of emergency, what can a general practitioner do?

It often occurred to me that by strange order of circumstances the less equipped general practitioner or aspiring surgeon is taxed with the greatest responsibility of this shocking calamity, while the more skilful specialist is called in later, only to tell the tale of woe of a ruptured gestation.

The public at large is also quite ignorant of the existence of extra-uterine pregnancy. While appendicitis is pushing its dreaded influence upon the laity as well as into the modern literature, manifestations of an ectopic gestation are frequently spoken in public as a "natural flow," a clearing process of the bad "and evil from the constitution of the woman." Its danger is ignored until the very fatal issues of it.

CASE 1.—Mrs. N. Russian, 36 years old, married 15 years, had 7 children, no miscarriages; strong, robust woman, weighing about 195 pounds, always been well. Menstruation always been regular, 4 weeks, 4 days; no dysmenorrhea. Had a child 15 months ago, which she is still nursing. No menstruation during previous period of lactation up till two months ago, when menstruation took place for four days. At this month she missed her period for three days and after this started oozing of blood from the uterus. Pain in abdomen slight. History of catching cold in a bath and hence retention of blood. On this ground my examination declined, but afterwards permitted.

Examination: Thick abdominal wall, uterus large, subinvoluted, lacerated gaping cervix. Adnexa could not be palpated. Slight oozing of blood. Chloroform narcosis declined. Rest and observation ordered. Kept in bed for two days, when one night suddenly severe pain, hemorrhage and collapse took place. Hurried consultation and immediate operation in the house of the patient. Posterior vaginal section. Ligation of left ruptured Fallopian tube. Very profuse anemia and shock. Patient expires next day.

CASE 2.—Mrs. I. Russian, 24 years old, married one year, no children, no miscarriages; menstruation four weeks, four days. History of retention of menses one week. Then oozing of blood for nine days. No pain, no other symptome of pregnancy. Temperature and pulse normal. Suspected early abortion. Prepared for curetting. When under chloroform she was carefully examined by me and my friend, Dr. Jos. Wiener, Jr., and both agreed that the tubes are free from any swelling and locus morbi thought to be in the endometrium. Curetting reveals nothing abnormal to justify an abortion. Microscopical examination of débris negative.

After removal of intrauterine gauze two days later, oozing of clean red blood continues. In view of a possibility of a polypoid endometritis, intrauterine applications of iodine and occasionally chloride of zinc made with no absolute result. Three weeks later patient examined by me again and a small enlargement found in the right Fallopian tube. Patient transferred to Mt. Sinai Hospital. Abdominal section reveals presence of an ectopic gestation. Recovery.

CASE 3.—Mrs. Ida A. Hungarian. 25 years old, slim built woman. First menstruation when sixteen years old, regular, 4 weeks, occasional dysmennorrhea, lasting three days. Married 16 months. Delivery of a child six months ago. Had peritonitis, confining her to bed for five weeks. Convalescence slow.

Since confinement frequent attacks of pelvic pains, especially in the left side, occasionally in the right. Patient never been free from pain since her confinement. No missing of period. Nursed child until my visiting. As pain was constant, the only leading symptom in this case was oozing of the blood for the last eight days. Frequent vaginal examinations do not disclose any abnormalities in the Fallopian tubes. Three weeks later she was sent to the Post Graduate Hospital, with the temperature of 98.6°; P. 100. Laparotomy by Dr. F. Foerster. Left tube found inclosed in a tumor of clotted blood. Tube and ovary ligated and removed and upon section of tumor a fetal ovoid disclosed. Recovery.

CASE 4.—Clara M. German, 38 years old, married 15 years, had six children, youngest child seven years. Menstruation regular, four weeks, five days. No dysmenorrhea. Had four miscarriages since her last child. Does not remember exactly the date of last menstruation. Had [illegible] during the past six weeks and during that time had pain in the right inguinal region. After these six weeks bloody discharges and pain for over one and one-half month. Works around the house and in her butcher shop. Feels full of gases in abdomen.

Examination. Short and open cervix. Large tumor filling the place of the uterus which has no outlines but is enclosed in a doughy soft mass drawn to the left posterior pelvic space. Dr. A. Brothers called in to see the case. Diagnosis drifting between hematocele or hydrocele. Diagnosis not clear.

Operation by Dr. Brothers at Post Graduate Hospital. Tumor found in the left iliac region, which was found to be a ruptured tubal pregnancy of three and a half months gestation. Salpingo oophorectomy performed.

CASE 5. Rose S. Hungarian, 25 years old, married six years, had three children, last child seven months old. No miscarriages. [illegible] menstruation during lactation, no malaise. No pain whatsoever. Noticed bloody coating from uterus for nine days but a noninterrupted flow simulating menstrual flow.

Examination. Antiflexed uterus. Uterine appendages normal. Patient put to bed for observation. Another week of continuous bleeding. Curetting of uterus. No secundines or placental tissue found. Microscopical examination of uterine scrapings negative. Patient improves after curetting. Leaves bed. Starts to bleed again nine days after. Twenty-six days after her first menses of blood she gets pain for the first time in the left side of the abdomen and occasionally in the right. Another vaginal examination. Found a large mass in the left parametrium which feels like a hematocele or pelvic abscess. This diagnosis concurred in by a consultation. Exploration with puncture needle advised—dark blood explored—microscopical examination of blood reveals nothing suggestive of extrauterine pregnancy. Admitted to Post Graduate Hospital and kept there under observation in bed for four days. Eight hours before the set time for operation tumor bursts and patient collapses. Dr. A. Palmer Dudley summoned. Vaginal incision and laparotomy lasting only fourteen minutes in view of the collapsed patient performed under very weak anesthesia. Left ruptured tube ligated and removed. On the right side a pyo-salpinx and ovarian cyst found which were also removed. Patient rallies. Final recovery.

CASE 6.—Dora S. Russian, 28 years old, patient of Dr. Mosessen, married 6 years nullipara. Had miscarriage four months after marriage. Menstruation four weeks.

last four days. Slight dysmenorrhea. Skipped menstruation for one and a half months, then blood appeared in spots off and on. No pain except at urination. No fainting spells. She was treated by her family physician, Dr. Moseson, who called me in to assist him at curetting for suspected imperfect abortion. Before curetting I have examined the patient who is a very slim woman, not over 90 pounds and conveyed to the doctor my suspicion of a possible intrauterine pregnancy, as the uterus was enlarged and cervix soft. Adnexa were found to be normal. It has been decided to postpone the curetting in view of a possible intrauterine pregnancy and the desire on the part of the woman to become pregnant. Rest and observation ordered. Oozing of blood and occasionally slight pains continue for nearly three months, when I had again occasion to meet this patient. After this examination I found an enlarged tumor on the right side which raised my suspicion of an extrauterine pregnancy. Dr. C. A. von Ramdohr called in consultation, who concurred in my diagnosis. Patient operated upon in Mt. Sinai hospital, where presence of an ectopic was firmly established.

Synopsis of Cases.

First Case.

Retention of menses three days. Patient treated only two and a half days when tube ruptured and fatal issue took place. Dark clinical history. Difficulty of vaginal examination. Lactation interferes with clear history. No local tumor, *pain* strongly ascribed to a recent "cold" in a bath.

Second Case.

Retention of menses one week. No objective symptoms. No pain. Nothing abnormal under chloroform narcosis. After four weeks small local tumor appears.

Third Case.

Non-missing of menstruation. Constant pains, ascribed to attacks of a recurrent peritonitis. No objective symptoms. No tumor. Lactation interferes with clear history.

Fourth Case.

Pain and oozing of blood from uterus only in the beginning. Then stopped entirely for one and a half months. Pain present on the **right** side of the abdomen. Ruptured tube found on the **left.** Walks and works in the shop. Very large and soft bloody tumor. Baffles the diagnosis.

Fifth Case.

Non-missing of period. No *pain* until after curetting about the twenty-sixth day from beginning of first sign of blood. No fainting. No malaise. *Pain* could be accounted for by the existence of a right pyo-salpinx and ovarian cyst found at the operation. No local tumor until the second month. Non-interrupted flow of blood simulating menstrual flow.

Sixth Case.

Pain only at urination. No enlargement of breasts. No signs of pregnancy. No faintings or dizziness. No local tumor until later development.

Above mentioned cases have been selected from a large number of cases of extra-uterine pregnancies observed by me during my practice and which ran a *normal* course.

With this small material at my command and with the aid of clinical reports of other observers, I permit myself to assert that *pain* is not the absolute symptom of an early ectopic gestation, but appears as a rule in advanced stages, say the third month or more.

Pain is the result and expression of an over-filled and advanced pathological condition of a Fallopian tube and takes place, usualy, when adhesions to neighboring ligaments are formed, and this occurs later in its developments.

Pain may not accompany a case of an early tubal gestation until the very rupture of it.

Local tumor is also a manifestation of advanced ectopic pregnancy and should not be put down as a positive sign of an *early* stage.

Dr. Hanks reports a case of a young married woman who skipped a period of five days and had all the subjective symptoms of pregnancy but no tumor. She died within twelve hours from bleeding from a rupture of a mass in the tube not larger than one by two centimetres in size.

Even the most frequent *oozing of blood* from the uterus may or may not be present at a given case, and may depend entirely upon the location of the ovum implanted in the Fallopian tube, which tube, according to Lawson Tait, is always the primary seat of every case of an ectopic embryo and which only later starts out on its dangerous tour.

Cases are reported where bleeding took place in the tube and by its fimbriated extremity into abdominal cavity and where no bleeding from the uterus was present. Cases of extra uterine pregnancies with non-missing of the period have also been on record.

If you will add to this that not every interrupted hemorrhage from uterus speaks for an existence of an extra uterine pregnancy, but hemorrhage may be caused by a pus tube, cystic disease of ovary, imperfect abortion, polypoid endometritis, etc., you will come to a conclusion that in an early ectopic pregnancy we have to deal with a dangerous and hidden foe.

You will also agree that out latest text books are quite empirical in their symptomatology of an early ectopic which, in my opinion, falls short from its real clinical facts.

The period of rupture according to Hecker took place out of his 45 cases of tubal pregnancies:

Twenty-six times in the first two months.
Eleven times in the third month.
Seven times in the fourth month.
One time in the fifth month.

Mortality of cases according to Schauta in non-operated cases which ran a spontaneous course was 68.8 per cent. *of deaths* and in cases *operated* in due time only 20 per cent. deaths.

Recapitulation.

1. **Early** ectopic pregnancy runs a treacherous and uncertain course.

2. Symptoms of pain, tumor or oozing of blood are not the absolute signs of an early ectopic gestation but their existence must be considered *"cum grano salis,"* and each case must be observed per se.

3. Clear history cannot always be obtained from the patient, and the period of lactation will still more darken the clinical history.

4. Microscopical examination of the uterine scrapings, presence of decidual cells of chorionic villi find advocates in many observers, find also as many opponents.

Treatment.

As late as the year 1891 the electrical current for killing the ovum of an ectopic pregnancy has been

advised by such prominent gynecologists as Wm. T. Lusk and B. Emmet.

The drift of the twentieth century is towards abdominal section in each suspicious case of an extra-uterine.

Curetting in a suspicious oozing from uterus does more harm than good, aggravates the case and leads to hematoceles, etc.

Probe punctures into the bulging mass may be the cause of future infection.

The so-called "suspicious cases" of extra uterine with the suspicious tumor in the Fallopian tubes should in my opinion, *not* be kept under long observation until it is "too late to mend," as in my case number five, which nearly cost patient's life, but should be operated at once. I also know of cases which are put down as cases of ectopic and are kept under observation in our best equipped clinics and presented to the student classes and watched in order to ascertain a positive diagnosis.

This in my opinion is cruel and entirely non-scientific.

In *conclusion* permit me to draw an analogy between cases of early uterine pregnancies and cases of suspected appendicitis.

Our best surgeons tell us not to wait till symptoms of pus or rupture will take place in the tube of the appendix, but to operate *early*.

They also claim best results in *early* operations before the rupture of the appendix.

I shall avail myself of this comparison and will broadly state that in a case of a suspicious extra uterine gestation, operate when you positively know of its existence, and in a case of dark and baffling symptoms operate because you **do not know** of its existence.

Exploratory laparotomies at the present advanced stage of abdominal surgery in cases of blood and **non-pus** tubes give perfect results and such attempts of exploration will surely be justified in view of the desire to save our patient's life, and in the light of advanced and broad views of modern surgery of the twentieth century.

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PUERPERAL MYELITIS.*

REPORT OF A CASE FOLLOWING ABORTION—WITH REMARKS.

By HARRY MORELL, M. D.,

of Litchfield, Minnesota.

Mrs. F. S., aged 29; occupation, housewife; married 12 years; had five children and one miscarriage; no particular trouble during labor. Menstruation always normal. Had measles, mumps and whooping cough when a child. Family history: Father, five sisters and four brothers are in good health. Mother has epilepsy.

When three months pregnant she started to flow, and continued to lose blood for six weeks. During this time she did ordinary housework, until she had to go to bed, when the bleeding increased until a large amount of clots were discharged, then the hemorrhage became less and she was able to be about again, but complained of a severe pain in the back part of the thighs. In about two weeks after this, while walking about the house, the pain and hemorrhage returned, a doctor was called and the fetus was taken away, but the placenta could not be delivered, although instruments were used. Two days after the doctor again tried with instruments to deliver, but he was unsuccessful. After the doctor had left the after-birth came away spontaneously. A great quantity of blood was lost and very great pain was experienced. The pain and hemorrhage lasted about five hours. The patient was in bed about two weeks, after this, with slight fever, and when she was able to be about she complained of weakness in her left hip and there was a numbness and unnatural feeling extending from her waist to the toes, especially in the left side. The power of lifting her left foot from the ground was gone, and consequently she had to drag it along and walk with a limp. Gradually the right leg became numb and paralyzed and the patient had to take to bed with absolute paralysis and muscular spasms of both legs. There seemed to be an unnatural feeling surrounding her body like a band at the level of the umbilicus. I saw this patient after she was in bed for three months. Both legs were paralyzed and rigid, and by lifting one member and raising it, the other would accompany it. Both legs were stiff and close together. The feeling was quite gone. A needle thrust could not be felt—knee jerks were lost. Associated with the paralyzed condition were pus tubes on both sides and there was an ozing of pus from the cervix. The patient complained of a very severe pain in the region of the bladder which had to be emptied by the use of a catheter. The bowels would not act without the use of a physic. She informed me that a battery was used by the doctor for two months, but as no benefit was received from its use, it was discontinued.

Two other practitioners examined the patient at this time with me and we decided to send her into the hospital for operation for the relief of her pelvic disease. The neurologist of the hospital to which she was sent would not consent to any operative procedure, on account of general septic poisoning, so the patient was sent home, where she remained in bed for two years in good health comparatively, with the exception of the paralysis and discharge from the cervix.

The subsequent history is that the woman, after being in bed for over two years, had a very gradual return of sensation and motion, and at this time is apparently well, although not robust.

The above is the history of a case which occurred a few years ago in my practice, and it is presented to the gentlemen of this society, in the hope that it may prove interesting to go over some of the points in this rather rare condition.

"Paralyses due to inflammatory changes in the spinal cord are rare as puerperal complications."

The causes of myelitis as generally given are—exposure to cold, exertion, as a sequel of infectious diseases, traumatism, diseases of the bones of the spine, and septicemia.

Authorities on obstetrics I have looked over, do not mention myelitis following abortion or labor. In consulting literature for the past two or three years, I have met with eight cases reported where paralysis occurred after labor. I cannot find on record any case of paralysis following abortion.

H. M. Thomas[2] says: "That the nerves may be involved in inflammatory conditions of the pelvis to such an extent as to cause paralysis is very generally stated on good authority, but personally I have had no experience with such cases. They must be unusual, for I have been unable to find the record of such a case in Dr. Howard A. Kelly's very active gynecologicad service. No such case has been referred to the neurological department for examination, and Dr. Kelly nor any of his associ-

*Read before the Crow River Valley Med. Society, Litchfield, Minn., Dec. 21, 1898.

ates can remember such a case. It may also be added that we have not seen a paralysis due to the involvement of the nerves during the growth of a pelvic tumor, which seems remarkable when one reads the statements in text-books."

Of the cases reported, five occurred in Kings County Hospital and were noted by Dr. Arthur Conklin Brush, and classed as puerperal myelitis. I am of the opinion that four of them were primarily puerperal neuritis (obstretrical paralysis of the mother"—Thomas) due to traumatic injury of the nerves as neuritis, as in two cases were forceps used, and in two both cervix and perineum were lacerated, showing a disproportion between the child's head and that of the mother's pelvis, causing undue pressure of the child's head on the nerves in that region.

I shall quote freely from Dr. Thomas' article, who cites Hendrie Lloyd[3] as follows:

"From the facts and authorities already cited, it is evident that there is some latitude for difference of opinion as to the chief exact causation of lesions of the sacral plexus and its chief trunks during labor. The older writers were evidently disposed to regard pressure of the head and injury by the forceps in prolonged and difficult labor as important factors in causing these paralyses. The tendency of more modern writers is to dissent from this view, and to ascribe lesions of the sacral plexus and its branches to a septic inflammation, propagated directly to the nerve trunks from a metritis or a periuterine cellulitis. I do not see that it is necessary to ignore either one or the other of these important factors, although I believe that the theory of septic infection is one that more satisfactorily explains the majority of these cases. There can be but little doubt, however, that in the case of large head or contracted pelvis, the instruments, especially if applied in a faulty manner, might make pressure upon the sacral plexus where it lies upon the body of the pyriform muscle or especially upon the trunk of the sciatic nerve where it emerges below the lower margin of that muscle and where, by reason of its great size and its exposed position, it is liable to injury."

In two of the eight cases referred to, two were reported by Dr. Thomas of the John Hopkins Hospital. In these, paralysis developed after labor, and I quote Professor Thomas' remarks as follows:

"These two cases are, I think, good examples of injuries to the roots of the sacral plexus during labor. (Obstetrical paralysis of the mother.) In both cases the women had passed through a practically normal pregnancy. In both cases the labor was difficult and instruments had to be used. In the first case the pelvis was normal and the child was large. In the second the pelvis was generally contracted and the child was very large (12½ lbs.)."

I believe in those cases of puerperal paralysis which follow inflammatory conditions of the pelvic organs, and in which trauma may be excluded, we should take into consideration the influence of toxic agents upon the cord. It is well known that myelitis is given by authorities as one of the complications of puerperal septicemia, although I cannot find a record of any case, but do not see why this should be so unusual as "it seems to us that its infectious origin is an established fact."[3]

Experimental medicine along these lines has shown that myelitis may be produced by toxins of rabies, bacillus pyocyaneus, diphtheria, bacteria coli, etc., etc.

Morell & Rispal,[4] in a case of experimental myelitis with a culture of streptococcus, found bacteria in vessels, anterior horns and central canal. Moltchanoff[5] experimented on mice with cultures of gonococcus and obtained an acute ascending paralysis. Enriquez and Hallion[5] reported a case of pyocyanic poisoning in a rabbit, followed by spinal lesions and muscular atrophy. With these results in view it seems strange that we do not more often meet with cases of myelitis, following inflammatory affections of the pelvic organs.

Another causative factor in the production of paralysis, leaving out the consideration of trauma, is neuritis, which occurs in various infectious diseases, including puerperal fever. Dr. James Stewart[6] reports a case of puerperal polyneuritis and polio-myelitis which occurred in the Royal Victoria Hospital. It is shown that the clinical course of the disease was first shown as a neuritis and later as a localized myelitis. His remarks on this case are as follows:

"The symptoms were for several months those of a neuritis rather than a polio-myelitis. In fact at no time were there sufficiently distinctive symptoms to enable one to say definitely that the spinal cord was involved. It was only the gradually ascending character of the paralysis (Landry type) that, some three or four weeks before death, gave a clue to the probable spinal involvement."

The pathological findings in this case prompt the conclusion, that the infection of the cord was quite distinct from that of the nerves, and that the changes in the cord were not caused from the peripheral nerves.

In conclusion I would point out that paralysis may occur after labor, abortion or pelvic inflammation; that the causes of paralysis after labor usually result from pressure neuritis, and the paralysis occurring after abortion or pelvic inflammation is, or is likely to be, due to myelitis from infection. It is sometimes impossible to say clinically whether the disease is a neuritis or myelitis or both.

It is to be regretted that the modern text-books on obstetrics make no mention of this condition, puerperal myelitis.

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An Extradural Serous Cyst Following Ancient Fracture.—In the *Journal des Sciences Medicales de Lille* (July 6, 1901) Dr. A. Franchomme reports the case of a boy of 8, who, four years before, had fractured the roof of his skull. Symptoms of idiocy had appeared for about a year. The beating of the brain was visible through the scalp. Trephining revealed a serous cyst between the dura and the scalp, caused by the fragments from the old fracture of the skull four years before, which had penetrated. Evacuation and irrigation were followed by complete recovery. This is the third observation of this kind in the literature. [M. O.]

ON THE DESIRABILITY OF FURTHER DATA CONCERNING THE PREVENTION OF OPHTHALMIA NEONATORUM.

By LUCIEN HOWE, M. D.,

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There is already such a mass of literature relating to this subject that any increase of it may seem at first, worse than useless, but a little consideration will show that it is desirable to have more data from obstetricians concerning the value of other methods of prophylaxis, besides the two per cent solution of silver nitrate now in use.

We are already familiar with the article by Kostling, of Halle, in the *Archiv für Gynekologie* for 1896, and the figures there need simply be mentioned in order to have their importance appreciated.

In that, as will be remembered, he brought together the combined experience of obstetricians who had written on the subject up to that time. In summing up their results he found, in general, that in considerably over 17,000 births when no prophylactic treatment had been employed, some trace of ophthalmia developed in over 9 per cent., whereas among over 24,000 children treated by the Credé method, the number who developed the diseases was not far from one-half of one per cent. Such a formulating of an enormous experience was, of course, of great value in demonstrating beyond question the duty of the obstetrician. Moreover, it indicated that the time was not far distant when, for the sake of economy, if not as a matter of philanthropy, some law will be enacted which requires every practitioner who attends a case of confinement in an institution supported in part or wholly by public funds to make use of the Credé method or of some other which, in a large number of cases, has been proved to be equally efficient.

The practitioner who attends private patients will, of course, continue to use some such prophylaxis or not, as seems best to his judgment and most in accord with the wishes of his patients. But as the State is the guardian of all children, especially those born in public institutions, it is, therefore, the duty of the State to provide for such wards the best treatment known. And if one method has been thus proved by combined experience to be so much better than any other, then it seems logical that this treatment should be made compulsory in such institutions. The sooner that such legislation is urged by obstetricians, the greater will be the saving in taxes for the support of the blind and the less will be the number of such unfortunates.

But when we say that the two per cent. solution of silver nitrate is the most effective form of prophylaxis thus far known, we must admit that it is by no means the ideal treatment. It always produces some pain, usually more or less conjunctivitis, and there are four or possibly five cases on record in which its use has been followed by bleeding, or even, it is said, in two of these cases, by distinct corneal ulceration. It is true, that so small a number among so many thousands is hardly of sufficient importance to be considered at all, especially when we take into account that this may have been entirely independent of the silver, as one case of ulceration is known also to have followed the use of sterilized water. But the undoubted pain of the application and the frequent conjunctivitis would be sufficient reason for seeking some other method of treatment. This has already been done. In the article by Kostling already referred to, he brought together the results obtained by numerous practitioners, in different institutions, who had used in turn weaker and stronger solutions of silver nitrate, and also solutions in various strengths of other antiseptics—even of distilled water. Apparently, however, sufficient data are still lacking in regard to these other methods and certainly in regard to the prophylactic value of protargol and argonin. It is true that a few observations have been made in this direction by obstetricians, since Kostling wrote his article, and one of these especially which has been published within the last few months is an excellent contribution to the subject.

In the *Centralblatt für Gynäkol.*, Aug. 3, 1901, Piotrowski gives a record of 1030 children treated with a strong solution of boric acid and a ten per cent. solution of protargol. Among these there was not a single case of ophthalmia and a slight catarrhal conjunctivitis followed in only 1.2 per cent. If such results can be obtained by other practitioners also, then certainly we have with these two solutions thus combined, or probably with one alone, a remedy superior to the two per cent. solution of silver nitrate; but until we have more of such experiments with different antiseptics, it is difficult to arrive at definite conclusions.

In a word, what we all wish is more of such data, especially as to the value of protargol, and for this we look to obstetricians, especially those in charge of large institutions. Such contributions would be much appreciated by ophthalmologists and by the entire profession.

OUTLINE OF THE SURGICAL TREATMENT OF ACUTE PANCREATIC INJURIES.

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The chapter of pancreatic injuries has ceased to be a mere supplement to abdominal surgery. It has changed from a fancy to a staple article in our dealings, and requires a ready and practical acquaintance in daily surgical work.

As to diagnosis it will be well to view pancreatic injuries in the list of possibilities and probabilities in every instance where the section of the body between the level of the seventh rib and that of the umbilicus is concerned. And it will not matter from what direction the injuring force has made its attack. Evidently stabs and bullets will have the best chance to reach the gland from the front, but they can do the same from the sides and from behind. Since the gland is from six to eight inches in its transverse diameter and from one and a half to two inches wide, it can be easily hit. Bullets

* Read before the Dallas Medical and Surgical Society, September 28, 1901.

perforating both walls of the stomach or of the duodenum are most liable to reach the pancreas, and the very limited space, where a bullet can avoid doing so, can practically little be reckoned with. The same will hold good in most of the stab wounds. Posterior injuries near or at the costo-spinal angles are apt to act the same way, and wounding from the side through the ribs, diaphragm, spleen and liver may as well include the pancreas.

As a matter of course, depth of the wound and its direction will have to be taken into consideration. All other moments will be of little help in diagnosticating fresh cases; we will hardly expect to recognize escaping pancreatic juice, or to be aided by systemic symptoms which later may be valuable guides. After all, it should be the rule in doubtful cases to act as if pancreatic complicity existed. We will have done little harm if we have erred, and we will often save lives if facts sustain our supposition.

But the pancreas is often injured while the body surface remains intact. We are entitled to suspect breaks and at least contusions of the pancreas from blows, falls and similar accidents. Fortunately most of such injuries are repaired by nature, but under circumstances, they will lead to the formation of cysts, either from hemorrhage or from retention of pancreatic juice within the gland, or from breaks of the surface. In the latter case the juice will accumulate between gland and the uninjured parietal peritoneum, lifting up the latter gradually to the omentum. I do not believe that true pancreatic cysts will form from accumulation of blood and juice within the lesser cavity of the peritoneum, breaking through it. But cysts will become objects of later concern and do not interest us here.

Fresh injuries of the pancreas have their particular features which compel us to look at them differently from other injuries. They are additionally dangerous from the effects of the escaping pancreatic juice. The well known digestive power of these secretions is plainly seen even on the healthy epidermis as we meet it in conjunction with pancreatic fistula. A much more deleterious effect may be expected on the more tender tissues in the neighborhood of a leaking pancreas, and it has lately been shown that the fatty tissue undergoes a kind of saponification leading to what is called fat-necrosis. The occasional absence of bacteria shows plainly that this condition is solidly produced by the pancreatic juice. This process has been brought to our understanding lately in connection with acute hemorrhagic pancreatitis, a disease which is due to infection carried into the gland from the intestinal or biliary tract, often leading to gangrene of the gland itself. No doubt, the combination of the bacterial infection with the vicious effect of the pancreatic juice explains the rapidity and fatality of the process. The frequent prompt staying of it by the removal and drainage of the fluids, proves beyond any doubt the correctness of such views.

Now if the pancreatic juice is able to destroy healthy tissue, it can be imagined how will fare by it wounded tissue, which will have little tendency to heal by first intention, because of the wound surface being kept constantly in an irritated condition. Only when the break of the gland is very limited or when it closes readily, a healing of the wound will take place. But it is evident that if that should not be the case, all doors to infection are kept wide open. This infection may come from the stomach, liver, spleen, the intestines, gall bladder, and also travel through the pancreas itself. Something of this kind threatens to happen in every case, since all such wounds will be complicated in one or the other way.

From such considerations it is plain that pancreatic injuries will be of different severity. A very important question will be whether the posterior parietal peritoneum is torn or not.

Posterior wounds may not reach forward far enough to tear the parietal peritoneum, and pancreatic juice may have no chance to get into the intraperitoneal cavity.

The depth and location of the wound in the pancreas is of great importance also. The deeper it goes into the organ, the more juice will escape. If the duct itself is severed, the danger is greatest, as a matter of course.

Of great moment is the wounding of the blood vessels. They will have to be ligated. Perhaps, if the main feeders are intact, partial necrosis resulting from wanting blood supply will be of little harm, as absorption may by and by take place. If the blood supply, though, is entirely cut off, I venture no suggestion whether the gland should be removed or not, since it has not been decided positively whether man can live without the pancreas. (Experiments on dogs have proven the possibility in animals.) There are cases well authenticated where great portions of the gland sloughed or were cut away with good results, and I myself know of a case where a pancreas, prolapsed through an incised wound, was cut away almost entirely with perfect recovery. Evidently the body of the gland can be easier spared than the head and the main duct.

Operative treatment of pancreatic wounds ought to begin as early and be as thorough as possible, the same as in all other intraperitoneal wounds. The indications to be met are: control of hemorrhage, prevention of escape of juice, prevention of infection, repair of injuries; all of which in the nature of such cases, will only be a part of the whole operative procedure.

We will first outline the handling of the wounds received from behind. A stab or bullet wound, doubtful as to the participation of the pancreas, will require at least a good drainage through its tract, which will perhaps call for a stretching or widening of the wound so that a drainage tube or a gauze strip can easily be inserted. If this fails, an incision ought to be made in or near the costo-spinal angle, similar to incision for perirenal troubles; and the whole retroperitoneal space should be freely exposed, which will, at the same time, allow examination of the kidneys, the spinal column, the larger blood vessels, etc.

Whenever the injury is suspected or really found extending through the posterior parietal peritoneum, at once a regular high laparotomy ought to be added and the same steps taken as for anterior

injuries. If it should be decided to close the peritoneal wound, the posterior drainage should nevertheless be kept open. It is unnecessary to say that injured vessels should be tied, loose portions of the gland removed, the wound of the gland stitched and portions which do not promise recuperation resected, provided that proper attention be given to the main duct. Perhaps this itself may have to be stitched or an anastomosis done.

If a traumatism is received from the front in such a way as to make the injury of the pancreas possible, the abdomen ought to be opened irrespective of other indications. The incision ought to begin high up and must at once be made large enough to allow a full survey of the field. The pulling out of the stomach and intestines is not advisable as it must be of advantage to examine all the organs in the position and relation they were in when the injury was received. Access to the pancreas and all the surrounding parts is best obtained by widely opening the lesser cavity of the peritoneum, which is most advantageously done by incising vertically or transversally, the gastro-colic ligament, with as little disturbance of the blood vessels as possible. If then the stomach is turned up through this opening and held up, the whole inside of the cavity can be examined. The wound can be found and the kidneys, the large blood vessels, the spinal column, etc., can be made out by touch, the pancreas by touch and sight, as the lining peritoneum is thin enough to allow the gland to be plainly recognized. If necessary the peritoneal wound can be widened. I once had to take this course in a case where the patient was shot from the side between the ninth and tenth ribs, and where paralysis beneath that point made injury of the spinal column doubtless. Probing and enlarging the wound did not satisfactorily clear up the more minute condition. Laparotomy was performed, but not before the gastro-colic ligament was opened could the nature of the injury to the spine be fully made out. We could feel distinctly the totally shattered vertebra.

Obviously all anterior pancreatic wounds include wounding of the lining peritoneum. After attending to the gland itself, securing hemorrhage, removing small loose particles, exsecting mashed portions, etc.—the pancreatic wound may be stitched up by itself or in common with the overlying peritoneal wound; and if it appears desirable, a second row of stitches (Lembert) may be inserted in the peritoneum. If everything is satisfactory, the abdomen may then be closed, with or without previous closure of the operative incision in the gastro-colic ligament.

In cases where the pancreas is totally perforated, or a portion mashed through its whole thickness, it seems to be most recommendable to establish posterior drainage by thrusting a long-bladed knife from the inside through the costo-spinal angle, carrying a tube or a gauze strip to the exterior. A not detectable bullet in that region or injury to neighboring structures will make this procedure much more desirable. (A widening of the drainage canal may afterwards be done by a more extensive incision from the outside.) After this the peritoneal lining over the pancreas may be closed and the case treated as described before.

But if the peritoneum itself should be greatly lacerated or other structures within the lesser cavity of the peritoneum should be so injured as not to allow ready repair, or if the pancreas cannot be drained freely from behind, it will evidently be best to leave the parts unstitched in as good a condition as possible, and to establish anterior drainage for itself or in addition to posterior drainage.

Anterior drainage is done by closing the operative incision in the gastro-colic ligament with exception of a portion about one inch in diameter. This open portion has to be stitched to the anterior parietal peritoneum around a corresponding portion of the incision in the abdominal wall, preferably the lower angle, which portion, as a matter of course, must not be included in the closure of the abdominal wound. We thereby will have established a kind of pancreatic fistula lined by the walls of the lesser cavity of the peritoneum, and perfectly separated from the larger peritoneal cavity. A drain has then to be introduced reaching from the outside down to the bottom of that sac.

It is hardly necessary to repeat that the never missing complications with injuries other than pancreatic, will modify our action in many a case. But whatever they may be, I cannot see that more can be done than a combination of posterior and anterior drainage in the described way whenever local repair is impossible or insecure.

Now supposing that the pancreatic damage had not been recognized in an operation for an injury in that region, or that none had been undertaken at all, and that after some days certain signs should make us suspect injury; it seems proper to me to open or reopen the abdomen and to attend the pancreas, proceeding exactly in the same line of repairing, cleansing and draining as above described. By this we will perhaps cut short even an infectious peritonitis.

This is a very short outline of what in my opinion should best be done, and while it contains nothing new, it may help to fix a certain line of procedure in our memory for ready use.

SOME EXPERIMENTS ON THE FORMATION OF BILE PIGMENT AND BILE ACIDS: A CONTRIBUTION TO OUR KNOWLEDGE OF ICTERUS.*

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(Continued from Page 77).

The following experiments make it probable that trypsin is in part normally absorbed from the intestine, but that the greater portion reaches the liver *via* the pancreatic veins in the portal blood or *via* the lymphatics in the hepatic artery. In other words that the "internal" secretion of the pancreas plays a greater rôle in the process of intra-cellular digestion that we are discussing than the external secretion.

The method employed for the determination of

*Read at a meeting of the Pathological Society of Philadelphia, Dec. 12, 1901.

the trypsin in the liver under varing conditions was the following:—It is known that flakes of fibrin placed into solutions of unorganized ferments seem mechanically to absorb the ferments and hold them so tightly that they can not be removed by washing. (Grützner). In the case of trypsin the fibrin, if placed into a weak alkaline solution, would be digested; as an indicator of slight degrees of digestion not sufficiently strong to dissolve the fibrin some stain may be employed that will color fibrin and at the same time be indifferent to the action of alkaline solutions; such a stain, f. i., is magdala red. If, therefore, a flake of fibrin, stained with magdala red, is placed into a solution suspected of containing trypsin and, if after removal from the solution to be tested the fibrin flake is placed into a dilute solution of soda and kept at body temperature, the color of the fibrin flake will change as soon as digestion takes place, that is, if the solution contains trypsin. Basing on this color change a colorimetric method for the determination of the quantity of trypsin present in a given solution has been evolved by Gehrig and gives good results. We must refer to the original paper for the details; in broad outlines it may be described as follows:—Several test tubes numbered 1, 2, 3, 4, 5, etc., are prepared; each one contains 10 cc. of water; to tube one is added one drop of a solution of trypsin; to tube (2) two drops, to tube (3) three drops, etc., into each tube is placed the same quantity of fibrin stained with magdala red; after two hours the trypsin solution is poured off and to the flake of fibrin is added a weak soda solution and the tubes placed into the incubator for one hour; at the end of this time it will be seen that the tubes show a progressive color-scale, the one containing the largest amount of trypsin being the palest (tube 5); fibrin flakes taken from the solution to be tested are then treated as above and their color compared with the scale; this allows at least comparative statements in regard to the amount of trypsin present in the solutions; the amounts are briefly designated as 1, 2, 3, 4, 5.

Experimental Series:—

(a) A dog is killed one hour after a full meal, the liver removed, a weighed portion of the organ rapidly macerated by rubbing with sand in a mortar and the pulp placed under absolute alcohol, for one day; the coagulate is then freed from alcohol and dried and the residue extracted with water; this extract tested for the amount of trypsin.

Equals No. 1 of the scale.

(d) After a fast of twelve hours, ligation of the pancreas stimulated by hypodermic injections of pilocarpin; the liver removed and treated as above; the trypsin determined.

Equals No. 2 of the scale.

(c) Dog killed after a fast of 24 hours. Trypsin determined in the liver.

Equals No. 3 of the scale.

(d) After a feast of twelve hours, ligation of the pancreatic duct in a dog and stimulation of the gland by pilocarpin; trypsin determined in the liver.

Equals No. 5 of the scale.

(e) Dog killed after ligation of the pancreatic veins 12 hours after eating and stimulation of the gland by pilocarpin; trypsin determined in the liver.

Equals No. 1 of the scale.

The smallest amount of trypsin is found in the liver during the time of maximum excretion of pancreatic juice into the intestine (a) and after ligation of the pancreatic veins even though here the secretion of the gland is artificially stimulated (e); if the pancreatic veins are not ligated and the gland is stimulated, a considerably larger quantity of trypsin will be found in the liver (b); if the dog is allowed to fast for a short time so that the external secretion of the gland may be considered quiescent, an amount of trypsin will be found in the liver larger than in any of the above cases (c); the largest amount, finally, is found if the pancreatic duct is ligated and the gland stimulated artificially at a time when no more trypsin could be present in the intestine (d); this shows that a large portion can reach the liver through other channels than the intestine.

Making due allowance for the many inaccuracies incident to this method of experimentation and the great difficulties encountered in executing it, the general results obtained justify us in drawing the conclusions chronicled above in regard to the path of trypsin from the pancreas to the liver.

Different investigators (Grützner, Hoffmann and others), have discovered trypsin in a number of organs besides the liver, viz:—the spleen and the muscles, but not the kidneys; I have found it in the liver, the spleen and the muscles and, in a paper to be published shortly, have shown that a ferment is normally present in the blood that is identical with trypsin or, at least, not distinguishable from it by known methods. I have also shown that this ferment is carried by the leukocytes and that it is capable of converting hemoglobin into the bile acids and bile pigment in the presence of dextrose. It seems probable, therefore, that trypsin is constantly secreted by the pancreas, that during digestion the greater proportion is excreted via the pancreatic duct to perform its important proteolytic, lipolytic and amylolytic function in the intestine and that during the periods of intestinal inactivity a considerable proportion is secreted internally and is poured into the blood or lymph stream to perform an equally important function in intra-cellular digestion, viz:—proteolysis and glycolysis.**

All the trypsin that leaves the pancreas *via* the pancreatic veins must reach the liver in the portal vein; a great part is arrested there like many other poisons that travel that path; in the liver the labyrinth of capillary channels through which ooze sluggish currents of blood and lymph and bile, must favor the retention, for a time, of trypsin; that this is not a specific property of the liver can be demonstrated by injecting trypsin solutions into the jugular vein of an animal; the bulk of the trypsin will then be found in the lungs, i. e., the first organ with an intricate system of capillaries reached. From the liver the ferment is carried into the blood current and as it is very toxic, is not allowed to circulate free in the serum but is gathered up by the phagocytes, we must assume, who, harboring it safely in their interior, bear it in a harmless form through the blood stream to its ultimate destination; it is not excluded that the leukocytes gather up

**The fundamental significance of the glycolytic power of trypsin, as elucidated above, in the pathogenesis of pancreatic diabetes, will be demonstrated in a paper entitled "An Experimental Investigation into the Causes and the Treatment of Diabetes mellitus," to appear shortly in the "American Journal of the Medical Sciences."

some of the trypsin in the lymph or blood vessels that leave the pancreas.

The fate of trypsin is not definitely determined; it is not normally excreted in the urine, whereas some of the other ferments of the body as pepsin, ptyalin, diastase, etc., are frequently discovered there; this is due to the fact that trypsin is quickly destroyed by contact with urine; if a solution of trypsin be mixed with an equal volume of normal urine, it will be rendered inactive in a very short time; this does not apply to any other ferment of the body; that trypsin is nevertheless excreted by the kidneys can be demonstrated as follows:—(1) if large quantities of trypsin are injected into the jugular vein of an animal, a certain proportion will be found in the urine if precautions are taken that the urine does not remain too long in the bladder, (2) if the pancreatic duct is ligated in a rabbit, the gland stimulated by pilocarpin and the urine withdrawn (after making a suprapubic cystotomy) directly from the ureters, trypsin will be found; if the urine, even under these circumstances, be allowed to remain in the bladder for from 20-30 minutes, no trypsin will be found. Grützner formulates the hypothesis that trypsin is returned to the pancreas by the leucocytes; this has not been proven.

When we study the peculiar anatomic arrangement of the arterial, venous, lymphatic and biliary channels that honeycomb the liver, when we remember that these passages over wide areas are separated from one another by a single layer of hepatic cells only, when we consider, finally, the manifold sources of the fluids that flow through this meshwork, we can well understand why (by osmosis and diffusion) an intimate mixture of their different ingredients occurs and why, as a result, so many metabolic processes occur in the liver. It is ordinarily believed that all the processes of assimilation and of disassimilation that take place in the liver are dependent on some specific, *vital* function of the hepatic cells. This has never been experimentally demonstrated.

In the liver we always have a medium containing glycogen, and by conversion (or prior to conversion) dextrose; for the formation of the bile acids and the bile pigments this is the *first* condition. The *second* one is given in the presence of trypsin that we have discussed. The *third* is given in the constant presence of free hemoglobin; it is derived chiefly from red blood corpuscles that perish in great numbers in the liver, "the grave of the red blood corpuscle", (Nicolaides showed that there are from one to two million less red blood corpuscles in the blood of the hepatic vein than in that of the hepatic artery); in addition, free hemoglobin is carried to the liver in the splenic vein, that always contains some of the hemoglobin derived from the red blood corpuscles that are destroyed in the spleen; finally, the leukocytes are known to carry fragments of red blood corpuscles to the liver and consequently also bring hemoglobin (Loew, Naunyn, Minkowski). In the liver, therefore, we have an intimate mixture of the three products and consequently the formation of bile acids and bile pigment; no specific liver function is required; the role of the organ it that of a "mixer", of an "abdominal lung"!

If the formation of bile acids and bile pigment from hemoglobin by the action of trypsin in the presence of dextrose is a purely chemical process and altogether independent of the specific action of any particular group of cells, we must conclude that *wherever in the body free hemoglobin is present together with dextrose and trypsin, this conversion into bile products can occur*; in other words that the formation of bile acids and bile pigment need not occur in the liver alone.

Red blood corpuscles are constantly destroyed in different parts of the body and consequently hemoglobin is constantly liberated; dextrose is universally present, and as we have seen, trypsin, in small quantities, can be found in many organs and is present in the leukocytes that can carry it everywhere. Here then a trinity of conditions is given for the formation of bile products in almost any part of the body and the burden of proof is imposed on us not to show why bile pigment and bile acids are formed in the liver but to show why they should *not* be formed elesewhere!

As a matter of fact both bile acids and bile pigment are to a slight degree, normally, to a greater degree, pathologically, present in the blood and the tissues. Whereas, owing to the minute quantities that are normally formed outside of the liver, it is a difficult matter to demonstrate their presence under normal conditions, it is easy to demonstrate their presence as soon as the disintegration of larger quantities of hemoglobin is brought about either by the injection of hemoglobin itself or of hemolytic substances; even then a large proportion of the excessive free hemoglobin will be transported to the liver and converted there, but a sufficiently large quantity will be changed outside of the liver to enable us to demonstrate the presence of bile acids and bile pigment in the blood and the tissues.

It is necessary to work with large quantities of blood and to adopt the following method:—At least one half to one liter of blood is allowed to flow into five or six volumes or warm, absolute alcohol, the mixture is rapidly shaken and the alcohol filtered off: both bile pigments and bile acids will be found in the filtrate. (The considerations that led to the adoption of this technique will be discussed in a future publication—also the conclusions to be drawn from the discovery, for the first time, of bile acids in normal blood).

It might be argued that these bile constituents in the blood are absorbed from the liver or the intestine; it has, in fact, been experimentally demonstrated that the bile salts are in part reabsorbed from the intestine and it is not impossible that the same applies to the bile pigments. At the same time this does not exclude the formation of these substances in the tissues; as regards the bile acids it is difficult to prove that they can be formed outside of the liver because 1, they are present in such minute quantities, 2, they are more difficult to isolate and to identify than the bile pigments, 3, in

contradistinction to the bile pigments, they are readily soluble in the tissue juices and the blood and consequently never accumulate in one location —in the case of the bile pigments, however, the proofs are manifold and simple, as follows:—

1. Latschenberger separated the corpuscles and the serum in the blood of a horse; he then injected serum into one region, corpuscles into another region of the same horse; after ten days he found bile pigment where the red corpuscles had been; where the serum had been he found no bile pigment; if he injected hemoglobin in the place of corpuscles, he also noted the formation of bile pigment.

2. Naunyn and Minkowski, after the injection of certain hemolytic substances, discovered leukocytes in the liver capillaries carrying fragments of red blood corpuscles and containing a pigment that gave many of the typic reactions of bile pigment.

3. Loewit, in frogs, could demonstrate that certain cells outside of the liver took up the red blood corpuscles and elaborated their pigment (hemoglobin) into bile pigment; these cells were leukocytes.

4. Bile pigment has been found in a number of pathologic conditions in locations and under circumstances that absolutely preclude any action of the liver cells; as examples may be named:——

Blood extravasations, whether artificially produced, or the result of trauma, contusions, etc., apoplectic foci, hemorrhagic infarcts in various organs, putrefied feti, cystic fluids containing blood; bile pigment is also excreted in certain diseases of the blood, particularly in pyemia, in which no occlusion of liver channels or liver ducts can be determined and in which the liver is intact; here the pigment must be formed in the blood and tissues from the disintegrating red blood cells.

In conclusion a brief critique, of the leading arguments adduced in favor of the formation of bile acids and bile pigment in the liver alone may be given.

These arguments are:—

1. The blood entering the liver contains no bile pigment and no bile acids; if these substances, therefore, are not known to enter the liver and are still excreted by the organ, they must necessarily be formed by the liver alone.

2. Ligation of the ducts of the liver is followed by the appearance of bile acids and bile pigments in the tissues, the blood and the urine.

3. After extirpation of the liver in frogs, bile pigment and bile acids are not found in the blood, the tissues and the urine.

Ad 1.—We have already called attention to the difficulty of detecting bile acids and bile pigments in the blood; such manipulations as coagulation of albumen by heat, evaporation of filtrates, etc., all lead to the precipitation or the destruction of the bile pigments, and to a slighter degree, of the bile acids; in view of all this and the minimal quantities that at best could be present in the portal blood or the blood of the hepatic artery, it can not surprise us that bile pigments and bile acids were not discovered there; at the same time, as we have shown that they are present in the systemic blood, they must also enter the liver; this argument, therefore, collapses.

Ad 2:—As by far the greatest portion of hemoglobin, dextrose and trypsin are present in the liver and as they are brought in the most intimate contact there, by far the greatest portion of the bile acids and bile pigments are formed there; in addition the liver seems to have the power of arresting and of excreting all the bile acids and bile pigments that circulate through it; consequently any obstruction to the outflow of bile must needs be followed by a re-absorbtion of bile constituents; under these circumstances they appear in the blood in quantities so large that they can be detected in the tissues, the urine etc., by the coarser, ordinary methods.

Ad 3:—Extirpation of the liver, aside from being an operative inroad of such violence that it might pervert any normal process, interferes with the glycogen-dextrose economy of the body; with a destruction of glycogenesis one of the three fundamental conditions for the formation of the bile acids and the bile pigments, viz: the presence of sugar, is not fulfilled; consequently no *formation* of these substances can occur, consequently they do not accumulate in the tissues, the blood and the urine; it is possible that even here under stated conditions some conversion of hemoglobin may occur for a time with the aid of residual sugar; at best, however, it would be minimal and no experimental data bearing on this question are on record.

The Prophylaxis of Malaria.—In the first number of *Le Caducee*, (July 6, 1901), Dr. E. Calmette discusses the prophylaxis of malaria. Common as is malaria, it does not exist north or south of the temperate zones. It is frequently found in low, moist land. Africa especially is filled with it. Many have sought its cause, but it was only in 1880 that Laveran was successful in finding that polymorphous hematozoa, the plasmodium of malaria. Ewing's work (*Journal of Experimental Medicine*, March, 1901) with its superb plates, simplifies the question of the varieties of the hematozoa. He observed the life cycle of the plasmodia and confirmed the ideas of Marchoux, Ziemann, and Laveran, that the different varieties exist at different seasons of the year and cause the different forms seen. Then followed Ross' discovery of the evolution of the hematozoa in the body of the anopheles, with the introduction of the sporozoites into the blood of man through the bite of the mosquito. The main signs of malaria are now considered to be melanemia, hypoleukocytosis up to the time of the chill, then lymphocytosis afterward, and the hematozoa in the blood. Quinine appears to be a specific in the treatment of malaria. The best method of prophylaxis seems to be the destruction of the anopheles variety of the mosquito, and the protection of the individual from its bites. Drainage, planting trees in marshy soil, oil poured upon stagnant water, etc., will aid in destroying the mosquitoes and their larvae. Calmette observes, finally, that all the discoveries concerning the forms, etiology, prophylaxis, and treatment of malaria were made by physicians in the Army, Navy, or Marine Hospital Serivce. [M. O.]

The Gravity of Syphilis.—In *L'Independance Medicale* (July 3, 1901, No. 27) Dr. G. Marcou discusses the gravity of syphilis. Some believe that the surroundings can make syphilis more or less virulent; others, that syphilis may of itself be virulent or benign. After a long discussion of these two theories, Marcou concludes that syphilis is grave when the source from which the syphilis was attracted is grave; that mercurial treatment can attenuate the virulence of the syphilis in both the first and the second persons; and that one's surrounding must always be investigated, though they do not necessarily affect the gravity of the syphilis acquired. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended January 11, 1902.

SMALLPOX—United States.

			Cases.	Deaths.
CALIFORNIA.	San Francisco.	Dec. 22-29.	2	
INDIANA.	Evansville.	Dec.22-Jan.4	3	
IOWA:	Clinton.	Dec.27-Jan.4.	1	
LOUISIANA	New Orleans.	Dec.27-Jan.4.	1	
MASSACHUSETTS.	Blackstone.	Jan. 1-8.	2	
	Boston.	Dec.27-Jan.4.	24	6
	Brockton.	Dec.27-Jan.4.	1	
	Cambridge.	Dec.27-Jan.4.	2	
	Chelsea.	Dec.27-Jan.4.	1	
	Lowell.	Dec.27-Jan.4.	4	
	Medford.	Dec.27-Jan.4.	2	
	Newton.	Dec.27-Jan.4.	1	
	Quincy.	Dec.27-Jan.4.	1	
	Somerville.	Dec.27-Jan.4.	1	
NEBRASKA	Omaha.	Dec.27-Jan.4.	29	
NEW HAMPSHIRE	Nashua.	Dec.27-Jan.4.	2	
NEW JERSEY.	Camden.	Dec.27-Jan.4.	19	
	Jersey City.	Dec. 22-29.		1
	Newark.	Dec.27-Jan.4.	31	1
NEW YORK:	New York.	Dec. 27-Jan.4.	8	2
OHIO:	Cincinnati.	Dec.28-Jan.3.	9	
	Cleveland.	Dec.27-Jan.4.	1	
	Youngstown.	Dec. 21-28.	1	
PENNSYLVANIA:	Allegheny.	Dec.27-Jan.4.	2	
	Norristown.	Dec.,27-Jan.4,	1	1
	Philadelphia.	Dec.27-Jan.4.	90	16
SOUTH CAROLINA	Greenville.	Dec.27-Jan.4.	1	
TENNESSEE:	Memphis.	Dec.27-Jan.4.	2	
VERMONT:	Burlington.	Dec. 21-28.	30	
VIRGINIA:	Roanoke.	Dec. 24-31.	11	
WASHINGTON:	Tacoma.	Dec. 22-29.	2	
WISCONSIN:	Green Bay.	Dec. 29-Jan.5.	5	1
	Milwaukee.	Dec. 29-Jan.4.	1	

SMALLPOX—Foreign.

ARGENTINA:	Buenos Ayres.	Oct. 1-31.	61	
AUSTRIA:	Prague.	Dec. 7-14.	16	
BELGIUM:	Antwerp.	Dec. 7-21.	4	1
	Ghent.	Dec. 14-21.	4	
BRAZIL:	Rio de Janeiro.	Nov. 28-Dec.8.	83	
CANADA:	Halifax.	Nov.22-Jan.4.	15	
	Quebec.	Dec.28-Jan.4	21	
COLOMBIA:	Cartagena.	Dec. 16-22.	3	
FRANCE:	Paris.	Dec. 14-21.	6	
GREAT BRITAIN.	Liverpool.	Dec. 7-21.	3	
	London.	Dec. 14-21.	398	32
INDIA:	Calcutta.	Nov.23-Dec.7		2
	Madras.	Nov.23-Dec.6.		3
ITALY.	Naples.	Dec. 7-14.	16	1
RUSSIA:	Odessa.	Dec. 7-14.	3	1
	St. Petersburg.	Dec. 7-14	5	1
SPAIN:	Corunna	Dec. 14-21.		2
URUGUAY:	Montevideo	Oct.25-Dec.9.	108	5

YELLOW FEVER.

BRAZIL.	Bahia.	Nov.30-Dec.7	1	1
	Rio de Janeiro.	Nov.25-Dec.8		4
MEXICO.	Vera Cruz	Dec.21-28	6	2
WEST INDIES:	Saint Lucia.	Dec. 9. Prevalent.		

CHOLERA.

INDIA:	Bombay	Nov. 26-Dec.3		5
	Calcutta	Nov.23-Dec.7		79
JAVA:	Batavia.	Nov. 6-20	40	28

PLAGUE—Foreign.

BRAZIL:	Rio de Janeiro.	Nov.23-Dec.5		11
INDIA:	Bombay.	Nov.23-Dec.10.		238
	Calcutta.	Nov.23-Dec.7.		50
	Karachi	Nov.23-Dec.8.	169	155
MAURITIUS:		Dec. 5-12	42	25
RUSSIA:	Batoum.	Dec. 12, 1 case, suspect.		
SOUTH AFRICA:	Port Elizabeth.	Nov.30-Dec.7	1	
	Mossell Bay	Nov.30-Dec.7	2	

ARCHIVES DE MEDECINE EXPERIMENTALE.

November, 1901. (13me. Année, No. 6.)

1. The Action of Ferments and Diastases upon Tubercular Poisons. GEORGE CARRIERE.
2. The Pasteurelloses of the Rabbit. J. LIGNIERES.
3. The Action of Toxic Sera upon the Peripheral Nerves. CHARLES DOPTER.
4. Titration for Testing the Alkalinity of the Blood. A. LUMIERE, L. LUMIERE and H. BARBIER.
5. Sebaceous Epithelioma in a Dog. B. AUCHE.
6. The Retina of an Anencephalus. N. VASCHIDE and CLAUDE VURPAS.

1.—Carrière, who gives a detailed account of his 34 **experiments** upon animals, found that **ptyalin** extracts a toxic substance from tubercle bacilli; that cultures of tubercle bacilli to which ptyalin has been added are more toxic than those without ptyalin, both for the healthy and tubercular guinea pig; that such cultures neither prevent the evolution of tuberculosis nor do they immunize healthy guinea pigs. Not only are these conclusions true when **pepsin** or **trypsin** replaces ptyalin, but the evolution of tuberculosis seems aided by the presence of cultures of tubercle bacilli with pepsin or trypsin. Bile has a similar effect. An extract made of tubercle bacilli with toluol, upon which trypsin has acted, is very toxic, but less so than the extract which has not been submitted to the action of trypsin. Trypsin, then, removes some poison from tubercle bacilli. The extract with toluol is neither curative nor immunizing. [M. O.]

2.—Lignières uses the term **"pasteurellose"** for hemorrhagic septicemia in animals, the bacterial group causing the condition being "pasteurella." He describes them as cocco-bacilli which do not take Gram's stain, polymorphic, showing involution forms, not liquefying gelatin, not coagulating milk, not giving a visible culture upon acid potato, not causing indol in pancreatic bouillon, not reddening the jelly of Wurtz, aerobic, occasionally anaerobic, with an odor, without spores or cilia. When injected intravenously, they affect the articular and tendinous synovia. The absence of any one of these characteristics excludes the microbe from the "pasteurella" group. Lignières has studied four epidemics among rabbits. The lesions are septicemic, pulmonary, peritoneal, or articular. Lignières gives a minute differentiation from other conditions due to other bacteria. [M. O.]

3.—**Peripheral neuritis** occasionally accompanies autointoxication, as it does the infectious diseases. After describing a number of experiments in which toxic serum was injected into guinea pigs. Dopter concludes that toxic sera, from uremic, diabetic, or carcinomatous patients, those with asystole or with Addison's disease, when in direct contact with a peripheral nerve, cause alterations in its elementary fibres. These lesions are the same as those produced by bacterial toxins, segmentary periaxillary necrosis and Wallerian degeneration. While the grade of the neuritis varies, the result seems dependent upon the toxicity of the serum used. By analogy it can be admitted that the peripheral neuritis of general toxic conditions is due to the injurious action of the toxic products in the circulation, which reach the elementary fibres of the nerves. This notion is confirmed by Dopter's experiments. [M. O.]

3.—After a historical review of the subject, the details of **titration in testing the alkalinity of the blood** follow. Several conclusions are reached in this technical article. The alkalinity of the blood must be differentiated from its total basicity. While the alkalinity is due to the mineral alkalies present, the basicity is formed by the organic bases and albumins. For titrating the mineral alkalinity of the blood, alone, an acid liquid is added to a known volume or weight of blood, up to the neutral point. When colors are used, the method is not exact, because of the coloring matter of the blood, and the lack of sensibility of the colored reagents. Besides, an acid added to the blood converts some of its basicity, even more when concentrated acid is employed. Lumières anid Barbier have devised a method of titration based upon the constant relation between the weight of blood and acid, using iodine in place of the colored reagents. They have made curves which show the normal and abnormal grades of alkalinity of the blood. [M. O.]

5.—Auché describes macroscopically and microscopically a **sebaceous epithelioma in a dog.** The histological findings show that common human tumors may be found in animals. [M. O.]

6.—Vaschide and Vurpas give a minute description of the **retina of an anencephalic subject.** Their investigations show that the retina is capable of individual development in spite of the absence of brain matter. [M. O.]

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See Advertising Page 8.

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The Philadelphia Pathological Society's Exhibit.—A year ago the Philadelphia Pathological Society instituted the custom of holding an annual exhibition meeting. The purpose was to give the members of the society, and all those interested in the various branches of pathology, the opportunity to see, systematically arranged, the more instructive and interesting specimens in the possession of laboratories or individuals in Philadelphia. The advantages of such a meeting are evident. The pathologist himself finds on view many treasures which would otherwise be buried, while those who have lost most of the knowledge of pathology that they once possessed, have an opportunity not otherwise provided of seeing all the new local work and are given a kaleidoscopic review of new technique and newly described lesions. The first meeting was a popular as well as a scientific success. The second annual exhibition meeting, which was held on January 9, was even better fitted for its purpose and may properly leave a sense of local pride and a general feeling of gratification as well, since it furnished evidence in massive form that the number of earnest investigators in this country is even now considerable and is constantly growing, and that their work may with entire satisfaction be compared with that produced in older countries. The pathological and bacteriological laboratories of the University of Pennsylvania, Jefferson, and Medico-Chirurgical Medical Schools had excellent exhibits, as did the Ayer Laboratory. The Pepper Laboratory displayed a very noticeable collection which was of general pathological, neurological and bacteriological interest. There were also beautiful eye specimens, and Dr. C. Y. White gave an extremely remarkable exhibit of blood specimens. The latter included practically all the changes found in the erythrocytes, with especially beautiful examples of basic degeneration, karyothexis, karyolysis and pyknosis and an almost diagrammatic specimen of karyokinesis, and with this there was a very interesting series of slides showing the various forms of leukocytes, acute and chronic leukemias, including a remarkable example of acute leukemia with enormous leukocytosis, and also blood parasites. Another exhibit which was of particular value under existing circumstances was Dr. Jay F. Schamberg's collection of portions of skin from the subjects of smallpox, prepared by Kayserling's method, and mounted under sealed watch crystals. This showed the varieties and stages of the eruption in a way that could be bettered only by exhibiting living patients. A third collection which could not fail of attention was that of Dr. M. P. Ravenel, consisting of a portion of the results of his experiments in the laboratory of the State Live Stock Board, which did so much to quiet the premature excitement of both Europe and America directly after Koch's paper at the London Congress; and with the older specimens were recent ones which are still more convincing of the correctness of Ravenel's position.

With over one hundred and fifty microscopes holding remarkable slides, and with a large collection of gross pathological and bacteriological specimens of notable interest, one felt that it is no longer necessary to say that the conditions of life in this country make it impossible for us ever to take a leading place in the kind of work that requires a sacrifice of time and money. Americans are not in large part of sordid purpose, nor are they too superficial and hasty to be scientific.

The definite evidences of good work that were presented at this meeting were such as to increase one's gratified feeling that the amount of sincere and earnest investigation that is being done in this country is increasing at an astonishing pace and will continue to increase; and one is fully justified in anticipating that there will be added, as there should be, a larger proportion of work that is of a more definitely experimental character.

The Medical Department of the Buffalo Exposition.—Occasionally we do things well in America. One of the things upon which we can congratulate ourselves is the organization of the Medical Department at the Buffalo World's Fair, a report of which has just been published in the *Buffalo Medical Journal*. This department was under the charge of Dr. Roswell Park, and he managed it as well

as such a department could be managed. There was a hospital and electric ambulance, and a corps of physicians and nurses and hospital attendants; and the various accidents and attacks of sudden illness which occurred among the visitors, or the various diseases which developed among the exhibitors, were carefully treated. So much for the medical side of it, but Dr. Park felt that his department had a wider and more important scope, and he insisted vigorously that the sanitation of the Fair should be as perfect as possible, and as a matter of fact the hygienic measures were as nearly perfectly enforced as they could be among such a miscellaneous collection of the scourings of the Orient as was to be found in the Mid-Way. Dr. Park generously gives the credit for this work to Dr. Nelson W. Wilson, the sanitary officer.

But they went even further: they looked after the babies and children brought by visitors who were glad to get rid of them for a few hours whilst they inspected the Fair. Of course the records were carefully kept, and in the report there are numerous statistical papers showing the mortality, the morbidity and the number of births, which by the way was three.

There may have been faults at the Buffalo Fair. Criticism is cheap. But Dr. Park and his corps of physicians and his medical department deserve the highest praise for their work in the midst of what were at times very trying conditions.

The Formation of Bile Pigment and Bile Acids.—In our last number was concluded the paper of Dr. A. C. Croftan dealing with experiments on the formation of bile pigments and bile acids. The work was the result of experimental research conducted in the Pepper Laboratory of the University of Pennsylvania and is well worthy of editorial comment. Dr. Croftan sets out to prove that the bile pigments and the bile acids are not formed by the liver cells, and that they can be formed in the various parts of the organism other than the liver. And further that they can be formed from hemoglobin outside the organism by a purely chemical fermentative process and without the vital action of the liver cells. This latter fact he has been able to prove by using devitalized liver tissue mixed with hemoglobin in which the active agent was a substance that was soluble in water, and was therefore unorganized. He believes that this unorganized substance, which causes the conversion of blood pigment into bile pigment and bile acids in the liver, is trypsin.

It is an extremely difficult matter to demonstrate the presence of the bile pigments and acids in the normal blood and tissues owing to the minute quantities in which they are formed physiologically outside of the liver, but when the disintegration of large quantities of hemoglobin has been brought about, while the greater proportion of excessive free hemoglobin will be carried to the liver and converted there, a quantity will be changed outside of the liver which will be sufficient to permit of the demonstration of the presence of bile acids and pigments in the blood and tissues. He describes the technique of the method by which he demonstrated for the first time the presence of bile acids in the normal blood. This paper of Dr. Croftan's, showing as it does carefully conducted experimental research, is a welcome contribution to the physiological chemistry of this subject.

The Diagnosis of Phantom Tumors.—A most interesting subject for the diagnostician is "the phantom tumor". In some instances the resemblance of phantom tumors to real tumors has been so striking that skilful clinicians have failed to recognize their true nature. In the *Lancet* of January 4, 1902, Sir William H. Bennett, Senior Surgeon to St. George's Hospital, London, contributes a very important article on the causes and significances of phantom tumors. He mentions that they may be caused by local irritation of the skin either directly over the muscles which give rise to the swelling or to irritation of the nerves supplyng the muscles concerned. The existence of disease of some underlying structure may be the excitant, by irritating the nerve supply of the muscles—the latter form may have a protective function. Our attention is also directed to "occupation phantoms" developing as a result of prolonged or continuous strain of muscles which become hard and enlarged and may remain in such a condition for a time, even after the occupation of the individual has been discontinued. He applies the term "imitative phantoms" to those that occur in neurotic individuals who show a tendency to mimic disease or deformity of others. The reports of a number of interesting cases are given which represent types of the various forms according to his classification.

We are especially indebted to Bennett for having added to our knowledge in regard to the recognition of these tumors. The fact of their disappearing during complete anesthesia, he points out, is not always sufficient evidence to show that the tumor is of the phantom type. During full anesthesia abdominal tumors may suddenly slip into remote parts of the abdomen, a floating kidney may return to its normal position or the bursting of a cyst may lead to errors in diagnosis. We are informed, and upon this point he lays great emphasis, that with the occurrence of general anesthesia phantom tumors never disappear suddenly, but always gradually

Bennett suggests that, when examining cases of this kind, the examiner's hand should be gently placed over the tumor from the commencement of the giving of the anesthetic, and "if the tumor is a phantom it will be found during the early stage of the production of anesthesia to increase a little in size and hardness. With the oncoming of complete anesthesia a little vibrating or quivering motion will be felt and then the tumor will preceptibly melt away gradually under the hand".

A New Epidemic Disease Among Horses in the Philippine Islands.—In the Monthly Report (September) of the Board of Health for the Philippine Islands there is found an interesting note on a disease affecting horses and caused by a blood spirillum. Major L. M. Maus, the Commissioner of Public Health, says that it is a febrile disease and is attended by a great mortality. As a rule it appears suddenly and is characterized by fever (103° to 107°) apparently without chill, with increased abdominal breathing, full pulse, swellings under the belly and in the sheath, testicles and legs, and with heart failure and emaciation. The disease is known among the natives as "calentura."At autopsy abscesses are noted in the stomach and abdominal organs; the liver shows fatty degeneration; the kidneys are large and white; the spleen is atrophied; and the intima of the blood vessels is of a diffused redness.

Under the microscope the blood in these cases is found to be infested with a parasite, a spirillum, which is about twice the length of a red blood corpuscle and about one half the width of the same. This parasite shows active movements. The disease, which is an exceedingly interesting one, is being investigated in the United States Government laboratories in Manila.

It may be worth while to call attention to the fact that while this disease may be new, the term "calentura" is quite the reverse. This word has been made to do duty among Spanish-speaking peoples ever since the days of the early Spanish navigators, and has usually been applied to any and every form of fever with delirium occurring in the tropics. Hence there is nothing distinctive about it, except a flavor of Spanish ignorance.

Major Maus and his colleagues will be entitled to credit if they have really discovered a new disease—even among horses. The report of the Board of Health for the Philippines is an admirable document, and serves to show the efficient work now being done by the U. S. Government in those distant islands.

Double Bell's Palsy.—Dr. Frank R. Fry, of St. Louis, has reported (*St. Louis Courier of Medicine*, December, 1901) an extremely interesting case of this rather rare affection. The patient was a man, aged 45 years, who had been working out of doors on a railroad platform handling freight. He was not sufficiently clad and was conscious that he was catching cold. The palsy occurred a few days later, first on the left side, and then, after an interval of two or three days, on the right side. There was no etiological factor in the case except the exposure to cold; no intracranial or middle ear disease.

Dr. Fry describes clearly the "peculiar expressionless blank" of a human face totally paralyzed on both sides. It imparts to the observer a sort of uncanny, morbid fascination. The eyes have a less important rôle in facial expression than is commonly supposed. Their movements and brilliancy cannot dispel the vacuous look of a paralyzed face in a case such as this.

Dr. Fry properly calls attention to the fact that such cases are rare. In fact they are much more rare than one would expect, considering how in not a few cases of unilateral facial paralysis both sides of the face are equally exposed. And yet in many cases the history is clear of an exposure of only one side, as in a person sitting in a draft at an open window. Still, like many supposedly rare things in medicine, Double Bell's Palsy is not quite so rare as one might imagine. In the *Index Catalogue* of the Surgeon General's Library there is a tolerably long list of references to such cases—a list which any one may consult who wishes to investigate the history and the frequency of this very interesting neurological phenomenon.

Swear Not at All.—We notice that the uncleanly custom of "kissing the book" continues to be a topic of protest in some of the English medical journals. In this country there does not seem to be so much occasion for protest, because in some of our states the act apparently is no longer obligatory. We recently observed in one of our Philadelphia courts that the witness who was willing to be sworn was simply required to lay his hand on the bible. The book was laid open before him, and he, laying his hand on its pages, took the oath. Another expedient which the witness has, is to take the "Scotch oath," or to "swear with the uplifted hand." This is a particularly dramatic and soul-thrilling ceremonial, and ought to satisfy anybody's conscience. At the same time it has the advantage of being aseptic.

The adjuration which requires to be sealed by pressing the lips on the dirty cover of an old book, had indeed better be abolished. The countless lips that have been there before have most of them not

been eloquent with piety or redolent with the perfume of a holy life.

The truth is that the whole ceremony is a relic of an obsolete form of thought. To the scientific mind it would seem that a man should be accepted as truthful until he is proved to be a liar, and that no antiquated rite will convert a liar into an honest man. The physician should be above the necessity of taking an oath, and might safely be allowed to follow the injunction to swear not at all. Certainly all physicians should protest against the custom of "kissing the book" if for no other reason than that it is unhygienic.

The Journal of Nervous and Mental Disease.—The death of Dr. Charles Henry Brown, the former proprietor of this useful journal, has made it necessary to reorganize to some extent its management. Dr. Smith Ely Jelliffe of New York becomes the Manager and responsible Editor, and the Advisory Board of Editors is enlarged by the addition to it of Dr. William Osler, Dr. Frederick Peterson and Dr. Wharton Sinkler. The duties of acting editor will be discharged as heretofore by Dr. William G. Spiller of Philadelphia. With him will be associated Dr. L. Pearce Clark. The journal will remain the organ of the American Neurological Association, and of the New York and Philadelphia Neurological Societies.

The scope of the journal will be somewhat enlarged, and the whole field of neurology will be covered in an able way, for which the personnel of its editorial corps is a guarantee. This journal is peculiarly the representative of American neurology, and deserves wide support, not only by specialists but by the general profession. It is highly important that such a journal should have complete success in this country. American neurologists are among the most active and original of any similar bodies of scientists in the world, and we are confident that in the future they will continue to contribute their full share to the advancement of neurological science. The *Journal of Nervous and Mental Disease* is an important exponent of their labors. We wish it success.

Sophomores in Quarantine.—The whole subject of quarantine seems to be in a transition stage; it is passing, but has not yet passed, from the period in human history when shot-guns were used to fight disease, and a lock and key were looked upon as a barrier against germs. At a still earlier period (even as in Turkey to this day) they beat drums to scare away a pestilence.

An amusing instance of the lock-and-key quarantine has just been seen at Princeton. According to the *Alumni Weekly*, a sophomore took the varioloid, and straightway the seven other sophomores who roomed in the building with him, were put under lock and key. This building was just opposite the campus, and the luckless youths proceeded to enjoy life in their own way. They decorated the front of the building with signs bearing such legends as these:—"Pest-House", "Pity the Blind" (with a tin can attached), "Free Beer," "Germs for Sale," "Sixteen days in a Pest-House—10th Edition, $1.50." They leaned out of the windows and exchanged pleasantries with the passers-by. Their food was carried to them in a huge basket which they pulled up with a rope to one of the upper windows. 'Nothing that went up was allowed to come down". Each man "got a clean napkin with every meal for the first time in his college course".

This may all pass as a sophomore frolic; but we fail to see exactly what the health authorities at Princeton hoped to accomplish with such a lax quarantine. We do not contend that the lock and key are never of use in preventive medicine, but we think a good application of formaldehyde would have done better in this case. The undergraduates in limbo were entitled to some sympathy—although they did not seem to need it, for they had a good time; and the smallpox germs, it is to be hoped, will continue to be kept under lock and key in the old Jersey town for an indefinite period.

It is worth while to call the attention of medical readers to Professor W. J. McGee's paper in *Science*, in which he gives reasons for dissenting from the belief that all mankind had a common origin. Anthropologically it looks as ridiculous to suppose that mankind has descended from a common stock as that it has sprung from an original pair of ancestors. Monogenesis is the deductive, but polygenesis is the inductive hypothesis.

Christian Science needs the attention of the legal rather than of the medical profession. It has assumed the proportions of a colossal financial fraud, and we doubt whether the fulminations of the whole medical press will prevail against it. The hand of the law alone can deal with it. If anyone doubts this fact, let him read the exposé of Eddyism recently published by Frederick W. Peabody, Esq., of the Boston bar. The lawyer reveals, with a bold and merciless pen, the transactions by which Mrs. Eddy has amassed a fortune.

Current Comment.

COMMERCIAL CONTROL OF THERAPEUTIC SERUMS. VACCINE, ETC

In view of recent unfortunate results attending the use of diphtheria antitoxin in one city and vaccine virus in

another, there have been numerous suggestions looking to the control of these materials and analogous products by the National Government, and the propositions have received a certain amount of comment of a favorable nature.

It is unnecessary to point out that the subject is a very important one, and at the same time one presenting many difficulties, and while it is recognized that it would be at once impracticable and possibly undesirable that the Government should engage in the manufacture of these substances, it is felt that good might accrue from government supervision and periodical inspection of the laboratories and farms where serums and vaccine virus are produced commercially.—*Public Health Reports.*

EDDYISM DEFINED.

The influence of Mrs. Eddy is infinitely harmful. It is literally derationalizing thousands of people. It is remorselessly separating husband and wife, parent and child. It is turning from the pursuit of knowledge and steeping in the superstition of the Middle Ages, untold thousands. It is the mother and promotor of a new-old witchcraft, which has so taken possession of the minds and lives of many people that they live in constant terror of its believed baneful work. Unless you know it to be a fact, as I do, that right here in the city of Boston there are hundreds and hundreds of people living in the confident belief that the malicious minds of others have the power to cause, and are causing, disease and death and all forms of domestic, social and business disaster, it will be difficult for you to believe it. This belief amongst Christian Scientists has reached the proportions almost of panic. (*An Address by Frederick W. Peabody, Esq.*)

KISSING THE BOOK.

We have over and over again in these columns pointed out the dangers of the uncleanly habit of kissing the book of the Gospels when taking an oath. Over and over again, too, have we pointed out that Section 5 of the Oaths Act of 1888 if any witness desires to swear with uplifted hand in the form and manner in which an oath is usually administered in Scotland he shall be permitted to do so, and the oath shall be administered to him in such form and manner without further question. Many persons are ignorant of this relieving clause, nay, even county-court judges have refused to allow witnesses to be sworn in this manner. His Honor Judge Emden and Mr. Justice Byrne have both called attention to the clause, and the former judge has caused notices to its effect to be posted in conspicuous places in his court. The Attorney-General stated in Parliament that such a notice was posted in every court, if so, we cannot say that they are conspicuous. We do not believe that there is any legal compulsion for a witness to kiss the book at all, and we think it is simply a custom which has grown up no one knows how. The old form of oath was to lay the hand upon the book and to say, "So help me God and these Holy Evangels." This form might well be restored, or if such an appeal were to give offence to Scotsmen, why should not the form and manner in which an oath is usually administered in Scotland be made the form also usually administered in England? The Government might well bring in a Bill to this effect when Parliament meets. But in the meantime every witness, and more especially every medical witness, should exercise his undoubted right and demand to be sworn in the Scotch fashion.—*The Lancet.*

Correspondence.

"VINO," THE PHILIPPINE WHISKEY.

By M. S. SIMPSON, M. D., Middle Valley, N. J.

Late Surgeon Macabele Scots. (Late P. A. Surgeon U.S.N., Late Captain and Assistant Surgeon U. S. N.)

To the Editor of the Philadelphia Medical Journal:

Under the title "Health in the Philippines," in your issue of January 4th is this, "The large majority of cases of insanity among the soldiers have been produced by drinking vinó, which contains as high as seventeen per cent. of fusel oil, a deadly poison," from the Taft Report.

Vino is manufactored in the nipa swamps around Manila Bay and the contiguous lagoons. Nipa does not grow inland or in the higher lands. The greatest nest of distilleries is in the vast swamps in the delta of the Rio Grande. The parent stalk of the *nipa fruticans* is tapped and the sap collected much in the same manner that we collect maple sap. A native fits out his *banka* (wooden dug-out), which is eighteen to thirty-six feet long and thirty inches beam, with ten or twelve *ollas*, or earthen bowls, holding from three to five gallons each, and paddles through the narrow waterways between the small islands densely covered with the nipa palm; and, frequently without leaving his position in the banka, can jab a tube into the spongy stem and tie fast a section of bamboo to collect the sap. Making his rounds again he empties these containers into his ollas and paddles off to the distillery, where it is disposed of for a few centavos.

At the distillery the sap is mixed with the juice of the sugar cane—about 25% of the latter being used—fermented, distilled and, in a crude way, rectified. The product is *vino*, taking that name from the Spanish word for wine. I was unable to find in Luzon and the upper islands a native made distillate from rice, although arrack, from that plant, is imported some little by the Chinese. Maize is produced in some quantity but, as far as I could learn, is not so used, either. Potatoes are not grown in any quantity.

Vino is a pungent, colorless fluid, exhibiting an alcoholic strength of from 50 to 80%, and showing some *butyric* ether, but I never saw a trace of *amylic alcohol* (fusel oil). The *"neva"* of the Sumatra is the same thing, and, a distillate is made from the various species of palm all around the world. In some parts of the islands *"tuba dulce"* is obtained from the cocoa palm, is fermented and becomes *"toddy;"* but, this is not the distillate *vino*. Vino more closely resembles the *mezcal*, *mezcal* or *aguardiente de maguey* of the Mexicans.

The native—excluding those of the larger cities who have adopted civilized habits—does not get drunk. It is a rarety to find a drunken native. Of the five hundred or more natives we had in our command we never had a case of drunkenness. The only case of intoxication that I ever saw among the Macabebes was our *"major domo"* or head servant, when we lived at Col. Blanco's, and he had surreptitiously emptied a bottle of cocktail that belonged to the commanding officer.

The native never drinks vino as it is in the market. He dilutes it with water, adds sugar and oil of anise and drinks it as "anisette" in the manner that his civilized brother takes a cordial. For a "long drink" he has bottled beer, made at the native breweries of San Miguel in Manila, or imported Japanese beer.

The intoxication from vino is purely profound insensibility of a toxic dose of alcohol. The American soldier saw in vino a substitute for whiskey, and, to the amazement of the native, took it raw and in big gulps. As a result he was dead drunk in a remarkably short space of time. The American temperament is peculiarly influenced by alcoholic intoxication and during the preliminary stages the soldier was to the native "mucho loco."

I wonder what foundation the Commission has for the statement in regard to fusel oil.

INTESTINAL CALCULI.

By ROBERT C. M. LEWIS, M. D., of Marion, Ohio.

To the Editor of the Philadelphia Medical Journal:

Enteroliths, or intestinal calculi, are so rare in the human family, that I herewith report a case that came under my observation a short time ago.

The subject was that of a man, age forty-six years. He had, for a period of five or six years, been suffering from diabetes mellitus, and at times rigidily adhered to diet for the disease; at other times break away from all restraint and eat such food as appetite craved. In this manner he had lived within six months of the end, when suppuration developed in one hand and foot on the same side. Septicemia, coma, death in regular order followed.

A few days before he died I ordered a full dose of solution of citrate of magnesia to move the bowels. This acted promptly and the first evacuation in a bed pan was given

no attention; the nurse simply threw it in the closet. But soon after the bowels moved again, this time on a rubber sheet, and in changing, the nurse noticed what he supposed to be some form of fruit seeds, but as he was disposing of the fecal matter in the closet, he thought to save some of the *seeds* to show me that some one had violated my instructions as to diet. I examined them and at first, like the nurse, thought they were seeds, but on close inspection found them to be calculi. Some were of a bean or kidney shape, others were nearly round, and under a magnifying lens they presented a peculiar appearance, as they were covered with lines, giving them a sort of a web-like covering. I had nine of the specimens, some I crushed and found them to be very hard, especially the shell. I have no theory to advance as to their formation, unless diet cut some figure in their development.

Medical literature furnishes very little information along this line so far as I have searched, and I should be pleased to have as much light on the subject as possible, from those who have covered a larger field than myself.

BRAIN-ANATOMY AND "DEGENERACY" THEORIES.

A Reply to Dr. E. S. Talbot's Criticism in the Philadelphia Medical Journal, January 18, 1902.

By EDWARD ANTHONY SPITZKA, of New York.

To the Editor of the Philadelphia Medical Journal:

Dr. Talbot does not meet the point I raised in any way directly or indirectly. Plain and unmistakable was my charge that he said what was not so, quoting from my report what was not only not in it, but sometimes the very reverse of what I actually said; besides introducing the fictitious statements with such qualifications and in such juxtaposition as to imply a biased attitude on the part of the reporters.

Dr. Talbot could have afforded to acknowledge an error of citation in a direct way and without resorting to a procedure whose disingenuousness is not at all compensated for by its adroitness, even were it greater than that evidenced. Again I must say that Dr. Talbot repeated in his paper on "Degeneracy and Political Assassination" a newspaper canard without awaiting its confirmation by our official statement, or even by means of an inquiry concerning it addressed to either Dr. Carlos F. MacDonald or myself. As this error could not well be argued out of existence, Dr. Talbot begs the question by endeavoring to twist a conclusion convenient to his purpose, out of the body of the report, which by the way, was not accessible to Dr. Talbot until several weeks after the publication of his erroneous citations. Unfortunately for himself, this procedure results in a different kind of entanglement from that aimed at by Dr. Talbot. I need not address the anatomist in pointing out the unsophisticated self-condemnation which argues a ratio of 9 in 160 as anomalous in a pathological or teratological sense; such a conclusion would leave no subject without "anomalies" of that serious significance in some part of the body. How many subjects have a plantaris muscle, how many have no palmaris brevis, how many have a fourth or even a third coccygeal vertebra, a tensor tarsi, an accessory auricular tubercle? But there is nothing to be gained by naming endless available illustrations of axiomatic and primary principles. As regards the gyri and fissures of the cerebrum, a not very extensive practical course in cerebral anatomy would justify Dr. Talbot in pronouncing opinions on their significance differing from the arbitrary yet naive expression of "anomalies." He would certainly appreciate that deviations which are possible in one hemicerebrum from the other, in one and the same subject, may exist in the brain of one person as compared with that of another, and not be atypical. Smallness of the cuneus, which in the brain of Czolgosz was relative only, is a feature which was found for instance in all the four hemicerebra of the two distinguished physicians.

To infer abnormality from any single deviation from the diagrammatic schema argues a lack of familiarity with cerebral anatomy, which I am reluctant to point out. In that sense, a normal brain does not exist. Not one of the features ascertained in the brain of Czolgosz is outside of the margin of ordinary every-day observations of variability.

Instead of admitting the injustice indisputably done, Dr. Talbot justifies having quoted the reverse of what the writer said by arguing from other parts of the report, that the author's language ought to have been identical with the misquotation. In other words, with refreshing calmness he informs me that the opposite of what I said was what I actually meant to have said, and if I did not mean it, I ought to have so meant.

Such revolutionizing innovation in the dull precedent of literary usages, naturally dazes and leaves me unable to resist accepting and echoing to Dr. Talbot's "anomalies found" with a reserve of rather reasonable expectation that the words may appear applicable elsewhere. They certainly, notwithstanding all Dr. Talbot's reasoning, do not convey the meaning, which, in my possibly imperfect way, but with the best intentions to be clear, I endeavored to convey by "no anomalies found."

In view of Dr. Talbot's statements that the omission of a microscopical examination in the Czolgosz case was a serious one, I would suggest to those inclined to repeat this cheap innuendo on some future and similar occasion, to formulate their grounds for considering it so serious, or in fact as of any import whatever. For otherwise such prospective insinuators may render themselves objects of the uncharitable surmise of attempting to cloak with random and hazy phraseology, conceptions which are more random and hazy still. It were at all events well for Dr. Talbot to ask himself what exact proof of insanity the microscope affords in any other than organic, specific and toxic insanities. Secondly, to mention all possible clinical forms even remotely conceivable consistent with the patent, uncontested facts in re Czolgosz. Thirdly what cytological changes are due to the high electro-motive force of the lethal current. Then let him formulate the microscopical changes of these forms that is those that have stood the test of time and critics, and that can be asserted as ever found in a brain which is, to the reasonably skilled observer, absolutely and ideally normal to the naked eye, its bloodvessels and membranes particularly included.

When he has answered this question, it will be time to consider the gravity of our involuntary and by ourselves sufficiently regretted inability to make such an examination, if only as a matter of record. I trust, however, that such answer may not oscillate between the opposing poles of morphological variability like the upper and lower jaws in Dr. Talbot's gallery of assassins. As it stands, and as under our present knowledge only negative results were to have been looked for, any one taking Dr. Talbot seriously might even regard the omission of the microscopical examination as advantageous to the examiners, for as their work is regarded as valueless they would but have enlarged the grounds for that generous criticism and had more labor for the same pains.

There is no doubt that Dr. Talbot is still under the impression that we made a microscopical examination of the fresh brain and one not worthy the name. Again must we repudiate the having done so or even pretending so to.

Might we not from some charitable point of view remain uncensured for at least not discovering what was not to be found, even if in so doing we disappointed the hopes of disciples of that school which has three-quarters of the human species anomalous and the remainder the doubtful objects of further searching measurements? Why not rejoice at the occasional discovery of a—I will not say normal—but nearly normal anatomical subject instead of resorting to pessimism, to deem us of so rare a consolation.

DISINFECTING AFTER SMALLPOX.

By J. Y. SHAMEL, Gibson City, Illinois.

To the Editor of the Philadelphia Medical Journal:

If possible will you please publish in a concise way the method best calculated to disinfect rooms after their occupancy by smallpox patients? I would like especially to know the professions' estimate of the value of formaldehyde and the best method of using it. The answer to this query will be great interest to the Illinois readers of the Journal. If not presumptuous, a statement from Dr. Abbott or Dr. Welch would be deemed conclusive.

A REPLY TO THE PRECEDING LETTER.

By WILLIAM M. WELCH, M. D., of Philadelphia.

To the Editor of the Philadelphia Medical Journal:

Replying to the question of Dr. Shamel, I would say that after the sick chamber has been vacated, either by recovery or death of the patient, every article in it of no great value should be immediately burned. Articles which it may be desirable to preserve, and which will not be injured by water, can be disinfected safely and cheaply by immersing them in boiling water for thirty minutes, and then subjecting them to the ordinary process of the laundry. But if this cannot be done at once, such articles should be immersed for four hours in some reliable disinfectant, such as mercuric chloride, in the proportion of 1 to 2000, or carbolic acid, 1 to 50, and subsequently boiled. For the disinfection of woolen clothing, carpets, bedding and the like, there is nothing equal to steam under pressure. All pathogenic germs will certainly perish if exposed for thirty minutes to this agent at a temperature of 230° to 250° F. When, however, this process cannot be carried out for the want of proper facilities, the articles named, with the exception of the carpet, which may remain on the floor, should be hung up in the room and subjected to the influence of formaldehyde. This may be very conveniently and effectively used in the form of formalin. The formalin may be diluted with two parts of water and used in a large atomizer, such as is commonly employed in the spraying of garden plants. In determining the amount required to disinfect a room, the estimate should be on the basis of one pint of formalin to every one thousand cubic feet of air space. Of course, the room should be as tightly sealed as possible, and left closed for eight to twelve hours. This method of disinfecting rooms was adopted by the Philadelphia Board of Health after having proved its efficacy by culture tests.

When this process is finished and the room opened and ventilated, all surfaces, including the furniture, should be washed with a disinfecting solution (carbolic acid, 1 to 50, or mercuric chloride, 1 to 1000), and afterward the floor and woodwork thoroughly scrubbed with soap and water. The wall paper, if there be any, should be well moistened with the carbolic acid solution and scraped off and burned. Paper may be re-applied or the walls whitewashed, according to fancy. I believe that any infected room could be considered safe for occupancy after having been faithfully subjected to the treatment herein outlined.

Reviews.

Circumstance. By S. Weir Mitchell, M. D., LL. D. Harvard and Edinburg. New York. The Century Company. 1901.

Dr. Mitchell has wrought so much in the purely literary field that general readers of fiction, especially of the younger generation, may need to be reminded that the author of this book has a wide reputation in science as well as in letters; but members of the medical profession, even if they were not told that the author of "Circumstance" was the author also of "Hugh Wynne," would have but little difficulty in guessing that the man who wrote this book was a physician. To our mind it is certainly one of the most finished and most satisfying of Dr. Mitchell's works; and this is because it has not only a fine literary polish, but also, and especially, a certain scientific quality or flavor which could alone come from the pen of one who was trained in the fine art of scientific analysis.

"Circumstance" is not a novel of stirring events, of involved plot or of dramatic situations. It is rather a novel of character, in which there is just enough of contrasts and of lights and shadows, to make it interesting to the intellect rather than to the emotions. In this sense it is a finely constructed literary tableau of men and women as they exist in Philadelphia society, about which so few Philadelphians really know anything. The most conspicuous extra-Philadelphian in the book is an adventuress who hails somewhere from the outer darkness and who returns to it in the last chapter badly damaged in character.

Dr. Mitchell's novel is too artistic a work to be saddled with a moral; yet if we might venture to construct a moral, or rather a *motif*, for it, we should suggest that it is to be found in the value set upon a certain poise of character which triumphs amid all and any adverse circumstances (including disappointed love and the risks of being disinherited), and which is perhaps as much the result of good breeding as of inherent strength.

Of individual characters, the most admirable is that of the self-made banker, whom the author rather cruelly reduces temporarily to the level of a dipsomaniac; the most lovable is that of the simple-minded little woman whom he marries; and the most exasperating is that of the fanatical and ritualistic clergyman who refuses the woman he loves when she literally throws herself at him. There is also an interesting doctor in the book; and an old man, his patient, about whose sick room and bank account and collection of autographs the whole story centers. The interest in the telling of it arises largely from Dr. Mitchell's keen psychological analysis and his artistic management of little social situations. [J. H. L.]

A Manual of Clinical Laboratory Methods. By John Benjamin Nichols, M. D., in charge of Clinical Laboratory, Garfield Hospital; Hematologist to Columbian University Hospital; Professor of Normal Histology in Medical Department of Columbian University, Washington, D. C. .Illustrated. New York, William Wood & Company. 1902.

The author of this manual has attempted to collect within small compass the large number of technical procedures, together with the associated collateral information, belonging to the study of clinical laboratory diagnosis, and to present these facts so that they may serve as a guide to the medical undergraduate and as a practical aid to the practising physician. The result of this endeavor is crystallized in a volume of some 300 octavo pages, between the covers of which the whole field of clinical laboratory methods is reviewed, in the main in a satisfactory manner. The doubt, however, must be expressed as to the wisdom of undertaking the concentration of a subject of this sort, for it does not seem clear that clinical diagnosis is a branch of medical science that lends itself kindly to literary compression. Dr. Nichols, after first giving a brief account of the general equipment of the clinical laboratory, considers, in the eleven subsequent sections of his book, the microscopical and chemical examination of the blood, gastro-intestinal contents, sputum, urine, body fluids and secretions, calculi, and parasites, prefacing each section with an account of the normal and morbid characteristics of the topics discussed. A six-page sketchy account of autopsy technique and a somewhat more detailed description of clinical bacteriology are also given. The sections dealing with the stomach, the urine, and the sputum are adequately treated, for all practical purposes. It is a pleasure to note that Tröpfer's dimethylamidoazobenzole test for free hydrochloric acid is advocated, rather than the less delicate and highly unstable Guntzberg's solution, and that the boiling and the nitric acid tests for albumin in the urine are emphasized according to their time-proven worth. The author's ureometer, designed to overcome the inaccuracies inseparable from the use of Doremus' curved tube, appears to possess decided advantages over the latter instrument, and should be well adapted to routine clinical work. The section on the blood contains clear descriptions of hemoglobin estimation, of counting, of staining, and of the microscopical examination of the fresh and stained films but other methods of examination are but touched upon and omissions are plentiful. The pages devoted to the physiology and pathology of the blood suffer especially from an obvious attempt to crowd an important array of essential facts into inadequate space. On the whole, Dr. Nichol's book represents the epitomization of the most important clinical laboratory methods now in vogue, and his effort reflects the expenditure of much careful labor. The publisher's share in the work leaves nothing to be desired.

[J. C. DaC., Jr.)

Some Cirrhoses of the Liver. By Walter Butler Cheadle. M. A., M. D., Cantab. Smith, Elder & Co., London.

This excellent little book discusses in an attractive manner the various diseases of the liver which are included under the term "cirrhosis." From the standpoint of a practical clinician Dr. Cheadle has had his difficulties in diagnosis and detected the inaccuracies of the statements that are usually copied from one text-book to another. One of the most valuable parts of the book is the group of "questions awaiting final settlement." Whether the contracted hobnail liver is always alcoholic? Whether it is always small from the first? Whether it is merely a late stage of hypertrophic cirrhosis? He wonders if there is an alcoholic cirrhosis in which the liver is hypertrophied in the beginning, or whether this form is limited to biliary cirrhosis? Or does the biliary form exist at all as a distinct entity? He doubts whether ascites is practically limited to the atrophic form, and questions whether the microscopical picture is always characteristic. In his attempt to answer these questions, or at least to summarize the knowledge at hand, he freely uses the cases that he has personally observed, and although they are sometimes insufficient in number to be valuable from a statistical standpoint, they enable him to criticise the statements of others with much more authority. He calls attention to the frequency with which jaundice occurs in the atrophic form. He mentions the frequent deviations from the classical type of cases of hypertrophic cirrhosis, and he devotes a long article to the degeneration of the heart muscle, a most important factor.

Among the rarer complications to which he calls attention he mentions fibrosis of the pancreas. He devotes a chapter to prognosis, and another to the treatment. With regard to the latter, aside from the general hygienic management of the case, he believes there are 3 drugs that may be of value: mercury, potassium iodide and digitalis. Paracentesis is recommended as a valuable conservative measure, and in some cases likely to aid the efficiency of the drugs used for promoting their absorption. The formation of artificial adhesions is deprecated. The book is excellent, and is an instance of the great advantage to be gained by printing long monographs as separate books rather than as articles in the medical journals. It is illustrated by 11 beautiful lithograph plates which form a very satisfactory atlas of the microscopy of hepatic cirrhosis. Dr. Cheadle is to be congratulated. [J. S.]

The American Illustrated Medical Distionary.—A new and complete Dictionary of the Terms Used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the Kindred Branches, with their Pronunciation, Derivation, and Definition, including much Collateral Information of an Encyclopedic Character. By W. A. Newman Dorland, A. M., M. D., Assistant Obstetrician to the University of Pennsylvania Hospital; Editor of the American Pocket Medical Dictionary; Fellow of the American Academy of Medicine. Together with new and elaborate Tables of Arteries, Muscles, Veins, etc.; of Bacilli, Bacteria, Diplococci, Micrococci, Streptococci, Ptomains and Leukomains, Weights and Measures; Epondymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Revised. Philadelphia and London. W. B. Saunders & Company, 1901. Price, $4.50.

The man of science constantly demands a dictionary abreast of the times. The rapid growth of our vocabulary and particularly in medicine, brings with it a demand for new and accurate dictionaries. The present volume by Dorland is intended to meet this demand and, in the reviewer's estimation, fully fills the essential requirements. The constant use of this book for two months has shown it to contain practically all the terms needed by the physician, student and laboratory worker; the definitions have been found up to date and fully satisfactory. Among the unimportant errors or omissions that have come to the reviewer's attention may be mentioned the following: Cryoscopy is not restricted to urinary examinations as indicated by the definition. Consistent objection could be made to the definition of hyperpepsia, page 310, and physiologic hypertrophy, page 311. To the student the definition of umbilicus, page 727, would be strangely inconsistent with the use of the word in the legend to the plate facing page 352. Uncinaria and trichinella are not given, although ankylostoma and trichina, older names, are to be found.

The volume is an admirable example of the printer's art and the binder's skill, and the plates, both colored and uncolored, unusually accurate and beautifully reproduced. The special tables are valuable and accurate compilations and constitute important aids. The use of small but unusually distinct type, the absence of wide margins, and the selection of thin paper of good quality, have enabled author and publisher to present a large amount of matter in a small volume; for a volume of 770 pages the book is unusually light and wieldy and, therefore, admirably adapted to easy reference. [W. M. L. C.]

Progressive Pernicious Anemia in a Syphilitic.—In the *Journal des Sciences Médicales de Lille*, 1901, Nos. 32 and 33.) Derville reports a case of grave anemia in a young woman of 21, syphilitic, and seven months pregnant. She had complained of headache and great weakness for a month. A hemic murmur was audible over the base of the heart. Ulcerative tonsillitis developed, with left facial paralysis and deafness. There was great diarrhea, which was overcome only after long treatment. Miscarriage occurred in the hospital, with very slight hemorrhage. Her red blood corpuscles numbered 392,000; white corpuscles, 43,100. She died four days after the miscarriage. The autopsy showed marked universal anemia, gummata of the strenum and trochanter, infarcts in the lungs, and buccal ulceration. No cause for the facial paralysis could be found. As there were no signs of tuberculosis, Derville believes that this was a case of progressive pernicious anemia, perhaps secondary to the syphilis which had already reached the tertiary stage. [M. O.]

The Role Played by the Bacilli-containing Excreta of Cows in the Propagation of Tuberculosis.—This paper, read at the London Congress on Tuberculosis, appears in the *Gazette Hebdomadaire de Paris* (August 18, 1901, No. 33.) Poinet and Hugo explain the frequency of tuberculosis among the milking boys as due to the inahalation of the dried tubercle bacilli from the excreta of the cows. Statistics show that 45% of the cows killed in Marseilles are tuberculous. Intraperitoneal inoculation of samples of milk into rabbits caused tuberculosis in 15% of those experimentally injected. A strenuous plea for better hygiene follows. [M. O.]

Recurring Tubo-Ovarian Cyst.—Schoofs reports a case of recurring tubo-ovarian cyst in a woman of 37, (*Journal Médical Belge*, August 18, 1901, No. 33.) Only one of her four children is living. Her abdomen began to swell a few years ago, and as menstruation stopped for some time, she first believed herself pregnant. But suddenly she passed several liters of a clear serous fluid through the vagina, and the tumor decreased in size. This recurred rapidly and has since increased in the same manner. Later she had an attack of metrorrhagia which lasted a week. The volume which the tumor reached before a coitus was too large for Dr. Schoofs to attempt operation, but the condition was an ovarian cyst. Believing that she was but a tubo-ovarian cyst, Schoofs has left it alone. The tumor is evacuated by coitus whenever it grows too large for comfort. She would not consent to operation, as her sister died from laparotomy. [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Philadelphia County Medical Society.—At a meeting held January 15, the following officers were elected for the ensuing year: President, Dr. Thomas H. Fenton; first vice-president, Dr. F. M. Perkins; second vice-president, Dr. J. Chalmers Da Costa; secretary, Dr. Elwood R. Kirby; assistant secretary, Dr. William S. Wray; treasurer, Dr. Collier L. Bower, and censor, Dr. W. J. Hearn. President Fenton named the following committees: Directors, Dr. J. M. Anders, chairman; Dr. Hobart A. Hare, Dr. J. V. Shoemaker, Dr. Guy Hinsdale and Dr. Judson Daland; publication committee, Dr. Joseph Spelissy, Dr. J. Dutton Steele and Dr. William Evans.

Methodist Hospital, Philadelphia.—It is announced that Dr. George Erety Shoemaker, of West Philadelphia, has resigned as gynecologist, on account of pressure of private work. His successor will soon be elected.

Smallpox in Philadelphia.—While the number of cases of smallpox during the week ending January 18 has decreased to 82, with 16 deaths, the disease seems, nevertheless, to be spreading, especially in certain sections of the city. A number of these newly reported cases were found in West Philadelphia. The discovery of a case in a Mission in Germantown has resulted in the quarantine of over 100 men. One case of smallpox has been discovered in the House of Correction, but no new cases have developed there. Manayunk, which is now free from smallpox, had in all 27 cases, two of which were fatal. The Municipal Hospital, which had already built five new wards for the accommodation of smallpox patients, is now erecting a sixth.

Society Meetings Next Week.—The only society to meet next week, at the College of Physicians, Philadelphia, will be the Neurological Society, Monday evening, January 27, at 8.15 P. M.

Philadelphia Hospital.—At the meeting of the Department of Charities and Correction, January 13, Drs. H. M. Newbold and William Pickett were appointed examiners of the insane, and Dr. D. J. McCarthy was made neurological registrar in Dr. Pickett's place. At the beginning of the year the Philadelphia Hospital contained 4525 patients. No more cases of smallpox have appeared. The neurological staff has approved the project to erect a new hospital for the chronic insane, for which the city has appropriated $400,000. Arrangements have been made for a consultation with Dr. Shoemaker, president of the Department of Charities and Correction, for the selection of a site and plans for the buildings and grounds.

Cumberland County Medical Society.—At the meeting of the Cumberland County Medical Society, held in Carlisle January 14, Dr. James Tyson, of Philadelphia, made the principal address.

Philadelphia Pediatric Society.—At the meeting held January 14, the following officers were elected for the ensuing year: President, Dr. S. McC. Hamill; vice presidents, Drs. D.J.M.Miller, J.H.Jopson, and A.A.Eshner; treasurer, Dr. H. B. Carpenter; secretary, Dr. C. H. Weber; recorder, Dr. D. L. Edsall; and executive committee, Drs. E.E.Graham, J. P. Crozer Griffith, Alfred Hand, Jr., F. A. Packard, and T. S. Westcott.

Scarlet Fever in Jackson.—The public schools of Jackson, Susquehanna county, have recently been closed on account of the epidemic of scarlet fever.

Medical Club of Philadelphia.—At the meeting held at the Hotel Bellevue, January 17, the following officers were elected: President, Dr. E. L. Duer; vice-presidents, Dr. T. H. Fenton and Dr. Alex. McAllister; secretary, Dr. Guy Hinsdale; and treasurer, Dr. F. Savary Pearce. The club has 365 members and a sinking fund of more than $5000. It is intended to devote this money to the purchase or building of a suitable club house.

Smallpox in the State.—Several cases of smallpox were discovered last week in Scranton, the disease having been diagnosed as German measles. Two patients have already died. In Wilkesbarre, weddings have been forbidden on account of the prevalence of smallpox, especially among the foreign population. At Resetto, an Italian settlement near Bangor, the attempt of the police to bury a woman who died of smallpox, without religious services, resulted in a riot. The Italians seized the coffin, bore it into the church, and then stood guard, chasing the policemen away. A patient escaped from Chester and is supposed to be in Darby. The Chester Hospital has been closed to visitors on account of smallpox. A number of new cases have been reported among the miners in Pittston, Shamokin and Duryea. Youngstown, near Sharon, has over a hundred cases of smallpox under treatment, and but one death has occurred so far.

Berks County Medical Society.—At a recent meeting of the Berks County Medical Society, Dr. James W. Keiser, of Reading, was elected president.

Dr. Keen Injured.—We understand that Dr. W. W. Keen, who is at present in India, recently fell off his horse, fracturing one of his clavicles. Some years ago Dr. Keen had his right clavicle broken. The accident was not serious, and he is doing well.

A Police census of Philadelphia shows that there are 352 blind persons in the city, 11 of whom are in institutions.

Death of Dr. Kingston Goddard.—Dr. Kingston Goddard, who was graduated from the University of Pennsylvania in 1859, coroner of the city of Philadelphia from 1874 to 1877, died in Philadelphia, January 17. During the Civil War he was a contract surgeon in the army, and later practiced medicine in Cincinnati, Ohio. He died of Bright's disease and heart trouble.

Dr. William C. Dixon, for many years an active practitioner in West Philadelphia, died on the 1st inst. in the German Hospital, after an operation for carcinoma of the colon. Dr. Dixon was one of that group of physicians—a group which is rapidly growing less with every passing year—who saw service in the Civil War. He graduated from the University of Pennsylvania in 1860, and went into the army as assistant surgeon in 1861. He served through the entire war, part of the time in the field, and later on the staff of the Satterlee Military Hospital in Philadelphia. After the war he settled in West Philadelphia, when he became widely and favorably known. During the latter part of his career Dr. Dixon was especially identified with practice in lunacy cases, serving at Blockley and at the Pennsylvania Hospital for the Insane as special examiner in these cases. In this capacity he probably signed as many papers in lunacy as any man who has ever practiced in this State. It is not the least of his distinctions that he never had one of his certificates called in question. He was also attending physician to, and a member of the board of managers of, the Industrial Home for Blind Women, and medical attendant to other local institutions. Dr. Dixon was a man of many attractive personal qualities, and his death is mourned by a large circle of friends both within and without the profession.

NEW YORK AND NEW JERSEY.

Do Mosquitoes Cure Rheumatism?—Professor T. B. Smith, New Jersey State entomologist, expects to ask the Legislature next week to appropriate $10,000 for the investigation and extermination of the New Jersey mosquito. The members from Sussex, Hunterdon, Warren and Morris counties, it is expected, will fight the proposed legislation on the ground that the real singing species of mosquito is beneficial to rheumatic natives. Former Assemblyman Righter, of Morris, who fought valiantly all efforts to legislate against the New Jersey mosquito a few years ago, declared that the bite of the mosquito had proved a sure cure for rheumatism.

Two New Prizes.—A first prize of $1000 and a second prize of $500 in cash for the best essays on preventive medicine have been offered by the Maltine Company of New York under the following conditions: First—Essays offered in competition must treat preventive medicine in its various relations to the welfare of the human race, either treating the topic in its broadest scope as affected by disease, custom, environment, heredity, etc., or from the viewpoint of the specialist. Second—In order that there may be no violation of medical ethics and no suspicion of commercialism, maltine or any of its combinations *must not be mentioned or even indirectly alluded to in the essays.* Third.—Competition is open to graduates of all recognized medical colleges. Fourth—The essays will be judged by Drs. Daniel Lewis, of New York, Charles A. L. Reed, of

Cincinnati, and John Edwin Rhodes, of Chicago. Fifth—The essays are to consist of at least ten thousand words. Each competitor is to send three typewritten copies of his essay by mail in a sealed envelope. These copies are not to be signed by the author, or contain anything which might point to his identity, but are to be signed with a *nom-de-plume*. Seventh—Another sealed envelope shall be sent containing this *nom-de-plume* together with the author's name and address. This envelope must be endorsed "For Identification," and will remain sealed until the judges have decided upon the two prize-winning essays, and will then be opened in order that the names of the successful competitors may be ascertained. Eighth—The prize essays and any others which are deemed suitable will be published in a medical journal or journals subject to the approval of the authors. Ninth—The Maltine Company reserves the right to republish any of these essays in pamphlet form, restricting the circulation to the medical profession. Tenth—Essays entered in competition must be in the hands of the Maltine Company, Eighth avenue and Eighteenth street, Brooklyn, N. Y., by September 1st, 1902.

Smallpox in Camden.—The new wing of the Camden Isolation Hospital was completed January 15, with accommodations for 75 patients. There are now 40 patients in the hospital. The last monthly report shows 97 cases of contagious diseases in Camden, 74 of which were of smallpox.

Smallpox in the Adirondacks.—Investigation of the report that smallpox has made its appearance in the Adirondacks shows that there have been one or two cases in the lumber camps. They were isolated, however, and no fear of a spread of the disease is felt. The report that smallpox had appeared at Saranac Lake is unfounded.

WESTERN STATES.

Bard Memorial Hospital, Ventura, Cal.—Dr. Bard and his brother, the Senator, have erected a hospital at the cost of $30,000 in memory of their mother. The hospital is designed especially for invalids and is equipped with all modern appliances, including an ideal operating room. A nurses' training school will be conducted in connection with that of the California Hospital in Los Angeles. Any physician may send patients there.

For New York Waifs.—It is announced that Miss Helen Gould is about to build a sanatorium for waifs and sick children of New York at Idaho Springs, Col. Miss Gould has bought a section of nicely situated land, known as the Point of Pines. It is expected that the sanatorium will be ready for use during the summer.

California State Board of Health.—If the intentions of the State Board of Health are carried into effect, persons infected with tuberculosis will no longer be permitted to mingle with the general public. The Board recently passed a resolution requesting the County Board of Health to segregate all tuberculous patients. This step was taken after a prolonged discussion, the Board deciding that inasmuch as tuberculosis is contagious it would jeopardize the health of the public to allow people who are affected with it to be at large. Some of the members of the Board even advocated the exclusion of consumptives from San Francisco, but it was finally decided that such a rigorous movement is not necessary at the present time.—Steps are to be taken by the Board to punish those who are practicing medicine without taking the precaution of securing the credentials necessary. The Board decided to ask the State Board of Medical Examiners to prosecute all illegal practitioners.

Town Quarantined.—The town of Pequaming, in Baraga county, Mich., with a population of 500, is quarantined and business is suspended on account of the prevalence of scarlet fever and diphtheria. The schools, post office and churches, and many stores are closed.

Sacrifice Made by Chicago Girls.—In one hour, before a clinic at the Post Graduate Hospital, a physician cut bits of skin from the arms and legs of fifteen young women and covered a burned and livid face with fresh, healthy epidermis. The patient, 16 years old, had her face terribly burned by an explosion of gasoline. Three times the number of young women chosen volunteered to make the sacrifice for their suffering friend.

Smallpox in Green Bay, Wis.—A case of smallpox was discovered January 7 at St. Vincent's Orphan Asylum, situated about one mile from Green Bay, Wis., in a child of 8 years. The institution was at once closed to visitors and the place fumigated. The asylum now shelters 200 homeless children, all of whom have been exposed to the disease. The entire number of children and sisters at the asylum are being vaccinated and will not be allowed to leave the place until the quarantine has been raised. The physicians think that other cases will follow this one, as the child was in the classroom with the other children until the doctor pronounced it smallpox.

Wisconsin State Medical Examining Board.—At the election of officers of the Board, held January 14, Dr. J. R. Currens, of Two Rivers, was re-elected president, and Dr. F. A. Forsbeck, of Milwaukee, succeeded Dr. H. M. Ludwig, of Richland Center, as secretary.

Erysipelas Not Raging in Chicago.—While erysipelas showed the usual seasonal increase of the disease rather sharply in December, in the last week of which there were but six deaths, in the last two weeks there were only four deaths, two in each week, from erysipelas. The disease is not "raging all over the city" and there is no cause for terrifying the public on this account.

National Health Service.—The following resolution has been passed by the American Society of Naturalists and the Council of the American Association for the Advancement of Science, at meetings held in December, 1901, in Chicago: Resolved, That the Council of the American Association for the Advancement of Science approves of the efforts to strengthen the administration and work of the Marine Hospital Service by its establishment as a National Health Service, in the direction of promotion of the public health, the furtherance of scientific investigation relating thereto, and the securing of the cooperation of experts in hygiene and related subjects..

An Ohio Man has 112 great-grandchildren, 22 great-great-grandchildren, and is himself 102 years old.

Gift of Dr. Senn.—Dr. Nicholas Senn recently gave to Rush Medical College $50,000 for building the best equipped structure for clinical work in the West. Recitation rooms, dispensaries and laboratories will be equipped with the latest improved appliances. A covered bridge will connect the fourth floor with the Presbyterian Hospital building. Two amphitheatres for clinical work, capable of seating 150 students, will occupy the upper part of the building.

Washington State Medical Board.—It has lately been made public that a physician in Seattle had paid $100 for answers to the questions asked at the State Medical examination recently held at Tacoma. The physician was sent from the examination room and is now anxious for the return of his money. The occurrence has aroused the medical fraternity of the State, and an endeavor is being made to ascertain whence the answers came.

Home for Consumptives.—General Wm. J. Palmer has announced his intention of giving 100 acres of land and $50,000 to establish a semi-philanthropic sanatorium for consumptives in Colorado Springs, the institution to cost $250,000. The remainder of the money is to be raised by subscription. A company will be incorporated soon to carry out the project.

The Milwaukee Medical Society held its annual meeting January 14, and elected the following officers: President, Dr. F. G. Shimonek; vice-presidents, Drs. Carl Zimmermann and J. W. Coon; secretary, Dr. A. T. Holbrook; treasurer, Dr. U. O. B. Wingate; librarian, Dr. L. F. Frank, and curator, Dr. J. M. Bell.

The Vermiform Appendix.—A Dr. E. P. Hershey, of Denver, has announced that he has discovered the mission of the vermiform appendix. He says that it has a secretory function, for no case ever became grave unless complete obstruction of the appendix occurred. He believes that its secretion is a necessity to the healthy being; when diseased it becomes a menace to life.

A Queer Case of Poisoning.—A stonecutter who was working on the new medical building of Cornell University suddenly fell dead from arsenic poisoning, the arsenic being in the stone on which he was working. Poisoning by inhalation of arsenic is not uncommon. Many cases have been reported in infants, the source of poisoning being the green coloring in wall paper.

An Aged Physician. Dr. John P. Wood probably the most aged practicing physician in the world, celebrated his one hundredth birthday, January 4, at Coffeyville, Kan. Dr. Wood was born in Dublin, Ireland. He has lived in Kansas 40 years. The most wonderful things about him are his physical strength and mental vigor. He walks

without a cane and reads without glasses. He can be seen every day walking the streets visiting the sick.

Death of Dr. Eskridge.—On January 16, Dr. J. T. Eskridge, the neurologist, died in Denver, Col., of uremia. He was graduated from Jefferson Medical College, Philadelphia, in 1876 and lectured on clinical medicine there from 1880 to 1882. He was born in Delaware, but lived in Colorado since 1884. He was most prominent as an expert in insanity cases.

Death of Dr. Parkhill.—Dr. Clayton Parkhill, a graduate of Jefferson Medical College, Philadelphia, class of 1882, vice-president of the American Surgical Association, and professor of surgery in the Gross Medical College, Denver, died of Bright's disease in Denver, Col., January 16.

CANADA.

(From our Special Correspondent).

McGill University.—The Medical Department has received a large sum of money from M. E. S. Bronson, of Ottawa, for research work in possible methods for the cure of consumption. These investigations will be undertaken by Dr. A. G. Nichol, under the supervision of Professor J. G. Adami.

Sir James Grant, of Ottawa, official physician to the Governor of Canada since the time of Lord Monck, delivered a lecture in Toronto, January 14, in aid of the Women's Residence of Victoria University. The subject of his lecture was "How to Live to Prolong Life." Sir James advocated the medical inspection of schools and opposed prohibition.

Amalgamation of Medical College and Hospital.—The Governors of the Medical Faculty of Bishop's College and the Governors of the Western General Hospital, Montreal, have decided upon a practical amalgamation. They have decided upon the erection of a new hospital building which will be ready in a year; and Bishop's College will take possesion of the present hospital building at the opening of the Autumn session of 1903.

Atlin Hospital, B. C.—The annual meeting of the Committee of the Presbyterian Hospital, at Atlin, was held in Toronto, January 13. It was decided to increase the pay of the nurses to $50 per month. The matron's annual report showed that the hospital had more women and children patients than ever before.

St. Francis Medical Association held its regular quarterly meeting January 8, at Sherbrooke, in the Eastern Township of the province of Quebec. Dr. Bowen, of Magog, contributed a paper on "The Local Prevalence of Tuberculosis in the Eastern Townships."

The Ontario Board of Health held its regular quarterly meeting at Toronto recently. The secretary, Dr. P. H. Bryce, reviewed the smallpox outbreak in 1901. There occurred during that time, in Ontario, 1900 cases, of which 750 were in the unorganized districts in New Ontario, 237 in Carleton County, 165 in Kent County, and 125 in Brant. There were but twelve deaths, a mortality of two-thirds of one per cent. Up to January 10th Ottawa had 208 cases, and there are at the present time 72 cases at the Capital..

Sir William Hingston Honored.—Sir William Hingston, who was graduated from McGill University in 1851, is celebrating his professional jubilee. A short time ago a large number of his friends presented him with a handsome portrait of himself. Sir William has had a distinguished career in this country. He is a former president of the Canadian Medical Association, an Honorary D. C. L. of Bishop's College, and an Honorary LL.D. of Victoria University. In addition to this he was honored by Queen Victoria and the Government of Canada, being a member of the Upper House of Parliament.

Calgary, N. W. T., Wants a Consumption Sanatorium, and calls upon the Government of the Dominion of Canada to contribute funds for its erection. A short time ago the City Council of Calgary passed strong resolutions, copies of which were sent to the Government at Ottawa, protesting against the increasing number of consumptives who were continually going west in search of benefit from the climate. Practically all of these came from Ontario, and they therefore considered that it was incumbent upon the Dominion authorities to provide a sanatorium. The Calgary Council will gladly co-operate in the matter.

A New Asylum for the Female Insane of Ontario was opened January 4, at Coburg, Ont., the old buildings of Victoria University having been remodelled for the purpose. It will have accommodation for 150 patients, and as the patients will be transferred from the other asylums in the province, it will greatly relieve the congestion now existing in these institutions. Dr. McNichol, of Coburg, has been appointed superintendent, to have as his assistant a lady, Dr. Cockburn, of Toronto.

Notre Dame Hospital, Montreal, has issued its annual report. During the past year 2,200 patients received treatment at the hospital, an increase of 177 over the previous year. 1308 were men, 892 women; 1854 were cured,155 were incurable and 134 died. Free medical advice was given to 20,078 patients, and 24,246 prescriptions were filled.

Death of Dr. Terrence Sparham.—Dr. Sparham, the oldest practitioner in Brockville, Ontario, died January 11, having attained the age of 89 years. He was a graduate of McGill University

MISCELLANY.

A Bill for Paying the Medical Expenses of Sick Soldiers.—Senator Proctor, of Vermont, has introduced a bill in the Senate to appropriate the sum of two hundred thousand dollars for the payment, or reimbursement of payments made, of just bills and charges for the support, care, and treatment, including proper hospital charges, of sick officers and enlisted men of the regular and volunteer armies of the United States, while absent from duty, on leave, or on furlough.

A Bill Requiring That Cases of Typhoid Fever occurring in the District of Columbia be reported to the Health Department was introduced in the House of Representatives January 13, by Mr. Babcock. Physicians or others in attendance upon cases of typhoid fever are required to report such cases, and the deaths of such cases within 24 hours, under penalty of $100 fine. The bill was referred to the Committee of the District of Columbia.

Bloodless Surgery.—A Japanese physician, Dr. Jokichi Takamino, claims to have discovered the possibility of bloodless surgery through the medium of adrenalin. By the local application of adrenalin in solution, operations may be performed, it is said, on the nose, ear and eye without the loss of a drop of blood. This medicament seems the most powerful and at the same time the most expensive drug known. It costs $1 a grain, $7000 a pound.—*Pearson's Weekly.*

Obituary.—Dr. James Rodman, at Hopkinsville, Ky., January 10, aged 72 years.—Dr. Joseph Diehl Thomas, at Pittsburg, Pa., January 8, aged 58 years.—Dr. Richard Hill, at Davenport, Iowa, January 10.—Dr. Daniel Waldo Stearns, at Newton, Mass., January 9, aged 37 years.—Dr. Norbourne N. Shipman, at Seymour, Ind., January 7, aged 72 years.—Dr. Phineas I. Mulvane, at Chicago, Ill., January 10, aged 64 years.—Dr. Joseph S. Carreau, at New York City, January 7, aged 53 years.—Dr. Smith T. Ferguson, at Joliet, Ill., January 10, aged 56 years.—Dr. John R. McDonald, at Courtland, Ala., January 6, aged 58 years.—Dr. Samuel S. Shamhart, at Hyattville, Wyo., January 2.—Dr. Joshua M. Doan, at Borth Bend, Neb., January 6, aged 27 years.—Dr. George W. James, at Lawson, Mo., January 2, aged 64 years.—Dr. John D. Young, at Starkville, N. Y., January 7, aged 70 years.—Dr. Leroy E. Jones, at Buffalo, N. Y., January 6, aged 81 years.—Dr. Andrew J. Christensen, at Waukon, Iowa, January 11, aged 89 years.—Dr. William Hausman, at Kewaskum, Wis., January 14, aged 48 years.—Dr. Samuel O. Prall, at Bangor, Pa., January 14.—Dr. C. H. Thurman, at Cincinnati, Ohio, January 14.—Dr.. Clayton Parkhill, at Denver, Col., January 16.—Dr. Charles Lewis Bonnell, at Brooklyn, N. Y., January 15, aged 56 years.—Dr. T. J. Eskridge, at Denver, Col., January 16.—Dr. James Farrington, at Rochester, N. H., January 19, aged 80 years.—Dr. Kingston Goddard, at Philadelphia, Pa., January 17, aged 62 years.

GREAT BRITAIN, ETC.

A Steamer From London With Smallpox.—The Furness Line steamer *Dahomey* from London January 9, for Halifax, passed Cape Race January 19 and signaled that she had smallpox on board.

A High Medical Fee.—The highest medical fee ever paid became the property of a blind physician, Dr. Gale, of Bristol, who cured a wealthy patient of a diseased knee by electrical treatment, and in return found his banking account richer by £2,000.

The Concentration Camps.—A Blue Book issued January

17 gives statistics for the month of December, 1901, when there were 117,017 inmates of the camps, and 2,380 deaths, of which number 1,767 were children.

Macclesfield Infirmary.—The deadlock occasioned by the appointment of a lady resident and the subsequent regisnation of the entire male medical staff has not yet come to an end, although the lady in question resigned her position. The medical staff, in order to avoid a repetition of this much to be regretted accident, has resolved to insist upon a revision of the constitution so that the Governors will in the future be unable to select candidates who have not been previously approved by the honorary medical staff.

County Galway Hospital.—The fact has just come to our notice that the County Galway Hospital has no operating theatre. At a recent meeting of the hospital managers, Professor Pye, of Queen's College, tried to impress upon the managers the necessity of such an amphitheatre. Nothing, however, resulted.

Col. Sir T. J. Gallwey, K. C. M. G., C. B., principal medical officer of the Home District of India with the rank of surgeon-general in the place of Surgeon-General W. Taylor, was appointed Director General of the Army Medical Service. Sir Thomas Gallwey has seen 28 years of army service.

New Lunatic Asylum, Lancashire.—The new asylum at Winwick, erected by the Lancashire Board to accommodate 2,000 patients and 200 attendants, was opened January 6. J. F. Gemmel, lately of the Lancaster Asylum, has been appointed medical superintendent of the new asylum. The cost, including the site and equipment, averages $1000 a bed.

Obituary.—Thomas Hyde Hills, a graduate of St. George's Hospital, London, died suddenly in Cambridge, January 2, of tetanus, aged 50 years.—Henry George Madan, formerly professor of chemistry at Queen's College, Oxford, Master of Chemistry at Eton, died in Gloucester, December 22, 1901, aged 63.—William Neale, a graduate of Dublin and Edinburgh Universities, died recently at Mountmellick.—Charles Roberts, formerly surgeon of the Royal Victoria Hospital for Children, the Yorkshire County Hospital, and the Yorkshire County Prison, died December 31, 1901, in Tunbridge Wells.—The death is also announced of Henry Carrington, a graduate of the Royal University of Ireland, during the last days of December, 1901, from chloroform poisoning.

CONTINENTAL EUROPE.

Death of Prof. von Ziemssen.—Hugo Wilhelm von Ziemssen, privy councillor, higher sanitary councillor, director of the Munich Krankenhaus, professor of medicine and director of the Medico-clinical Institute of the University of Munich, died in Munich, January 21, 1902, in his 73rd year. Born in Greifswald, December 13, 1829, he studied medicine in Greifswald, Berlin, and Würzburg. In 1854 he received his M. D. degree in Berlin and became assistant to Prof. Niemeyer in Greifswald, where he remained until 1863. In 1862 his monograph upon "Pleurisy and Pneumonia in Childhood" appeared. The first edition of his work on "Electricity in Medicine," was published in 1857. He became head of the medical clinic in Erlangen in 1863, and in 1866 he founded the *Deutsches Archiv fur klinische Medicin*," in conjunction with his friend Zenker. Soon after this he began the edition of his large "Handbuch der specielen Pathologie und Therapie inneren Krankheiten." During the Franco-Prussian war he not only visited the hospitals in Metz, but took a train of wounded soldiers back to France from Nürnberg. In 1874 he moved to Münich to become director of the first medical clinic and of the Krankenhaus. von Ziemssen in 1868 had established hospital assistants as resident physicians in the hospital, and in 1877 he started the "Clinical Institute." Since 1878 he has edited the "Annals of the Munich Hospitals." His "Handbuch der allgemeinen Therapie" followed, and later, with von Pettenkofer, he edited a "Handbuch der Hygiene." His clinical lectures for over 25 years and innumerable smaller works upon medical subjects have been published. His death comes as a great loss to the medical profession.

Dogs Prevent Suicide.—The Prefect of Police of Paris is so well satisfied with the experiments of his dog brigade, attached to the police for saving the lives of persons who fall or jump into the Seine, that seven more Newfoundland dogs have been added. Every day dummy bodies are tossed into the river and the dogs plunge in and bring them out.

Another Alleged Cure for Consumption.—The *London Daily Mail* of January 16 prints a dispatch stating that, at a meeting of the Paris Academy of Medicine, a report was read which recounts some remarkable results of a new remedy in the treatment of consumption. The newly discovered preparation is called bacilline. It is a liquid. At Roubaix, a locality noted as a hotbed of consumption, out of 100 cases treated by hypodermic injections of bacilline 84 are reported to be on the high road to recovery.

An Antiseptic Dressing.—At a recent meeting of the Paris Biological Society, Drs. Aucke and Thibaudeau described a new dressing for wounds consisting of an application of potassium permanganate followed by a bandage soaked with hydrogen peroxide. They claim that this combination produces the best known antiseptic dressing.

Deaths From Vehicles.—According to a report published by the Prussian Government, the number of persons killed last year by vehicles was 2117. In Berlin alone 103 persons lost their lives in this way. Most of the people were killed by railroads, tramways, automobiles and cycles. More than one-fourth of the those killed were children under 15.

University Notes.—Basel: 529 students have matriculated this winter, 147 studying medicine. There are, besides five female medical students.—**Copenhagen:** Dr. F. C. C. Hansen has been appointed professor of anatomy in the place of the late Dr. Chievitz.—**Paris:** Dr. Gilbert has just been appointed professor of therapeutics in the place of Professor Landouzy, who recently became professor of clinical medicine.—**Berlin:** Dr. De Ruyter has recently been made professor of surgery, as has also Dr. George Meyer. Dr. Theodor Sommerfeld has been appointed professor of hygiene.—**Bonn:** Dr. Bleibtreu has been appointed professor of physiology.—**Breslau:** 371 students have been matriculated this winter, 53 of them in medicine.—Dr. Lesser was made professor of medical jurisprudence.—The new children's clinic, built by the Government, has just been opened by its director, Prof. Czerny.—**Erlangen:** Dr. Max von Kryger has been appointed professor of surgery and surgeon-in-chief at the Poliklinik.—**Goettingen:** Out of 1338 students enrolled this winter, 162 are studying medicine. Besides, there are 32 women medical students.—**Kiel:** Out of 1079 students 447 are studying medicine.—**Koenigsberg:** Dr. Jäger has just been made professor of hygiene.—The number of students this winter is 911, 38 being women: 207 of these are studying medicine.—**Munich:** The Royal Bavarian Academy of Sciences has elected Dr. Rückert, professor of anatomy, a member, and Dr. Hering, of Leipsig, professor of physiology, a corresponding member.—Dr. Martin Hahn has recently been appointed professor.—**Marburg:** :Dr. Wilhelm Ruppel has been made professor of hygiene and experimental therapeutics.—**Muenster:** Dr. Wilhelm Hittorf, professor of physics and inventor of the so-called "Crooke's tubes," celebrated the anniversary of his 50th year as professor on January 12.—**Rostock:** Dr. Groenouw, of Breslau, has been made professor of ophthalmology.—**Tuebingen:** It is rumored that Dr Krehl will soon be appointed professor of pathology and therapeutics in the place of the late Professor Liebermeister. Out of 1408 students matriculated 242 are studying medicine. **Cracow:** Dr. Leo Krynski has been appointed professor of surgery.—**Budapest:** Dr. Koloman Müller, professor of medicine, has been made a member of the House of Magnates of Hungary. **Vienna:** A bust of Dr. Herman Muller, who died of pest in 1898, from the hands of the sculptor, Theodor F. Khuen, will soon be placed in the physicians' meeting room of the University.—Dr. Heinrich Schmit has been appointed professor of obstetrics in Linz.

Obituary.—In Brussels, Dr. Destrée, director of the second medical clinic and professor of clinical medicine, has recently died, aged 43 years.—In Greifswald, on December 31, Dr. Hugo Pernice, formerly professor of obstetrics and director of the obstetrical clinic, died, aged 72 years.—In Alzing on December 23, Dr. Joseph Liegl formerly of Münich, founder and director of the Alzing Sanatorium, died in his 54th year.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

January 4, 1902.

1. A Lecture on Epilepsy. SIR WILLIAM BROADBENT
2. A Brief History of the Operations Practised for Cancer of the Breast. SIR WILLIAM M. BANKS.
3. A Clinical Lecture on Oophorectomy in the Treatment of Cancer of the Breast. H. T. BUTLIN.
4. Accidental Removal of Auricle by Midwifery Forceps, and Successful Application of Artificial Auricle. JAMES ERSKINE.
5. Theories of Inheritance. CHARLES MERCIER.

1.—Broadbent delivered a lecture on **epilepsy** at the Medical Graduates College and Polyclinic. In the causation of epilepsy, he believes that an inherited tendency in the nervous system is the most important element. This inherent tendency is for the most part congenital; in some cases it is so powerful that the attacks occur early in life; in other cases the attacks occur only under the influence of some violent exciting cause or of some depressing influence upon the general health. The author is not sure that sufficient importance has been assigned to the sensory nerves in the causation of this disorder. When infantile convulsions are followed by epilepsy, it is probable that the brain has been damaged. When, on the other hand, the convulsions set in suddenly at any period of life, peripheral irritation of some kind may be suspected. From whatever point of view the evolution of nerve energy is considered, the conclusion suggested is that a substance of an explosive character is accumulated in the gray matter which is ready to liberate energy by a sudden adjustment of chemical affinities. A convulsion, according to this theory, represents an explosion of nerve matter. The question at once arises: How is such a discharge determined? The experimental methods by which convulsions are induced have the more or less sudden arrest of the cerebral circulation as a common feature. The explanation of epilepsy to which these very concise statements of the author's ideas lead, is that the explosive material in the gray matter of the cerebrum is unstable and explodes too easily. This inherent instability characterizes epilepsy, and distinguishes the epileptic convulsion form a convulsion determined by some violent external cause. The status epilecticus would seem to disprove the theory of Hulings Jackson that the coma following an epileptic seizure is a paralysis following the exhaustion of the explosive substance. Epileptic fits are liable to come on during the night or early in the morning, soon after rising. This fact is very suggestive of cardiovascular conditions as among the influences by which the time of an outbreak is determined. The prognosis in a case of epilepsy is governed mainly by the degree that the disease depends upon an inherent tendency in the nervous system and by the degree that it depends upon causes outside the nervous system that may aggravate the tendency or that may provoke the attacks. Heredity will play an important part in the consideration; but it is not necessary that there should be a family history of epilepsy. If, in addition to the liability of recurrent attacks of convulsions there are other evidences of a low type of nervous organization, there is practically no chance of the cessation of the attacks. If the fits have begun in childhood, at or soon after puberty and have recurred regularly and frequently, whether or not there have been other injurious influences at work, it may be concluded that an inherent tendency to instability exists. If, on the other hand, the patient has the look of bodily and mental vigor, if some serious exciting cause has preceded each attack, if the fits have not begun until late in the period of adolescence or until adult life has been reached, it may be presumed that the inherent tendency is not strong, and that it may possibly be held in abeyance. The author regards the low tension pulse as characteristic of the disease and its existence is an unfavorable prognostic indication. A pulse of unduly high tension for the age of the patient is a ground for hope of recovery. In all cases the epileptic should have an open-air life as far as possible. Exercise of almost every kind may be permitted, unless the fits are frequent, boys may be allowed to go to school; more hesitation should be felt concerning allowing girls to continue at school. Epileptic children and young peope should be very carefully dieted; overfeeding should be strictly avoided; no stimulants should be allowed. The relief of symptoms may, in many cases, be too dearly purchased by the routine administration of the bromides. These salts should be used to diminish the frequency and the severity of the fits, while the removal of the instability of the nervous system should be sought by other means. Phosphorus, the hypophosphites, arsenic, strychnine, quinine and iron may be employed to meet the latter indication. [J. M. S.]

2.—Banks defends the work done by the older surgeons, notably Gross, Moore and himself, towards securing a general recognition of the importance of clearing the axilla and removing a large area of skin in the operation of **excision of the breast for malignant disease.** Persistent efforts have recently been made to ignore this work and to hand over to Halstead the entire credit thereof. Bank's first communication was to the Lancashire and Cheshire Branch of the British Medical Association in 1877; he then exhibited a patient on whom he had done the complete operation and she was well after about three years. That woman lived 20 years and died without a recurrence. In 1882 Banks reported to the British Medical Association the results of 46 cases of removal of mammary cancer with extirpation of the axillary lymph glands. In 1887 in a paper read to the Harveian Society entiled Extirpation of the Breast for Cancer with Removal of the Axillary Glands as a necessary accomplishment, he detailed 82 cases, and insisted on the necessity of excising the entire mass with the contents of the axilla in one continuous piece. The only points of difference between the operation described by Halstead and that employed by Banks consist in the removal of the sternal portion of the pectoralis major and the division of the pectoralis minor; this is unnecessary if the arm be properly manipulated and the pectoral muscles be strongly retracted upward and inward. To remove the supraclavicular glands is to stretch the operation without gaining any advantage, as supraclavicular involvement means certain death. Concerning the histological researches of Stiles and Heidenhain, it is denied that they have any practical bearing on the doings of the surgeon. Operations for cancer have gone as far as they are likely to go. Advance must now be in the direction of earlier diagnosis rather than in more extensive extirpation. Operation should never be attempted unless there is a great probability of cure as the bad results from the unsuccessful cases deter and frighten away the really curable patients. [F. T. S.]

3.—In a clinical lecture on **oophorectomy in the treatment of cancer of the breast.** Butlin draws attention to a class of cases in which the carcinoma seems to be retarded in its growth or even appears to have disappeared for some unascertainable reason. He cites a case of this character in his own experience and refers to the cases reported by Gould and Bowlby. From a study of the reported cases excision of the ovaries seems to affect the growth in the breast favorably, but there has not been a single case of cure and many have not received the smallest benefit. In the local excision of cancer there are three objects to be kept in view: the hope of permanent cure, the possibility of internal recurrence if cure be not effected, and the probability of local return in the form of nodules with but little suffering. [F. T. S.]

4.—Erskine records a rare accident in obstetrics, namely: the **accidental removal of the auricle by the obstetrical forceps,** the instrument having slipped during a protracted delivery. The tragus only was left together with the part of the antihelix bounding the concha inferiorly and pos-

teriorly. An artificial ear of vulcanized rubber was made and held in position by the insertion of a process into the external meatus, the remainder of the ear being temporarily glued to the surrounding parts. [W. A. N. D.]

LANCET.

January 5, 1903.

1. A Lecture on the Causes and Significance of Phantom Tumors. SIR WM. H. BENETT.
2. A Clinical Lecture on the General Principles of Treatment of Diseases of the Skin. WILLMOTT EVANS.
3. A Clinical Lecture on Seventeen Cases Operated on for So-called "Internal Derangement of the Knee-Joint." ARTHUR E. J. BARKER.
4. On the Etiology and Pathology of Scurvy. GEORGE LAMB.
5. Abdominal Pan-Hysterectomy for Cancer of the Uterus, With Notes of Two Cases. ARTHUR H. N. LEWERS.
6. On Two Contrasted Cases of Hysterectomy, etc. J. BLAND-SUTTON.
7. The Disappearance of the Addiment from Anti-microbic Sera. E. W. AINLEY WALKER.
8. Beef-worm in the Orbital Cavity. THOMAS W. F. GANN.

2.—Evans in a clinical lecture discusses **the general principles of treatment of diseases of the skin.** He lays great emphasis on the regulation of the diet. He mentions that the quantity of food, even though the quality be unexceptionable, is prone to produce or exaggerate skin diseases. He points out that alcohol, even in small quantities, is harmful in many diseases of the skin, and that it acts by inducing cutaneous hyperemia and influences digestion. Spirits, except when well diluted, champagne and beer should be particularly avoided. Tea and coffee are also injurious. The use of tobacco exercises harmful effects on some diseases of the skin. It should be borne in mind that many medicines have the power of producing skin manifestations, especially if the skin be diseased. He thinks that, on the whole, a fairly dry climate is best for individuals suffering from skin diseases. Sea air may have a beneficial effect when the general nutrition is impaired. Frequent washing of the skin with soap and water is harmful not only to the healthy but to the diseased skin. It should always be the aim of the physician to remove the cause of the disease, if possible; when it cannot be determined, we must treat the symptoms. The author does not discuss the use of various drugs in the treatment of cutaneous cases. He contends that arsenic has been misused more often than any other drug, and that as a rule this drug should only be prescribed when all other modes of treatment have failed. [F. J. K.]

3.—Arthur E. J. Barker discusses clinically the **dislocations of the semilunar cartilage,** which conditions were formerly described as "internal derangement of the knee joint." In all of the 17 cases operated upon for this condition it was the internal cartilage which was displaced. In all of these cases too the cartilage was split in the direction of its fibres; in none of them was the cartilage torn across. This latter lesion, however, is said to occur, and Barker refers to Körte's three cases. The splitting of the cartilage is described by Barker as being "peripheral," "central," either of which may be partial or complete, "partial anterior," and "partial posterior." In one of the cases operated upon by Barker of complete central tear of the cartilage the inner portion was found curled up against the crucial ligaments and only attached by its ends. In another case operated upon he found a flat pedunculated growth attached to the inner edge of the cartilage which produced all the symptoms of a dislocated cartilage. Dislocation of this cartilage is supposed to be due to some congenital slackness of the ligamentous mechanism of the joint in many of the cases. From a study of the mechanism of the joint during operation it is found that the cartilage during flexion moves more or less backwards and that during extension of the knee it moves forward again. Flexion and eversion of the tibia would seem to offer the most favorable conditions to dislocation. When the cartilage is split through its entire length and only attached by its extremities, Barker does not think it possible to restore it to its proper position and keep it there, since it will invariably become again displaced as soon as the knee is flexed. In these cases total removal of the meniscus is perfectly justifiable, although in several cases by careful suturing an excellent and permanent result has been obtained. It is in the incomplete cases that rest and support are productive of cure. In cases of "central splitting" it is proper to remove the loose portion of the cartilage. In such instances the outer portion fulfills all the needs of the semilunar cartilage. Barker describes his operation as follows: "To operate on these cases the incision I have always used is one commencing over the inner border of the ligamentum patellae about half an inch above the articular border of the tibia and carried with a curve downwards and outwards to the anterior edge of the internal lateral ligament. The lowermost edge of the flap so formed should lie about half an inch below the articular border of the tibia. The cut should be firmly made and divide the periosteum at the same time. The flap must now be raised with the periosteum until the edge of the cartilage appears under the attachment of the meniscus, which, if partially attached, will rise with the flap until its *under* surface is seen. If partially torn anteriorly, it can then be stitched to the periosteum with a few silk threads. When the periosteum is now laid back in its place and secured there by silk stitches the meniscus becomes firmly attached to it. The rest of the wound is closed without drainage." An icebag should be applied over the dressing for the first week, as it gives comfort to the patient and probably prevents much effusion into the joint. These 17 cases are made up as follows: Complete internal dislocation, six; partial anterior peripheral, five; partial posterior peripheral, three; central complete, two; and polypoid tag, one. A number of excellent illustrations accompany the author's description. [J. H. G.]

4.—Lamb contributes an interesting article on **the etiology and pathology of scurvy.** He mentions that Professor A. E. Wright suggested the theory that the scorbutic condition was due to acid intoxication which rendered the blood plasma less alkaline, and that this condition was due to partaking of food stuffs which contained a large excess of mineral acids over bases. Wright in a recent issue of the *Times* (August 25, 1900) records the results of the estimation of the alkalinity of the blood serum in seven cases of scurvy. The alkalinity of the blood serum was markedly decreased in every instance. The symptoms were relieved by the administration of lactate of soda and other similar substances. The author suggests that Professor Wright has established beyond doubt that in some instances scorbutic symptoms are associated with the condition of acid intoxication and decreased alkalinity of the blood. The author also mentions Liston's view, who has found the ova of ankylostoma duodenale in the feces of some of the individuals suffering from scurvy and finally he tells us that Jackson and Harley have come to the conclusion that neither fresh vegetables nor lime juice prevent or cure scurvy. These investigators hold the view that scurvy is a condition of ptomaine poisoning induced by the eating of tainted animal food. Lamb has carefully investigated eleven cases of scurvy, five of which occurred among the prisoners of Thana Jail, an institution situated a few miles out of Bombay. All of these cases presented well marked scorbutic symptoms, and one of them was so severe that death occurred. The alkalinity of the blood plasma was not decreased in any of the cases. The diet of the prisoners was of such a character that acid intoxication and ptomaine poisoning cannot be said to have induced the disease. The remaining six cases were patients in the Jamsetjee Jeejeebhoy Hospital, Bombay. Decreased alkalinity of the blood was not found and in only two instances were the ova of intestinal parasites present in the feces. He draws the following conclusions: "In view of Professor Wright's observations, the only conclusion therefore which I can come to is that scorbutic symptoms although associated in some cases viz. in Professor Wright's cases with the condition of acid intoxication in other cases develop quite independently of this condition. There would seem, in fact, more than one etiological factor and pathological condition underlying the symptoms, which are clinically known as scurvy." Lamb's observations lend no support to

the theory advanced by Liston that scurvy symptoms may merely be an expression of ankylostomiasis. [F. J. K.]

5.—Lewers remarks that for the most part the vaginal route is the most suitable for the removal of a **cancerous uterus.** As regards **cancer of the cervix** almost all the advantages appear to be on the side of vaginal hysterectomy. Thus, in the latter operation, the exact position and extent of the growth are clearly visible, and the excisions in the vaginal mucous membrane can be made as far as possible from the edge of the growth, also, the cut edges of the vaginal mucous membrane and the adjacent submucous membrane can, in vaginal hysterectomy, be freely seared with the cautery. In a purely **abdominal panhysterectomy** for cancer of the cervix, the vagina must be opened into from above, and the incision may or may not clear the malignant growth. Some portion of it is almost certain to be left behind. It is true that this objection may be met by performing a combined operation partly from below, and then completing the operation from above. This procedure, however, entails a loss of time in altering the position of the patient and redisinfection of the hands. The abdominal operation, however, is better in that it is possible to remove the infected lymphatic glands. Although Lewers believes that when these glands have become infected the disease has advanced beyond a cure by any operation. In primary cancer of the body of the uterus, however, the abdominal panhysterectomy should be adopted. He reports two cases of this operation performed for uterine carcinoma of the fundus. [W. A. N. D.]

6.—Bland-Sutton records two cases of **hysterectomy,** one performed during pregnancy and the other in the puerperium. In the former a condition of multiple fibroids existed in a woman three and a half months pregnant. Bland-Sutton believes that when a fibroid becomes painful it signifies that the tumor is undergoing secondary changes, or that some complications have arisen in the pelvis, and that hysterectomy is indicated. [W. A. N. D.]

7.——Walker contributes a preliminary article on **the disappearance of addiment from anti-microbic sera.** In a previous article this author demonstrated by a number of experiments that the bacteriolytic addiment of fresh normal serum tends to disappear with rapidity. Serum which has been kept for several days or longer contains it. In this communication he sets forth the observations of a number of experiments, and draws the following conclusion: "The bacteriolytic power of a fesh serum rapidly diminishes both in the immune and normal sera, and ceases to be recognizable within a few days from the time of bleeding. Hence it appears that as regards experiments in bacteriolysis the age of the serum which supplies the addiment is a factor of the first importance, and that the observations on bacteriolytic action with an addiment-containing serum cannot be properly compared unless they are performed at the same time, since the bacteriolytic addiment of the given serum may undergo considerable diminution in a few hours. This fact may throw some light upon the want of harmony in many of the results which may have been published, and certainly affects the value of a number of recorded observations." [F. J. K.]

8.—Thos. W. F. Gann describes a **"beef worm"** which **was lodged in the soft tissues of the orbital cavity.** The worm is found in Central and South America and grows from an egg laid by the parent fly beneath the human skin or mucous membrane. In a few months it attains a length of from one to two inches and a diameter of ⅜ to ¾ of an inch. It is composed of from twelve to twenty segments and is covered by stiff black hairs or bristles along the middle of its body. The tail end projects through the skin or mucous membrane and has a circular orifice surrounded by a prominently raised margin. The head of the worm is imbedded deeply in the tissues and is possessed of two hook-like projections by which it maintains its position. Its rhythmic motions cause the patient to complain of "something moving under the skin." This worm is much more prevalent in some districts than in others, and some individuals seem to possess a peculiar susceptibility and others an equally peculiar immunity to the worm. The case reported is that of a lad 18 years of age who presented himself with a considerable swelling at the inner canthus of the eye. Close inspection revealed the opening of the tail of the worm. The natives remove these worms by applying tobacco over the opening which produces an apparent narcotism of the insect and renders its removal by pressure comparatively easy. Gann injected a strong solution of tobacco into the aperture of the tail and a few hours later was able to withdraw the worm. [J. H. G.]

MEDICAL RECORD.

January 18, 1902.

1. Prognosis. Its Therapeutic Value. HENRY FREEMAN WALKER.
2. The Pathological and Therapeutic Aspects of the Effects of the Röntgen Rays. CARL BECK.
3. Suprapubic Cystotomy in Operation upon the Postate. HOWARD LILIENTHAL.
4. Alcoholic Amaurosis. FRANK VAN FLEET.
5. Report of a Case of Addison's Disease. EDGAR MOORE GREEN.

1.—H. F. Walker discusses the **therapeutic value of prognosis.** The relation of the physician to his patient has three bearings. First, he is expected to make a diagnosis of the disease; second, he is asked for a prognosis; and third, he guides the patient to recovery or smoothes the downward path to death. He cites a number of cases with an apparently grave aspect which terminated in recovery and in these cases believes that the favorable and hopeful view expressed to the patient did much towards bringing about the favorable results. To the family it is a physician's duty to disclose his fears. but to the patient his attitude must be one of hope and assurance. There are two reasons why the most favorable prognosis possible should be given to the patient; first, because we cannot be absolute in our knowledge, and second, it is positively for the patient's good. We have no right to shorten a life an iota by adverse judgment. [T. L. C.]

2.—Carl Beck presents a paper on the **pathologic and therapeutic aspects of the Roentgen-rays.** The most characteristic difference between ordinary burns and the integumental changes produced by the Röntgen-rays is the fact that the latter do not manifest themselves before the lapse of a period of incubation, as a rule after about two weeks. This latent stage lasts about ten days in the **simple type** of Röntgen-ray dermatosis. A condition of hyperemia then develops, the skin is at first light, later dark red, and finally becomes brown and scaled. After a few weeks there is complete recovery, sometimes leaving slight pigmentation. There are two other types of this dermatosis, the **bullous** and the **necrotic.** In the **bullous,** intense reaction follows an incubation of about 2 weeks; this is of both subjective and objective character and also lasts about two weeks, then cicatrization occurs as well as depilation. The hair returns slowly and pigmentation and teleangiectasis nearly always remain. The **necrotic type** develops a few days later than the bullous form and requires months for its cure. Beck states that this type reminds one of the stationary form of gangrene which is known in Europe as "glacier gangrene." In ten thousand examinations none of Beck's patients were burned and this accident did not occur in his practice until a few months ago. He reports his personal experience in being burned on the dorsum of the right hand and three other cases in his series. As to the causation of the burns he states that the peculiar chemic influence of the Röntgen light on the tissues is so exerted that the nutrition of the cells is impaired. It is only when this impairment has reached a certain degree that the burns occur, and these are influenced by the power and amount of the Röntgen light as well as the personal susceptibility. He explains **effluvium capillorum** by the inflammatory process which affects the matrix cells. The therapeutic application of the rays now includes a large number of diseases, among which may be mentioned **hypertrichosis, favus, eczema, psoriasis, rosacea, acne vulgaris,** and **prurigo.** He proceeds to give the **technique of irradiation.** Beck believes that there is no doubt whatever that the Röntgen-rays possess bactericidal properties, and he gives it as his opinion that it would be well worth while further to

study the effect of the rays upon **tuberculous foci.** He thinks the assumption is well grounded that a favorable influence is exerted by the rays, for their action is **bactericidal** as well as **inflammatory.** Beck recommends that healthy skin surfaces should be protected by tin foil or lead plates and the face by masks of the same material during the process of irradiation. The treatment recommended for accidental burning in no wise differs from that of ordinary burns. [T. L. C.]

3.—Howard Lilienthal discusses **suprapubic cystotomy in operations upon the prostate.** He presents clinical notes of seven cases in which the suprapubic operation was performed. He believes that as a general rule, with few exceptions, the first step in the operative cure of any form of prostatic obstruction should be a suprapubic cystotomy even if it should later become evident that the disease itself must be attacked from another quarter. He describes the steps of the operation as he performs it. He opens the bladder between two retraction sutures and explores the viscus with the finger, then by the eye, raising the pelvis if this is necessary. He incises the mucous membrane covering the most prominent part of the prostate. He incises the mucous membrane covering the most prominent part of the prostate. Enucleation of the gland is done with the two fingers of the left hand while an assistant with finger in the rectum supports the parts. A perineal opening may or may not be necessary according to the circumstances of the case. [T. L. C.]

4.—Frank Van Fleet refers to his publication in 1897 describing the second case recorded of **methyl alcohol poisoning.** In this paper he reports the case of an inmate of an institution for the cure of inebriates. For six months she was not out of the institution,had not tasted alcohol and believed herself cured. On leaving the institution for the purpose of transacting some business the desire for drink sized her irresistably and finally she purchased a bottle of ordinary alcohol at a drug store, this she drank in the privacy of her room and sank into a stupor which lasted several hours. She awoke blind. When seen by the writer the pupils were widely dilated and there was no reaction to light. With the right eye she was able to count fingers at two feet, in the left eye there was barely perception of light. The optic nerves were dead white and the blood vessels small. Treatment consisted in the administration of **sulphate of strychnine hypodermatically** beginning in doses of one-sixtieth grain and gradually increased to one-sixth grain which seemed to be the point to tolerance. After six weeks of treatment the vision of the right eye had increased to 20/200 and in the left eye to 3/200; the fields of vision were markedly restricted. To the writers' knowledge this is the only case of **acute retrobulbar neuritis following the ingestion of ethyl alcohol.** [T. L. C.]

5.—E. M. Green reports a case of **Addison's disease** in which the patient was seen but three days before death. She gave a history of repeated gastric disturbance and her skin was of the typical bronze color. The conjunctivae had a pearly hue. The abdominal walls were tense and hard, and the abdomen tympanitic. The result of the post-mortem showed that the suprarenal bodies were much wasted, not more than one-third or one-half of the size of these organs in health. No lesions of the sympathetic system was observed. The family history of the patient indicated that a sister suffered from a similar malady and died at thirty years. A satisfactory history of the case could not be secured save that she had suffered from gastric disturbance the geater part of her life and the discoloring of the skin was first noticed about five months before her death. [T. L. C.]

MEDICAL NEWS.

January 18, 1902. (Vol. 80, No. 31.

1. Congenital Atresia and Stenosis of the Rectum and Anus. W. REYNOLDS WILSON.
2. General Medical Treatment of Syphilis. G. FRANK LYDSTON.
3. A Conservative Element in Acute Mastoid Surgery. EDWIN W. PYLE.
4. The Class of Cases of Chronic Glaucoma in Which Operation is not Advisable. CHARLES STEDMAN BULL.
5. A Résumé of the Subject of Actinomycosis, with Report of a Case of Actinomycosis Abdominalis. A VAN DER VEER and ARTHUR W. ELTING.

1.—W. Reynold Wilson, in his article on **congenital atresia and stenosis of the rectum and anus** says that the conditions in stenosis call for no further classification than that dependent on the degree of narrowing. In atresia it may be noted that the degree of development may involve a more or less extensive segment. Two types are observed. (1) One in which the absence of the rectum may be partial. In this form the cul-de-sac which marks the termination of the gut may descend into the excavation of the pelvis and adhere by a fibrous tract (1) to the connective tissue lining the posterior part of the bony pelvis; (2) to the basfond of the bladder; (3) to the uterus or the vagina in the female. (2) Total absence of the rectum may exist with extensive obliteration of the gut and attachment of the cul-de-sac to the bony pelvis at the level of the sacro-vertebral angle. In certain rare cases the absence of the rectum coincides with arrest in development of the colon. In either form of atresia the obliteration may exist simply as a muscular or fibroid cord, the most careful examination of which fails to reveal the presence of a canal and in some instances even the strand of tissue which represents the vestige of the rectum may escape detection altogether. As to atresia of the anus we may note that the opening may be permeable only for a certain distance. The configuration of the anus in such cases is normal, but the opening will admit the finger or a sound only to a depth varying from a few millimeters to three or four centimeters. In total absence of the anus the skin may extend from one buttock to the other without a trace of any opening, even sometimes without a notable depression. In such cases abnormality in development of the pelvic region is shown sometimes by the nearness to one another of the tuberosities of the ischia. As to the method of procedure it may be noted that in reference to stenosis that gradual dilatation is indicated. The permanent retention within the rectum of a dilating staff in the form of a flexible bougie is neither necessary nor practical. The dilatation must be practiced until the stenosis has been permanently overcome. It is to be noted further that in cases, alike of stenosis and atresia in which apparently marked deviation from the normal exists, the sphincter muscles are frequently well developed. In cases of stenosis, therefore, after the original contraction may have been overcome, the spasm of the sphincters may give an exaggerated impression of resistance. The occasional administration of a mixture of castor oil and glycerine to induce a partial laxness in the discharges is to be recommended; or, instead of this, rectal suppositories of glycerine, manufactured in compact flexible form may be introduced into the rectum daily. Rectal injections of saline solution by means of a woven silk catheter introduced to beyond the point of stenosis may be resorted to for the same purpose. In deviation of the rectum with anastomosis performing a perineal section as a primary operation, entering the base of the bladder and opening thereby a means of rectal evacuation. Later the colon may be approached by inguinal colotomy in such as the rectum is held stationed in the pelvis by its attachment to the bladder and is therefore out of reach by the perineal operation. In performing the secondary operation the cul-de-sac may be drawn up into the inguinal incision and after its attachment to the edges of the abdominal opening may be incised. An artificial opening is thus established similar to that in laparocolotomy, while at the same time the perineal incision may be encouraged to heal. Two methods of treatment in imperforation may be considered. (1) The opening of the rectum by perineal incision at the anal site. (2) the establishment of an intestinal outlet by means of inguinal colotomy after the method of Littlé. Generally speaking the inguinal incision is to be preferred when prompt relief is demanded. Another medical method of operating may be followed by exploration of the position of the rectum carried out by an incision in the neighborhood of the sacro-iliac articulation.

The rectum may then be freed and its attachment to the incised perineum established. If it is found impracticable to force the rectum sufficiently downward, an artificial iliac opening may be made instead of the perineal incision, the exploratory opening being closed. [T. M. T.]

2.—G. Frank Lydston says that success or failure of treatment in by no means infrequent instances depends more upon the general intelligence and therapeutic skill of the practitioner than upon the carefulness with which he carries out specific therapy. General hygiene treatment of syphilis is of great importance. Ptyalism and iodism may both be avoided in many cases by attention to the eliminative functions. The ingestion of large quantities of water, increasing the functional activities of the skin, kidneys and bowels, is very useful in syphilis. The best way to give iodide under these circumstances is to mix the drug with a given quantity of pure water, say from two quarts to a gallon, and have the patient drink the entire amount, a glassful at a time, at intervals during the twenty-four hours. Hot baths are very useful. They increase tissue metamorphosis, favor elimination and necessarily enhance the therapeutic action of the mercury and iodide, while limiting any possible injurious effects of the drugs. A very hot bath of short duration taken daily and followed by a cold shower or cold tub has been found to be the best method for the average patient. Attention to the bowels is very important. Any of the simple forms of laxatives are the best. The saline aperients taken hot in the morning are very beneficial. In cases in which the bowels become irritated and instead of constipation there is diarrhea, the substitution of tannate of mercury or the inunction or hypodermic gives excellent results. When the gastric symptoms are present, the substitution of the inunction or hypodermic method is imperative. Lavage seems to be of service in gastric derangements and increases the patient's tolerance for drugs. The combination of essence of pepsin, plain or phenolated, with the iodides is sometimes very useful. Taka-diastase is indicated where the irritation is largely of the bowel and starch indigestion exists. In persistent syphilitic lesions in which mercury and iodides are not tolerated the use of chlorate of potassium is followed by good results. The author states he believes that chlorate of potassium is one of the most valuable remedies in the systematic treatment of syphilis. The tonic treatment in this disease must not be forgotten and various preparations of iron should be given. In conclusion the following points are emphasized: The physician should remember that he has to deal with three important factors in the treatment of syphilis: (1) A specific disease to be controlled by specific medication; (2) a distinct individual personality in each patient; (3) the result of antiseptic medication. [T. M. T.]

3.—Edwin W. Pyle reports a case of **acute mastoid disease** in which operation was refused and which was cured by continuous douching with hot bichloride solution, followed by gentle massage backward and downward, to discharge the pus from beneath the fascia into the external canal. Under the contracting influence of the former and the pressure of the latter, with general sustaining measures, pain, fever and swelling subsided with recovery. If primary, with resisting muco-periosteum and normal phagocytosis, amid conductive surroundings, the less skilful operator may well delay in reasonable doubt. If there be persistent narrowing of the deeper meati, with concomitant symptoms of pus in the mastoid cells, or if the attack be engrafted upon a residual condition in an individual of vitiated blood, poor nourishment and ill environment, the early operation is necessary. [T. M. T.]

4.—Charles Stedman Bull advises in **simple chronic glaucoma** early operation before much contraction of the field has occurred. The operative effect of iridectomy is more certain and undeniable the earlier it is done. The slightest narrowing of the field demands operation as soon as diagnosis is made. Early iridectomy, while the iris is still mobile, the field but little contracted and the cupping of the disk slight, commonly arrests the disease, at least for a prolonged period and preserves what sight remains. Done early, it offers the best prospect for the arrest of the process, and its effects are either permanent or very prolonged. If the tension is lowered after iridectomy, a favorable result is to be expected. If the tension remains high after operation, we must look for an unfavorable result. If under the use of myotics the vision improves and the field widens, it is almost certain that an iridectomy will give a good result. If the visual acuity remains stationary and the field does not improve, the effect of operation will be less favorable. The class of cases in which operative interference is not advised are in advanced chronic glaucoma with great contraction of the visual field, marked impairment of vision, undoubted increase of tension and deep cupping of the disk. In cases in which the contraction of the visual field has approached close to the fixation point, even though the central vision is still good, iridectomy is positively contraindicated. Where operation is not advised, the use of myotics must be resorted to. By these drugs we bring about contraction of the iris and lower the intraocular tension. Even though the field may not be widened and the vision improved, we at least render the progress of the disease more slow and for a time maintain the vision at the existing standard. They can never bring a radical cure and are of no use in old advanced cases of glaucoma in which the iris is atrophied. The two important myotics are eserine and pilocarpine. Eserine is the more powerful, but it is more irritating and tends to develop ciliary congestion. It is best combined with cocaine which contracts the calibre of the ciliary blood vessels and diminishes the sensibility of the ciliary nerves. Eserine should be used in the minimum amount and with the minimum frequence which is sufficient to contract the iris and keep it contracted. The salicylate and hydrobromate of eserine are more permanent and less changeable in solution than is either the sulphate or hydrochlorate. When the effect of the drug is reached, it is better to continue the effect by the use of pilocarpine. It must be remembered that eserine sometimes fails to produce the effect, while pilocarpine succeeds. The primary effect of eserine may be asserted by a hypodermic injection of morphine, five to eight minims of Magendie's solution, which lowers the blood pressure, lessens secretion and promotes contraction of the iris. The author advises the use of one-fourth to one-tenth grain of salicylate of eserine and cocaine hydrochlorate two grains, two or three times a day for two or three days, and then substitute a solution of pilocarpine hydrochlorate two grains, and cocaine, one grain, used with the same frequency. Massage of the eyeball has been followed by improvement of the vision and deepening of the anterior chamber. This should be done twice a day. Regular hours and habits, and sound refreshing sleep are important in the management of these cases. [T. M. T.]

5.—A. Van der Veer gives four avenues of infection of **actinomycosis abdominalis**: (1) Through the mouth and pharynx; (2) through the respiratory tract; (3) through the gastro-intestinal tract; (4) through skin-wounds, etc.; and (5) a group of cases in which no definite way of entry is discoverable. Microscopically, a focus of actinomycotic infection is characterized by a central zone that contains the fungus, either free or attached to the foreign body by means of which it gains access to the part. The zone usually contains more or less cellular detritus and the products of degeneration. The blood-vessels in the immediate vicinity of the focus are rarely obliterated. Actinomycotic lesions may be divided into (1) the neoplastic type, which is usually found in horses and cattle; (2) the inflammatory type, usually found in man and hogs. In the neoplastic type recovery is not infrequent, while in the inflammatory type the process of destruction exceeds that of defense, both in rapidity and in intensity and tends to the production of sinuses but not of large abscess cavities. An unfavorable medium for the extension or the development of the disease are the muscles and bones. Characteristic is the tendency to the formation of pustulous processes and the discharge presenting marked differences. It is serous in some instances, in others sero-purulent and still in others distinctly purulent. Practically, in all fistulous cases secondary infection exists. Another characteristic feature of the lesions is the tendency to extend by continuity rather than by metastasis. Ponfick and Bollinger propose a division of actinomycotic infections into the following groups: (1) [illegible] (2) those of the mucous membranes, (3) cutaneous, (4) cutaneous foci in [illegible] the spinal column, the genito-urinary organs, the brain; special organs of sense, etc., being regarded as complications. Statistics prove that 55 per cent. of all the cases are of the cervico-facial type; 20 per cent., thoracic and pulmonary; about 20 per cent. abdominal and about five per cent. of a variety of types. Van der Veer mentions that

Grill has distinguished three typical periods in the course of abdominal actinomycosis: (1) The initial period; (2) the period of tumor formation; (3) the period of fistula. Another period has been added by Hinglais—a period of repair. The duration of the disease varies from a few weeks to several years. The prognosis in abdominal actinomycosis is not always grave. Cases that offer the best prognosis are those which are most amenable to surgical treatment. The older cases are more unfavorable. Grill found, out of 77 cases, 22 recoveries, 10 improvements and 45 deaths. Early diagnosis is rarely made, but as soon as suppuration begins the diagnosis is comparatively easy. Iodide of potassium is the most satisfactory and effectual drug. It must be administered early and in large and gradually increasing doses. Tuberculin has been tried with some success and it has been found that men and animals infected with this disease react to Koch's tuberculin the same as do cases of tuberculosis. Combined medical and surgical treatment has produced the best results, especially in the form of actinomycosis more superficially placed. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

January 18, 1902. (Vol. LXXV, No. 3).

1. Implantation of a Gold Ball for Better Support of an Artificial Eye. L. WEBSTER FOX.
2. The Influence of Electric Ozonation upon Disease. G. LENOX CURTIS.
3. Clinical Notes on Gleet. A. RAVOGLI.
4. The Conservative Treatment of Appendicitis and the Fallacy of the Starvation Cure. J. H. CARSTENS.
5. Concerning Hepatic Syphilis. SIMON FLEXNER.
6. Electricity in Renal Disease. A. D. ROCKWELL.

1.—L. Webster Fox in his article on **implantation of a gold ball for the better support of an artificial eye,** recommends his last operation and gives the technic as follows: If operation is to be performed on the right orbit, the eyelids are kept apart by a speculum, the conjunctiva is then grasped up and in above the inner canthus and the tissues are well pulled out. He then passes a Beer's knife or a curved keratome through the tissues, somewhat obliquely and well down into the orbit; this opening must be made large enough to push the globe in the space behind the tissues, conjunctiva, etc. This starts the opening which he enlarges with curved scissors, separating the tissues from the cellular tissues around the orbit, thus giving him a large pouch into which the globe can be inserted. He uses at present a gold ball of 11, 12, 13 and 14 mm. in diameter. The gold ball is inserted through the opening and retained in place by a shell which has to be modelled after an artificial eye and which he calls a "conformer." He has chosen three sizes for various orbits. He closes up the incision with two stitches and then places the conformer over the buried ball and by gentle manipulation on this metal rotates the ball into place. The circular opening in the conformer allows the gold ball to fit the space which will be covered by the cornea of the artificial eye. The eyelids are then closed over the conformer which is left in place 24 hours. The eye-lids also help to keep the ball in place. The conformers are made of metal, gold-plated. He states that the results obtained by this method are perfect; no secondary trouble follows, all healing up by first intention and the two stitches are taken out the third day. If the operation is to be performed on the left orbit the incision is made up and out above the external rectus muscle and the dissection carried out as described above. [T.M.T.]

2.—To be abstracted when concluded.

3.—W. Ravogli, in his treatment of **gleet,** says that it cannot be carried on with only one method, but requires a good deal of judgment in the selection of methods demanded in different cases. In an old case of gleet much benefit cannot be expected from internal remedies, yet in association with local applications they are useful adjuvants. The balsams have a tendency to diminish suppuration, and when the urine is cloudy their use clears it somewhat. Copaiba, cubeb, oil of turpentine and santal oil, either alone or in conjunction with others are used in emulsions or capsules. They are rather hard on the stomach and the patients cannot continue their use for a long time. The best tolerated of all is the santal oil, but its benefit is only temporary and rather questionable. It is not so of the so-called urinary antiseptics, which are of good service in the treatment of gleet. They are usually the salicylates, which, giving off carbolic acid, render the urine antiseptic and less irritating to the inflamed surface of the bladder and the urethra. Furthermore, they maintain the acidity of the urine and so prevent ammoniacal decomposition. In the author's experience salol has given good results as a urinary antiseptic, and he has never noted the troubles which have been attributed to its use. Urotropine, introduced by Nicolaier, has a more powerful germicidal action, maintains the acidity of the urine, and retards its decomposition. Its action is due to formaldehyde, which is set free by the presence of uric acid. It is administered in doses of from five to ten grains three times a day. It is useful when given before using instruments, as a preventive of urethral fever. It diminishes suppuration, and by arresting ammoniacal decomposition relieves painful urinary tenesmus. Bromides and opiates are of greater service in relieving sexual excitability, insomnia and neurasthenic conditions, and their employment is often found necessary during treatment. Tonics are also required. The treatment on which most reliance can be placed is the local treatment. The posterior urethra needs to be washed with some force, in order to clean the surface and reach the glands. The object is attained by means of lavage, which can be done with or without a catheter. For convenience the soft rubber catheter is the best, and through it the fluid can be injected without exposing the whole urethra to unnecessary painful distension. The lavage without the catheter is advised in recent, acute, anterior urethritis, but for a chronic posterior urethritis irrigation through a recurrent catheter is much more desirable, strength of 1 to 5000. In the chronic cases stronger injections must be used. The author has substituted for the nitrate of silver instillations a two to three per cent. solution of silver-protein. Mechanical treatment.—In order to produce the reabsorption of the infiltrated patches, pressure must be resorted to, which is practiced by means of sounds. The sounds are introduced once a week, their calibre being gradually increased, and they are left in for five minutes. Also grooved sounds are used in some cases in which the treatment consists of the use of salves. The application of electrolysis has given good results. If dilatation is used it must be repeated at intervals of one or two weeks, in order to give time to these fissures to heal. In the meantime the patient may continue his injections with a mild solution of permanganate or boric acid, and the urethra can be treated with a solution of silver-protein or nitrate of silver until every vestige of discharge has completely disappeared. [T. M. T.]

4.—J. H. Carstens in concluding his paper on the **conservative treatment of appendicitis,** sums it up as follows: (1) The conservative treatment of appendicitis consists in prompt operation; (2) the starvation method of procrastination is vicious and has cost many lives, because it is used as an excuse to dally with patients that should be promptly subjected to removal of the organ. [T. M. T.]

5.—Simon Flexner found out of 5,088 autopsies 88 cases of **hepatic syphilis.** The types of disease were the interstitial hepatic, gummatous, perihepatic, and amyloid. The first made up half of the cases. Next in frequency came the gummatous form (23 cases); perihepatitis was observed in 16 cases; amyloid in 7 cases. The so-called syphilitic scar was seen in 38 cases. They were located superficially, generally upon the superior and anterior surfaces of the organ, were commonly multiple, and at times penetrated to some depth. Flexner says that there can be no doubt that many gummata disappear from the liver, either as a result of treatment or spontaneously. The analogy with similar lesions on parts of the body more exposed to exact observation renders such a result probable and he considers the scars referred to as adding proof of such an issue. When the scars are accompanied by fibrous bands penetrating the tissues and containing remains of gummata, then their nature may be taken as demonstrated. The prognosis is more favorable the younger the individual, the less advanced the lesion, and the fewer the complications, and even severe ascites, the effects of the pressure exerted by gummata, may gradually lessen and disappear.

[T. M. T.]

6.—A. D. Rockwell reports five cases of **renal disease treated by electricity** and from their study believes that by arresting inflammatory action and congestive pressure

through heightened circulatory drainage and increased filtration, by removing the inflammatory products which block up the uriniferous tubules, we can do much toward the prevention of more serious and chronic complications, and hasten the recovery of those cases which have not yet crossed the border line of incurable organic changes. His method of administration of the electricity is: (1) *The high tension faradaic current.* Flexible electrodes, of blocked tin, 3 inches in diameter, and covered either with sponge or with layers of absorbent cotton, are placed over the region of each kidney and firmly bound. Begining with periods of ten minutes in length, they may be gradually or quickly increased according to the susceptibility of the patient, to three-quarters of an hour. The strength of the current should be given almost, but not quite, to the point of actual discomfort. Mild currents are of little value. If the electrodes are suitable and properly placed the current strength borne is very great. (2) *The static wave current.* This is used in connection and alternation with the high tension faradaic current. It has the advantage over the last named of exceeding it greatly in frequency and tension; of enabling one to administer a current, not indeed of greater magnitude, but of far greater force and rapidity of oscillation, with the minimum of sensory and motor disturbance. On the circulation they have been found to lower the blood pressure at the moment of application, followed by increased pressure and vascularization. As a result we get an active circulatory drainage of inestimable benefit in conditions of passive congestion. In treatment of hyperemia of the kidney, our desire is to relieve the hyperemia and albuminuria by quickening its circulation. With less blood passing through the renal capillaries in a given time, less fluid is withdrawn from them, and anything which heightens blood pressure and increases renal filtration, relieves the burdened organ of much stress and strain. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 16, 1902.

1. Difficulties in the Diagnosos of Syphilis. JAMES C. WHITE.
2. Needless Laparotomies, etc. JOHN C. MUNRO.
3. The Vagus Reflex. THOMAS J. MAYS.
4. Auscultation of the Knee Joint. WILLIAM ERNEST BLODGETT.

1.—James C.White calls attention to the difficulties attending the diagnosis of **syphilis**, and especially the errors accompanying the interpretation of the symptoms. The failure to obtain a history of an initial lesion, is considered by the author as of little importance, and still less so when patients present themselves with the characteristic syphilodermata. The inconstancy of the so-called "copper color" of the lesions, he believes to be another confusing element and often the source of error in the diagnosis. Likewise it is unimportant in the diagnosis of syphilis whether or not there are any lesions on the scalp. The absence of marasmus or emaciation should not be considered as having weight against a diagnosis of congenital syphilis, as many syphilitic children are born plump and apparently healthy. The rashes caused by the administration of the iodides often resemble syphilitic lesions to such an extent that an error in diagnosis is frequently made, which the author believes would occur less frequently if deramtologists would more intimately acquaint themselves with the iodide eruptions. The author is of the opinion that there is sometimes difficulty in making a differential diagnosis between variola, varicella and syphilis. Pityriasis rosea, described some time ago by Gilbert, may give rise to confusion, especially because but few physicians recognize the affection, which is not always taught. The differential diagnosis between syphilis and the many lesions which may simulate it, are discussed in detail. White calls particular attention to the courage that is required to make a diagnosis of syphilis, especially when the social standing of the patient is allowed to influence the physicians. He believes in a year of continuous treatment, the second year the same, or an interrupted course of treatment, and in the third year no treatment but observations; all these points to be emphatically impressed upon the patient. [M. R. D.]

2.—John C. Munro reports 8 instances of needless laparotomies embracing, however, only those cases in which the symptoms indicated some grave surgical intra-abdominal lesions which upon operation were not found. Among the cases are not included those requiring surgical intervention, and in which lesions other than those diagnosed were found, nor cases in which abdominal symptoms were concomitant with lesions situated elsewhere. [M. R. D.]

3.—Thomas J. Mays, in a recent series of observations, is led to conclude that pressure over the course of one pneumogastric nerve in the cervical region, produces more pain on one side than on the other; in phthisis, the supersensitiveness corresponding to the affected side. He terms the phenomenon "**the vagus reflex**," and reports the cases in which he first observed them. [M. R. D.]

4.—William Ernest Blodgett reports his investigations of joint auscultation, and believes that it deserves further investigation, in the absence of which no conclusions are as yet offered. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

January 18, 1902.

1. The Ponto-Bulbar Heat Center. EDWARD T. REICHERT.
2. Pernicious Anemia, etc. THOMAS McCRAE.
3. The Pharmacology of the Suprarenal Gland and a Method of Assaying its Products. E. M. HOUGHTON.
4. The Blood-Pressure Raising Principle of the Suprarenal Gland JOKICHI TAKAMINE.
5. Neglected, but Valuable, Therapeutic Measures. GEORGE F.. BUTLER.
6. Tuberculosis in State Institutions. H. M. BRACKEN.
7. Public Sanitaria. C. P. AMBLÆR.
8. Consideration of Some Important Subjects Connected with the Treatment of Pneumonia. EDWARD F. WELLS.
9. Cases of Sarcoma and of Hodgkin's Disease Treated by Exposure to X-Rays. WILLIAM ALLEN PUSEY.
10. Surgical Correction of Malformation and Speech Defects due to or Associated with Hare-Lip and Cleft Palate. GEORGE V. I. BROWN.
11. Traumatic Arterio-Venous Aneurysm of the Subclavian Vessels, etc. RUDOLPH MATAS.
12. The Organization of the Medical Profession.

1.—See **Philadelphia Medical Journal**, June 29, 1901, page 1233.

2.—See **Philadelphia Medical Journal**, June 15, 1901, page 1124.

3.—See **Philadelphia Medical Journal**, June 22, 1901, page 1192.

4.—See **Philadelphia Medical Journal**, June 22, 1901, page 1192.

5.—See **Philadelphia Medical Journal**, June 22, 1901, page 1187.

6.—Bracken contributes an article on **tuberculosis in State institutions.** He contends that tuberculous children should be excluded from public and parochial schools because they are a source of infection, and for the good of the tuberculous children themselves. Tuberculous children should have few hours for study, and they should give much attention to physical training and live in the open air as much as possible. The state schools for the deaf and dumb, the blind, the epileptics, the reformatories, etc., should be inspected carefully for the development of tuberculous subjects. These unfortunates must be separated from the others. He mentions that the feeble-minded frequently develop tuberculosis of the intestines, as these individuals are in the habit of swallowing their sputa. In the institutions for the insane two classes of tuberculous subjects are encountered: (1) Those who suffered from the disease before their admission in whom the condition progresses slowly, and, (2) those who are infected after admission and in whom the disease is progressive. He emphasizes that institutions for the insane should take the first place in the regulation and control of tuberculous patients. In State prisons tuberculous prisoners should be placed in cells away from the other prisoners. They should not be employed in the work shops with the healthy subjects. [F. J. K.]

7.—Ambler, in an interesting article, discusses the subject of **public sanitaria.** He states that before many years it will be recognized by all that it is the duty of the State

to provide for the consumptive poor. State sanitaria should be built for the care of the phthisical poor. At the present time but two State institutions of the kind exist. While in all but one of the States provision is made for the insane, tuberculosis, which kills one out of every ten persons dying, receives practically no attention on the part of the State or philanthropist. [F. J. K.]

8.—Wells, in an address before the Chicago Society of Internal Medicine considers some of the **important subjects connected with the treatment of pneumonia.** He mentions that it is important to disinfect the sputum of pneumonia patients as a prophylactic measure. He contends that by the early use of a mercurial followed by a saline cathartic (bleeding from 500 to 750 cc.) giving fluids freely and by the administration of digitalis and adrenalin hydrochlorate, from 6% to 10% of the toxin is removed from the blood. He thinks leukocytosis a favorable sign, and that nucleinic acid, which he prescribes in every case, increases the number of leukocytes. The value of antipneumococcic serum, he contends, is as yet unknown. He cannot form any conclusions, as his experience with sera has been too limited. In his own practice he directs that all foods, including milk, be well salted, and that saline enemata be given freely and as frequently as they can be retained. With this measure it will be found that chlorides will not be entirely absent from the urine, an indication, he believes, that the system is being supplied with chlorides. Other remedies of value in the treatment of this disease are oxygen, strychnia, caffein, camphor and morphia. Each should be used for special indications. [F. J. K.]

9.—W. A. Pusey reports three **cases** in which he has employed the **X-Ray** in the **treatment of sarcoma.** The first case was that of a young man having enlarged glands in both cervical regions. Some time previously Ochsner had operated upon one side and the growth was diagnosed small rounded cell sarcoma. About a month later the growth on the opposite side assumed large proportions extending from the front of the angle of the jaw to within an inch of the posterior median line and from the mastoid process almost to the clavicle. The growth was hard and not freely movable. The circumference of the neck before the application of the X-Rays was 21 inches. The patient had 21 exposures to the rays with a hard tube and a weak light, the duration of the exposures varying from ten to fifteen minutes. Considerable dermatitis developed and the exposures were stopped. The dermatitis rapidly subsided and soon disappeared. Within ten days the growth had shrunken perceptibly and the motions of the neck were much freer. The circumference of the neck after the treatment was 16¾ inches. Six weeks after the treatment was begun there was no trace of the disease left except a very small and freely movable painless gland which later on became still smaller. On January 12 the patient reported he had gained 12 pounds since September and was in good health. The second and third cases reported were in patients past 60 years of age. The growth in each case was very extensive and the application of the rays had little effect. Pusey reports a fourth case, one of Hodgkin's disease, occurring in a boy four years of age. This case showed a wonderful improvement under exposure to the rays. Another case of Hodgkin's disease occurring in a man 50 years of age is also reported. The rays in this case were applied to the epitrochlear gland which was about the size of a goose egg and very hard. The exposures resulted in a reduction of the gland to about the size of an olive. At the time the X-rays were being employed arsenical injections were being made into a mass of axillary glands but without success. [J. H. G.]

10.—To be abstracted when concluded.

11.—To be abstracted when concluded.

AMERICAN MEDICINE.

January 18, 1902

1. Artificial Respiration by Direct Intralaryngeal Intubation with a Modified O'Dwyer Tube and a New Graduated Air-Pump, in its Application to Medical and Surgical Practice. RUDOLPH MATAS.
2. Proper Foot-Wear and the Treatment of Weakened and Flat-Feet by Mechanical Devices for Maintaining the Adducted Position. JOHN A. SAMPSON.
3. Concerning Sugar-Forming Ferment in Suprarenal Extract. ALFRED C. CROFTAN.
4. Obstetric Forceps in Relation to Tuberculous Lungs, Cardiac Lesions, Anemia, etc. GEORGE E. ABBOTT.
5. Hysterectomy and the Removal of a Nine Months Fetus Dead in Utero for Fifteen Months etc. FRANK B. THORNBURY.
6. Perforation in Typhoid Fever, etc. RICHARD T. DAVIS.
7. Astasia-Abasia. GEORGE S. GERHARD.

1.—Rudolph Matas holds that **intralaryngeal insufflation** is a most valuable auxiliary in meting the emergencies of surgical pratice. Whenever the respiratory function is compromised and imperilled by acute surgical atelectasis. He suggest in this paper an apparatus for artificial respiration which consists of a **modified O'Dwyer tube and a new graduated air pump.** The instrument is described in detail and while the opportunity has not been afforded the author to apply this pump on a living subject its practical working capacity has been fully demonstrated on the cadavar and dog. A full description of the pump is given together with a number of cuts. [T. L. C.]

2.—John A. Sampson contributes a paper on **proper foot-wear and the treatment of weakened and flat-feet by mechanical devices for maintaining the adducted position.** He states that shoes for infants should be distinctly right and left the front of the shoe should be adducted, the inner edge straight, and there should be room along the straight inner edge for the front of the foot and the big toe to assume their positions of greatest strength. He recommends that adults should wear right and left stockings preferably with a separate apartment for the big toe. He discusses the subject in detail including what may be said for and against the use of the heel what constitutes the proper foot-wear and the treatment of flat-foot, and he gives directions for making a flat-foot brace. [T. L. C.]

3.—A. C. Croftan presents a preliminary report on **suprarenal glycosuria.** He states that the experiments described although incomplete, reveal the fact that the injection of suprarenal extract can cause the excretion of dextrose provided the quanity injected is sufficiently large. It remains to be determined why in the case of one animal more must be given than in the case of another to produce approximately the same excretion. The effects of the injections were in all cases transitory and all the animals recovered. [T. L. C.]

4. Abbott remarks that few practitioners of to-day would allow patients suffering from tuberculous lungs, valvular lesion of the heart, severe anemia or neurasthenia to accomplish delivery by themselves. He states that when the second stage of labor begins the patient should immediately be anesthetized, the vagina fully dilated by gradually introducing the elongated compressed hand, and the forceps then applied. [W. A. N. D.]

5.—Thornbury records a case of **hysterectomy and removal of a nine months fetus** dead in utero for fifteen months; the fetus also showed a transposition of the heart to the right side. [W. A. N. D.]

6.—Richard T. Davis reports the case of operation following perforation in typhoid fever which was performed under very favorable conditions in a miner's home. The patient recovered. [T. L. C.]

7.—G. S. Gerhard reports a case of astasia-abasia in a young colleague of twenty years, who first suffered from the condition of weakness in the legs while attempting to walk as well as a hesitancy of speech during convalesence from an attack of influenza. The patient was given the rest treatment and finally recovered completely. [T. L. C.]

VRATCH.

November 17, 1901. (Vol. XXII, No. 46).

1. Binocular Phenomenon. On the Physiology of Binocular Vision. A. I. SOCOLOFF.
2. On the Influence of Antipyrin on the Animal Organism. E. SUDZILOVSKI.
3. A Simple Method of Fixing Blood on Coverglasses. N. P. KORNILOVITCH.
4. Neuromyositis Caused by Chronic Alcoholism. S. G. LIPLIAVSKI.
5. On Intrauterine Injections. B. A. LIPOFF.
6. A Case of Nodular Erythema of Uremic Origin (erythema papulatum uremicum.) I. V. VVEDENSKI.

1.—Socoloff describes a few interesting phenomena of **binocular vision** which can be observed through a paper tube or a stethoscope. The existence of special **binocular centers** is suggested. The paper does not lend itself to abstraction and should be read in the original by those interested in the subject. [A. R.]

2.—Will be abstracted when concluded.

3.—Kornilovitch devised a simple and very efficient **method of fixing blood-smears.** A small camel-hair brush is washed in strong alcohol to remove the fat from the hair. The blood having been obtained in the usual manner, the brush is dipped in a solution of osmic acid 1 grm., sodium chloride 0.6 grm, and distilled water 100 c.c., and then in the exuding drop of blood. The latter spreads throughout the hair of the brush and is fixed by the osmic acid. By a light and even stroke the blood is spread by the brush on a clean cover-glass. Thus, the blood is both spread and fixed at the same time. The film is then dried in the air and stained in the usual manner. The author employed this method in the study of normal human and frog's blood and obtained excellent results. He believes that the method is also applicable to preparations of pus and pathological blood. [A. R.]

4.—Lipliavski reviews the literature of **neuromyositis caused by chronic alcoholism** and reports a case of this affection in a man, 39 years old. The patient died on the 41st day of the disease, and on autopsy the following conditions were found: Anemia of the heart, liver and kidneys; myocarditis and fatty degeneration of the heart; fatty liver; parenchymatous nephritis; hyperplasia of the spleen; hypostatic congestion of both lungs, and yellow softening of the right temporal lobe. During life neither albumin nor other indications of nephritis were found. The affection seemed to have been restricted to the nervous and muscular systems. [A. R.]

5.—Will be abstracted when concluded.

6.—Vvedenski reports a case of **erythema nodosum occurring on the sixth day of retention of urine.** The patient, a man 52 years old, was suddenly attacked by suppression of urine and had to travel on a wagon 4 days before he obtained relief at the hospital. The peculiar features of the case were (1) that there was no eruption on the face, neck, wrists and soles of the feet; (2) the eruption was symmetrical and ran a uniform course; (3) the kidneys were not affected, as neither albumin nor edema was observed; (4) the temperature remained normal during the entire attack; (5) the eruption occurred on the sixth day of retention of urine, the latter being the only factor in the causation of the erythema. [A. R.]

CENTRALBLATT FUER INNERE MEDICIN.

November 2, 1901.

The Origin of the First Sound at the Base of the Heart.
LUDWIG BRAUN.

For many years it was taught that there were six elements of the first sound; one each from the mitral and tricuspid closure, one each from the tension of the aorta and pulmonary artery, and one each from the closure of the aortic and pulmonary valves in diastole. It has been taught more recently, however, that **the sound at the base in systole and that at the apex in the same period are the same,** and that the former is not due to the vibration of the walls of the aorta and pulmonary artery. The latter teaching is, to Braun's mind, the correct one; and he reports a case which he believes demonstrates its correctness. The patient had pericarditis and the most important point in the physical examination was the observation that there were occasional extrasystoles, while at other times, at the period when diastole occurred, there was intermittency of the pulse. Examinations of the heart sound showed that practically every intermission was accompanied by a palpable and audible extracontraction. At the time of these extracontractions there were three distinct sounds to be heard at the heart apex and at the base: a systolic, corresponding with the usual systole of the heart; a diastolic; and an extrasystolic sound. This could not be interpreted in any way but as an indication that there was an **imperfect contraction of the ventricle, which was not enough to produce a pulse, but was enough to produce a sound at both the apex and the base.** That there was no pulse and no sound over the great arteries, indicates that the sound at the base is produced by the heart itself, and not by the vibrations in the wall of the artery. [D. L. E.]

November 24, 1901.

On the Method of Counting the Pulse.
ROBERT GRUENBAUM.

Grünbaum notes the difficulty in making exact records of the pulse for scientific purposes, and the difficulty that sometimes exists in the exact marking of a period of counting in the clinical examination of cases. He therefore gives an enthusiastic recommendation of the use of a stop-watch, which, he considers, reduces the errors very largely. [D. L. E.]

JOURNAL DES PRATICIENS.

November 2, 1901. (15me. Année, No. 44).

1. Permanent Brachial Anesthesia in Angina Pectoris. KLIPPEL.
2. The Diagnostic and Prognostic Value of So-called Albuminuric Retinitis. ROCHON-DUVIGNEAUD.
3. The Suppression of the Handkerchief in the Prophylaxis of Contagious Diseases. P. REILLE.

1.—Klippel reports the case of a man of 38 with **chronic aortitis** which followed an attack of typhoid fever at 19. **and angina pectoris.** Two weeks after severe pain in the left shoulder, arm, forearm, and fingers, permanent anesthesia occurred. He had vertigo, fainting spells, palpitation, dyspnea, and some cardiac hypertrophy. The anginoid attacks continued. Klippel believes that brachial anesthesia followed the angina, the pain of which showed the characteristic course of angina, always beginning in the precordial region, and radiating down the arm. The distribution was decidedly radicular, in some corresponding to the nerve roots. [M. O.]

2.—With severe Bright's disease a peculiar form of retinitis occurs, the so-called albuminuric retinitis which Rochon-Duvigneaud believes should be termed **nephritic retinitis.** This retinitis may be the only symptoms of the nephritis, or edema, uremia, etc., may occur. The lesions are generally symmetrical, white spots forming a perimacular star. It is of great value in diagnosing an unsupected nephritis, and always means a grave nephritis. Statistics show that cases of Bright's disease with retinitis are twice as fatal as those without: that about three-quarters of these patients die before the end of the second year of their nephritis; and that the mortality is a trifle less in women than in men, in private practice than in hospitals. Recovery is more frequent in the nephritis of pregnancy. In rare cases the occurrence of nephritic retinitis in a pregnant woman may cause the physician to induce abortion. [M. O.]

3.—Reille describes the opinions expressed by Dr. Guyot at the Congress on Hygiene in 1900, upon discontinuing the use of linen handkerchiefs, since they spread contagious diseases. There should be cuspiders in public places, and patients ought to carry some sort of portable receptacle for expectoration. Or handkerchiefs might be made of antiseptic paper, to be thrown into boxes specially provided in the streets. These should contain an

antiseptic solution, and should be emptied daily, their contents being destroyed. [M. O..]

EDINBURGH MEDICAL JOURNAL.

(*December, 1901*, Vol. X, No. 6.)

1. A Contribution to the Study of Fever in Lymphadenoma with Special Reference to Seventeen Reported Cases of Terminal Recurrent Fever in Lymphadenoma and Sarcomatous Disease. H. BATTY SHAW.
2. The Toxemic Basis of General Paralysis. JOHN MACPHERSON.
3. The Bacteriological Examination of the Renal Secretion in Certain of the Zymotic Diseases, with Subsidiary Differential Experiments. C. J. LEWIS.
4. A Plea for the Systematic Teaching of Heredity. G. ARCHDALL REID.
5. Atony of the Uterus as a Cause of External Hemorrhage during Utero-Gestation. JAMES OLIVER.
6. Report of Successes in the Treatment of Floating Kidney by a new Method. J. ROSS WATT.

1.—Shaw reports a case of lymphadenoma which was complicated by periodic rises of temperature, accompanied by severe constitutional disturbances. The affected lymph nodes enlarged during the attacks of pyrexia and shrank when the temperature fell. The skin over some of the masses was red, hot and painful. No suppuration was found in these lymph-nodes either at operation or at autopsy, and malarial organisms were not found in the blood during the progress of the disease, although they were looked for. The author, after a study of the case reported and after a review of the cases described by other writers, is of the opinion that **lymphadenoma with recurrent fever** is not a special form of disease and that the thermic phenomena are due to a terminal infection occurring during the last year of the life of these patients. The nature of the bacterial invasion varies and in some instances proof of such invasion is wanting. In some cases urobilinuria is a marked symptom and the spleen, as well as the lymph-nodes, becomes enlarged and tender during the attack of fever. In such cases the prognosis is hopeless. [J. M. S.]

2.—Macpherson considers that the following factors in our knowledge of the **toxemic causation of general paralysis** are established: (1) Syphilis precedes, in the great majority of cases, the appearance of the symptoms of this disease. (2) In the majority of cases the course of the disease is marked by recurrent febrile attacks, during which there is reason to believe that hyperleukocytosis occurs. Both these symptoms, fever and leukocytosis, point conclusively to a toxic infection of the system. The remittent character of the fever shows either that the toxin is irregularly discharged into the system or that the system acquires a periodic immunity from its influence. (3) Gastrointestinal disturbances form a well-marked clinical feature during the course of the disease and pathological alterations, especially in the mucous membrane of the alimentary tract are often found. Bruce and Ford Robertson have advanced the opinion that the symptoms of general paralysis are wholly preferable to gastrointestinal autointoxication. While Macpherson does not agree with such a sweeping assertion, he believes that such intoxication plays a very important part in the order and the development of its symptoms. [J. M. S.]

3.—The presence of specific micro-organisms in the urine in cases of zymotic disease has been frequently described, particularly in connection with typhoid fever. The subject is of great practical importance as well as of scientific interest, because on its solution depends the answer to the question of the routine disinfection of the urine in these diseases. Lewis believes that the healthy kidney possesses no power of casting out living organisms, although it is able to remove the products of their action. Any escape of bacteria through the kidney is only accomplished when there is functional interference with the integrity of the renal epithelium or some congestive or inflammatory condition. Bacteria, escaping by the way of the urine are usually accompanied by some other abnormal constituent, such as blood, pus, or albumin. One hundred and fifty-eight specimens of the urine of 45 typhoid fever patients were examined, in only one of which the bacillus typhosus was found. The author believes that there are 2 types of typhoid bacilluria; one occurring in severe cases of the fever, commencing during the height of the disease, accompanied by albuminuria, pyuria or hematuria and diminishing as the albuminuria diminishes, finally disappearing. In the second type, the bacilluria begins in the latter stages of the disease and persists into and during convalescence or even for months without causing severe symptoms; albuminuria is not an invariable accompaniment. This type is the one most likely to disseminate the disease. The organisms reach the bladder through the kidney; but Lewis believes in a smaller portion of cases than 25%. A case reported by Petruschky proves that the urine is infective and it is, therefore, imperatively necessary to disinfect any urine containing the bacillus. For this purpose heat is the best medium. Lewis has examined 51 specimens of urine from 16 cases of scarlet fever. From these specimens he obtained 2 pathogenic varieties of streptococci which he describes at length. He also examined 43 specimens of urine from 17 cases of diphtheria without in any case isolating the bacillus of Löffler. Some subsidiary experiments showed that the urine of healthy persons is more often sterile than that of the sick, and that sterile urine of healthy persons and of typhoid fever patients is a suitable culture medium for the bacillus typhosus. [J. M. S.]

5.—Oliver believes that **hemorrhage, in consequence of atony of the uterus,** is most commonly noted at about the sixth week, when the maternal vessels are developing into sinuses and the chronic villi are endeavoring to plant themselves in the uterine substance. [J. M. S.]

6.—Watt proposes to **treat floating kidney** by supporting the entire abdomen. Two wing-shaped pieces of sheet-lead which reach almost to the midline are applied under good long fitting corsets, so as to cover all the muscular area bounded by the various bony curves and elevations. A pattern is made in brown paper from which lead sheets are cut. These sheets are then tightly covered with holland or chamois and then moulded to the form over a chemise by hand pressure. Then apply corsets, and after pinning the lead sheets in position, securely stitch them. The patient should wear the corsets all the time that she is out of bed, putting them on before she gets up in the morning and only taking them off at night after she is in bed. The author reports 18 cases that he has treated by this method, with uniform success. [J. M. S.]

ZEITSCHRIFT FUER KLINISCHE MEDICIN.

Bd. XLIV., Heft 1 and 2.

1. Concerning Kidney Growths. DAVID VON HANSEMANN.
2. A Contribution to the Knowledge of Albumin Metabolism. HUGO LUETHJE.
3. On the Chlorides of the Stomach and the Cause of the Lack of Hydrochloric Acid in Castric Cancer. OTTO [illegible].
4. The Influence of the Salt-Content of Certain Spring Waters on the Condition of the Blood. HERMANN DUENSCHMANN.
5. Investigations concerning the Pathological Anatomy of the Human Stomach in Cases of Ulcer and Carcinoma with Known Chemical and Motor Function. W. A. BOEKELMANN.
6. Has Uric Acid an Antiseptic Action? ERNST BENDIX
7. The Influence of Aspirin on Intestinal Fermentation. HEINRICH SINGER.
8. On Systole blocked at the Auriculoventricular Junction. A. BELSKI.

1.—Hansemann gives a general discussion of the main points in the pathologic anatomy of various tumors of the kidney, and speaks of the frequency of the different forms

of tumors and the scheme of placing those tumors as to their pathologic nature. He recapitulates as follows:

1. Tumors from the parenchyma of the kidney—cystoma; adenoma, carcinoma.

2. Tumors from the stroma of the kidney.

A. Connective-tissue tumors—fibroma, sarcoma.

B. Vascular tumors—hemangioma, lymphangioma, adenoma, endotheliale (malignes).

3. Tumors resulting from embryonal errors.

A. Tumors of one kind of tissue—hypernephroma, lipoma, chondroma. (The latter never reported; only islands of cartilage have been found.)

B. Teratoma, with and without malignant change.

4. Pseudotumors—cystic kidney, echinococcus, hydronephrosis, etc. [D. L. E.]

2.—Lüthje gives an elaborate and interesting **study of two cases of typhoid fever,** during the disease, during convalescence, and a long time after convalescence, studying more particularly the **nature of the nitrogen retention which occurs after acute infectious disease.** He reaches the conclusion that the use of abundant food makes it possible to cause a very marked and very protracted nitrogen retention, if the food contains a very large amount of protein. His results make it seem possible that the retained nitrogen is wholly converted into muscle, or that it is united with water in the proportion in which water and nitrogen are found in the tissues. He also made some studies of the question as to whether different albuminous bodies have different actions in producing tissue. He studied the effects of the use of **large amounts of casein in one period, and of large amounts of meat in another.** One of the main points in this experiment was to determine whether it is true, as suggested before by himself and others, that casein —a protein somewhat difficult of digestion—is provided by nature in milk because it is very readily assimilated. His results speak against this view, as he found the **nitrogen retention decidely greater, in both dogs and human beings, when meat was used than when casein was employed instead.** The results do indicate, however, that there is a difference in the nutritive value of different proteins. One of his patients menstruated during the period of investigation; and he found, as others have, that **menstruation caused a decided nitrogen retention,** which could be attributed only to the menstruation itself, and not to accidental factors. This patient also had, during the period of convalescence, an extremely severe attack of tonsillitis, which practically prevented her taking food. The nitrogen loss during this period was very striking; but it was also extremely interesting to note the effect of the few days following, and the great rapidity with which the loss was replaced. [D. L. E.]

3.—Reissner contributes an extremely interesting report. Using the method of Martius and Lüttke for the determination of the chlorids, and also using a modification of this method which allowed him, he believes, to determine the actual value of hydrochloric acid, excluding the error due to ammonia and other extremely volatile chlorine salts, he reaches the conclusion that in at least a very considerable **number of cases of carcinoma the total chlorid excretion into the stomach is not only not reduced, but even actually increased.** He employs this fact as a means of giving, to a considerable extent, at least, an answer to the question as to the cause of the lack of hydrochloric acid in the stomach contents in carcinoma. It indicates that the stomach certainly secretes a sufficient amount of chlorids, and he believes his results also indicate that the difficulty lies not in a lack of secretion, but in the fact that the hydrochloric acid is abnormally neutralized. He thinks that **carcinoma provides an alkaline secretion** which neutralizes the acid of the normal gastric juice, and considers that there are **several factors active in reducing the HCl of the gastric contents:**

1. A reflex reduction of the excretion caused by the presence of an excess of alkali.

2. A general reduction of the amount of chlorids in the tissues, the stomach secreting an excessive amount of chlorids, and these chlorids being either passed off through the bowel or vomited; the tissue chlorid being, therefore, gradually reduced.

3. Arthrophy of the gastric mucous membrane.

The latter has often been considered the cause of the lack of hydrochloric acid. It is not, however, the only cause, for in many cases decided atrophy is not found. The author believes that **carcinoma changes the chemical conditions of the stomach only when it ulcerates,** and that ulceration alone is the cause of the reduction of the HCl. The reason that defficiency of the HCl does not frequently occur in carcinoma following ulcer is that in that case the carcinoma tends to grow into the depths of the gastric wall, and not to cause marked carcinomatous ulceration of the surface. The explanation which the author gives is, he thinks, sufficient to make clear several rather obscure facts: For instance, the frequent observation of absence of free HCl very early in gastric carcinoma, wholly unrelated to the situation of the carcinoma, and the occurrence of the same phenomenon in carcinoma of other organs. It likewise explains the frequently rapid devlopment of severe atrophy of the mucous membrane. Further it shows why ferments are often present when HCl is absent; in other words, why one element in the gastric secretion is altered and the others not. It also shows why the HCl should so frequently be present in carcinoma following ulcer. Then, too, it explains the rapid and often very sudden disappearance of the free HCl, and the return of the latter when the tumor is removed, if atrophy has not already occurred. [D. L. E.]

4.—The studies reported were based upon intraperitoneal injections of water from the Homburg Elizabeth Spring. The results of the study of the blood show that the water-content of the blood distinctly increased, the total dry residue decidedly decreased, and the amount of albumin in solution in the blood—that is, the amount of nitrogen-containing substance—decidedly decreased. The decrease in the albumin was decidedly more marked than the decrease in other substances in solution. This shows that, of the total amount of soluble substances in solution in the blood, there must be a relative increase in the nitrogen-free substances. The specific gravity of the blood decreased somewhat. Its osmotic pressure increased slightly. The spontaneous clot showed no definite changes that could be determined, but the serum showed the same changes as the total blood: It became richer in water, the dry residue decreased, the nitrogen-containing substances also decreased, and the latter relatively more than the total dry residue; there was also, at the same time, an increase in the osmotic pressure. The conclusion to be drawn was that those non-nitrogenous substances, which increased in the blood at the cost of the nitrogenous substances, were those which are osmotically more active than the albuminous bodies. These substances are the salts of the mineral water. [D. L. E.]

5.—Boekelmann gives a **description of the portions of gastric mucous membrane** which he has had opportunity to examine in cases which had undergone gastroenterostomy. In all, there were 44 cases; and in 38 of these, the secretion of the stomach was known. There were 17 cases of ulcer; 9 cases of carcinoma following ulcer, with increase of HCl; and 17 cases of primary carcinoma with slight or no HCl. The **changes he finds in ulcer** are as follows: While the glands are of normal length and there are no goblet cells, there is slight bulging of the necks of the glands, little or no increase of interstitial tissue, some round-cell infiltration in the superficial layers, few or no eosinophile polynuclear leukocytes, few or no hyaline bodies, numerous blood-vessels and hemorrhages, and a great many parietal cells —often more than normal. The principal cells showed much more marked disease than the parietal cells. Eight of the nine **cases of carcinoma after ulcer showed** much the same changes. Only one case was exceptional, in that the glands were very long, there was some connective tissue between them, there was a diffuse infiltration with

epithelioid cells, there were many goblet cells, and the gland lumen was much widened and irregular. The carcinoma cases showed extreme length of the gland ducts, while the secreting glandular tissue was often no more to be found. There was often increase of the connective tissue between the glands. The numbers of the glands varied greatly in different cases. The infiltration was frequently composed of large numbers of epithelioid cells and scattered deposits of lymphocytes. In most of the cases there was marked collection of polynuclear neutrophiles and of polynuclear eosinophiles. There was no definite relation between the numbers of the blood vessels or the amount of hemorrhage and the numbers of eosinophiles. Hyaline bodies were found in large or smaller numbers and in various sizes. The ducts of the glands were more or less widened. There were often cylindrical cells, similar to those seen in the intestine. The principal and parietal cells showed marked changes, in some places one form of cell being more decidedly diseased, and in other places the other variety. The shape of the glands was often altered or entirely lost, particularly in regions in which there was marked infiltration. Boekelmann directs attention to the fact that his statistics at least show that **carcinoma following ulcer is more frequent than is commonly thought.** In the operative cases there were nine instances of carcinoma following ulcer and seventeen of carcinoma which was probably primary. He has observed 35 other cases, 26 of which were primary carcinoma, and 9 carcinoma after ulcer. He gives a very brief discussion of the cause of the absence of hydrochloric acid from the gastric contents, inclining to the belief that it is atrophy, poor appetite, a general cachexia, and the other constitutional conditions which combine to produce the deficiency. [D. L. E.]

6.—Bendix—because of the fact that gouty joints, even if they become opened, through the breaking down of uratic deposits or otherwise, rarely suppurate—investigated the **action of uric acid upon cultures of various micro-organisms,** in order to determine whether uric acid has any antiseptic effect. He put so much uric acid into the cultures that some still remained undissolved, and he also used sodium urate, which is more freely soluble than uric acid. He found that no effect could be observed on colon bacilli, streptococci, staphylococci, or tubercle bacilli. He decides, therefore, that **the hypothesis that uric acid is an antiseptic is incorrect.** Probably **the reason that gouty subjects so rarely become tuberculous** is that gout attacks those persons that are, in their constitution, to some extent protected from tuberculosis. The reason that the joints do not often suppurate in gout, even when opened, is probably that, because of the chronic thickening and because of the thick deposit of urate and other salts, invasion of bacteria is difficult. [D. L. E.]

7.—The **effect of aspirin** was investigated by **studying the aromatic sulphates of the urine** during periods when aspirin was given and when it was not given. Similar investigations were undertaken with oxgall. No effect was obtained from the latter, while with aspirin there was a very slight rise in the excretion of ethereal sulphates. Singer believes, however, that some of the etheral sulphates of the urine may come from increased albuminous decomposition in the tissues. He therefore investigated the indigo of the urine, and found that, while in one instance the indigo seemed to be very greatly decreased by using aspirin, in others it increased. Hence, he thinks there is **no evidence that aspirin actually reduces the fermentation in the intestine.** [D. L. E.]

8.—Belski reports the case of a patient with marked arteriocardiac sclerosis, who had extremely irregular pulse-rhythm, occasional Cheyne-Stokes breathing, and general venous stagnation. The chief point in the case was the fact that there frequently occurred a marked systole followed by a short systole, and then a long pause, during which there were in the jugular vein weak, but, nevertheless, distinct, pulsations that followed in the regular rhythm of the pulse. During this time there was complete quiet over the heart. The author believes that this series of events definitely indicates that there were, during the period of the venous pulsations with cardiac quiet, **systoles of the auricle that were blocked at the junction of the ventricle;** and he considers this case added evidence of the truth of Wenckebach's teaching that such blocked systoles occur. [D. L. E.]

ARCHIVES DE MEDECINE DES ENFANTS.

November, 1901. (Volume IV, No. II).

1. Vomiting with Acetonemia. A. B. MARFAN.
2. Diphtheria in Nursing Infants. CRISTEANU and J. BRUCKNER.
2. A Case of Fracture of the Left Parietal Bone. ARMAND BERNARD.

1.—Marfan describes an acute affection in children from 1 to 10 years of age, characterized exclusively by **vomiting and acetonemia.** It is most frequent from 3 to 8 years. In 8 years of practice, Marfan has seen 25 such cases. The vomiting occurs in healthy children, with slight headache, anorexia, and a distinct odor of acetone to the breath. This odor may even precede the attack of vomiting. Everything is vomited and nausea persists. The urine has the same odor of acetone, and as much as 0.6 g. of acetone has been found to the liter of urine. There are perhaps slight fever and irritability, but these are not constant. This condition lasts as a rule five or six days, the children losing flesh and becoming much weaker. Marfan's cases ranged from three to fourteen days in duration. Recovery occurs suddenly, and convalescence is rapid. The affection may recur at long intervals. Several children in one family are sometimes affected. While its cause is unknown, Marfan believes that it is not gastric, but probably some sort of intoxication. The prognosis is always good. Sugared ice water with magnesium sulphate in small quantities forms the only treatment. The condition is often primary, but may accompany some other disease. Marfan believes that the affection is closely allied to periodical or cyclical vomiting. Several cases are described. [M. O.]

2.—After giving the case-histories in full of five **infants with diphtheria,** Cristeanu and Bruckner conclude that diphtheria is rare in nursing infants, especially soon after birth; that should there be distinct contagion, the infant will contract diphtheria easily; that the mortality is much higher among nursing infants, because of their decreased resistance, and the difficulty in forming the diagnosis; that the bacilli enter by the mouth; that nasal diphtheria is secondary from the pharynx, while laryngeal and pulmonary complications are very rare; that the treatment consists of prophylactic injections of antitoxin in times of epidemic, and larger injections later, repeated when necessary, with some local treatment; and finally, that, in spite of the antitoxin treatment, the mortality reaches 60%. [M. O.]

3.—Bernard reports an interesting case of **comminuted, complicated, fracture of the left parietal bone,** in a boy of 7. The wound was opened, enlarged, the fragments removed, and a tear discovered in the transverse sinus, which was tamponed. The gauze was only removed on the nineteenth day. The child left the hospital in perfect health, six weeks after the accident had occurred. [M. O.]

Total Evisceration in a Four Months Fetus.—Dervaux describes a fetus between three and four months, with protrusion of the liver, stomach, intestines, spleen, pancreas and kidneys, through the abdominal wall. In the liver were two cysts of an unknown nature. Besides the hernia of the stomach, intestines and kidneys, there were marked arrest of development of the umbilicus and curvature of the spinal column. The hernia took place before the abdominal wall had ceased to grow, as this was found under the protruding organs. The cause of this interesting and rare condition is unknown. (*Journal des Sciences Médicales de Lille*, August 10, 1901, No. 32.) [M. O.]

Original Articles.

ON THE SO-CALLED IDIOPATHIC DILATATION OF THE ESOPHAGUS (SACCULAR DILATATION OF THE ESOPHAGUS WITHOUT ANATOMICAL STENOSIS)*

By PRIVAT DOCENT H. STRAUSS, M. D.,
of Berlin, Germany.

The demonstration of a postmortem specimen of the so-called idiopathic dilatation of the esophagus, or as I suggest calling it, "the saccular dilatation of the esophagus without anatomical stenosis" appears to be justified on account of its rarity. The specimen was obtained four years ago in the third medical clinic of the Charité at the autopsy on a young man, 29 years of age, who up to his fourteenth year had always been healthy, and who from that time on showed in a more or less pronounced manner the whole category of symptoms as it is presented by patients with idiopathic dilatation of the esophagus when contents of the latter are conveyed into the stomach with difficulty. As the clinical aspect of the case is not to be made a subject of discussion in this paper, it will only have to be stated, that there exist in the patient at the same time the symptoms of an apepsia gastrica with motor insufficiency, due to cicatrices of the peritoneum which surrounded the pyloric portion of the stomach, as discovered by Geheimrath König during a laparotomy; furthermore the passage from the esophagus to the stomach was at times not only sufficiently patulous for food, but also for the sound. This I could easily demonstrate while the adhesions were being separated by Dr. König during the laparotomy, as by means of a tube introduced into the mouth of the patient the stomach could be considerably distended. The patient died after the laparotomy and the separation of the adhesions had caused an improvement for a few months, death being due to asthenia which followed an exacerbation of the esophageal lesions, and at the autopsy the dilatation of the esophagus which you now see was found.

The esophagus was found as a wide tube situated before the spinal column and extending torsively with a sickle shaped bend toward the right. At its middle and lower portion the esophagus was markedly dilated, appearing in connection with the stomach, like an hour glass stomach whose upper portion is situated in the thorax.

The esophagus began markedly to dilate 9 cm. below the arytenoid cartilage, and 18 cm. below it attained a circumference of 15 cm., again to reach a circumference of 7 cm., 2 cm. above the cardia. The circumference of the cardia itself was 38 cm. The length of the dilated portion was 30 cm., the total length of the esophagus therefore about 40 cm. that is, about 12 to 15 cm. more than the normal. At that portion of the dilatation situated on the right there was a slight sacculation at the lower portion of which and above the cardia there was present a thickening of the musculature which is still visible. The only other findings contained in the autopsy report that are worthy of mention are a few adhesions between the colon and the pyloric region, the stomach itself was not found dilated at the postmortem examination; the circumference of the pylorus was 6 cm. In addition there were present a slight dilatation of the heart, a fresh fibrinous pleurisy as well as a great number of bronchopneumonic areas in both lungs.

The close examination of the mucous membrane of the esophagus will still show numerous superficial and deeper losses of substance as well as scars, the mucous membrane being also thickened in various places, so that the epithelium protrudes as gray, warty prominences. The microscopical examination of the muscular structure which I have made showed no changes in the muscle fibres themselves, nor was there any separation of the muscle fibres to be found on examining the posterior part of the esophageal dilatation.

If we compare our specimen with those specimens which are described more in detail, we must consider the dilatation in our case of considerable importance, as it belongs to those instances which deserve to be called "a marked dilatation"; for very few cases are known in literature in which the dilatation attained a more extensive degree. The most note-worthy of all is that of Luschka, in which the length of the spindle shaped dilated esophagus reached 46 cm. and the maximum circumference fully 30 cm. Still larger maximum peripheries were observed in the cases of Giese and Kreuder, which measured each 21 cm., as well as cases of Leichtenstern, Griffith, Hanney and Spengler in whose cases the circumference varied between 10 cm. and 17.5 cm. A circumference similar to our case (14 to 16 cm.) was observed by Hölder, Töply, von Monakow, and Schmidt. We meet with circumferences of 10 to 12 cm. in cases of Lindau, Giese, Kreuter, Stern, Jaffe and Rumpel. In the cases of Zenker, Rumpel and von Strümpell the circumference was still less. Fleiner speaks of cases in which the circumference varied between that of a man's fist and that of an apple.

Of particular interest as to the theory of the origin of the idiopathic dilatation of the esophagus has always been the condition of the *musculature* in the distended portions, because a number of authors like von Miculicz, Mermod, Metzler, Einhorn, Leichtenstern, Rumpell, von Monakow, Lenhartz, Maybaum, Westphalen, Rose, Dinkler, Dauber, and others, have contended that spastic processes in the cardiac region are responsible for the affection. Others again, like Rokitansky, Fenker, Kreuder-Boström, Netter, and, in certain cases, also Rosenheim, believe that a *primary atony* of the muscular membrane is the cause of the dilatation, and von Strümpel states that in his case possibly a bend of the esophagus in its lowest portion has impeded the passage of the esophageal contents. As far as *anatomical* examinations of the condition of the esophageal wall are known, a hypertrophy of the muscular membrane has been found by Luschka, Giese, Zenker, von Strümpell, Leichtenstern, Kreuder, von Monakow, Rumpel, Töply and others. Changes

*Lecture and demonstration at the 19th Congress of Internal Medicine at Berlin.

in the musculature of a different nature have been described by Klebs, Kreuder and others. Klebs found a fatty degeneration in the muscles, Stern a small-celled infiltration and clefts between the individual muscle fibers, as if the latter had been forced apart. Kreuder, in an article supervised by Boström, claims that there are primary inflammatory processes originating in the mucosa or submucosa which gradually extend to the muscularis and then, by affecting the contractility of the organ, finally lead to dilatation of the same. Some time ago Rokitansky stated that repeated catarrhs with suppuration, excluding mechanical obstructions, were likely to be the cause of the dilatation; recently Bollinger also expressed a similar opinion, considering an idiopathic chronic inflammation, analagous to processes in other organs, as the bladder, large intestine, stomach, to be the possible cause of the affection. Fleiner recently reports an observation, in which the longitudinal musculature of the esophagus separated in a spindle shaped manner at the place where there existed a spindle shaped dilatation of the esophagus of the size of a small apple, and in which the individual bundles radiated downward on the wall of the ampulla in the shape of whitish, isolated streaks as occurred in a similar manner in Stern's case.

As, on the one hand, a number of authors have found a hypertrophy of the musculature at the lower pole, and, again, others, such as Fleiner, Griffith, etc., observed inflammatory or degenerative changes in the esophageal wall instead, it is obvious that the whole question still requires a critical inspection as to the *final cause of the cardiac spasm* and the part played by *etiological factors* in the pathogenesis of the dilatation of the esophagus. It is, therefore, this latter question which we have to consider, because Rumpel already spoke of a congenital weakness of the esophageal wall, and Wibrecht regarded the affection to be congenital. But it was Fleiner before all others, who quite recently ascribed the cause of the dilatation to an abnormal relaxation of one or several enteromeres. Regarding the details I refer to Fleiner's explanations and will only state here, that *in determining the cause of the disease I myself decidedly count upon disturbances of development* and further upon spasms in the cardiac region, but my views of this matter are a little at variance from the usual ones, and I wish to express the latter.

It is undoubtedly certain that those authors, who ascribe the cause of the affection to a primary neurogenous cardiospasm, are correct in so far as cardiospasms actually occur in functional neuroses, and that patients afflicted with the fully developed disease show signs of a high graded irritability of the nervous system. My own experience warrants me to confirm this fact, for not only the patient who furnished the post-mortem specimen, but another patient of the same category, whom I had an opportunity to observe for some time in the meanwhile, was suffering with high graded neurasthenia. But it is doubtful whether the neurosis may not frequently be the consequence of so painful and weakening a disease, and it is further quite remarkable that the disease does not prevail as much among the female as in functional nervous affections generally. Besides, the extent of the dilatation and the intensity of the thickening of the wall are contrary to our experience of the consequences of neurogeneous spasms, especially if we consider that only in very rare instances (in chronic cicatricial stenosis) similar symptoms are observed. Apparently matters can not be so very simple here; in fact, it is very probable that they are quite complicated and that *in the majority of cases a number of causes are participating in the origin of the disease.*

If we look for these, a number of factors deserve consideration which, in my opinion, do not seem to have been sufficiently appreciated until now. In the first place, it is remarkable that a very large number of cases presented *the first pathological symptoms just during the first three decades of life*, furthermore, that in the cases hitherto reported the dilatation almost always affected the lower, or the lower and middle, or the entire portion of the esophagus, so that the distended esophagus had the appearance of an arched bottle. The upper portion alone was dilated in only one case (A. Fränkel-Rosenheim) so that it presented the shape of a tulip. The frequency of the first occurrence of the disease just in the first decade of life justifies the question, whether impediments to development of a post-fetal character, which, it is true, may originate already in the primitive germ, are of moment for the causation of the disease. This question is also suggested by the fact that in the existing reports the remark is found twice, that a *gastroptosis* was present synchronously, and that in my second case, only recently observed, I could demonstrate so very pronounced a form. I lay especial stress upon these observations which for the future investigation of the case in question certainly deserve a particular consideration, because those forms of gastroptosis, which are of interest here, I have designated elsewhere as a *constitutional impediment to development*, which was recently expressed in a similar manner by F. Kraus-Gray. The synchronous presence of a gastroptosis can be used as a support for the opinion which I have advanced here, and it is now the question how to conceive the manner of origin of the so-called "idiopathic" dilatation of the esophagus from this point of view. Similar to Fleiner I likewise refer to the investigations of Mehnert to answer this question, but I consider a few other points than Fleiner does. This author goes back to the enteromeres and looks for the cause of the dilatation as being in the abnormal relaxation or elasticity of a Mehnert's esophageal spindle section or enteromere, and further calls attention to the fact that the dilatations located above the antrum cardiacum are also above a so-called physiologic narrowing. I myself would consider the enteromere only in the second place, and in the first refer to the conditions as given in the esophagus of *adults* under physiological conditions. To this end I have, besides Mehnert's enteromere schemes, drawn from Mehnert's specifications a double scheme—in a slightly different form also to be found with Mehnert—which on the right contains the physiological

stenoses as given by anatomists, and on the left the statements of corrosive cicatrices as contained in the clinical literature. A comparison of both sides of the scheme will prove that the different investigators were most frequently surprised by the stenoses from the hiatus of the esophagus down, and also in the neighborhood of the bifurcation and of the aortic arch. It is also known that the lower portions of the esophagus are normally wider than the superior ones. In fact, Mehnert describes the esophagus of a healthy person which actually represents a transition from a normal to a distended esophagus. The mostly observed form of a dilatation of the esophagus is therefore *only an excess of a condition which is already indicatively present in the normal state*, and this seems to be caused by the fact that the region between the bifurcation and the hiatus of the esophagus is of greater width and possibly also possesses a greater elasticity of the wall than these two places, and the portions of the esophagus located above and below them. These portions show clinically a different conduct in the normal condition already. The *esophagoscopical* examination will readily show us that the portion near the pharynx is normally closed, while the portion in the thorax as far as the hiatus of the esophagus normally gapes. This symptom is generally explained by the fact, that a negative pressure prevails in the thoracic cavity, but I do not believe it impossible that the pharyngeal portion of the esophagus is closed, because it alone —except the region of the hiatus esophageus— possesses *a varying amount of transversely striated muscle fibres* which are well able to *enhance the contractive energy of this portion of the esophagus.*

This explanation, however, only sets forth that, according to theoretical reasoning, the portion between bifurcation and hiatus esphageus may offer less resistance to *expanding influences than the portion above the bifurcation*, but it does not answer the question of such moments as may cause stagnation. If it is permissible to establish a new hypothesis in this respect, I would like to refer to the observations which Mehnert made in the same paper regarding the position of aorta and esophagus at the different stages of life. The aorta in the newborn, according to Mehnert, is immediately prevertebral, and during childhood and youth gradually advances to the left and posteriorly; but the most apparent displacement occurs between the second and third decades of life and causes an increasing distancing of the lowest portion of the esophagus from the aorta. If this receding of the two organs takes place imperfectly or not at all, it is quite conceivable that in the neighborhood of the hiatus esophageus the aorta exerts a pressure upon the esophagus, causing a *slight* narrowing of the lumen and with it a *slight* degree of stagnation; and a stagnation is very apt to cause *irritations of the esophageal mucous membrane*—inflammations and excoriations—and these again, as is well known, may easily lead to spasms of the cardiac region, i. e., the region from the hiatus esophageus down (the region from the hiatus to the cardia may be considered functionally equivalent, according to Leichtenstern). These spasms originating in the irritated esophageal wall may become more violent, as the region of the hiatus esophagi also contains an admixture of transversely striated muscular fibers; and may in turn become the further cause of a progressive dilatation of the wall which patients, who do not die until late, according to clinical experiences were often afflicted for years with the affection[1].

The objection to this hypothesis is not admissible that a number of cases are reported in the literature in which the affection did not become manifest until in an advanced age, because there are cases in which the autopsy revealed a decided dilatation of the esophagus while no symptoms of an affection of this organ were ever noticeable during life.[2] The fact that most of the cases can, by proper treatment, be brought into a certain state of latency, also goes to prove that the course of the affection may for *a long period* be a latent one. It seems to me that a *compensatory, enhanced activity of the musculature, which is rendered feasible by an intense hypertrophy of the wall*, plays as important a part for the presence of a clinical latency, as I take the *presence of lesions of the mucous membrane to be essential for the production of so-called incarceration symptoms.* As to the formation of the obstruction, I will state that both my patients presented the same long, lean formation of the trunk which is also characteristic of the constitutional form of gastroptosis, and that, in the meanwhile, at the autopsy of an individual afflicted with this constitutional anomaly, a man of 21 years with a heart defect, I have observed an immediately prevertebral position of the aorta angusta, besides a gastroptosis.[3] It is true, a dilation of the esophagus was absent in this instance, so that I believe a third factor, a constitutional weakness of the wall, must be present.

However, I do not wish to enter upon this question in detail, as I believe in several causes, as stated; and it is only my intention to present the hypothesis, that a developmental obstruction causes a stenosis of the lowest portion of the esophagus, the "pars sphincteria inferior", as I am inclined to call the region between hiatus and cardia, and that a secondary dilatation is brought about in the described manner. At the same time I do not object to the supposition that such a stenosis may possibly be caused by the fact that the growth of the "pars sphincteria inferior" did not keep up with that of the remainder of the esophagus, so that a *relative* stenosis might be caused in this manner. But under all circumstances must we look for the most frequent cause of the *vascular dilatation of the esophagus* without anatomically demonstrable stenosis to be the coincidence of *several* synchronously acting factors.

1. cfr. Two cases of Faure and case 3 of Kreuder.

2. cfr. The cases of Luschka, Purton, Rokitansky (Case 2), Spengler, Giese, Toeply, Kreuder (Cases 2 and 3), and others, whose age was between 40 and 65.

3. I wish to state here that I have frequently observed habitus enteroptoticus and gastroptosis in constitutionally weak heart conditions, and that I consider it advisable to look into the relations of the aorta augusta to these conditions.

4. As to the literature cf. Centralblatt fuer die Grenzgebiete Bd. III., 1900, Sammelreferat von Dr. Alfred Neumann, also Fleiner, Muench. med. Wochenschr., 1900, No. 16, and Mehnert Archiv. f. klin. Chir., Bd. 58.

GASTROPTOSIS AND GASTRIC MOTOR INSUFFICIENCY.*

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The term enteroptosis is given broadly to the symptom complex usually associated with downward displacement of the different abdominal viscera, especially of the tranverse colon, right kidney, stomach, and more rarely of the liver. Study of recent literature suggests that the term is used somewhat indiscriminately. A floating liver and kidney can usually be recognized by palpation, while ptosis of the stomach is comparatively easy to diagnose where inflation is employed, but the downward displacement of the intestines is apparently assumed without inflation in those cases showing other ptoses or where Glenard's belt test is positive. That enteroptosis in the true sense of the term is very important and very frequent, is of course well known, but it may be questioned whether the presence of displaced intestines can be taken for granted in all such cases. Experience has shown the risk of assuming changes in the shape or position of the stomach without inflation, and I can see no reason why the same rule should not apply to changes in the position of the intestines.

It is the purpose of this paper to consider some cases of gastric motor insufficiency in which displacement of the stomach was the dominant feature.

Exact figures as to the frequency of gastroptosis are hard to obtain, for a number of reasons. As will be shown, it may exist absolutely without symptoms. In certain conditions its presence appears to be nearly constant. Consequently, to obtain statistics of its frequency, it would be necessary to examine a number of individuals with and without gastric symptoms. Thus Meinert found it in 90 per cent. of all the cases in his gynecological clinic, and in every one of a large number of chlorotic women. In a number of men examined by the same observer it was found in 5 per cent.

The tables which follow were taken from the records of fifty consecutive cases which occurred in the writer's service in the Medical Dispensary of the University Hospital and in private practice. All of them presented symptoms of gastric motor insufficiency, and in each an examination of the size and position of the stomach was made by inflation.

Total cases examined	50
Cases showing gastroptosis	20
Cases showing dilatation	17
Cases of uncomplicated general dilatation	14
Cases of uncomplicated gastroptosis	5
Cases of combined gastroptosis and general dilatation	3
Cases of combined gastroptosis and dilatation affecting the pyloric end alone	14

It will be seen that a distinction is made between gastroptosis with general dilatation and with dilatation of the pyloric end alone. Practically all of the vertical or subvertical stomachs show dilatation of the pyloric end. As will be shown, this may be regarded as a direct result of the downward displacement, and it is probable that in such cases showing pyloric dilatation the primary condition was gastroptosis, and the dilatation was secondary. On the contrary, where the dilatation affects the cardiac end as well as the pyloric, the primary factor is somewhat in doubt, but the probable sequence of events is first dilatation and then gastroptosis. In other words, the cases of gastroptosis and general dilatation belong under the head of primary dilatation, while gastroptosis and pyloric dilatation belong to the primary gastroptoses.

Men examined	30	
Men showing gastroptosis	5, or 16	per ct.
Men showing uncomplicated gastroptosis	0	
Men showing uncomplicated dilatation	10	
Men showing gastroptosis and general dilatation	2	
Men showing gastroptosis and pyloric dilatation	3	
Women examined	20	
Women showing gastroptosis	15, or 75	per ct.
Women showing uncomplicated gastroptosis	5	
Women showing gastroptosis and general dilatation	1	
Women showing gastroptosis and pyloric dilatation	11	

These figures suggest the following conclusions:

1. In cases showing symptoms of gastric motor insufficiency, ptosis of the stomach is more common than changes in the shape and size. The ratio is as 40 to 34. The commonest gross lesion found clinically was gastroptosis and pyloric dilatation, which occurred in 43 per cent. of the cases showing changes in size and position. The next in frequency was general dilatation alone (35 per cent). Next comes gastroptosis alone (20 per cent.), and the least common is general dilatation and gastroptosis (10 per cent.). However, the two sexes differ so in their relations to the condition that the above combined figures are of little value.

2. Gastroptosis is much more common in females. Thus, in sixteen women showing changes in size and position, gastroptosis occurred in all but one, or 94 per cent. All the cases of uncomplicated gastroptosis were women, and in but two could dilatation be considered the primary condition. This is in accordance with the figures of other observers, and can easily be explained when the etiology of the affection is considered.

3. In males general dilatation is more common, and occurred in all but three of the fifteen men showing changes in the shape and size of the stomach. Uncomplicated dilatation is much more common, and no case of gastroptosis alone was noted. Three cases showed gastroptosis and pyloric dilatation.

4. These figures combined with those of other observers indicate that ptosis of the stomach is more frequent than has been supposed, and deserves

*Read before the Philadelphia County Medical Society, November 13, 1901.

quite as much consideration as the changes in shape or size. In women showing demonstrable alteration in the position and size of the stomach its presence is almost constant.

Pathology. Gastroptosis implies an absence of the stomach from its normal position in the epigastrium. When a displaced stomach is inflated, its upper border appears as a concave line, sometimes almost vertical, sometimes slanting from below on the right to upward on the left, and sometimes lying horizontally. According to the degree and character of the ptosis, the condition divides itself into two varieties: First, the total displacement downward (*descensus in toto*), and, second, displacement of the pyloric alone. The first position is rare, owing to the firmness of the attachment of the cardiac end.

That the stomach ever descends as a whole is denied by Meinert, but several cases on the list belong to this class,and Riegel and most other authorities agree that it may take place. Total descent implies loosening and stretching of the gastrophrenic ligament or a lowering of the diaphragm. The lesser curvature is usually displaced so as to be at the level of the umbilicus, and the lower border half way to the pubis. Its shape has been variously compared to a sling or hunting horn. The pylorus and the cardiac end are at the same level and occupy the horns of the crescent.

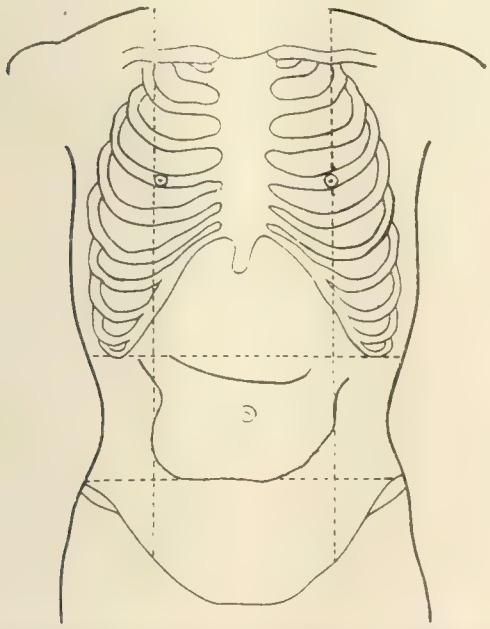


FIGURE 1. Total descent of the stomach. Female aged 25 years. Air inflation.

Descent of the pylorus alone is by far the most common form. Then the cardiac end occupies approximately its normal position while the pylorus is depressed downward and toward the median line. The stomach approaches a vertical position, and its shape has been aptly compared by Kelling to a fish-hook, of which the length of degree of curvature is variable. For the sake of convenience and depending upon the degree of displacement of the pylorus, the different forms may be classified as vertical and subvertical.

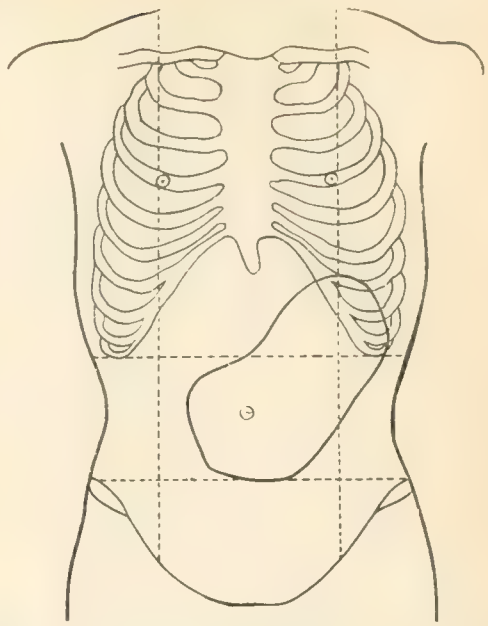


FIGURE 2. Subvertical stomach. Male, aged 35 years. Air inflation.

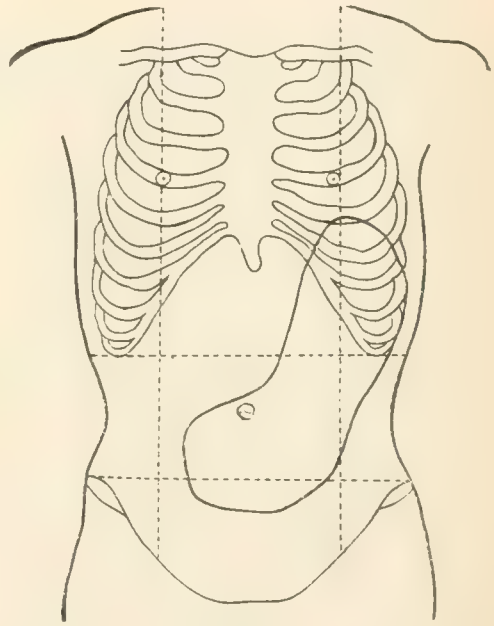


FIGURE 3. Vertical stomach and pyloric dilatation. Female, aged 43 years.

In the series here reported five cases showed total descent, all of whom were women; six were cases of vertical stomach, also all women, and the remaining nine were subvertical, including all men. It will be seen that not only three-quarters of the cases, but also the severer forms of the condition occurred in women.

Simple ptosis of the stomach may be associated with a greater or less degree of dilatation. As has already been said, this may be of two varieties: First, pyloric dilatation, which is probably a direct result of the increased demand upon the stomach muscles, due to the physical conditions arising in gastroptosis, and, second, general dilatation affecting the cardiac end as well as the pyloric. It is

probable that in cases of pyloric dilatation the primary condition is gastroptosis, while in cases of gastroptosis and general dilatation it is reasonable to suppose that in a large percentage the dilatation is primary.

Etiology. The abdomen may be compared to a vessel filled with water. As the abdominal organs are practically impressible and approximately of the same weight, there is present a condition simulating hydrostatic pressure, and it can be assumed that the uppermost organs, the stomach, colon, and liver, are upheld by and, as it were, float upon the intestines and organs beneath them.

The stomach and colon have a certain degree of motion depending upon the amount of their contents and upon the movements of respiration, change of position, etc. Ligaments control these movements and do not support more than a very small portion of the absolute weight of each organ, perhaps, as Schwerdt says, not more than one-eighth. The analogy is very close between the support of the viscera by their ligaments and the support of a man immersed in water by a very weak cord which keeps the man's head above water, but, of course, would support but a very small fraction of his weight out of water.

There is a considerable difference of opinion concerning the power of the ligaments to hold the entire weight of the organs in case the support of the abdominal walls and viscera below them was withdrawn. Meinert and Meltzing say that they cannot do so, while Blecher, Stilling, and others, following the investigations of Scarpa and Hutsche, think that the strength of the peritoneal folds is such that they may not only support an organ alone, but may withstand a considerable amount of pressure from above.

A very frequent cause for ptosis of the abdominal organs is an increase in the volume of the abdominal cavity which produces a sinking of the contents of the lower half, and represents the lowering of the surface of the fluid upon which the stomach and colon float. Another cause is pressure from above, which, of course, will produce displacement by forcing them deeper into the lower abdominal cavity.

Assuming that the ligaments are not strong enough to support the actual weight of the viscera, then it is easy to understand how, when all the support falls upon them, stretching, and ptosis takes place. If, however, the ligaments are strong enough to hold the organs in place when the support below is removed, or when pressure is exerted from above, then, to explain the occurrence of downward displacement, we must assume a congenital or acquired weakness which allows them to stretch.

In favor of the second view is the fact, that all cases of pendulous abdomen, repeated pregnancy, tight lacing, and narrow thorax do not show visceral ptosis.

How a structure like the peritoneum could become weakened idiopathically is hard to understand, and the theory that in such cases the ligaments are congenitally weak is the only one that can be easily assumed. The ptosis remains latent while circumstances are favorable and no abnormal strain is put upon the supporting bands, which are strong enough to control the movements of the floating organs, but give way when greater strain is brought upon them.

The conditions oftenest associated with increase in abdominal volume are repeated pregnancies, assuming the erect posture too soon after parturition or after the removal of abdominal tumors or ascites, the absorption of deposits of fat about the abdomen from wasting diseases, and general muscular relaxation.

Perhaps the most frequent cause of downward displacement is pressure from above, and is usually the effect of lacing or dragging of the skirt-band. The pressure comes over or just above the stomach and naturally tends to displace it downward. A rarer cause of pressure is depression of the diaphragm in cases of narrow thorax, funnel or pigeon-breast, or displacement downward of the liver from any cause.

The theory of Glenard, that all displacement of the abdominal viscera arises from the presence of adhesions, which cause the different organs to become displaced through mutual traction, is now generally considered to be untenable.

It has been said by some writers that phthisis predisposes to downward displacement on account of the associated narrow thorax. Kelling has shown, however, that while gastroptosis is not common in the earlier, it is quite frequent in the later stages of the disease, and it is his theory that it is the emaciation and not the shape of the thorax that is responsible.

J. Clarence Webster, of Chicago, has recently called attention to a condition that is very frequently associated with enteroptosis. This is separation of the recti muscles and stretching of the linea alba. It exists most frequently in women who have born many children. The enteroptosis in such instances is really a form of hernia. Owing to the stretching of the fibrous tissue around the umbilicus, the amount of space in the abdominal cavity is increased and a ptosis occurs in a manner previously mentioned.

Stiller has lately advanced the theory that visceral ptosis is always associated with the atonic habit and with cerebro-sympathetic neurasthenia. He says that a floating tenth rib is almost a constant stigma of such a condition. Stiller has many supporters, but the observations of Meinert and Zweig have demonstrated the rarity of such a phenomenon in gastroptosis. It was present in but one of my cases, a young woman of very neurotic temperament, who showed a floating right kidney and considerable gastroptosis.

Diagnosis. The symptoms of that stage of gastroptosis in which the patient most frequently consults a physician are those of gastric motor insufficiency, and perhaps dilatation which has supervened upon downward displacement. It is, of course, of supreme importance to differentiate between gastroptosis and general dilatation without displacement since the treatment of each is suited to itself alone.

The recognition of gastroptosis as a frequent cause for gastric insufficiency renders a routine examination of the size and position of the stomach

indispensable in all cases showing functional disturbances.

The patients presenting themselves with gastroptosis are usually emaciated and often anemic, but not to a greater degree than is common in all severe disturbances of the gastro-intestinal tract.

The abdomen is often pendulous, but may be decidedly flat. A very characteristic condition, however, is that of relaxation of the abdominal walls. This renders the abdomen extremely easy to palpate, and a floating kidney or liver can hardly escape observation. Inspection shows an abnormal flatness in the epigastrium, with fulness below the umbilicus. Owing to the absence of the stomach from its normal position in the epigastrium the pulsation of the aorta can be plainly felt. Indeed, the patients often notice and complain of this themselves. Above the umbilicus a transverse band or cord can be frequently felt, which Glenard took to be the transverse colon, but which later authorities usually consider to be the pancreas. W. F. Hamilton has demonstrated in one case by operation that this transverse band was indeed the pancreas.

A sign much employed by certain observers in demonstrating the presence of abdominal ptosis is the "belt sign" of Glenard, which is elicited by standing behind the patient, placing the hands on the lower abdomen, one on each side, and lifting upward and backward. If the procedure relieves the patient of the sense of dragging usually complained of in such cases, it is assumed that downward displacement of the stomach, and probably of the intestines, is present.

Webster suggests a sign which is of value in determining the amount of separation of the recti muscles in those cases in which enteroptosis is due to this cause. With the patient in the recumbent position the examiner places the finger tips of the right hand over the linea alba near the umbilicus, while with the left he grasps the patient's hand, and she is asked to raise the head and chest in order to contract the abdominal muscles. Through the sense of resistance thus given by the recti the extent of their separation may be determined.

The various procedures to determine the size and position of the stomach previous to the introduction of the various methods of inflation are not worthy of serious consideration.

The numerous fallacies of all the methods applied to an undistended stomach have been fully dealt with, and space will not be taken for their consideration. (See papers of Pepper and Stengel, Musser and Steele, and others.)

The following case is a good illustration of the difficulties encountered in attempting to outline an undistended stomach:

CASE 9.—Mary Jane M., aged forty-five years. Bore eleven children. Her abdominal wall was extremely relaxed. She showed the typical symptoms of dilatation and gastric motor insufficiency. Both kidneys, the liver, and spleen were floating. The case had been diagnosed as dilatation, and an attempt had been made to outline it by auscultatory percussion. The bell of the stethoscope was placed on the epigastrium, and upon percussion the note was found to change at the umbilicus. The lower border of the stomach, therefore, was thought to be at that point. When the stomach was inflated, it was found to occupy the lower instead of the upper half of the abdomen. The upper border was at the umbilicus, the lower was at the pubes.

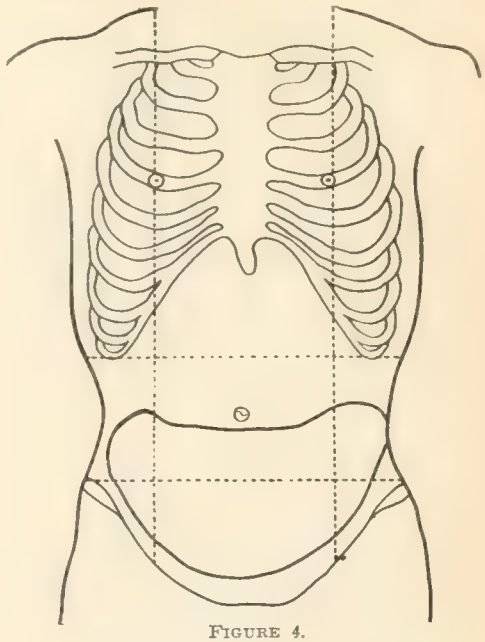


FIGURE 4.

The earlier method of inflation, and one still used to a considerable extent, is that depending upon the liberation of carbon dioxide gas by a mixture of sodium bicarbonate and tartaric acid. The advantage of this method is, of course, that the stomach tube does not have to be employed. In my clinic at the University Hospital we occasionally us it. As a quick but not overly sure means of dilating the stomach is has its advantage, but for a thorough examination the use of the stomach-tube is imperative. The method is briefly as follows:

A drachm of sodium bicarbonate and thirty grains of tartaric acid are dissolved separately in small amounts of water. The patient first drinks the soda and then the acid solution. The examination must be made quickly and preferably by auscultatory percussion. We have never noticed any excessive distention by the use of these amounts of the reagents. The larger quantities, recommended by Meinert, consisting of two drachms and a drachm and a half of soda and acid respectively, have never been employed, on account of the risk of excessive distention. The disadvantages of the procedures are: That it is very hard to control the amount of dilatation, because it is difficult to determine the quantity of gaseous or liquid contents of the stomach at any given time, and because the size of the organ itself must be to a certain degree uncertain. The gas quickly escapes, and time is not given for an exhaustive examination.

In employing the method of inflation through the stomach tube the stomach must first be emptied by the lavage. It may be inflated by placing a distensible balloon upon the end of the tube, which, when distended, fits itself to the shape of the stomach, and, of course, confines the air absolutely, and prevents any escape. This method is strongly recommended by Kelling, Schreiber, and Jaworski. The writer has never seen any advantage in this extra at-

tachment, which necessitates the removal of the tube after lavage and its reintroduction with the balloon in place.

Anything that complicates the procedure is undesirable, and I believe unnecessary. Pepper and Stengel state that if air is pumped into the stomach rapidly at first a spasm of the pylorus is produced, which prevents the escape of air into the intestines. At all events, a stomach inflated to a point just short of producing a sense of fulness will remain distended long enough to permit a thorough examination. The air is introduced through a Davidson syringe, or, what has proven more successful in the writer's experience, by the bulb of an ordinary atomizer apparatus fitted with a small nozzle. After the stomach is distended in ordinary cases it can easily be seen and palpated through the abdominal wall.

In addition, and as a check upon inspection and palpation, the following signs are of great value:

1. A high-pitched tympanitic note upon percussion is obtained over the distended organ.

2. Auscultatory percussion gives the outline sharply, and, since the stomach is distended and brought against the anterior abdominal wall, the tendency to error incurred when this method is practiced upon a partially collapsed stomach is avoided.

3. When the bulb of the syringe is compressed, forcing the air through the tube, a peculiar metallic ring can be heard with the stethoscope over the stomach. When the bell of the instrument is moved along beyond the stomach limits, the sound instantly loses its metallic character.

The writer regularly employs all of these methods in routine examinations, and the closeness with which they all correspond in determining the outline is most striking.

A practical point of some value is to allow the air to escape through the tube before it is withdrawn; otherwise great distress is often experienced before the stomach can be emptied, probably on account of a spasm of the cardia.

In 1889 Dr. Einhorn introduced his method of illuminating the stomach by an electric light introduced at the end of the sound. This instrument he calls the gastro-diaphane. The patient, after a period of fasting, drinks a pint or so of water; then the tube is passed and the light turned on. The stomach is projected as a luminous area upon the abdominal wall. The apparatus is expensive, and the method cannot be advantageously combined with the observation of the amount and character of the stomach contents as can inflation, while in determining the position of the stomach it offers no advantages over the method of dilatation described.

Symptomatology. Simple downward displacement of the stomach cannot of itself produce symptoms as long as the gastric muscle is equal to the increased demand upon it. When it fails there occurs a series of dyspeptic symptoms, which may have their origin in disturbances of motility, or of the sensory apparatus, or in alterations in the gastric secretions. The fact that many cases of gastroptosis exist absolutely without symptoms is shown by the statements of Riegel, Kelling, and Meinert. This fact deserves much emphasis, and has an important bearing upon the treatment of the condition.

The most common of the direct results of downward displacement are motor insufficiency and dilatation. The work of the stomach is increased, because a greater effort is required to raise the food up to the pylorus and through it to the duodenum. Kussmaul states that in addition there is often a mechanical obstruction to the outflow of the gastric contents, produced by a bending in the upper flexure of the duodenum.

When gastroptosis is the primary condition, it is probable that the dilatation affects the pyloric end alone, since this is the portion of the stomach that is most dependent, and upon which most of the extra work falls. When the ptosis is secondary to general dilatation, the cardiac end will be enlarged as well as the pyloric.

Alterations in the chemistry of the gastric secretions may occur. These are probably not a direct result of the displacement, but are due to the disturbance of motility and to dilatation, which favors the retention of food and irritation of the gastric mucous membrane. It is probable that in many cases the changes in the gastric juice are not connected with the ptosis, but are due to certain conditions that may affect it without the influence of the gastroptosis. The changes in the secretions are not uniform, and cannot be considered to bear any relation to the origin of the condition.

The following is a table of the amount of free HCl found in the gastric contents of fourteen cases one hour after the ingestion of an Ewald test breakfast;

Free HCl above 20	2
Free HCl 10 to 20	5
Free HCl below 10	2
Free HCl absent	5

Thus five were approximately normal, two showed hyperacidity, two subacidity, and in five free HCl was absent. While the examination of the gastric secretion is of no value in the diagnosis of the condition, it is of great importance in its treatment, especially in determining the diet.

Every case should be examined both after an Ewald breakfast of toast and tea, and after the Boas-Riegel test meal, containing meat, which is to be removed several hours after ingestion. The writer has in several instances found free HCl after such a meal, when it was absent after the Ewald breakfast.

As practically most cases of gastroptosis coming under observation are those in which a certain amount of motor insufficiency or dilatation exists, the symptoms are those of retention and fermentation.

Vomiting may occur, but is rare. In my series but three cases suffered from it at any time.

All showed symptoms in some degree of weakness of the stomach muscle. It will be seen that it is practically impossible, without inflation of the stomach, to distinguish between myasthenia gastrica due to atony and that arising from or complicated by gastroptosis.

Chronic jaundice may accompany and apparently

be directly dependent upon gastroptosis, disappearing when the stomach is replaced. It is probable that this occurs only when adhesions are present, binding down the bile ducts so that the traction of the displaced stomach produces kinking and obstruction. For a further discussion of the subject see a paper by the writer ("The Association of Chronic Jaundice and Gastroptosis," *University Medical Magazine*, January, 1901).

Disturbances of sensation may occur, especially in those cases which are complicated by adhesions. Because the pylorus is displaced and bound to neighboring structures, pain will naturally be felt when the stomach is full or distended by gas. As an illustration of this the following case is of interest.

CASE 6.—Daniel M., aged fifty years, had suffered for five years with symptoms of dilatation of the stomach, which has been diagnosed in the wards of the University Hospital. One year ago he applied at the Dispensary and complained of much pain in the neighborhood of the gall bladder and below it, which occurred from one to three hours after eating. Lavage and inflation after a test meal showed a total acidity of 64, free HCl 20, and the presence of lactic acid. The stomach was considerably dilated and the pyloric end had dropped to below the umbilicus. The diagnosis of adhesions between pylorus and the hilum of the liver was made. A belt was fitted so as to bring the pylorus back into place. Then the pain almost instantly ceased and has not re-occurred while the belt fitted properly. The only reasonable explanation of the disappearance of the pain in this case is that adhesions were present between the pylorus and the hilum of the liver or the gall-bladder, and when the stomach was distended by food or gas its displacement was greater, consequently traction was made upon the adhesions, and pain resulted. This was naturally relieved by replacing the stomach by the belt. (Figure 5).

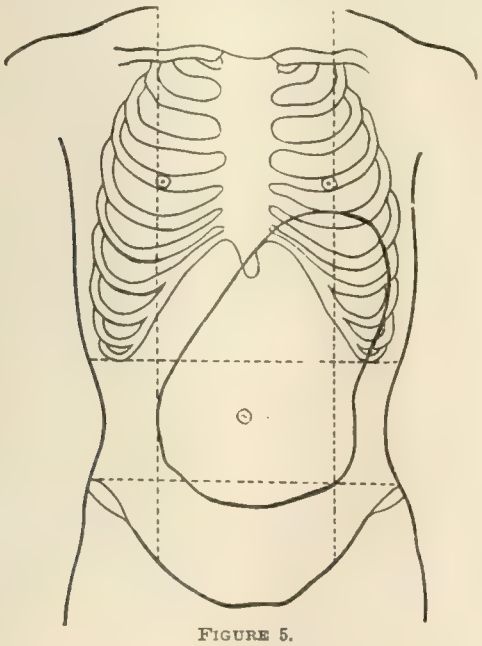


FIGURE 5.

There may be a sense of dragging and epigastric tenderness, due probably to the uncovering of the solar plexus, lying in front of the aorta and usually protected by the stomach. As a rule, however, unless adhesions are present, pain is not a prominent symptom. In none of my cases did a true sensory neurosis exist.

Raynier has called attention to a symptom that he considers extremely important in the diagnosis of abdominal ptosis. This is the existence of a painful point in the left hypochondrium over the fourth rib at the level of the waistband. This corresponds to the splenic flexure of the colon, and pain is the result of temporary obstruction in the bowel due to kinking.

The early observers, especially Virchow and Glenard, claim that splanchnoptosis is a frequent cause of gastric and intestinal neurosis. Many later observers state that it plays an important part in the origin of neurasthenia. Fleiner says that the anomalies of the position of the stomach are as often associated with nervous disturbances as those of the uterus. However, a displaced uterus alone cannot cause neurasthenia, and in either case a functional weakness of the nervous system must be assumed.

That neurasthenia and gastroptosis are not interdependent is shown by the fact that gastroptosis may exist without disturbance of the nervous system. When the relative frequency of gastroptosis in woman is considered, there is no wonder that it is so often associated with functional nervous disorders. In men, Beall found that in half his cases gastroptosis was without nervous symptoms.

Meinert's theory that gastroptosis is the sole cause of chlorosis has not been supported by the other observers. Kelling states that there is an error in Meinert's observations, arising from his employment of the carbon dioxide method exclusively, and that when he (Kelling) examined the same series of cases by air inflation he failed to discover downward displacement in several, although Meinert contends that it was constantly present. It is certain that a displacement of the stomach can occur without chlorosis. In thirteen of my own cases but two were chlorotic, seven showed slight secondary anemia, while in four the hemoglobin was normal.

Treatment. Tight lacing and the hanging of heavy clothing from the waist-band should be absolutely forbidden. I have been accustomed to recommend any of the health corsets that do not compress the waist-band, and that have an arrangement by which the weight of the clothing is supported from the shoulders. After pregnancy or operations upon the abdomen corsets should not be worn too soon.

The conduct of the patient's life should be rigidly scrutinized and corrected. Rest for at least an hour after meals, flat upon the back with the clothing loosened, is an extremely useful measure. It acts, of course, by giving the stomach an opportunity to force the food into the duodenum without undue effort. These patients should not take, and, indeed, do not desire, large amounts of food at any one time, and the diet should be carefully regulated in this direction. In bad cases small and frequently repeated meals are better tolerated.

The diet should be easily digestible and suited to the condition of the gastric secretions; and should be so arranged that the food may be rapidly rendered fluid, and so easily discharged into the duodenum. Any stated diet cannot well be given, but the character of the food must depend upon the amount of hydrochloric acid secreted, and also

upon the presence or absence of dilatation. A milk diet is usually not well born.

Two measures must be insisted upon:

1. Not too large amounts of food at one time.
2. A period of rest after eating.

Lavage is not required unless a considerable amount of dilatation or retention demands it.

The stomach must be held in place by a belt or abdominal bandage so arranged as to exert pressure from below upward and backward. I have found that the ordinary elastic abdominal supporter is best for the purpose, but in my experience the simple binder has rarely been enough to properly replace the stomach.

Two additional measures are to be employed, the first of which is absolutely necessary:

1. The lower edge of the belt must be firmly held against the tubes by perineal bands. These should be made of soft material, and are well tolerated. Thus a firm support is afforded for the upward pressure, which it is impossible to obtain satisfactorily without them, as the belt slips up and it is easily displaced.

2. An addition to the apparatus which is often needed is one or more pads, which should be flat and rectangular in shape and from three-quarter to one and three quarter inches thick, according to the need of the individual case. The pads are to be placed so as to exert upward pressure upon that part of the stomach that is too low. When the displacement is vertical or subvertical I usually order one immediately below the point where the examination has shown the displaced pylorus to be. In total descent it is better to employ two smaller pads placed parallel to and a little above Poupart's ligament. I have rarely seen satisfactory restoration of the stomach to its normal position without the use of these pads. In the cases in which lack of fat causes the lower abdomen to be very flat, it is very hard to exert sufficient upward pressure by the belt alone, and in such a person the pads are indispensable. The apparatus is never considered satisfactory until the stomach has been inflated with the belt in position and the organ shown to be in its place, or approximately so. The belt should be snugly fitted and worn fairly tight around the hips, while the upper border should be loose. If the situation of the pad and the fitting of the belt is satisfactory, I have never found that the amount of pressure has had to be increased. The relief afforded has almost invariably been instant and decided, with disappearance of the symptoms of motor insufficiency. Still, I have never seen a case in which prolonged use of the support produced a cure in the sense of permanently fixing the stomach into place. It can only aid the stomach wall to recover itself and re-establish its compensation by removing a link in the vicious circle. The weakness of the abdominal walls may be combated by electricity or massage.

Various operations have been performed for the relief of splanchnoptosis and relaxed abdominal walls. The excellent paper of Stengel and Beyea deals extensively with the literature of the subject. The procedures have consisted of gastrorrhaphy, or stitching the reflection of the peritoneum round the lesser curvature to the abdominal wall (Duret, Byron Davis, Roosing); a combined gastrorrhaphy and gastroplication, or reducing the dilatation of the pyloric end by removing a diamond-shape piece of the stomach wall (Terrier and Hartman); stitching a floating liver into place (Treves); and reducing the volume of abdominal cavity by removing a V-shaped piece from the abdominal wall (Hamelcart).

The operation described by Stengel and Beyea, and employed by them in a case of subvertical gastroptosis with marked benefit to the patient, continuing as long as she was under observation for a period of eleven months, consists in shortening the gastro-hepatic omentum by a series of ligatures. Since the publication of their article Blecher has reported four cases of gastroptosis, and one of enteroptosis, treated by Bier in practically the same manner, with very good results.

The operation recently recommended by Webster consists in the excision of that portion of the connective tissue lying between the recti muscles, which by its weakness and stretching has so thinned the abdominal walls that they are no longer able to lend support to the abdominal viscera. The muscles are then stitched together. A strip of skin and fat is cut away from the side of the wound before it is closed. Webster has operated upon fifty-one cases, and states that the results have been most satisfactory. Both Blecher and Webster insist upon a prolonged after-treatment of rest, massage, and abdominal support as extremely important.

It is impossible as yet to say whether operative measures will give permanent relief in these cases. The testimony of the last three authorities offers much hope that such may be the case. However, the conditions producing gastroptosis are so various, affect so many tissues, and have their origin in so many causes, that one may well be cautious in advising operation in any but those cases in which it has been definitely shown that medical treatment is of no avail. Indeed, Blecher urges that operation is desirable only when a prolonged rest cure and the use of abdominal support have proved to be of no benefit, when the ptosis is extreme, or when for social reasons the patient is unable to afford the time or money, for a more conservative treatment.

It is to be hoped that the methods suggested will prove to be the rational treatment for ptosis of the abdominal organs, but until such a time it is the writer's intention to advise operation only in cases showing symptoms directly traceable to peritoneal adhesions, or in those not benefited by or not amenable to more conservative measures. When the trouble is aggravated by a relaxed pelvic floor this should, of course, be remedied, and when there is much separation of the recti it is hard to see how relief can be obtained without the operation recommended by Webster.

Permanent restoration of the stomach to its normal position by non-operative measures may occur,

according to Meinert and Riegel, but it must be rare, and it has not been the good fortune of the writer to obtain such a result in any of the cases reported. Marked improvement and often complete and permanent disappearance of the symptoms of gastric motor insufficiency follows a course of appropriate treatment, especially when a mechanical support is supplied. This can best be explained by the assumption that the muscle of the stomach has grown strong enough to do the work required for it. Cases may exist absolutely without symptoms, when there has been enough hypertrophy of the stomach muscle to establish perfect compensation. It is probable that in the cases of gastroptosis and chlorosis reported by Meinert, in which all stomach symptoms disappeared upon the administration of iron, compensation was established as the blood returned to its normal condition.

The vicious circle which exists should be broken by replacing the stomach by mechanical means until its muscle can be so strengthened as to re-establish compensation. The cause should be removed if possible, and the conduct of life already alluded to must be insisted upon, besides the diet, regulation of the clothing, of the amount or character of the food, and rest after meals. The drug that appears to affect the stomach walls most advantageously is strychnine, which is best given in the form of nux vomica in ascending doses.

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Symphysiotomy and Cesarean Section.—Alfred Boissard reviews this subject in *Medecine Moderne*, (July 3, 1901, No. 27) Pinard has again brought forward the operation of symphysiotomy which had been advocated by Sigault in 1777. Morisani has also had many successful results from this operation. But Baudelocque formerly showed that Cesarean section was generally better and less dangerous than symphysiotomy for contracted pelves. Nowadays Cesarean section gives no infant mortality, while, with symphysiotomy, this reaches 10%. With conjugate diameter of less than 7 cm., at term, Cesarean section is to be preferred to symphysiotomy; if the woman arrives at term with a conjugate diameter over 7 cm. but in a contracted pelvis, Boissard again prefers Cesarean section to symphysiotomy. From the results of both these operations, which are now multiplying in frequency, Boissard believes that Cesarean section will be indicated oftener than symphysiotomy, which will again, in time, fall into disuse. [.M. O.]

A CLINICAL LECTURE ON SCALP WOUNDS, AND CRANIAL AND BRAIN INJURIES.*

By THOMAS H. MANLEY, Ph. D., M. D.,
of New York.

Gentlemen: In my discourse during the last evening session, the subject of fracture involving the bone shafts was considered.

This topic was chosen by me for the reason that my experience in the treatment of broken bones has been large, and moreover, because they belong to a common class of severe accidents occurring in general practice; but as their treatment always involves responsibility, and they may not yield satisfactory results, they are too frequently turned over to public institutions. Besides fractures of the extremities, a very considerable number of various injuries of the head has come under my observation in the emergency service of the hospitals, and in dispensaries, as scalp wounds, simple and complicated, fractures of the base and vault of the skull, with various forms of brain lesions.

Advances in the art and science of surgery now call for radical changes in the treatment of this class of cases, and as I have nowhere seen these amply emphasized in any of our modern treatises on surgery, I have decided to devote our time this evening to a brief, practical consideration of them, with an anatomical demonstration of the structures involved in the fresh crania of the animal, and the technique now called for, since the trephine has been set aside, in osteoplastic operations on the skull.

Before the presentation of illustrative cases, it may be well to very briefly refer to the anatomical architecture of the skull and its tegumentary investment: and, at the very onset we will appreciate some of the most conspicuous features of the cranial appendage of the body in the human subject. The first we observe is the exposed position of the head, its volume and weight, and the manner in which it is supported and balanced on the two narrow articular surfaces of the atlas.

In the adult ossification is complete, and the brain substance is everywhere sealed within a closed shell, perforated only for the passage of nerve-trunks and blood vessels.

A part, then, so exposed and so constructed must necessarily, not very infrequently, suffer from the effects of various degrees of traumata. Moreover, it is remarkable to note how disproportionate these are as contrasted with serious injuries of the equally exposed extremities. This is accounted for by the salutary provisions of nature in safeguarding the cerebral hemispheres, the very citadel of life itself. And, hence, unless one is intoxicated or off his guard, in the event of serious accident, his limbs are projected out, and even freely sacrificed, that the skull may escape damage.

Before middle life the tissues of the calvarium are highly elastic and resilient, and rich in organic elements, hence why we will sometimes encounter well-marked depression without fracture. Malgaigne denied the existence of cranial depression without fracture, but I have myself seen several examples

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of it; and also we will witness cases of sharp blades driven into the brain without fracture of the skull. An instance of this I saw some years ago in a young negro jockey, who had the long blade of a pocket-knife driven down into the calvarium, just to the outer margin on the right side of the median line. It was broken off close to the handle. When I saw him three days after it was lodged, he had meningitis. The blade was removed without difficulty. There was no hemorrhage following its extraction, but he sank the following day from meningitis.

Injury of the brain is of paramount importance in cranial fractures. It is well to bear in mind that in many severe injuries of the head the scalp and the skull may quite entirely escape severe damage, yet the brain may suffer from contusion, concussion, or depression, from rupture of the thin-walled veins in the convolutions.

Felizet demonstrated this very forcibly by experiment. He took the fresh skull and filled it with paraffine. After this had cooled and set, he let the head fall from various heights. He noted as a result of these concussions, at the point of impact the paraffine showed marked indentations and depressions in a large proportion of cases without a trace of fracture existing.

Hence, we must assume various degrees of cerebral trauma without cranial disorganization.

In the greater number of scalp wounds the lesions are wholly extrinsic, besides in a large proportion of depressed cranial fractures, simple or compound, if treatment is instituted early, if sepsis be avoided and compression is removed, the brain suffers but slight damage, if any.

Trauma of the Pericranial and Cranial Structures.—As to consequences of violent trauma, we encounter essentially three classes of lesions here: (1) a simple scalp wound; (2) fracture of the skull, and (3) scalp wounds complicated by fracture, with brain lesions. In some instances they may all occur simultaneously.

Scalp Wounds.—We may find very extensive fractures of the skull without a scalp wound. Scalp wounds, independent of the gun-shot variety, we meet with of every grade from a small puncture, or surface abrasion, to wide clefts carrying so large a flap as to expose a wide area of the skull. These wounds quite invariably are attended with a copious hemorrhage. Blood pours in streams from the opened vessels when the wound involves the larger arterial trunks. Very often before we see the patient he has lost a large quantity of blood. It is somewhat remarkable, however, to note that this hemorrhage must be very rarely mortal, as with a very considerable number of these cases which have come under my notice I have never seen death follow from the bleeding of scalp wounds, nor am I aware of such a case being recorded. You will meet with two types of fresh scalp wounds; in the first, when the contusive type predominates, there is not much bleeding; in the other, the scalp has been widely torn open and the blood loss is large. These latter are generally the simple, or non-complicated variety, they may present hideous features, but their management is on simple lines. The former are always the most serious, because of the possibility of cranial fracture.

Therapy in Scalp Wounds.—In the treatment of non-complicated scalp wounds our aim is to accomplish two things; the first is to subdue the hemorrhage, and the second to institute the most vigorous asepsis. In this class the large open breach permits us to inspect the surface of the skull without further dividing the scalp. No description of free hemorrhage is so readily controlled as that from a torn scalp.

Hemostatic procedures are practically two. (1) Compression; a tampon of gauze with a firm bandage will suffice in several. There are other cases which call for more decisive measures, and here comes up the question of the employment of the suture, for, in practically all of the most aggravated cases, the well-set suture and bandage will effectively control all bleeding. We may certainly dispense with ligatures. In pre-antiseptic times we were forbidden to employ sutures here, because of the danger of erysipelas. However, when we observe all aseptic rules in the wound treatment, we may now suture the scalp with security in every fresh case. But I must warn you that there should be no half-hearted measures or tinkering here, the cleansing must be thorough and radical. In every instance we should shave the scalp clean for an area of at least three inches from the margin of the wound. Then, after a scrubbing with soap and brush, the parts should be well rinsed with sterile water, or what is better, 1 to 40 carbolic solution, or a douche of strong alcohol, flushed off with water. Strong, sterile silk or salmon-gut makes the best suture for the scalp. Carry the sutures sufficiently deep to include the larger vessels, and close the wound well, except at the ends, which you leave open for drainage.

After 24 hours remove the dressings and take out the sutures. A few subsequent simple dressings, and that is all there is to it, for the scalp heals almost at once, and if there be no infection,—and there should not,—there is nothing more to it.

I may suggest here that for a dusting powder over the line of cleavage and to fill in the needle holes I have found nothing superior to fresh powdered mustard. It should be dusted on lightly and well rubbed in. It acts as a styptic, antiseptic, and cement, as no other substance will, with none of its objections.

The Exploratory Incision in Severe Cranial Injuries.—*The Hematoma.*—Not infrequently after a fall or a severe blow on the head we may observe local signs or cerebral symptoms which suggest the presence of fracture.

One of these local signs is an effusion of blood under the scalp, a hematoma. Large bumps under the scalp are of very frequent occurrence after contusions of the head. They are generally innocuous and rapidly vanish, but they are sometimes present in fracture. If we examine them carefully we will almost invariably find their borders raised and their centers depressed, just such a condition as we might expect in certain fractures of the closed type.

In these cases we will not interfere, unless the tumor is persistent, when a free incision should be

made and the nude cranial surface exposed. In cases of very grave vault fracture under the unbroken scalp it may be questioned whether or not the parts should be widely opened and a hiatus made through the cranial wall.

This is a controversial side of the subject, on which all of our best surgeons are not in accord.

Practically all very severe vault fractures extend into some part of the base, into the anterior, central, or posterior fossa, in which event intervention will accomplish little, if not, indeed, remove the only hope of a possible recovery.

Sir F. Treaves goes so far as to allege that with few exceptions all vault fractures extend down into the base; but this is certainly an error, as we seldom witness it in the greater number of depressed cases, and, rarely, under any circumstances in fracture through the calvarium, unless the extent of damage to the skull is very great. In small, contused scalp wounds, in order to ascertain the state of the skull, especially if the history of the case points to great force having been sustained, we must make a free incision and explore the parts; if the pericranium has not been opened, it will be incised, and the nude cranial surface critically inspected, meanwhile observing severe asepsis. Eucaine or cocaine will entirely dispense with the need of a pulmonary anesthetic here.

Fractures of the Skull are Open, and Closed.—Open, or so-called compound fractures of the skull are the most common, but the least serious; they always involve the vault or calvarium, that part above the ear line, which has been well designated the non-vital area.

No branch of operative medicine has enjoyed more revolutionary advances during the past two decades than that pertaining to the surgery of the cranial vault for traumatisms.

Closed fractures of the vault are treated on the same general principles as the open.

Be always mindful of the dangers attending all osteoplastic operations in depressed fractures when these lie over the course of the large sinuses or the middle meningeal artery.

Meanwhile I beg to remind you that when vault fractures lie over these courses, and when the dura mater is opened, unless the extent of depression is marked and symptoms point to brain injury, we may well hesitate whether we should elevate or not; certainly not, unless we are well prepared to deal with formidable hemorrhage, for I have more than once witnessed mortal hemorrhage under these circumstances. Fortunately, in the great preponderance of cases of depressed vault fractures the tough resistant dura mater has escaped laceration, and with the chisel, not as in the old days of the trephine, in elevating, we should never damage this membrane.

Fractures of the Base of the Skull.—Fractures of the base of the skull are generally produced by indirect violence, or contrecoup force. They are traumatisms of the very gravest character and are wholly beyond the range of the art of surgery to either relieve or cure. All the vital ganglia and the great blood-trunks lie in the floor of the skull. These are powerfully protected against injury and are lodged in the densest areas. In some of these fractures the base and walls of the skull are terribly fissured, death invariably following. The anterior fossa is chiefly supported by the facial bones and is one of the very thinnest areas of the whole skull. If art can accomplish nothing in the way of relief in grave basilar fracture, nature can, as several of the minor forms are sometimes recovered from. These are the cases in which medicinal agents, good nursing, and judicious abstention may avail.

The Passing of the Trephine in Cranial Fractures.—The mallet, rongeur, and osteotome should always replace it.

Local anesthetics skilfully utilized should always suffice, and we are in the fullest accord with Lejars, when he says: "The trephine, the antiquated relic, the dear old instrument of the ancients, must be set aside here forever." It is quite impossible for one who has not used the mallet, the rongeur, and the osteotome as substitutes for the trephine, to realize the enormous advance this simple procedure is over the trephine in the way of simplicity of technique, in safety, and in reconstruction. It at once obviates all the dangers of the trephine, and also enables us to accomplish results impossible with the antiquated instrument.

In open depressed fractures of the skull our object in view is to raise the fragments and readjust them. This involves: (1) rigorous asepsis; (2) the elevation of the fragments, the reduction of the fracture; (3) the removal of the fragments which are wholly detached from the pericranium and the dura mater, and their replacement, always, invariably, in young subjects, in children, or those of good general condition. This has been called "re-implantation." Those displaced fragments must be morticed back and carefully jointed, their borders maintaining precisely the same relations they did before displacement. This is known as "cranial reconstruction" or re-implantation.

You will therefore observe, that there is no sacrifice of bone here by this simple measure as there invariably is after trephining. The fragments reduced, they are well supported from below by the expanding encephalon, and above by the pericranium and the scalp, the latter being treated precisely the same as in an ordinary scalp wound.

This sketch then briefly indicates what modern surgery requires of us in the treatment of this class of grave injuries.

Traumatisms of the Brain.—The encephalon is of a pulpy consistency, weighing in the male about 50 ounces, and rests nearly everywhere on a substratum of liquid. It is steadied, at the base, by the spinal cord and the nerve roots.

In severe injuries to the head the brain is liable to suffer from (1) concussion or violent commotion of its finer elements without any gross pathological changes; (2) it may suffer from laceration or compression with or without depressed fracture; (3) it suffers mortal injury from large hemorrhage, or the effects of septic inflammation. In vault fractures the greatest danger ensues from the effects of meningitis succeeding infection of the wound. Hemorrhagic pressure may be considerable in some of these cases, but the effusion is generally rapidly absorbed without any impairment in function resulting.

For this reason in fracture cases, unless there

are very pronounced symptoms of a grave cerebral compression, it is better not to open the dura mater to dislodge the clot, as this interference may produce a fresh hemorrhage or introduce infection; moreover, any procedure entailing the opening of the subdural space greatly augments the dangers of meningitis. In fact, in traumatisms it cannot be said that there is any such thing as direct surgery of any structures of the brain, except its envelopes and septa; for lesions, therefore, of its peripheral structures much may be accomplished, but for those of its soft central or basic constituents art can accomplish practically nothing.

EXHIBIT OF CASES.

CASE 1.—Closed fracture of skull, large loss of brain substance, recovery with total loss of vision.

A child now two years old was admitted into my service at the Harlem Hospital 10 months ago. The little patient fell three stories from a window into the street, striking on the pavement. Patient brought in in an unconscious state and in deep shock, a good clinical picture of basilar fracture; but this type we rarely witness in young children. There was a large hematoma over the vertex and the symptoms pointed to a large intra-dural hemorrhage. The infant steadily improved, quite completely recovering in a week; it was active and cheerful, but was totally blind.

This large supposed hematoma persisting, on the 20th day it was opened by Dr. J. H. Byrne at the Metropolitan Hospital, when he came on a mass of clotted blood freely mixed with brain substance, a large depressed fracture in the skull was exposed, the fragments were raised and all pressure removed. Recovery was rapid from the operation. You will note now, after more than a year, ossification of the fragments is perfect, and only a faint semilunar scar can be seen, but total blindness remains.

How can we account for the loss of vision? I am entirely unable to explain it, or get any light on it from neurological literature.

2nd Case.—Patient 8 years old. January 12th, 1901, fell 14 feet, striking headlong on a rock. Compound fracture of skull.

Patient brought into hospital unconscious and in deep shock. Sustained a depressed fracture of the skull on the right side of the head, near junction of the squama, parietal and frontal bones.

Fragment driven fully an inch into the brain. Part shaved and thoroughly cleansed, all bleeding arrested. Scalp wound enlarged, one large plaque of fractured bone, 5 centimetres long completely lifted out, the remaining parts were raised. No pulsation of brain felt, no laceration of the dura mater. Parts cleansed and removed fragments set into place and jointed. Wound closed. Following morning consciousness fully recovered, scalp wound looked well; temperature at no period mounting above 100°. Wound solidly healed and patient discharged at end of 3rd week.

This case is an ideal one of reimplantation.

These other four cases here are of a similar character to those just presented; and now, rather than take up time in detailing their histories, I will proceed to give a practical demonstration of the technique of osteoplastic surgery, using therefor skulls of sheep, those on which various types of cranial fracture have been artificially induced.

Epidemic Cerebro-spinal Meningitis.—Griffon and Gandy report a case of epidemic cerebro-spinal meningitis in a boy of 17, in whom the meningococcus of Weichselbaum was found in pure culture, not only in the cerebro-spinal fluid, but also in the tonsils and the nose. Cultures were made at intervals of two weeks, and the results were identical. Early in the disease the cerebro-spinal fluid contained polynuclear leukocytes; later only lympbocytes were found; and with a relapse, the polynuclear leukocytes and meningococci returned. Recovery followed in a month. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, July 11, 1901, No. 24). [M. O.]

REMARKS ON VACCINATION IN RELATION TO SKIN DISEASES AND ERUPTIONS FOLLOWING VACCINATION.*

By ARTHUR VAN HARLINGEN, M. D.,

of Philadelphia.

Under ordinary circumstances the following remarks would seem scarcely called for since the facts set forth are for the most part already in print. But as the papers which have appeared on this subject are scattered in many special journals it may be convenient, with smallpox so prevalent as it is in this city and with the very general vaccination of the community, to call attention to what is known regarding the skin affections occasionally met with in connection with the inoculation of vaccine virus. These, acording to the classification of Morris, modified by Crocker, are as follows:

Group. I.—*Eruptions Due to Pure Vaccine Inoculation.*

Division A.—Secondary local inoculation of vaccine.

B.—Eruptions within the first three days before the development of vesicles.
Urticaria.
Erythema multiforme.
Vesicular and bullar eruptions.

C.—Eruptions following the development of the vesicles, due to the absorption of virus.
1. Roseola (like measles).
Erythema (like scarlet fever).
Erythema multiforme.
Vaccine lichen.
Purpura.
2. Generalized vaccinia, "*vaccine generalisee.*"

D.—Eruptions appearing as sequelæ of vaccination: eczema, psoriasis urticaria, etc.

Group II.—*Eruptions Due to Mixed Inoculation.*

Division A.—Introduced at the time of vaccination.
(a) Producing local skin disease.
Contagious impetigo.
Erythema.
(b) Producing constitutional disease.
Syphilis.
Leprosy.
Tuberculosis.

B.—Introduced, not at time of vaccination, but subsequently, through the wound.
Erysipelas.
Cellulitis
Furunculosis.
Gangrene.
Pyemia.

Secondary inoculation sometimes occurs between the formation of the primary vesicles and the eighth day and in such cases the secondary vesicles catch up, so to speak, with the primary ones and are mature at the same time (Crocker). Cases of this kind are apt to occur in establishments for preparing vaccine lymph; several lesions may occur in rapid succession, the virus being conveyed from the hands as in scabies to the face, eyes, nose, mouth, penis

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*A paper read by substitute before the Philadelphia Pediatric Society, Tuesday, Nov. 5, 1901.

and, as I have learned from a gentleman in charge of one of these places, on the dorsum of the tongue.

The ordinary redness and swelling in the neighborhood of the vaccination, the urticaria which frequently develops in the same locality, the vesicles and bullæ which also frequently occur in the neighborhood, all these are the immediate result of the irritation caused by the introduction of the vaccinal virus, but they are not distinctive. "Vaccinia herpetica" belongs to these manifestations.

Those eruptions mentioned under division C, which follow the development of the vesicles and are due to the absorption of the virus, are without exception angio-neurotic in character and belong to the same series. Roseola, like measles; erythema, like scarlet fever; erythema multiforme, and the so-called *vaccine lichen* include the series. The latter is described by Crocker as coming out on the fourth to the eighteenth day, most frequently on the eighth, beginning on the arms in half the cases, and on the trunk, neck or face in the rest. By successive crops it may spread over a considerable part or even the whole of the body, pretty evenly distributed, and sometimes tending to form circles or segments of circles.

The papules are acuminate, pin-point sized, and bright red and these characters may be preserved to the end. They usually remain discrete, but sometimes coalesce into patches. Many papules are crowned with small vesicles and pustules and have a red areola, sometimes half an inch in diameter. A few bullæ sometimes appear. The rash rarely itches to any degree; it lasts from a few days to a week or so. In some few cases the vesico-pustular cases last with much itching, the eruption coming out in crops for weeks and months. These cases must be distinguished from Hutchinson's *varicella prurigo.*

Vaccinia herpetica or generalized vaccinia is somewhat different in its nature from the other eruptions under C category and it is analogous in some respects to a general outbreak of an infectious disease following a period of incubation. Professor Tyson has described a case of this quite unusual complication in a paper read before this society in 1899.

In this case a child six months of age was vaccinated with Alexander's lymph from the tube. The vaccination was successful. On the fifth day after vaccination a pustular eruption developed on the arms, legs and body. Some of the pustules were at least half an inch in diameter; they were umbilicated. The lesions resembled those of smallpox and came out in crops of several at a time, lasting a week or more. A few, including the original vaccination, broke down into ulcers. The whole duration of the eruption was nearly six weeks.

Bowen[1] has described recently six cases of bullous dermatitis following vaccination and resembling dermatitis herpetiformis. Taken as a whole these cases presented a purely bullous and vesicular character. Grouping was usually marked, especially about the mouth, nose and ears, about the wrists and ankles. An erythematous element was present in some cases. A papillomatous element was also developed. Itching was never severe. The eruption appeared in from one to four weeks after the vaccination.

Bowen thinks it not improbable that a toxine developed by the vaccination in certain predisposed individuals is responsible for the cutaneous appearances.

Although, as Frank says, we are not always able to identify the specific germs which, with the vaccine virus, produce the mixed inoculation, we are justified in calling the results a mixed infection. If a foreign germ is introduced with the lymph, or, at a later period, by contamination of the wound, it will not fail to produce its peculiar manifestations. It may produce only local lesions, or it may bring about a general infection. Such local manifestations, as *impetigo, furunculosis, cellulitis* or *erysipelas,* are not very uncommon, even now when much purer lymph is employed, and in former times were of every-day occurrence.

Patients are not unfrequently brought to the physician weeks and even months after vaccination, suffering from an eczema or impetigo which is attributed to the operation. Such affections, unless occurring with or immediately after the vaccination, should not be attributed to the influence of the latter, as the results of mixed infections of this character show themselves at an early date.

The inoculation of syphilis, leprosy, and tuberculosis is very rare. I do not think an authentic case of tuberculosis infection, excepting in the form of lupus, perhaps, has been reported. A very few cases of syphilis and of leprosy were reported under the *regime* of arm-to-arm or human-crust vaccination. Nothing of the sort should occur under present regulations and with animal vaccine.

The influence of vaccination upon the course of previously existing affections of the skin has never, so far as I am aware, been made the subject of careful investigation. During the smallpox epidemic of 1872 I observed all cases of skin disease coming under my notice in which vaccination had been practiced. In a few, some aggravation of the symptoms followed; in some others an apparent improvement took place. But in the great majority of cases vaccination did not appear to exercise any influence whatever on the course of the more common diseases of the skin coming under observation.

During the present epidemic I have had all the cases of skin disease coming under my care at the Children's Hospital and in private practice vaccinated so far as I have been able, but the results are about the same as those observed thirty years ago. In one case of psoriasis in an adult, vaccination was practiced in the centre of a lesion which faded away entirely during the development of the vaccine pock. The other lesions, however, remained unaffected. A child suffering from diffuse impetigo was vaccinated while under treatment in the skin ward of the Children's Hospital. No change took place in the character or course of the eruption. About the time the vaccination lesion had completely healed over the child was attacked by well-marked varicella. The lesions of impetigo disappeared with great rapidity as the varicella developed. Some groups of varicella vesicles occupied the discolored patches from which the impetigo patches had scarcely become detached. Another curious feature of this case was

1 Jour. Cut. and Gen. Urin. Dis., Sept, 1901.

that certain of the varicella lesions situated in parts of the body, where no eruption of impetigo had occurred, took on an impetigonous character in the course of their development. Finally, as the varicella eruption disappeared, an eczemaform eruption developed in place of the original impetigo.

If we examine the schedule of eruptions occurring in connection with vaccination, we see that, while some of them are in the present state of our knowledge unavoidable, we may hope that a purer quality of vaccine and an improved technique of introduction into the system will in time eliminate these. There are other eruptions, and, particularly, those which are due to mixed inoculations and to infections introduced into the wound subsequently, which can be prevented. Too much carelessness still exists as to the manner in which vaccination is performed and I cannot help thinking that if patients were as intelligent in such matters as they will one of these days become, the physician would be held to a more strict account at least on the score of cleanliness. Perhaps few men will now come to the delicate infant with the odor of stable and animal on the unwashed hands, or will moisten their instruments with their own saliva. But it is desirable to go further and approach the operation of vaccination with almost the precautions employed before a surgical operation. Certainly absolute cleanliness both of the instruments and the parts should be employed. Asepsis, however, can be carried too far, and when we hear of washes of germicide soap, alcohol and solutions of corrosive sublimate 1 :2000 being employed, we may not unreasonably fear that the virus itself will be rendered inert by such precautions.

The shields which have been so extensively employed this autumn have served to retain moisture and keep in the secretions, thus acting as a cultivation house for all pathogenic germs. They have at present nearly fallen out of favor but have their place. As a protective for the first few days a shield is almost indispensible, but as soon as the vaccine virus has invaded the system, as shown by the red and infiltrated areola, the shield should be cast aside and antiseptic dressings with frequent changes should be practiced. Nothing, I am convinced, can be lost by such dressings at this stage and much annoyance and danger may be avoided. The physician who vaccinates his patient and then sees him no more is subjecting him to a real danger, and especially when the operation is performed on the leg, where dust and dirt of all kinds are so apt to accumulate.

The After-treatment of Cataract Operations.—In the *Gazette Medicale de Paris* (July 6, 1901, No. 27) Dr. E. Valude describes the dressings necessary after cataract operations. The old occlusive dressing, changed frequently, does not prevent the growth of bacteria, as both Gayet and Valude have shown. But a dressing applied without bandage shows as much, if not more, infection. Best of all Valude believes to be an occlusive dressing composed of sterilized gauze, applied directly to the eye, covered with sterile cotton and loose bandages, left in place three or four days. The healthy eye is better left unbandaged, and the room should not be darkened. The changes of the dressings must be made very antiseptically. Solutions of corrosive sublimate (1 to 1000) are used upon the wound. The second and third dressings are left two days; then dark glasses alone will be needed. [M. O.]

A CASE OE PNEUMOCOCCIC ARTHRITIS, ACCOMPANYING ACUTE CROUPOUS PNEUMONIA.

By D. J. MILTON MILLER, M. D.,

of Philadelphia

Physician to the Episcopal Hospital,

On January 28, 1901, M. G., a laborer, was admitted to the Episcopal Hospital with acute croupous pneumonia. The patient was a man of robust physique, an habitual drinker, who had never before been seriously ill. Seven days prior to admission he had been seized with a severe chill, followed by cough and pain referred to the left shoulder. Since then he had been very sick with high fever, cough, left-sided pain and diarrhea. On admission the following note was made: "Face flushed; conjunctivae of a yellowish tinge; tongue heavily coated; the right heart is enlarged; extending one finger's breadth to the right of the sternum; no murmurs audible, but the second sound is accentuated; at the left supraspinous fossa and scapular region there is impaired resonance and feeble respiratory murmur; laterally and in the proportion of the lung bordering upon the heart, fine moist superficial rales are heard at the end of expiration; over the lower lobe, posteriorly, resonant percussion note and many superficial friction sounds and harsh breathing; the right lung, beyond exaggerated breathing, appears normal; the liver and spleen are slightly enlarged; no rose spots or other eruption; temperature, 103° F.; pulse 100; respiration, 44." The pains of the previous days had subsided, but there was slight cough and a tenacious, rusty sputum. The stools were loose, numbering 4 to 5 daily. The leukocyte count was 18,000 and the urine contained a trace of albumin. During the next two days the temperature fluctuated between 102° and 103°, the pulse was about 100, the respirations from 36 to 40. On the 31st distinct bronchial breathing was detected for the first time at the left supraspinous fossa and in the left scapular region; the râles in the strip of lung bordering upon the heart had cleared up, but the posterior friction sounds persisted. During the early hours of this day (31st) the temperature began to fall, registering 99° F. at 10 A. M. The fall was associated with profuse sweating, marked amelioration of the general symptoms and a leukocyte count of 13,400. At the same time the patient was quite restless and delirious. On the same day (11th of the pneumonia) the right wrist became swollen and painful. On January 1 the swelling had increased considerably, involving the dorsum of the hand, while the joint itself was very painful, both subjectively and to pressure, and its surface was reddened and edematous. An indistinct sensation of fluctuation could be elicited, but there was no grating and no other joints were involved. Inquiries as to previous injury to, or disease of, the joint were fruitless. Under due antiseptic precautions, the wrist joint was punctured with a sterilized needle, and a small quantity of a slightly opaque serous fluid was withdrawn by Dr. A. A. Ghriskey, bacteriologist to the hospital, and examined by him with the following result: "Cultures from the joint fluid were made on blood serum. After 24 hours in the incubator 9 minute, dew-like colonies were evident in tube 1. A slight growth also appeared in the water of condensation. Stained smear preparations (methylene blue, alkaline) showed a pure culture of a diplococcus, lancet shaped, and from the water of condensation a few short chains were observed. The organism failed to grow in the second generation on agar agar. Deep stab inoculations were made in gelatin, and a growth was evident throughout the outer line of inoculation after a few days, at room temperature. This, microscopically, was found to be the same organism. From lack of facilities no animal inoculations to test the virulence of the organism were made, which, in culture, was identified as the pneumococcus."

On February 4th (5th day of arthritis, 16th of pneumonia), the wrist swelling had lessened, but was more doughy and still very painful on pressure; friction râles persisted posteriorly, as did the bronchial breathing in the upper left lobe. The temperature remained at 99° and 99.5° during the 31st, but on the next day, i. e., coincident with the appearance of the arthritis, it rose gradually to 101° at 4 P. M., and fluctuated between that point and 102° until

February 4th, when it slowly subsided to normal on the 6th. The joint affection had, by this time, somewhat diminished, and continued to do so until the patient's discharge on February 21st. On this date, however, there was still some swelling, almost complete immobility and pain on deep pressure and attempts at movement; otherwise the patient had made a good recovery, the pulmonary signs having entirely cleared up. A leukocyte count made at the height of the arthritis showed 13,700. For 2½ months after discharge the patient's joint was treated at the out-patient department of the hospital, and with considerable benefit; but at this writing (December, 1901), the wrist is still stiff and of little use, while the prospect of complete restoration of function seems very doubtful.

In the *London Lancet* for January 12, 1901, E. J. Cave reports a case of this rare complication of pneumonia, and in connection therewith presents a study of 30 instances of arthritis due to the pneumococcus which he had collected from the literature. In the paper referred to, the author states that hitherto no observations had been made in Great Britain of the occurrence of arthritis associated with the presence of the pneumococcus in the affected joint, and believes that, although the association is uncommon, cases must have occurred and escaped detection, because of the "comparative rarity of bacteriological examinations of morbid fluids." Arthritis, as a complication or sequel of pneumonia, has been recorded from time to time by various observers, and the clinical histories of these cases accord so closely with the usual course of the affection as to leave little doubt in Cave's mind of their pneumococcic nature. As to American observations on this question I have no data at hand. They must, however, be exceedingly rare, as I can recall no instance in a rather extensive acquaintance with American periodical literature of recent years.

Cave, in his paper, has dealt so thoroughly with the clinical history, bacteriology and pathology of the affection that little or nothing remains to be said. Notwithstanding this, a brief comparison of the case herein reported with the picture of the affection as deduced by Cave from his study of the recorded cases would seem to possess some interest: My case, in the first place, terminated in recovery, death being the issue in the majority of instances (23 out of 31). It occurred in a previously healthy joint, the arthritis being especially prone to attack joints already damaged by disease or injury (10 out of 31). My patient was 29 years old, the affection usually occurring in middle or advanced life; thus, of 29 cases, 21 were over 40 years of age and only 3 under 30, two of these being children under 10 years. In all but 3 of the recorded cases one or more of the joints suppurated, and in these 3 the effusion was of a sero-fibrous character; in my case the aspirated serous fluid was slightly opaque, a quality which may have been due to the presence of a few pus cells, although this was not determined microscopically. The arthritis, according to Cave, in addition to the presence of the specific organism in the lung, is usually associated with the localization of the pathogenic germ in other parts of the body, infection of the peri- and endocardium, pleurae, kidneys, peritoneum and meninges being extremely common and the cause of the high mortality of the affection; in my case the only infection outside of the lung was the rather extensive pleurisy, which, however, was not attended with a demonstrable effusion. In other respects the case recorded in this paper conformed very closely to the usual course of the affection. It occurred, for instance, on the 11th day of the pneumonia; in 26 of the 31 cases the arthritis appeared in from a few days to 2 weeks after the onset of the pneumonia, in two instances it preceded the pneumonia at intervals of 3 and 7 days respectively, while in 2 it is said to have occurred independently of the lung affection. The inflammation, as in my case, is usually confined to single joints (19 out of 31), and is commoner in the upper extremity and in the larger rather than in the smaller joints. The puenmococcus was found in the arthritic effusion in all but one of the cases collected by Cave, and in most of these its virulence was tested by animal inoculation. This, unfortunately, could not be done in my case, but the organism cultivated from the joint fluid was identified both morphologically and culturally as the pneumococcus. Instances have been reported of suppurative arthritis associated with pneumonia in which the pus in the joints was sterile. Widal (cited by Cave) suggests that in such cases the pneumococcus may have died at the time of examination, or that the arthritis may have been due to toxins produced by the microorganism.

The prognosis of this form of arthritis is grave. The high mortality, usually due to general infection by the specific organism, has already been referred to; and, even in those cases that have a favorable issue, the course, as in the one here reported, is apt to be slow and tedious, usually leaving the joint permanently impaired.

The treatment of my case consisted in fixation upon a splint and the application of lead water and laudanum; later massage and similar measures to restore the function of the joints were employed. Suppurative cases should, of course, be treated by incision, flushing and drainage; but even in those cases characterized by serous effusion, Cave believes that better results would follow arthrotomy than are obtained with the expectant treatment usually adopted.

Lymphatic Varices Following Repeated Attacks of Erysipelas.—Danlos and Gastou report the case of a woman of 26, who had had several attacks of erysipelas. When 9 years old, an attack of erysipelas, treated by Marmorek serum, produced several abscesses. At 20 lymphatic varices appeared about the mouth. These are grouped upon the upper and lower lips, with some in the right cheek. She is very thin, and the numerous abscess scars suggest tuberculosis. The lymphatic varices could only be mistaken from lymphangiomata, which are congenital. They do not resemble salivary cysts. The cause is probably lymphatic obstruction from many attacks of erysipelas. Examination showed that the varices were lymphatic in structure. In the discussion which followed this paper, Millard suggested that dental caries might possibly have caused the condition. (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, July 11, 1901, No. 24.) [M. O.]

Society Reports.

MANHATTAN DERMATOLOGICAL SOCIETY.

Meeting held January 3, 1902, Dr. W. S. Gottheil in the chair.

Dr. R. Abrahams presented a woman of 38 with **sarcoma cutis** on the knee, 2 by 3 inches in size. When first presented, there was some doubt as to its malignancy; recent microscopical examinations, however, show it to be an **angio-sarcoma.** Dr. Franklin gave a differential diagnosis between granulation tissue and sarcoma as seen under the microscope.

Dr. Abrahams then presented a case of **naevus verrucosus** in a girl of 16, in the lumbar region. This was imbedded in a cellulitis which was further complicated by herpes zoster. Drs. Sobel and Pisko regard the vesicles as part of the cellulitis. Dr. Abrahams said the vesicles followed the course of the nerve and believed this to be conclusive.

Dr. Bleiman presented a man with macular eruption covering the chest, probably syphilitic, in spite of a negative previous history. Dr. Pisko then presented a case for diagnosis, a man 29 years old, with a papular eruption on his scalp and face. Six months ago a red itchy papular eruption appeared, covering both forearms. His wife had one miscarriage and five living children, four of whom died within the first few months. He took iodides and mercury without influencing the eruption. The general opinion was that the eruption on the forarms was **folliculitis** and that on the face and scalp **acne.** Dr. Pisko believes the lesion on the face the **acne varioliformis** and that on the hand a **cutaneous gumma.**

An interesting case of **Raynaud's disease** was presented by Dr. Abrahams. Six years ago gangrene appeared in the toes of the right foot, followed by amputation of the lower third of the tibia. The same process attacked the great toe of the left foot, and amputation was performed, while now the right index finger is involved. Dr. Bleiman thinks that the primary lesion involves the blood vessels and reported a case recently observed in which both hands were affected. Dr. Pisko regards the main features as a vaso-motor disturbance. Dr. Dalton always looked for atheromatous changes in these cases.

THE EASTERN MEDICAL SOCIETY OF NEW YORK CITY.

Meeting held January 10, 1902, Dr. R. Abrahams in the Chair.—Dr. A. Hymanson presented a case of **amaurotic family idiocy,** Dr. Schapringer demonstrating the eye lesions of the case. Then Dr. Wm. S. Gottheil presented a case of **bullous eruptions in a child,** and Dr. H. I. Knapp reported a case of **ulcer of the esophagus.**

Dr. Max Toeplitz read a paper on **purulent otitis in infants,** describing the anatomy of the ear in the infant, and emphasizing the position of the mucous cushion of the tympanic cavity at birth in the question of the future development of otitis media. He described the symptomatology, course, duration, and complications of purulent otitis, particularly in the acute infectious diseases. He mentioned the indications for operation, paracentesis or mastoidotomy. Dr. Friedenberg called attention to the difficulty of the diagnosis of otitis in infants, in whow it may be mistaken for typhoid fever, meningitis, etc., until spontaneous rupture of the drum membrane occurs. He emphasizes the importance of routine examination of the ear, stating that 90% of chronic otorrhea in children are due to extension from the nose and throat to the ear, particularly in cases of tonsillitis, measles, scarlet fever, etc. Dr. Friedman observed that otitis frequently complicated apex pneumonia.

A paper on **indications for the surgical treatment of cholelithiasis** was then read by Dr. A. A. Berg, who advised medical treatment in cholelithiasis with cholecystitic pain, and attacks of biliary colic uncomplicated by cholecystitis. Severity or constancy of these symptoms, in spite of medical treatment, indicates surgical intervention. The first attack of acute cholecystitis accompanying calculous disease of the gall-bladder is an indication for abandoning medical and resorting to surgical treatment. Even though the acute attack subside, secondary infection of the gall bladder and ducts by the bacteria which caused acute cholecystitis remains. To the production of a toxemia is ascribed the emaciated condition of patients who have for a long time had attacks of acute cholecystitis. Dr. Berg considers that early operation, after the first attack of cholecystitis, will prevent serious local and toxic complications. As a rule operation is not imperative during the first acute attack of cholecystitis. This is because the great elasticity of the gall-bladder enables it to hold even a large amount without much tension. Operations during the acute attack will be indicated when local and general manifestations become intense, otherwise the operation can be postponed. To delay until empyema or gangrene of the gall bladder, cholemia, infective cholangitis, obstructive jaundice or perforation has occurred, is unwarranted. The mortality after early operation is 2% to 3%, while the death-rate when these complications exist, is over 50%, even in expert hands. Dr. A. G. Gerster insists that the most important point in the treatment of cholelithiasis is to make the diagnosis. Some cases are diagnosed by the patient himself. The diagnosis is particularly difficult in women whose liver and gall bladder are situated high in the abdominal cavity. He considers that a carefully established history, with paraspinal pains in the abdomen is the most important aid in diagnosis. After eliciting a history pointing to gall-stones, careful palpation may reveal a pear-shaped tumor which moves with respiration. He emphasized the importance of abdominal palpation in cholelithiasis. He believes that medical treatment is of no avail, surgical treatment being the only means of permanently curing these sufferers. Dr. A. E. Isaacs believed that biliary colic without suppuration in the gall-bladder was attended by an elevation of temperature. He has frequently observed cases of acute cholelithiasis in which the thermometer registered from 102° to 105° F. While he does not exclude the possibility that the pus in the gall-bladder might in these cases have followed the exit of the stone, still elevation of temperature during an attack of biliary colic is no proof of dangerous suppurations in the gall-bladder. He does not think operation indicated in all cases of cholelithiasis, since people may have several severe attacks of biliary colic and then remain free from it for the rest of their lives.

Large Morsels of Food in the Pharynx.—Dr. Ed. Laval reports four cases of suffocation following the ingestion of large morsels of food, which have reached the pharynx only (*Bulletin Medical*, July 3, 1901. No. 52.) Two of these patients died before aid arrived. In the other two, large pieces of food were rapidly removed. As a rule such bits of food lodged just at the entrance of the larynx, in the esophagus, or they may enter the larynx. In either case they occlude the respiratory passages. The food is generally a piece of insufficiently masticated meat. Suffication occurs at once, and either dyspnea persists until help arrives, or asphyxia supervenes instantaneously. The diagnosis is easy. Prophylactically all food should be well masticated. Tracheotomy or rhythmical traction of the tongue may be performed at once. The physician tries to dislocate the piece of food with his finger or a forceps. The laryngoscope will help to locate the occluding body. [M. O.]

Tuberculous Cysto-peritonitis and Ovarian Cysts.—H. Duret calls attention to an encysted form of peritoneal tuberculosis, originating in tuberculosis of the adnexa. The fluid is sero-purulent, and is contained in a closed, unilocular sac. Duret calls it tuberculous cysto-peritonitis. He reports in detail the case-histories of two cases, a girl in whom tuberculous cysto-peritonitis was mistaken for an ovarian cyst, and a woman in whom this condition existed, but was taken for a parovarian cyst. Duret reports several other cases in which tuberculous cysto-peritonitis was diagnosed ovarian cyst. The cyst adjoins a tuberculous genital organ, as a rule. Some tubercular family or personal history is secured, and some uterine or vaginal symptoms exist. There is not much pain, but the fever is distinctly tubercular. Laparotomy with evacuation of the cyst is the only treatment of tuberculous cysto-peritonitis. (*Journal des Sciences Medicales de Lille*, July 27, 1901. No. 30.) [M. O.]

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X-Ray Literature.—When the Röntgen ray was introduced into the practice of medicine and surgery it was supposed that its use would largely be confined to the illumination and study of the interior structures of the body. Its immense value in this field was at once perceived, and a voluminous literature soon appeared and now continues to increase. It is certain that not a single agent in modern times has been introduced into the field of diagnosis that surpasses the X-ray in its unique interest and importance. The exact limitations of its usefulness in this interior illumination have not yet been determined, but the subject has now passed well into the critical stage and it is likely that we shall ere long know with some degree of precision just how reliable and how applicable this agent is as a means of diagnosis. That its usefulness tends to increase rather than to diminish seems evident, for cases are occasionally being reported in which the X-ray has given most valuable aid in the study of diseases in which it was once thought that it would prove useless. In support of this assertion we may refer to diseases of the brain and of the chest.

In diseases of the eye, the X-ray might be supposed on general principles to be of value, and the papers of Dr. Sweet and Dr. Fox, which we publish in this issue, present the subject with commendable fulness and accuracy.

But it has been found that the X-ray has other potencies than as a mere illuminator. Before it had been long in use its influence, often disastrous, on the skin was noted. This influence seems as yet to be somewhat mysterious; certainly we have nothing like well-formulated knowledge based on experience. For this reason much more extended and accurate observation is needed, not only to explain the X-ray's destructive action but to determine its physiological and therapeutic effects. We take pleasure in presenting in this issue a series of papers on this aspect of the subject. Dr. Johnston presents a paper on keratosis, and Dr. Rinehart one on the treatment of epithelial skin cancer with the X-ray.

In the early future Dr. Codman of Boston will contribute to this Journal an exhaustive paper in which he reviews all recorded cases of X-ray burns. This latter subject is of great practical importance as well as of grave medico-legal significance.

The Report of the Mosquito Commission of New Orleans.—The *New Orleans Medical and Surgical Journal* for January contains the Report of the Mosquito Commission to the Orleans Parish Medical Society. The work of this body has been thoroughly and painstakingly done. A study has been made of the topographical and seasonal distribution of the mosquitoes to be found in and about New Orleans. As a result of their work the Commission states that *Anopheles* inhabits the swamps surrounding the city, as well as the suburbs, while *Stegomyia* and some of the common forms of *Culex* infest the heart of the city and find their breeding places in cisterns and gutters. A map showing the distribution of mosquitoes and of the location of yellow fever cases in the year of 1897 accompanies the report. There is a somewhat striking significance between the distribution of *Stegomyia* and of yellow fever cases. It is of interest to know that those who prepared the mosquito map did not see the yellow fever map until both were completed. The Commission points out, however, that too much importance should not be attached to this apparent relation between the distribution of the cases of yellow fever and the haunts of the *Stegomyia*. They call to mind that all cases reported as yellow fever may not have been such, and further that all yellow fever cases were probably not reported. The further fact that *Stegomyia* is absent from those sections which are sparcely populated, which show no yellow fever infection, may well be due to the fact that there were no inhabitants in these sections to have the disease. They have performed considerable experimental work with the *Bacillus icteroides* of Sanarelli and mosquitoes and their results have in every way borne out the theory that *Stegomyia fasciata* is a means of infection with this organism. As to malaria they have confirmed descriptions given by other authorities and have found the parasites in sections of *Anopheles* which have bitten malarial patients. They conclude from the result of their studies that *Anopheles maculipennis* is responsible for

simple tertian and quartan infection and that *Anopheles crucians* is responsible for the estivo-autumnal form. From these conclusions of their report we observe the undoubted relation of *genus Anopheles* with malaria, and *Stegomyia* with the *Bacillus icteroides* infection, but the committee have very well emphasized the point that because of the association of these diseases with certain varieties of mosquitoes, it is by no means safe to conclude that the uninvestigated genera are not also carriers of these diseases. They further state that they have not disproven that the mosquito might carry the contagion mechanically, either by means of an infected proboscis or the body, wings and legs having been soiled by contact with dejecta and then touching food or drink of another individual who might thus become infected. They have failed in their attempt to locate the *Bacillus icteroides* within the tissues of the infected mosquito and they suggest that further work be done in this direction. The report includes an account of the most simple and approved method of prophylaxis of both yellow fever and malaria, which is of course identical in both diseases, and primarily depends upon the destruction of mosquitoes and the protection of the patient by proper screening from serving as a focus of infection for these pests. It is a pleasure for us to refer our readers to this Report and to congratulate Prof. George E. Beyer, Dr. O. L. Pothier, Dr. M. Coutet and Dr. I. I. Lemann for the thoroughness of their work and the soundness of their conclusions.

Penetrating Wounds of the Heart.—Twice recently we have referred to the modern treatment of stab-wounds of the heart, and now we do so for the third time with a great deal of pleasure because it is to comment upon a successful operation of heart suture by an American surgeon.

In the *Interstate Medical Journal* of January, 1902, will be found a report of this case by Nietert of St. Louis. Our readers will remember Nietert's first case, reported in the **Philadelphia Medical Journal**, December 14, 1901, and the misfortune he had in losing his patient from uremia on the second day after operation. Nietert's second case was in a negro, 27 years of age, who was admitted to the hospital 14 hours after the receipt of a stab-wound of the left chest. The symptoms differed from those of his first case in many particulars. The patient was semi-conscious and the left pleura was found filled with blood, which greatly embarrassed respiration. In his first case it will be remembered the pleural cavity was not injured at all and the patient was completely unconscious from blood pressure within the pericardium. In the second case the wound was situated in the wall of the left ventricle quite far back. The flow of blood was constant and the wound was not probed, but Nietert has no doubt whatever that the knife penetrated the ventricular cavity. The wound was closed with two interrupted silk sutures. During the 14 hours elapsing between the receipt of the injury and the patient's admission to the hospital no means were taken to prevent infection of the wound, and as a result an empyema followed the operation and necessitated a second operation for the purpose of drainage. After remaining very ill for a number of days the patient made a good recovery.

Dr. Nietert is to be congratulated upon what we believe to be the first successful operation for penetrating wound of the heart in this country.

The Degeneracy Howl.—An esteemed correspondent has recently written to us in strict confidence that he hopes the time is near at hand when this chimerical "degeneracy howl" will be forever silenced. Our friend has evidently had a surfeit of Nordau's belles-lettres science, and of Lombroso's morphological metaphysics. "So rabid have some writers become," he says, speaking of the Czolgosz case, "that they assail almost anything that savors of the really scientific, or of conservatism or common sense." Such writers seem to feel that they must shriek "degeneracy" into everybody's face. Not a crime is committed or a murderer hung but they are ready to prove the criminal a "degenerate" if only they can get near enough to him to measure his ears or to take the angle of his front teeth. A writer out west, who rides the degeneracy mule at a rapid pace, has even claimed that statistics show that the entire population of this country will be either lunatics or fools in 260 years! For our part we are quite prepared to prove by his figures that some of our population are fools already.

It is a subject for congratulation that with very few exceptions the alienists and neurologists of the country did not lose their judgment over the case of Czolgosz. The perfect sanity with which his case was discussed goes far to disprove the assertion that experts in this country are prone to entertain extreme views in such cases, and is sufficient answer to the flings of some ill-advised critics who have insinuated that American alienists, as a class, are ready to try to prove any criminal insane. The report of Czolgosz's case by MacDonald and Spitzka was as well-balanced and scientific a medico-legal document as it is possible to conceive. It was judicial in tone, and it will be enduring in its example. For these very reasons it has not suited those critics who would, if they could, with one gesture sweep everything and everybody into the bottomless pit of "degeneration."

The tendency to follow Lombroso blindly, and to harp on this one string, will seriously impair the

scientific credit of him who does so. Let every student reflect that *variation* does not necessarily mean *abnormality*. This hunting for and measuring every little variation will never establish a science of "degeneration." Variations are infinite, and, as Darwin has shown, they are but the starting points, not for degeneration, but for evolution. Without them there could be no advance. We expect to publish next week an important paper bearing on this subject by Dr. Edward C. Spitzka of New York.

Snake-Venom and the Coagulation of the Blood.—The physiology of serpents' venom has always aroused much interest, although the observations of different experimenters have by no means always tended towards the same results. This is to be explained partly by the difference in the methods of experimenting, and partly by the difference in the venoms employed.

It is now conceded that the opinion of Mitchell and Reichert, that all venom contains two poisonous substances, one acting upon the central nervous system and the other upon peripheral tissues, is correct. The action of the nervous poison has been fairly well investigated, being taken up with renewed interest and energy subsequent to the discovery of Phisalix, Bertrand and Calmette, that this principle was capable of leading to the formation of an anti-body in the blood. The nature of the other principle of the venom has, however, been subjected to much less investigation and much still remains unknown concerning its physiological action.

One of the problems still surrounded by the greatest uncertainty is the inhibition of the coagulation of the blood which venom induces. In their paper published in 1886 Mitchell and Reichert conclude that *venom renders the blood incoagulable*. These experimenters worked with venoms of all kinds and this statement probably refers to the average result obtained.

Barrett in 1894 confirmed the results obtained by Martin of Sydney, that the rapid injection of venom was succeeded by rapid intravascular coagulation of the blood and that when the poison is injected slowly into the tissues instead of into vessels the same dose of venom produces no clotting of the blood.

Halford in 1894 maintained that venom acts primarily upon the blood and secondarily upon the nervous system. The post mortem effects of the poison he found to be the prevention of coagulation, the blood in the cases in which he investigated having been fluid.

Cunningham published a rather lengthy paper in 1896 in which he regards the action of venom as primarily that of a powerful blood poison. He found it to produce changes in the blood outside of the body and found the changes observed in venom intoxication closely related to those following poisoning by CO. He also found the injection of a large quantity of venom was followed by loss of the coagulability of the blood.

Stephens and Meyers in a paper published in 1898 found the cobra poison inhibitive and poisonous to blood *in vitro*. They found that this power of the cobra venom to inhibit the clotting of the blood was neutralized by anti-venomous serum.

Phisalix in 1899 found, as others had done, that when a sufficient quantity of viper venom was injected into a dog, to occasion its death immediately, the chambers of the heart were filled with black clots and there was rapid destruction of the blood corpuscles, but if the quantity of venom injected was insufficient to produce rapid death the coagulability of the blood was lessened.

Delezenne endeavored to explain the action of venom upon the coagulability of the blood as depending upon the destruction of corpuscles and the liberation into the blood of certain substances favorable or antagonistic to coagulation.

The most recent investigation of the subject is contained in the paper by George Lamb in the *Indian Medical Gazette*, for December, 1901. The experiments of Lamb upon this subject were partly made *in vivo* and partly *in vitro* upon an entirely new plan. Lamb found that death from venom secured from Russell's viper was preceded by objective symptoms which he believed were due to intravascular thrombosis. In some cases he saw the arteries filled with solid clot, the whole vascular system, in fact, being a solid mass. The immediate cause of death is probably thrombosis of the pulmonary arteries. He believes that the theory of Wall and Cunningham is erroneous. Lamb found a marked difference in the behavior of the venom according as it was rapidly absorbed or slowly absorbed. He concludes that in slow or chronic cases there is a deficiency in coagulability of the blood. The blood may remain unclotted for twenty-four hours after being shed. But from his experiments he concludes that fatal doses of venom increase the coagulability of the blood, and that death is largely due to thrombosis. Lamb's experiments were very ingenious, but the reader is referred to the original paper for a description of his technique.

Copper in Canned Peas.—The coloring of preserved peas by copper has been practised for a considerable period, and has been investigated by many chemists and sanitary authorities, but positive information as to the physiological effects of the copper has not been secured. It is probable that the cumulative action of copper is not strong and that small

amounts of it may enter the tissues without seriously disturbing function. It is known that several articles of food frequently contain minute amounts of this element. The English Commission, the report of which was a subject of editorial notice by this journal recently, made some investigations into the question, by visiting canning establishments and also having analyses made of colored peas. The report of the commission was against the use of the copper method, but Dr. Tunnicliffe filed a minority report, in which he stated his opinion that the quantity of copper was too small to do harm. It is thought by some that colored portions are difficult of digestion and, therefore, absorption of the metal is unlikely.

In one of the establishments the operation was conducted by adding 28 grams of crystallized copper sulphate containing about 7 grams, or a little over 108 grains of copper, to a bushel of peas and considerable water. Much of the chemical is drawn off with the water. Normal uncolored peas were found to contain less than one one-hundredth of a grain of copper to the pound; peas deeply colored by the above process contained six-tenths of a grain to the pound. An interesting side-light is thrown on the subject by the fact that although Germany has a law forbidding the use of such coloring matters, a sample of canned peas made in Strassburg and sold in some other German town was found to contain copper in proportion of seven-tenths of a grain to the pound. Thus in the country in which the practice was in violation of a statute the added material was higher than where no regulation existed.

The Turks and the Rats.—The wily Turk has proven himself once again a thorn in the side of all Europe. The United States Consul at Hull, England, has recently written to the State Department informing it of the action of the Turkish authorities at Constantinople in adopting regulations governing the admission of ships into that port from the Mediterranean and all ports where plague is said to exist. The regulations are stringent in character and will involve a great loss of time and great cost to the merchant-marine. The Turkish health authorities have accepted the theory that plague is a rat-borne disease and they are seized with a sudden spasm of hygienic virtue to protect their beloved city against the scourge which they fear the foreigners will thrust upon them. They prefer to pick the mote from their brother's eye rather than search for the beam in their own. There is no city in the world in which rats, household pests, as well as dogs, are treated with more consideration, or are entertained with more friendly feelings of solicitude or in greater numbers than in Constantinople. They play the important part of scavengers and the system is believed to be both economical and excellent for refuse disposal. It is an historical fact that at one time the city was so overrun with dogs that in compliance with an Imperial edict these animals were gathered together with infinite care and transported to an island in the sea. There were many grumblings and dire prophecies [illegible] on the part of the mass of the population when this regulation was put into effect. Time passed and what was the outcome? Behold, an epidemic broke out in the city, thousands died, the murmurings of the populace grew louder, "It is the will of [illegible]," they said. The dogs were brought back tenderly, and plying their trade as scavengers soon brought the city back to its wonted condition, and sickness gradually disappeared. So the Turk, grateful for the services which the dogs, and to a less extent the rodents, of the city render him, holds them more or less in reverence. He has not the same partiality, however, for unorthodox rats and he is willing to give the European shipholders a large overdose of their own medicine. "Hygiene," he says, "is a most excellent thing to enact—against the foreigners. Let us give them plenty of it." The stringency of the regulations lately adopted *might* have been the result of an argument of this [illegible]

The Duty of the Physician to Himself.—The newspapers announce the death of a venerable physician in the interior of the state, who after a practice of fifty-five years, leaves uncollected [illegible] accounts amounting to $50,000. It will be in order now for the lay press to moralize on the case, and to refer to the noble alms-giving propensities of the medical profession. Some people will see in this story the evidence that physicians are a noble, self-sacrificing class, while on the other hand certain philistines will say that the case simply proves that doctors have not sense enough to collect their bills. Judgment in such a case depends somewhat upon the point of view. Both interpretations are valid, but on the whole the philistine judgment is the one that goes straighter to the point. It is somewhat deplorable that the medical profession should have forced upon it the reputation of being an eleemosynary corporation, simply because it has slack business methods; and it is not desirable that it should have to support such an undeserved reputation for benevolence at the expense of its own bread and butter. The [illegible] is not slow to adopt the comfortable idea that physicians practise medicine for the love of their fellow men, and so let the doctors have the full benefit of this generation with the bills are presented. There is danger of insecurity and [illegible]

one side and of injustice and fraud on the other. $50,000 in uncollected book-accounts are a poor asset for any doctor's estate.

Varianation.—The very large number of vaccinations that are at present being made throughout the country reveal to those engaged in making the inoculation with cowpox many peculiar ideas and strange projects. The number of antivaccinationists is perhaps smaller than we have been led to suppose would be found in any given community; but these people do exist and their efforts to evade compulsory vaccination orders of school boards, educational institutions, employers, etc., are somewhat amusing. We understand that a number of practitioners are catering to the whims of their antivaccinationist clientele by administering the vaccine of cowpox by the mouth. After a certain course of powders, which are composed of dried vaccine, they give to their patients a certificate to the effect that so-and-so has been "varianated." We are not personally familiar with the dose of dried vaccine that is employed to varianate a person. Neither are we familiar with the physiological action of the serum under these circumstances. We suggest that the health authorities of some of our cities or states investigate this subject, and give the world the benefit of their inquiries.

It is a hopeful sign of the times when a new governor of a state, in his inaugural address, leaves politics and talks about health. Governor Murphy of New Jersey uttered a wise and timely word about the care of the consumptive poor, and made no recommendation in his address more worthy of note and approval than when he urged upon the Legislature the desirability of erecting a state sanatorium for these invalids in that state.

Dr. G. Stanley Hall, president of Clark University, has spoken a word in defence of alcohol, and his address, we fear, will sound to some of our temperance friends like an apology for the devil. He is especially severe on the temperance physiology which is made to order and taught in our public schools. He probably speaks the truth when he says that laboratory research has not made plain whether alcohol does or does not increase motor ability. The subject seems as yet to be *sub judice*.

Current Comment.

A WISE GOVERNOR.

"I am inclined to bring to your attention the subject of providing a state hospital for the consumptive poor. The dreadfulness of this disease is not appreciated by the average layman. The rich stand a fighting chance, and if they take the disease in time and submit themselves to skilled treatment they may recover. But with the poor the bullet of the rifle pointed at the heart is hardly more certain. It is swifter, but not more sure. That this disease is contagious is now as fully recognized as that under most conditions it is fatal. It is a proper subject for legislative investigation and action."—*From The Inaugural Address of Governor Murphy of New Jersey.*

THE NEW YEAR WITH ITS RESOLUTIONS.

The physician should avail himself of the new year to take stock and calculate his resources, both liabilities and assets, and decide how best to conduct his business for the new year. He should see what percentage of collections were made on the year's business. Consider the class of work rendered. Satisfy himself that he is keeping his business up to the highest standard. Look about his library and see if it is supplied with recent up-to-date text-books for case reading. Consult his journal files and see if he is supplied with the best to keep him up with the latest medical thought. Examine his instrument case and see that he is reasonably well supplied with the tools necessary to perform skilfully the work that is required of him from time to time. Look into the office furnishings and feel they are in keeping with the rules of hygiene and comfort. See that his vehicle and motor power of same are up-to-date and look well; and that the "old horse," the next best friend to the physician's wife, has received his share of the profits of the business. Take an inventory of the whole business and decide to improve on the past year in every way possible.

—*The Texas Medical News.*

THE ALTRUISM OF THE MURDERER.

We need not admit any genuine altruistic element in Czolgosz's motive; the altruism of the murderous anarchist is that of the French Reign of Terror or the Paris Commune—a bloodthirsty working-out of the evil passions of hate and envy. It is the stirring up and sowing of these that is the trade of the modern agitators, and they find in such as Czolgosz a fruitful soil for the seed. Traditions of tyranny and disappointed expectations of wealth and license make many of the ignorant foreigners of certain races in this country ready disciples of anarchy. Collectively they are a social problem, but their individual psychological interest must depend not so much on their anarchistic tendencies and acts as on the special evidences of abnormality that they individually present. These seem to have been absent in Czolgosz; he was not an original paranoiac of the higher grade, like Guiteau, or one closely bordering on imbecility, like Prendergast; he was, rather, from all evidences, of average normal mentality but misled by the more vicious social tendencies of the present time. The possibility of his being a degenerate, or mentally abnormal, appears to us to be a purely *a priori* assumption not sufficiently justified by the facts.

—*The Journal of The American Medical Association.*

Reviews.

The Estivo-Autumnal (Remittent) Malarial Fevers. By Charles F. Craig, M. D., (Yale) Acting Assistant Surgeon U. S. Army; Pathologist and Bacteriologist to the U. S. Army General Hospital, Presidio of San Francisco, Cal.; late Director of the Bacteriological Laboratories of the Sternberg U. S. A. General Hospital, Chickamauga Park, Ga., the Josiah Simpson U. S. A. General Hospital, Fortress Monroe, Va., and the Camp Columbia U. S. A. Hospital, Havana, Cuba; member of the American Medical Association, the American Microscopical Society, etc. Illustrated by two colored plates and twenty-one clinical charts. William Wood and Company, New York, 1901.

Craig has contributed a most excellent treatise on Estivo-autumnal Malarial Fevers, which is based largely upon his extensive experience in this class of fevers. This widespread disease has been fully and systematically studied by many competent observers, and Craig's addition to the

present abundant literature is nevertheless a most valuable one, for in the work before us we find a concise, clear, and thorough account of the forms of malaria due to the estivo-autumnal parasite. The book is divided into eighteen chapters which discuss the subject from the view point of etiology, pathology, symptomatology, prognosis, diagnosis, and treatment.

Craig describes two forms of the estivo-autumnal parasite, the quotidian and the malignant tertian. The following are the chief points of difference between these varieties. The quotidian parasite in its hyaline stage is about one-sixth the size of the red corpuscle, is very active, perfectly round, and has an indistinct outline. The red corpuscle in which it is contained presents very frequently a crenated appearance and is dark green. In the pigmented stage it is about one-fourth the size of the erythrocyte, is round, its ameboid motion becomes lost; it possesses a sharply defined outline and contains one or two perfectly motionless coarse granules. The parasite divides into from six to eight segments within the red corpuscles as a rule. The crescentic bodies are small, plump, and always have a double outline. They contain a small amount of pigment. Its developmental cycle covers a period of 24 hours. The malignant tertian parasite, on the other hand, is about one-third or one-fourth the size of the red corpuscle in its hyaline stage, signet ring shaped, possesses sluggish ameboid movement, and has a clear cut refractive outline. The erythrocyte in which it is contained, is light green and sometimes wrinkled. In the pigmented stage it is about one-half the size of the red corpuscles, its ameboid motion continues; it is slightly ring-shaped and afterward becomes round. The outline of the tertian parasite is well defined. Within its protoplasm there are minute pigmented granules, which have a rapid vibratory motion. The red cell is rarely crenated and there is never more than one parasite in a corpuscle. The segmenting body, which consists of from five to fifteen or more segments, is outside of the red blood corpuscle as a rule. The crescents are long, narrow, and deeply pigmented and do not present a double outline. The developmental cycle of the malignant tertian parasite covers a period of 48 hours.

In this work the author lays great stress upon the diagnostic value of examination of the blood in estivo-autumnal malaria. Referring to the diagnosis of these fevers, he emphasizes that "the examination of the blood is the most infallible method of arriving at a diagnosis and should never be neglected. The clinical symptoms in these cases are often so misleading, the periodicity of the attacks so often irregular, and the prognosis so grave, that to undertake a diagnosis by any other method is at once unsatisfactory and dangerous. The therapeutic test by quinine, while it is often decisive, should not be relied upon wholly, in these cases, as they are often very resistant to quinine, and thus the correct diagnosis of the case is long delayed, and the life of the patient endangered. There is but one absolutely reliable and scientific method of diagnosing the estivo-autumnal fevers, and that is by microscopical examination of the blood." After a careful perusal of this work, we believe it to be reliable and should serve as a valuable guide for the general practitioner.

[F. J. K.]

A Practical Treatise on Diseases of the Skin. By John V. Shoemaker, M. D., LL. D., Professor of Skin and Venereal Diseases in the Medico-Chirurgical College and Hospital, Philadelphia, etc. Fifth edition, revised and enlarged. D. Appleton and Company, New York. 1901.

The review of a work that has already reached the fifth edition, as the one before us, is in a great measure a perfunctory task, as this is evidence enough of its appreciation by professional readers. Continued success is rarely meted out to any volume unless it has inherent merits which commend it. The author has always kept in view a work written from the standpoint of an active general practitioner, approaching the subject rather from the basis of general medicine than from purely that of the specialist, although necessarily largely moulded by his dermatologic training and knowledge. This has some advantages, although it often leads to giving too much weight to therapeutic remedies internally administered, and to an unnecessary multiplication of formulae. A writer from a purely dermatologic standpoint, on the other hand, frequently tends to place a too low appreciation upon constitutional treatment, but large stress upon local remedies, frequently holding the latter within certain prescribed lines, and detailing only the more valuable methods—those likely to prove most successful. Dr. Shoemaker has, however, upon the whole, well avoided the extremes in either direction. The present edition shows pretty general revision, and the necessary changes to bring subject matter into line with the advances of the past several years.

The text shows that the literature of the period has been given due weight in all its divisions—etiology, pathology, pathogenesis, diagnosis and treatment—so that the treatise can be said to give a sufficiently complete reflex of the present state of dermatologic science. The author has wisely avoided too much "attention to publications, which however interesting and suggestive—probably containing germs of truth—have not yet been fully demonstrated, nor yet won general acceptance." In short the present revision, while a careful one, has been, and very properly too, made on conservative lines; and the work, as it now stands, can be considered as clearly representing the subject, and will therefore continue to receive the same appreciation given to the earlier editions. [H. W. S.]

Transactions of the American Surgical Association. Volume the Nineteenth. Edited by Richard H. Harte, M. D., Recorder of the Association. Printed for the Association by William J. Dornan, Philadelphia, 1901.

This volume of Transactions contains the 36 papers which were read before the Association at the Meeting held May 7-9, 1901. As most of these articles have been printed entire in the various medical journals, and as an abstract of the proceedings was published in the **Journal**, an extended review is uncalled for. The volume is illuminated by a series of well executed cuts and plates and is carefully edited and attractively printed. [F. T. S.]

First Aid in Accidents. By Charles R. Dickson, M. D., Secretary, Committee on First Aid, I. A. R. S., Lecturer and Examiner. St. John Ambulance Association. Fleming H. Revell Company, Chicago, New York and Toronto. 1901.

In the first chapter of this valuable little brochure, the author has couched, in simple and concise language, the fundamental principles of human anatomy and physiology, and in such a manner as to be both interesting and highly instructive to all such of the laity, whose duties may cause them at any time to be called upon for assistance and presence of mind. It is difficult for medical men to impress laymen with what they ought to know about the human body, and yet remain within the confines of simplicity. This, the author has mastered throughout the book, with tact and judgment. Chapter 2 is devoted to the consideration of surgical cleanliness and the treatment of hemorrhage. The location of the various major blood vessels is comprehensively described in a previous chapter, thus enabling the laymen practically to apply such expressions as "digital compression of the artery." Chapter 3 is devoted to mechanical injuries, and is well compiled. Chapter 4 deals with insensibility due to various causes, and offers simple methods for differential diagnosis and treatment. Especially to be commended are the statements for the benefit of the laity not to administer oil in phosphorus poisoning, nor stimulants in apoplexy, the employment of firmness, and not of sympathy in hysteria, the protection from injury, rather than an attempt to treat in epileptic paroxysms and the admonishment not to exhaust the patient while trying to keep him awake in opium poisoning. In considering arsenical poisoning it might have been well to describe the recognized antidote, and its preparation. In suffocation by gas it is seldom possible to break the windows from the outside, especially if the room is highly situated. There are several erroneous indices: for instance, apoplexy is indexed, as, on page 91 upon which it is not. Similarly, "Carbolic Acid Poisoning is not on page 96, as indexed, nor "Internal Bleeding" on page 47. Poisoning by ether is unimportant, and comparatively rarely ocurs except in the proximity of a physician. It would have been better to discuss strychnine poisoning. The book will undoubtedly result in saving many lives that otherwise might have been sacrified through ignorance.

[M R D.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Philadelphia Hospital.—The corner-stone of the new Children's Hospital building of the Philadelphia Hospital is to be laid by Mayor Ashbridge Saturday, February 1, at 11 A. M. It is expected that the building will be opened for mer.
the reception of children before the end of the sum-

College of Physicians, Philadelphia.—The report of the Library Committee for 1901 shows 64,916 volumes in the library, including 1070 duplicates. 4079 volumes have accumulated since July, when all duplicates on hand were disposed of. In addition to the volumes, there are in the library 58,395 unbound pamphlets, reports and transactions. The library regularly receives 356 medical periodicals, 86 of which are American, and 270 foreign. 2212 inaugural dissertations have been received during the year.

Bequests to Charity.—Almost $150,000 has been left to charity by the late William McClary, of Philadelphia. Of this amount, the Episcopal, Presbyterian, German, St. Joseph's, and Samaritan Hospitals each receive $5000. The same sum is left to each of ten homes and orphanages.

Smallpox in Philadelphia.—The number of cases reported during the week ending January 25 was 90, with 19 deaths. While the disease does not seem to decrease, its increase is not at all marked. An effort is being made by the city physicians to vaccinate the poor people in large numbers. Visits have been made to lodging houses at night and several hundred people have been forced to undergo vaccination. On Sunday almost five hundred men who came for breakfast to the Sunday Breakfast Association were vaccinated before receiving their meal. A number of schools have been closed for disinfection. Since January 1, 361 cases of smallpox and 66 deaths have been reported. Cases have recently appeared in Torresdale and Willow Grove.

Episcopal Hospital.—Dr. Henry M. Fisher has just resigned from the medical staff of the Episcopal Hospital.

Society Meetings Next Week.—The following societies will hold meetings next week, at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening, February 3, Academy of Surgery; Wednesday evening, February 5, College of Physicians; and Thursday evening, February 6, Obstetrical Society.

Typhoid Fever in West Philadelphia.—For the week ending January 25, 117 cases of typhoid fever were reported in Philadelphia, with nine deaths. By far the greater portion of these cases are in West Philadelphia. This outbreak is attributed largely to the bad condition of the water supply west of the Schuylkill.

The Appointment of Dr. Dougherty.—February 1, Dr. S. W. Dougherty will succeed Dr. J. B. Harmer as medical inspector in the Philadelphia Post Office. Dr. Dougherty, a graduate of the University of Pennsylvania Arts and Medical Departments, was resident at the German Hospital and afterwards studied abroad.

Smallpox in the State.—On account of the prevalence of smallpox, Italians are not allowed on the electric cars in Bethlehem and Italian laborers in the employ of the Bethlehem Steel Company have been discharged. This is the result of the escape of an Italian with smallpox from quarantine. Two hotels in Lebanon have been quarantined on account of smallpox. From Wilkesbarre comes the news that business is seriously affected by the quarantine which prevails against Plymouth, Edwardsville, Kingston, Luzerne, Dorranceton, Wyoming and West Pittston.

Diphtheria in Reading.—There has been a marked increase in cases of diphtheria in Reading during the past few weeks. Since January 1, 21 cases have been reported.

University of Pennsylvania.—Among the donations recently received by Provost Harrison were $15,000 from Dr. and Mrs. Norton Downs for the medical laboratories and $5000 from Mrs. J. F. Wentz for endowing a ward in the University Hospital.

The Polyclinic Hospital.—At a meeting of the trustees, January 21, Dr. George C. Stout was appointed professor of diseases of the ear, succeeding Dr. G. Alexander Randall. Mr. John Scott, Jr. was elected president of the Board of Trustees.

NEW YORK AND NEW JERSEY.

New York's Milk Supply.—The recent report of the Rockefeller Institute's milk investigations has aroused the philanthropists of New York. 330 epidemics of typhoid fever, diphtheria and scarlet fever have been traced to infection through the milk. During 1900, it is estimated that 6055 infants in New York City died from the effects of impure milk. The president of the Board of Health, Dr. Lederle urges the education of the farmers in sanitation, while Mr. Straus wants to erect a large plant for pasteurizing or sterilizing the entire milk supply. The physicians of the city are somewhat opposed to this scheme, since sterilized milk is the main cause of scurvy, while they all advocate instructing the dairymen in how to produce clean milk. This was also the conclusion reached by the Milk Commission of the New York Academy of Medicine.

Measles in Flushing, Long Island.—Over 400 cases of measles have been reported at Flushing, Long Island, in one week. The majority of the cases are of a mild type.

A Bill to License Osteopaths.—The Brackett bill to regulate and legalize the practice of osteopathy in New York has caused much discussion. It has developed that many United States Senators, among whom are Senators Platt, of New York, Foraker, of Ohio, and Cockrell, of Missouri, believe in osteopathy. Governor Shaw, the new Secretary of the Treasury, also has faith in osteopathy. Much opposition has also been aroused by this bill, medical societies throughout the State having presented protesting petitions. On January 29 the bill was defeated.

Hotel for Invalids, Chelsea, N. J.—It is proposed to build a large hotel for invalids with 200 bedrooms and fifty private baths, and facilities for salt water bathing. On each floor there will be a diet kitchen for the preparation of special foods, and resident physicians and trained nurses are both to be in attendance.

The New Lying-in Hospital, New York City.—The new lying-in hospital which J. Pierpont Morgan has built in Second avenue, Seventeenth and Eighteenth streets, at a cost of $1,250,000, was opened January 23, for the reception of guests. The building, which occupies a site 184 feet on Second avenue, 166 on Eighteenth street and 83 feet on Seventeenth street, is eight stories high, and is built with every modern convenience for successful hospital work.

Smallpox in New York.—Eight new cases of smallpox were discovered last week in Brooklyn, as a result of which three public schools have been closed. Another case was found in the accident ward of Kings County Hospital, the fifth case to have appeared in the hospital since the beginning of the year. Dr. Lederle, Chairman of the Board of Health, advises wholesale vaccination.

Dr. Koch's Tuberculosis Theory.—Dr. George D. Barney says Dr. Koch's theory of the non-transmission of tuberculosis bacilli from cattle to man is all wrong. He inoculated a cow, he says, last October, and it died of tuberculosis. He then inoculated Miss Emma H. King, who volunteered to assist him in the experiment. She rapidly became a victim of tuberculosis and was saved only by immediate treatment. Dr. Barney produces many affidavits in support of his claim that the young woman was afflicted with tuberculosis transmitted from the cow and that now she is entirely well. Washington scientists are not much impressed with Dr. Barney's result. Dr. D. E. Salmon, Chief of the Bureau of Animal Industry, who is a recognized authority on bovine tuberculosis and the author of a bulletin designed to refute the theory of Koch, said that he did not think Dr. Barney's experiments were sufficient grounds for his conclusions.

St. Vincent's Hospital is to have a splendidly equipped sanatorium near Suffern, N. Y., for convalescents, the gift of Mrs. T. F. Ryan. The building will accommodate at least thirty private patients and will be in charge of the Sisters of St. Vincent's Hospital. Mrs. Ryan has already given two free beds to St. Vincent's Hospital, one for telephone girls, the other for trained nurses.

Smallpox in Hackettstown, N. J.—The epidemic of smallpox in Hackettstown is evidently nearing its end. There have been 100 cases with four deaths. No new cases have appeared in the last few days. Hackettstown people are barred from visiting other towns, and when they appear at Washington, Phillipsburg or Belvidere, they are at once invited to return home. The disease has made its appear-

ance at Stanhope, Free Union, Newton, Schooley's Mount, Farmersville and German Valley.

Scarlet Fever in New York.—Four cases of scarlet fever were recently discovered in the Hebrew Orphan Asylum in New York, and were quickly removed to the Willard Parker Hospital. The 700 inmates of the Asylum were at once quarantined. Though 200 of the children attend public school in the neighborhood, no more cases of scarlet fever have yet been reported.

Manhattan Maternity Hospital and Dispensary.—A site has been purchased for the building of the new Manhattan Maternity Hospital and Dispensary, an institution which has been in existence since last spring, although it has not yet begun active work. The property acquired is that belonging to the American Ice Company, at 327 to 333 East Sixtieth street, a plot 100 by 100, now covered by stables. The price paid for the lots is reported at about $33,000.

NEW ENGLAND.

Smallpox in Boston.—15,000 people in the thickly populated part of East Boston were vaccinated Sunday, January 26, between 10 A. M. and 5 P. M. by the physicians of the Board of Health. As a result, the number of cases of smallpox in Boston has perceptibly decreased. The smallpox quarantine in Beverly has been raised. Smallpox has appeared in Southbridge, another case is reported in New Bedford, and several cases have appeared in Nashua, New Hampshire. One death is reported in Rockdale. Two cattlemen, who returned from Liverpool on the Warren Line steamer "Kansas," have been landed in Boston with smallpox.

Noble Hospital, Westfield, Mass.—An isolation building, in memory of the late J. W. Keep, has been erected on the ground of the Noble Hospital, with accommodations for ten patients. The building was erected by Mrs. Keep, to be used for patients with contagious diseases only.

Illness at Harvard.—The official report of illness in Harvard University for the year 1900-1901, prepared by Dr. M. H. Bailey, shows a total of 4603 cases, an increase of about 200 over last year. The following gives the number of cases of various diseases: Appendicitis, 33; chickenpox, 6; colds, 1396; constipation, 14; diarrhea, 184; diphtheria, 12; ears, 43; eyes, 259; general debility, 95; headache, 147; indigestion, 411; jaundice, 17; grip, 276; malaria, 32; measles, 1; miscellaneous, 719; mumps, 66; neuralgia, 68; overwork, 80; pneumonia, 6; rheumatism, 53; scarlet fever, 4; skin diseases, 79; surgical, 429; tonsillitis, 158; typhoid, 15; total, 4603; visits, 1326; office consultations, 2279; total number of consultations, 3605; calls on students not found in, 424; cases not seen by the medical visitor, 2186.

A School for Nursemaids has been established in Boston. They are instructed in the care of children, and have to prepare food and simple remedies for the little ones.

Lead Poisoning in Milton, Mass.—Seventeen well marked cases of lead poisoning have occurred during the last few months in Milton. Chemical analysis of the water showed an excessive quantity of lead evidently taken up by the water in passing through lead pipes. Examination of the water at its source shows an excess of carbonic acid, which, in passing through the pipes, becomes soluble poisonous carbonate of lead, which slowly accumulates in the human body with very serious results. Precautions are being taken that no water which has stood in lead pipes be used for drinking or cooking, while it is expected that safer pipes will soon be used in place of the lead service pipes.

Smallpox at Yale.—On account of the appearance of a case of smallpox in one of the students' dormitories at New Haven, the students at Yale are all being vaccinated.

Boston City Hospital.—The Boston City Hospital, which is said to be the largest hospital in the world, is to be enlarged by the addition of a new four story surgical building to contain a well equipped operating room and thirty-six rooms for private patients. It is stated that this will be the most complete hospital building in the world.

Diphtheria in Salem Mass.—Seven cases of diphtheria are reported in the Bently school in Salem. There are also several other cases in the same part of the city. The health department will fumigate the entire building and the school will remain closed until an investigation is made.

SOUTHERN STATES.

A Crematory Needed. Dr. S. O. Heiskell, quarantine physician in Baltimore, in his annual report recommends that facilities for the cremation of the bodies of persons who die of smallpox or yellow fever be supplied. 39 patients were treated during 1901. 29 of these were smallpox cases, but only 14 of them came from the city, the rest being from the counties. 16 persons were quarantined and there were 2 cases of scarlet fever. Inspections were made of 1607 vesels.

Johns Hopkins Hospital.—Of the 655 students enrolled at the Johns Hopkins University, 257 are candidates for the degree of M. D.

Louisiana Leper Home.—There are in the leper home in Louisiana thirty-six inmates, nineteen males and seventeen females. Five Sisters of Charity nurse these unfortunates. The leper colony is a State institution.

A Negro's Heart on the Wrong Side.—An autopsy made at Johns Hopkins Hospital recently upon the body of a negro who died after a stroke of paralysis, showed transposition of the man's internal organs. The heart was entirely on the right side of the median line; the liver was mostly on the left; the spleen was transposed to a spot several inches from its normal position; while the kidneys had changed places. The stomach was far out of its natural position. This transposition of viscera was probably congenital, and may indirectly have caused death by superinducing hemiplegia. He was 49 years old, a familiar figure about Point Market, Baltimore, where he worked thirty years, carrying meat and produce for the dealers.

Maryland Hospital for Consumptives.—At the annual meeting of the Board of Directors of the Hospital for Consumptives of Maryland, it was announced that an appropriation of $10,000 would be asked from the Legislature.

Dr. Rixey, Surgeon-General.—Medical Inspector Presley M. Rixey, physician to the late President and Mrs. McKinley, was appointed Surgeon-General of the Navy with the rank of Rear Admiral, succeeding Rear Admiral W. K. Van Reypen as chief of the Naval Bureau of Medicine and Surgery.

Hagerstown Hospital, Md.—It was announced January 10th that a citizen, who withholds his name, has determined to donate $50,000 for the establishment of a hospital in this city with the provision that the Medical Society first formulate plans for the same. It is believed that the project will soon be under way.

Carnegie University, Washington.—A Board of Trustees for the Carnegie Institution, which was recently incorporated under the $10,000,000 gift of Mr. Carnegie, was announced January 9. The form of the gift is in 5% bonds. Among the 27 trustees appointed are Dr. John S. Billings, of New York, and Dr. S. Weir Mitchell, of Philadelphia.

Dr. Hayes Honored.—Dr. T. Heyward Hayes, of Baltimore, a graduate of the Maryland College of Pharmacy and the University of Maryland, for 13 years Surgeon-Major of the Royal Siamese Navy, was lately decorated with the Royal Order of the White Elephant, the highest of Siamese decorations, rarely conferred upon a foreigner.

Baltimore General Dispensary.—The Baltimore General Dispensary has just closed its 101st year. During the past year extensive improvements have been made to the building. They include new operating tables and instruments. Over 13,000 prescriptions have been filled and 9,000 patients attended.

District of Columbia Medical Society.—At a recent meeting of the Medical Society of the District of Columbia the following officers were elected to serve during the present year: President, Dr. Samuel S. Adams; vice-presidents, Drs. J. W. Chappell and A. R. Shands; treasurer, Dr. C. W. Franzoni; corresponding secretary, Dr. Thomas C. Smith; recording secretary, Dr. Francis P. Morgan; librarian, Dr. Edwin L. Morgan.

Tetanus in Baltimore.—During 1901, 32 deaths from tetanus occurred in Baltimore, [illegible] days of age. In [illegible] vaccination, showing that the vaccine virus used [illegible] contained no tetanus germs, as that used in other cities has been claimed to do.

Suit for Physician's Fees has been brought against the estate of the late Gov. William Goebel, of Kentucky. The action was begun by Dr. Morgan Vance, who seeks to recover $500 for medical services rendered Gov. Goebel during his last illness.

Mary Washington Hospital, Fredericksburg, Va.—It is expected in the spring that the Mary Washington Hos-

pital in Fredericksburg will be greatly enlarged by the addition of an operating room and various other improvements.

The Briarcroft Infirmary, which is being fitted up at Georgetown, D. C., by Drs. O. D. Robinson and G. R. Paynter, will soon be completed and used as a general hospital. It will be one of the finest institutions in the District.

MISCELLANY.

International Congress for Original Medical and Surgical Investigations.—Dr. J. D. Coakley, of Chicago, is now engaged in establishing an exclusive association to be formed only of those physicians and surgeons who have made original and extensive investigations which have added much to scientific knowledge. While essentially American, membership will be drawn from all parts of the world. Dr. Coakley, who has just returned from Europe, has given the names of a number of foreign medical men interested in the association. Among these are Dr. Renvers, of Berlin, Dr. Hallion, of Paris, and Drs. Starling and Foster, of London. All applicants for membership must be at least 25 years old, graduates of a school of medicine and surgery recognized by the International Medical Association, and affidavits must be presented to show the originality of work and the practical and satisfactory results of experiments. Members less than forty years old will be required to perform satisfactory experiments on living animals or such lines as will be in harmony with their particular line of work. This must be continued each year for ten years, at the end of which time he may become an honorary member of the congress. Less work will be required of those more than forty years old. The different divisions of the congress will meet every year for the next five years with their respective national associations and every three years with the International Medical Association, after which time the meeting place will be selected by a majority vote. The last clause of the by-laws states the object of the congress to be: The furthering of scientific research, honest work and honest reports, all of which, it is to be hoped, will result in the further alleviation of suffering and the prolongation of life. Before any line of work will be accepted as complete, the investigator will be compelled to demonstrate his results before a committee, to be selected by the president of the congress.

Bubonic Plague.—From Adelaide, Australia, comes the report of an epidemic of bubonic plague among the natives of the Fiji Islands. A cable has also been received from Canton, China, stating that there have been over 100 deaths from the plague at Shuiting, about 250 miles south of Canton.

The Mexican National Board of Health reports, in its last bulletin, that since 1888, when the Pasteur treatment of hydrophobia was introduced, 4000 persons had been treated, with a total mortality of only 3 per 1000.

The Total Population of the United States.—Nearly sixteen fold in one hundred years has been the growth of the United States, whose population, including all Territories, is now 84,233,069. From the census report published this month, the statistics given are: Continental United States, or United States proper, 75,994,575; Philippines, 6,961,339, being the estimate of the statistician to the Philippine Commission; Porto Rico, 953,243; Hawaii, 154,001; Alaska, 63,592; Guam, 9000; American Samoa, 6100; persons in the military and naval service of the United States outside of the territory of the United States proper, 91,219. It is shown that the United States now includes Alaska and the recent insular accessions, Hawaii, Porto Rico, the Philippine Islands, Guam and American Samoa. The twelfth census extended over only two of these outlying districts, Alaska and Hawaii, but the Census Office has obtained the best available information regarding the population of the other portions of the United States. There are but three countries which now have a greater population than the United States, China, the British Empire and the Russian Empire. China and the British Empire have each of them probably between 350,000,000 and 400,000,000, or together nearly one-half of the total population of the earth. The Russian Empire has about 131,000,000 people.

Why Dr. Menke Was Killed.—From Samoa comes a hitherto unknown explanation of the killing of Dr. Menke, leader of the German scientific expedition of the South Sea Islands by natives of St. Matthew's Island. Dr Menke's party ruthlessly destroyed a number of palm trees, and the natives defended their property. The German punitive expedition has killed 81 islanders.

Notes.—There is one physician in the present Senate and there are four physicians in the present House of Representatives.—The human lungs usually contain about one gallon of air.—Typhoid germs retain their vitality for many weeks; in garden earth twenty-one days; in filter sand, eighty-two days.—Spain produces 10,000,000 tons of coal tar a year, Canada 17 millions, and Australia 30,000,000.—Out of 16,300 islands in the Indian Ocean only 370 are inhabited.—A simple decoction of hemp was used in China 1700 years ago as an anesthetic in surgical operations, according to a newly discovered Chinese manuscript in a Paris library.—Dissection of human bodies has been practiced since B. C. 320.—The United States with a poulation of 70,000,000 has about 130,000 physicians; Russia with a population of 130,000,000 has but 14,784 physicians.—One in every 50 persons over 80 years of age is blind.—Most spiders are possessed of poison fangs, but very few are dangerous to human beings.—The world's tobacco crop of 850,000 tons is grown on two and one-half million acres.—Of all the newspapers published in the world 68% are in the English language.

No Homeopathy in Japan.—We are advised, through Minister Buck, of Tokio, under date of December 12, 1901, that on July 20, 1899, the Central Sanitary Council resolved not to permit the practice of homeopathy in Japan.

Obituary.—Dr. William C. David, at West Superior, Wis., January 9, aged 40 years.—Dr. John H. Spurrier, at Rushville, Ind., January 9, aged 73 years.—Dr. John M. Sweeney, at Utica, N. Y., January 10, aged 35 years.—Dr. Robert Leeper Sweney, at Marion, Ohio, January 12, aged 80 years.—Dr. Alfred Neale Mahon, at Pittsburg, Pa., January 12, aged 25 years.—Dr. Robert A. Brunson, at Norwalk, Cal., January 7, aged 80 years.—Dr. Joseph W. B. Kamerer, at Greensburg, Pa., January 13, aged 56 years.—Dr. Nicholas Timary, at Cincinnati, Ohio, January 14, aged 52 years.—Dr. Ambroso M. Kinnamon, at Fairburg, Neb., January 9, aged 58 years.—Dr. Louis D. Masson, at Cohoes, N. Y., January 10, aged 28 years.—Dr. William P. Wilcox at Nebraska City, Neb., January 14, aged 39 years.—Dr. Anson S. Thompson, at Ellisburg, N. Y., January 8.—Dr. A. John Law, at Omaha, Neb., January 7.—Dr. Stephen H. McManigle, at Harper,, Kan., January 12.—Dr. Thomas H. Bernard, at Spring Garden, Ill., January 6.—Dr. Joseph Abell Baden, at Baltimore, Md., January 20, aged 68 years.—Dr. Andrew J. Hines, at Doylestown, Pa., January 21, aged 76 years.—Dr. William Leroy Brun, at Auburn, Ala., January 23.—Dr. H. U. Umstad, at Phoenixville, Pa., January 25, aged 75 years.—Prof. Emil Scheiffer, at Louisville, Ky., January 22, aged 90 years.—Dr. J. F. Spillman, at Andersonville, Ind., January 24.—Dr. Francis Clemens, at Williamstown, Pa., January 21.—Dr. Lachlan Tyler, at New York, N. Y., January 27, aged 50 years.—Dr. R. B. Grimes, at Cheyenne, Wyoming, January 25.—Dr. Henry J. Ziegler, at Chicago, Ill., January 27.—Dr. Charles G. Sproull, at New York, N. Y., January 24, aged 35 years.—Dr. J. R. Romeyn, at Keesville, N. Y., January 25, aged 77 years.

GREAT BRITAIN, ETC.

The English Tuberculosis Sanatorium Prizes.—Prizes amounting to $4000 have been offered by the Committee appointed by the King of England for the best description of a complete sanatorium for tuberculosis patients, under the following conditions. Plans may be sent in by a physician alone, or by a physician and an architect, for a sanatorium to accommodate 50 men and 50 women, 88 beds to be for free patients, and 12 for private patients, each patient to have a separate room. The sanatorium will be on high, dry ground open to the sun, and protected from cold winds, with dairy, park, woods, and a good water supply. It will contain the newest hygienic appliances, and is to be modern in all respects. The papers must be typewritten, in English, and signed with a motto, while the name and address of the writer is to be in a sealed envelope bearing the motto outside. All plans must be sent before April 15, 1902, either to Dr. P. Horton-Smith, 15 Upper Brook street, W., London, or to Dr. John Broadbent, 35 Seymour street, W., London. Three prizes of $2000, $1000, and $500 will be awarded for the best three works on

the subject. Articles must be as short as possible, and the conclusions should be collected at the end. The Committee in charge of this competition consists of Sir William Broadbent, Sir Richard Douglas Powell, Sir Francis Laking, Sir Felix Semon, Sir Hermann Weber, and Dr. C. Theodore Williams.

St. Thomas' Hospital, London.—An appeal for aid has been made by the treasurer of St. Thomas' Hospital, where as many as 150,000 cases were treated last year. The expenses of the hospital are over $250,000 annually.

Another Cure for Consumption.—A London surgeon has just published the results of experiments made with modifications of Tesla's high frequency electrical currents in the treatment of consumption. By his apparatus, a current of 80,000 volts is produced of such high frequency, yet administered in such small quantities, that the patient receives it without injury. His experiments show great improvement in the cough, night sweats, appetite, weight and general health. Even if the bacilli are not destroyed, their virulence has been markedly decreased.

Guy's Hospital.—$350,000 out of $900,000 required for the renovation and rebuilding for Guy's Hospital has already been subscribed. Mr. Pierpont Morgan has promised $25,000 as soon as $500,000 has been subscribed. A determined effort is being made to raise the desired amount.

Two Hundred Old People, whose ages altogether amounted to 16,314 years, have received half a sovereign apiece from the Magistrates' poor box at Brighton, England. Charles Green, one of the recipients, is 107 years old, and still retains all his faculties.

Cancer causes 4251 deaths annually in the metropolis, says the latest report of the Medical Officer of Health for London.

Myers Traveling Studentship.—Mr. Myers, of Birmingham, has endowed a traveling studentship in the University of Birmingham in memory of his son, Dr. Walter Myers, who died of yellow fever, while investigating that disease for the Liverpool School of Tropical Medicine. This studentship, open to any graduate of the University of Birmingham, permits a year's studies at one of the German universities, with an income of $750. The object is research in pathology or clinical medicine.

There is no hydrophobia in Great Britain, because of the stringent rules of the Board of Agriculture regarding muzzling. The muzzling ordinances have been repealed, but importers of dogs and travelers with dogs still have a hard time of it. A six months' quarantine of animals will be demanded after March 15, 1902, in order to be sure that the disease is not brought from foreign countries.

Smallpox in London.—Already 2000 cases of smallpox have been reported during the present epidemic, which as yet shows no tendency toward decreasing. Some cattlemen with smallpox were recently landed in London, having arrived upon a steamer from Portland, Me. Owing to the spread of smallpox, the various Government departments have issued instructions which will result in the revaccination of all Government employés, including postmen, inland revenue officers and telegraphers.

Obituary.—Col. Oswald Gillespie Wood, C. B., a graduate of the University of Edinburgh, principal medical officer at Kroonstad, South Africa, died January 3.—Dr. Frank E. Williams, a graduate of the Universities of Edinburgh and Glasgow, died in Wrexham, December 25, 1901, of typhoid fever.

CONTINENTAL EUROPE.

SWISS LETTER.

(From our Special Correspondent).

At the last meeting of the Zurich Medical Society in 1901, Prof. Haab spoke upon the **treatment of infected, penetrating wounds of the eye.** Iodoform, applied locally in 30 cases, has given striking results. Eyesight has been restored in cases hitherto considered intractable. This treatment was first mentioned by Haab at the Utrecht Ophthalmological Congress in 1900. A few drops of iodoform and gelatin are left in the inner chamber of the eye for absorption. Haab demonstrated a new case which, though complicated with panophthalmia, resulted in a vision of three-fifths to three-fourths. He considers tuberculosis of the iris an indication for the local iodoform treatment and showed two such cases, with good results.

Dr. Emil Feer, lecturer in pediatrics at Basel University, has published an interesting investigation upon **Koplik's spots in measles.** He observed them in 89% of the 200 cases under his treatment, and they always appeared from one to three days before the eruption. This is of great practical value, allowing the isolation of cases and the prevention of infection. This is of especial importance in families. Koplik spots never occur in any other disease, and they were not noted in 37 cases of rötheln. Dr. Lorand found the spots in 329 out of 349 cases of measles.

At a meeting of the Medical Practitioners of Zurich, January 9, Dr. Theodor Zangger gave a résumé of 16 cases of **phthisis, treated only with hydrotherapy.** The results compare well with those originally obtained upon medical treatment and encourage him to continue the application of wet packs, cold sponging, and friction according to the Winternitz method, followed by a course of douches. The patients belonged to the working classes, the mild cases continuing their work, only slightly altering diet and daily habits, yet recovery was generally obtained, even in damp, winter weather. In initial cases a cure followed in from 3 to 4 months, in more advanced cases, from 6 months to a year. The 10 initial cases were all discharged relatively cured, 2 cases in the second stage were greatly improved, able to resume occupation during the last 2 years; while 3 of the 4 cases in the third stage succumbed. The fourth case, with infiltration of both apices, hemoptysis, and a cavity the size of a hen's egg, recovered, all the processes becoming quiescent. Dr. Zangger sends all the patients of the poorer class to a sanatorium, when their home surroundings do not afford sufficient rest, light, air and food. He advises a limited amount of fluid and no overfeeding.

Insanity and Divorce.—A study of Prussian vital statistics recently published seems to show a relation of some sort between divorce, insanity and suicide. Out of a million persons, 348 divorced women committed suicide as compared with 61 married women. Three hundred and eighty-six married men committed suicide as compared with 2,834 divorced ones. In the insane asylums in Würtemberg a similar study shows 3,024 persons who have been divorced as compared with 283 married persons, 460 bachelors and maids, and 672 widows and widowers.

Professor Virchow Worse.—The condition of Prof. Rudolf Virchow, the eminent pathologist, who injured his thigh by a fall when alighting from a street car the early part of last month, causes apprehension among his physicians. He is growing weaker.

119 Deaths in the Alps.—Statistics just published in regard to the number of accidents in the Swiss Alps during the past year show that 119 lives were lost. This breaks the record, and is twice as large as the fatalities in 1900. Chamounix, which has been the principal death center since 1850, was responsible for the loss of thirty lives.

The Seventh International Red Cross Congress.—At St. Petersburg in May will be held the Seventh International Congress of the Red Cross Association. The first congress of this Association was held in 1867, and the great progress in the work done by the association will be fully shown at the coming congress.

A Serum Cure for Scarlet Fever. The Paris Academy of Medicine publishes the result in fifty cases treated with scarlet fever serum last year. Of the thirty children treated twenty-nine were cured. Of the twenty adults eleven were cured. But the reports say the results were not conclusive, as the usual therapeutics were followed conjointly in each case. The serum treatment consists in injecting into the patient an extremely small quantity of blood taken from a person who is recovering.

The Hugo Prize.—The Hugo Prize of $200, for the best work on the history of medicine to have appeared within five years in the French language, has been awarded by the Paris Academy of Medicine, to a lady, Dr. Melanie Lipinska, of Warsaw, for her book upon the history of women physicians from the time of the ancients to today.

A Remarkable Operation.—The Moscow Medical Congress recently gave a reception to a rural physician named Glosson, who, equipped with only his ordinary field instruments, removed half the stomach of a peasant. The patient recovered.

Obituary.—The death is announced of Dr. N. Homs y Pascuets, professor of clinical medicine in Barcelona.—We also learn of the death of Dr. Achilles Gouguenheim, physician to the Lariboisière Hospital in Paris, aged 62 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

January 11, 1902.

1. A Lecture on Maternities and Pre-maternities. J. W. BALLANTYNE.
2. A Clinical Lecture on Early Extrauterine Pregnancy. THOMAS CARWARDINE.
3. Tubal Gestation with Rupture and Hemorrhage into the Peritoneal Cavity. J. N. MARSHALL.
4. Hysterectomy for a Soft Fibroma Weighing 53 Pounds. FRANK C. MADDEN.
5. The Treatment of Puerperal Eclampsia. LOUIS A. FRANCIS.
6. A Suggestion for the Treatment of Enuresis in Females. G. C. PARNELL.
7. Hydroa Gestationis due to Staphylococcus Albus. NATHANIEL W. HOLMES.
8. Note on a Method of Quantitatively Estimating the Phagocytic Power of the Leukocytes of the Blood. W. B. LEISHMAN.
9. Epidemic Catarrhal Jaundice. ELLIOT CURWEN.
10. Enteric Fever in the Inoculated. C. BIRT.
11. Tortuosity of Both Internal Carotid Arteries. R. P. ROWLANDS and R. H. J. SWAN.

1.—Ballantyne describes what he regards as the **ideal maternity** hospital and compares this with those maternaties which do not come up to the high standard which he has drawn. The empty maternity, that is one without patients, means puerperal sepsis when patients arrive, owing to neglect in antiseptic precautions. He enlarges upon the special need of antiseptic measures in these lying-in hospitals, and describes the methods of antiseptics which he favors. [W. A. N. D.]

2.—Carwardine gives a **classification of extrauterine pregnancies,** defining the rare form of ovarian pregnancy and the usual tubal gestation. Most cases, he says, of pregnancy found other than in the tube have primarily been tubal in origin. He remarks that with a living fetus the placenta always remains attached to the tube after rupture has taken place. Where the placenta is, there is the tube or what remains of it. Where the living fetus is, there is the amnion surrounding it. The fetus may pass in one of four primary directions: into the pelvis by direct abortion or by rupture of the outer third of the tube; into the ventral abdomen by rupture of the tube; into the mesometrium or broad ligament by gradual giving away of the lower part of the tube; and into the uterus by passage through the uterine ostium. He describes the symptoms of early extrauterine gestation and gives two illustrative cases. He emphasizes the impotance of immediate operation after diagnosis. [W. A. N. D.]

3.—Marshall gives the history of a case of **tubal gestation with rupture and hemorrhage into the peritoneal cavity,** the patient being a woman 26 years of age. Hemorrhage had been so profuse that the collapse was marked. Injection of saline solution into the rectum and into the submammary areola tissues resulted favorably. The ultimate convalescence was normal. [W. A. N. D.]

4.—Madden reports a **hysterectomy performed for a soft fibromyoma,** weighing 53 pounds, in an Egyptian woman. Operation was successfully performed and convalescence was uninterrupted. Madden fills the peritoneal cavity with normal saline solution before closing the incision in all his operations. [W. A. N. D.]

5.—Francis reports five cases, two of which were fatal, **of puerperal eclampsia treated by injections of morphine.** He remarks that the premonitory symptoms in all the cases were more or less vomiting and headaches, which were not considerd by the patients to be anything unusual. He is not certain about the proper course to pursue as to the induction of labor in these cases. [W. A. N. D.]

6.—Parnell has thoroughly tested, he claims, the utility of the application of a strong solution of silver nitrate to the neck of the bladder and urethra as a means of treatment of **enuresis in females.** He does not claim this method as original with him. He reports five cases so treated with good results. It is necessary to dilate the urethra in order to make the application. There is but little pain produced and seldom is chloroform required. The patient must subsequently remain in bed 24 hours. He is unprepared to state a theory to account for good results, but there certainly is a mechanical action caused by the slightly swollen condition of the urethral mucous membrane after treatment. [W. A. N. D.]

7.—Holmes and Bulloch record a case of **hydroa gestationis due to the staphylococcus albus** occurring at three consecutive confinements. [W. A. N .D.]

8.—In former experiments on the **phagocytic power of the blood,** the serum alone cannot be shown, by experiments *in vitro*, to have more than a trace of bactericidal power against the organisms experimented upon. In the methods referred to, the leukocytes have, to a great extent, been excluded by clotting or by centrifugalization and the clear serum or plasma used so that the part played by these corpuscles, if any, has not been taken into account. The method advanced by Major Leishman, aims at enumerating the number of bacilli or cocci phagocyted within a definite time by the polymorphonuclear cells of the blood under examination, obtaining an average of these values, and comparing the result with that of a control blood, preferably that of the observer, put up under identical conditions. An emulsion of a portion of an agar culture of the germ whose action is being investigated is first made in a few drops of normal salt solution in a watch glass. A measured volume of blood is now to be added to and mixed with an equal volume of the emulsion of germs. The mixture is then placed upon a prepared slide and at once covered by a cover glass, very gentle pressure with the forceps being used, if necessary, to ensure the film spreading evenly to the whole circumference of the circle. A precisely similar preparation is then made of the control blood from the observer's finger, the drop being placed and covered at the opposite end of the same glass slide. The slide is now placed in a moist chamber, and left in an incubator at 37° C. for half an hour. At the end of this time the slide is removed and prepared for staining. Even with such a minute organism as the micrococcus melitensis, beautiful examples of phagocytosis may be obtained. Little difficulty is experienced in counting the individuals ingested by a particular polymorphonuclear cell up to the number of 50; beyond this figure, however, the results can only be given approximately, and the experiment had better be repeated with a more dilute emulsion, or the period of contact curtailed. The author reports the case of a man aged 34 years, who had suffered from small, painful boils at the nape of his neck for a year, but who was otherwise in very good health. The patient's phagocytic power for staphylococci, as gauged by the control blood, has varied in direct proportion to the amelioration of his symptoms. [J. M. S.]

9.—Curwen refers to an **epidemic of catarrhal jaundice** that he saw in Pekin and Tientsin during the winters of 1898-9 and 1899-1900. [J. M. S.]

10.—The mortality of 947 uninoculated individuals who have suffered from **enteric fever** in Harrismith, South Africa, from September, 1900, to September, 1901, has been 14.25%. During the same period, 263 **persons** who had been **inoculated with typhoid vaccine,** at periods varying from 6 to 18 months before, contracted this disease. Eighteen of these cases proved fatal; equivalent to a death-rate of 6.8%. The unmodified fever has been of severe type. In all the fatal inoculated cases an interval of 8 or more

months had elapsed between vaccination and the onset of the illness. [J. M. S.]

11.—Rowlands and Swan record a case in which both internal carotid arteries were found to have a marked S-shaped bend in their upward course. [J. M. S.]

LANCET.

January 11, 1902.

1. A Presidential Address on Some Diseases Incidental to School Life in New Zealand, with Suggestive Methods for Combating them. G. R. SAUNDERS.
2. A Clinical Lecture on Acute Suffocative Pulmonary Edema. JOHN LINDSAY STEVEN.
3. An Address on Mental School Hygiene. FRANCIS WARNER.
4. Volkmann's Contracture. LEONARD S. DUDGEON.
5. Some Figures as Regards Susceptibility to Revaccination. F. W. ANDREWES.
6. A History of the After-Progress of Five Cases of Partial Gastrectomy for Cancer of the Pylorus. J. RUTHERFORD MORISON.
7. Nevus Verrucosus Associated with Certain Anomalies of Pigment. H. TAYLOR.
8. A New Method of Breaking down Recent Adhesions. GEORGE W. ORD.

1.—Saunders delivered an address **"on some Diseases Incidental to School Life in New Zealand, with Suggestive Methods for Combating Them,"** before the members of the New Zealand Branch of the British Medical Association. He discusses at length the question of the eye sight of school children and points out that this is of the highest interest and demands great attention. He makes a number of suggestions in regard to the regulation of light in the school-room, as to the desk and seating of the scholars and in regard to suitable exercises which should be undertaken to a point, just short of fatigue and then followed by rest. He points out an evil which is prevalent in some schools that "of pouring in a mass of undigested knowledge which is allowed to remain untested until the objectionable monthly or quarterly examination comes round." He emphasizes that a physician's certificate should be obtained whenever a child is sent back to school after having been a victim of any of the exanthemata. He also discusses cardiac strain and deafness in school-children. [F. J. K.]

2.—Stevens delivered a lecture **"on Acute Suffocative Pulmonary Edema,"** before the Glasgow Royal Infirmary. The author mentions that a description of this condition cannot be found in most text-books. He gives a report of a case of acute suffocative pulmonary edema which occurred in a woman, 38 years of age. She was admitted into the Glasgow Royal Infirmary on January 29, 1901, at 2.30 A. M., in a somewhat collapsed and dyspneic condition. She had been in her usual good health at 11 P. M. on the previous evening. Her first symptom which appeared shortly after 11 o'clock, difficulty in breathing, became rapidly worse. A frothy expectoration soon followed and a lancinating pain was experienced across the front of her chest. On admission to the hospital her face was flushed and her lips livid and she was expectorating a whitish frothy sputum. The respiration numbered 34 per minute. The pulse rate was 105, and the temperature registered 96.4° F. Fine and medium moist râles were heard on auscultation of the chest. At 9 A. M. the patient was able to lie down and from that time she continued to improve. He reports another case of acute edema of the lungs which occurred in a man, 40 years of age, who was admitted into the Infirmary on December 22, 1899. The patient was found to be the subject of aortic regurgitation and obstruction and of mitral regurgitation and also suffered from subacute nephritis. These conditions were complicated with attacks of suffocative pulmonary edema. The attacks of edema would come on suddenly. Great dyspnea, cyanosis of the face, rapid pulse rate, and expectorating of frothy material, were the symptoms. The patient died on January 27, 1901. A post-mortem examination was made. A subacute tubular nephritis, chronic changes in the aortic valve, stenosis of the mitral valve, edema and congestion of the lungs and congestion of other organs, were found. The author mentions that acute suffocative edema of the lungs may be a primary or secondary condition. The symptoms of either form are similar. He emphasizes that the symptoms are so striking that there is, as a rule, little difficulty in recognizing their significance. The onset is always sudden, without warning the patient is suddenly seized with great difficulty in breathing. There is a sensation of intense oppression behind the sternum and expectoration of a perfectly white finely frothy watery sputum occurs. Cough is slight or absent. Fever is not present as a rule. The pulse is very rapid and fine moist râles are to be heard over the chest. The face assumes an ashen gray appearance and the expression is anxious. The sputum may become blood tinged after an hour or two. As much as 1½ pints of frothy fluid may be expectorated in course of five or six hours. With reference to the treatment of this condition, the author advises free stimulation by means of brandy injected into the rectum and the use of hypodermic injections of strchynin and digitalin. He states that opiates in any form are to be avoided as they tend to prevent the expulsion of the fluid from the pulmonary alveoli. If free stimulation is not followed by a subsidence of the symptoms, blood letting may be tried. [F. J. K.]

3.—Will be treated editorially.

4.—(This article will be abstracted in the Department for Co-operation and Original Research, this issue, under the head of General Surgery.) [J. H. G.]

5.—Andrews discusses **"some figures as regards susceptibility to revaccination."** The author vaccinated a large number of the female staff of Saint Bartholomew's Hospital. In all 171 persons were inoculated. Two of these were unvaccinated subjects, leaving 169 cases of revaccination. In three cases he was unable to ascertain the results owing to the persons leaving the hospital within a few days after the operation. Out of the 158 cases, which he can vouch for the results, perfect vaccinia occurred in 72 instances (45.57 percent); imperfect vaccinia in 65 cases (41.14 per cent.); and negative results occurred in 41 cases (13.29 per cent.) Sixty-one of the cases were persons successfuly vaccinated in infancy and not successfully vaccinated since. Out of this number, 50 cases (81.96 per cent.) were successfully revaccinated. The individuals who had been previously revaccinated, were the ones in whom the vaccination was unsuccessful in a large percentage of the cases. He emphasizes "that during the third decade of life some 80 percent. of those vaccinated in infancy are most perfectly protected against smallpox, and I imagined that it is this class which renders the number of attacks during an epidemic larger in the vaccinated than in the unvaccinated whatever the relative proportion of fatal cases may be. The figures which concern those already successfully revaccinated are of less importance. Individual susceptibility here plays an important part which can be only ascertained by experiment. There are certainly those who are so susceptible as to require revaccination after six or seven years. It is much to be desired that those who have the cause of vaccination at heart should record statistics of this kind, as there appears to me to be a dearth of accurate information on this important subject. This is my only excuse for recording the facts above." [F. J. K.]

6.—J. Rutherford Morison presents the **after progress of five cases of partial gastrectomy** for cancer of the pylorus. The first patient was a woman, 40 years of age. The growth was about the size of a Tangerine orange. Pylorectomy was done on October 31, 1897. The patient was perfectly well until May, 1900, performing all the regular duties of a housewife. During this period she gained considerable weight. On the 24th of May the abdomen was reopened

because of gastric symptoms. The recurrence of the growth extended along the lesser curvature of the stomach from the pyloric end nearly to the esophagus and along the greater curvature to within four inches of the esophagus. The growth was adherent to the liver and a number of enlarged glands were found in the lesser omentum. The growth was not removable so the abdomen was closed. She died December, 1900, three years and two months after her first operation. The second patient was a man, 48 years of age, upon whom a pylorectomy was performed on September 12, 1898. He returned to work two months after the operation and remained perfectly well until February, 1900, when he was found to have lost some weight and did not feel so well as previously. At this time a small mass was found in the scar of the abdominal wound. In August, 1900, a large mass could be found in the epigastrium firmly adherent to the abdominal wall. The patient died November, 1900, two years and two months after the operation. An autopsy was obtained and showed no sign of growth in the stomach itself. The glands about the suture line were large and infiltrated with cancer, but were quite easily separated from the stomach, while the liver was studded throughout with large masses of the cancer's growth. The third patient was a woman, 41 years of age. Pylorectomy was performed September 19, 1898. The patient greatly improved after operation and took on considerable flesh. She was able to work and maintain her family until the following May, when stomach symptoms returned. In July there was a large mass in the epigastrium. She died in December, 1899, one year and three months after operation, no necropsy. The fourth patient was a man, 38 years of age. Pylorectomy was performed October 18, 1898. Two years later he reported that he was perfectly well and had gained considerable flesh. In July, 1900, he returned with signs of large local recurrence with deposits in the liver. He died two years and eleven months after operation, no necropsy. The fifth patient was a man, 41 years of age, upon whom plyorectomy was performed February 9, 1899. This patient died of recurrence six months after operation, no necropsy. [J. H. G.]

7.—Taylor reports **a case of nevus verrucosus associated with certain anomalies of pigment** which occurred in a lad, 19 years of age. He was well nourished and in good health. There was no history of syphilis or tubercle. A dense crop of pigmented non-hairy warts are present over the right pectoral region which extends into the axilla and half way down the inner aspect of the right arm. A fine brown line unaccompanied by any warts is present over the umbilicus to the pubes. On the right side of the scrotum and penis a few reddish scars, the site of previous pigmented warts, are present. On the right side of the forehead, nose, and chin, similar scars can be seen from the groin to the inner malleolus. On the right leg there is another faint line of pigment which becomes more marked behind the ankle. On the left side of the body there are no skin lesions of any description. Sweating is more pronounced on the right side of the body. The condition is congenital. [F. J. K.]

8.—G. W. Ord reports a **new method of breaking down recent adhesions in joints** without anesthesia. The method consists in placing the patient in bed and while fixing the bone above the joint with the left hand quickly flexing the limb below with the right. It is claimed for this method that the pain is momentary and that the resistance of the patient is reduced to a minimum. [J. H. G.]

MEDICAL NEWS.

January 25, 1902. (Vol. 80, No. 4).

1. The Causation of Multiple Neuritis. W. ALLEN STARR.
2. Criminal Abortion. E. STUVER.
3. On the Use of the Opiates. Especially Morphine. OSCAR C. YOUNG.
4. Gonorrhea in Women. J. P. KILLEBREW.
5. A Case of Spontaneous Rupture of the Eyeball. W. WHITEHEAD GILFILLAN.

1.—M. Allen Starr in his article on **the causation of multiple neuritis** mentions the various causes which are known to produce the above conditions and classifies the cases as follows: I. Toxic cases due to the action of a poison derived from without the body (a) metallic: Arsenic, lead, mercury, copper, phosphorus and silver; (b) non-metallic: Alcohol, carbonic oxide gas, bisulphide of carbon and nitrobenzol. II.Toxemic cases from infection. In this class are included all cases due to the development and action in the organism of some bacterial poisons either of external or of internal origin. III. The third class of cases of multiple neuritis is allied to the second class, for while not truly toxemic or infectious, it is a class which Remak terms dyscrasic. There are certain diseases, the presence of which in the system predisposes it to nervous affections, and among these affections it is now necessary to include multiple neuritis. Some of these are in themselves of bacterial origin. Thus tuberculosis is surely and rheumatism possibly so. IV. In this class we have to place many cases for which no cause can be discovered. These are so-called "idiopathic" cases, but as our knowledge of the causes of the disease increases this class diminishes. The author in concluding his article says that there must, however, be added cases of neuritis in which a double causation may be ascertained. Thus it is well known that alcoholic subjects are more liable to arsenic and lead poisoning than non-alcoholics. It is well known that alcoholic neuritis often develops in a person subsequently to an attack of influenza, typhoid or other infectious diseases, though the amount of alcohol taken is not increased. Hence it is not wholly sufficient to ascertain one cause in a patient, and we should not be satisfied that we have determined the exact etiology of the affection in any patient until we have elicited every possible factor in the case. [T. M. T.]

2.—E. Stuver thinks that the distinction between the term *abortion* and *miscarriage* should be made on moral and ethical grounds rather than be determined by the length of time pregnancy has continued. He defines abortion as the deliberate and intentional interruption of pregnancy before viability of the fetus has been attained. Stuver also says that before we can correct an evil, we should have a clear conception of the causes which produce it and gives the following. (1) Hereditary vestiges of pre-existing savage or barbarous instincts and practices; (2) ignorance of the biological fact that from the moment of conception the developing embryo contains all the potential powers of the fully developed individual; (3) apathy, or a spirit of *laissez faire*, on the part of the great majority of people; (4) incompetence on the part of legislators to comprehend the true significance of the subject, and the consequent futility of the laws enacted by them to prevent the crime of abortion by adequate punishment thereof; (5) the inability, or disinclination, of judges to appreciate the rights of the embryo as an individual entity during the early stage of its development; (6) the ignorance, or disregard, of the subject on the part of teachers, ministers, druggists and physicians and the frequent complicity of the two latter classes in the perpetration of the crime; (7) ignorance of the physical dangers and the moral degradation inevitably attendant on the offence. [T. M. T.]

3.—Oscar Young gives five conditions in which **opium** is used: (1) Pain; (2) insomnia; (3) irritation and inflammation; (4) oversecretion; (5) systemic strain. It is the best agent we have for the relief of all pain, especially those in neuralgia, acute traumatic meningitis, various colics, renal, hepatic, etc., and dysmenorrhea. On inflammations it seems to exert some influence not very easily explained. Both large and small doses are of value upon inflamed serous membranes, as in meningitis and pericarditis. In nervous cough following hemoptysis it is very useful. In muscular rheumatism nothing is better in connection with hot internal and external applications. In serous diarrhea, diabetes insipidus and diabetes mellitus and in the treatment of oversection of any secreting surface except the skin, opiates may be used. In prolonged strain upon the system, as in great physical or nervous effort, or more frequently in old age to smooth out the cares of the remaining years of life and to decrease worry, it is useful. In advanced phthisis and heart disease, especially of the mitral valves, it is of service and it is also always of value in difficult breathing in all forms of heart disease. It is contraindicated in fatty degeneration of the heart. It

should be given hypodermically for the reason that it acts more quickly and that smaller doses can be given.

[T. M. T.]

4.—J. B. Killebrew divides his **treatment** under two heads: preventive and curative. The preventive treatment is one which is very hard to enforce, and most of our attention must be given to the curative. If the disease is confined to the urethra, vulva and vagina, it is comparatively easy, and the treatment consists of rest, thorough cleansing by douches containing some antiseptic solution and local applications. If the vagina or vulva be affected it should be douched every three or four hours with 1:500 bichloride solution or ¼% lysol solution. Local applications of 1% nitrate of silver or 2% protargal should be made to the urethra once every 24 hours. The solution applied to the vulva, vagina and cervix should be stronger and the author advises tincture of iodine or 5% nitrate of silver. These applications can be made once a day for three or four days and then every second day until all evidence of inflammation has disappeared. If the cervix is large and congestel it should be completed by blood-letting once a day. If abscess form in the vulvo-vaginal glands, it should be opened and treated in the usual way. The author believes cases of acute gonorrheal endometritis should be curetted as soon as possible. It is always well to remember that complications do sometimes follow curetting and the patient or her friends should be told of the possibility. If operation is not permitted, intra-uterine irrigation is the best method of treatment. The strength of the bichloride solution should be 1:10,000 to be followed immediately by a saturated solution of boric acid. This should be repeated every 24 hours. In nearly all chronic cases the infection has extended to the peri-uterine structures and any treatment applied to the endometrium alone will not effect a cure. In these cases treatment must be directly applied to the appendages. This treatment can be applied through an incision in Douglas's cul-de-sac, and will in many instances bring about a cure. Radical work should be done in cases in which conservative treatment has failed, in which there is extensive suppuration and in which there is genital sclerosis. [T. M. T.]

5.—W. Whitehead Gilfillan reports **a case of spontaneous rupture of the eyeball** in which there was no history of traumatism nor was there any ulcerative process going on in the cornea. There was no staphyloma. Had there been any of these conditions, there would be nothing unusual about the case. The patient had well-marked arteriosclerosis, as might well be expected in a person of her age (87). It is possible that the straining at stool may have ruptured one of the vessels of the eye and produced the unusually large hemorrhage. [T. M. T.]

MEDICAL RECORD.

January 25, 1902.

1. The Food Factor as a Cause of Health and Disease During Childhood, or the Adaptation of Food to the Necessities of the Growing Organism. JOSEPH E. WINTERS.
2. The Nature of Cutaneous Epithelioma, with Remarks on Treatment by the X-Rays. CHARLES WARRENNE ALLEN.
3. Report of the Committee Sanatoria for Consumptives. JOHN H. PRYOR
4. Two Cases of Gastroenterostomy with Enteroenterostomy Done with the Aid of the Elastic Ligature (McGraw's Method). WILLY MEYER.
5. Report of a Case of Penetrating Wound of the Abdomen with Protrusion of Viscera and Injury to the Stomach—Operation—With a Later Development of Renal Symptoms—Recovery. WILLIAM V. PASCUAL.

1.—Joseph E. Winters discusses the food factor as the cause of health and disease during childhood. He reviews the various articles of diet dealing especially with those foods suitable for growing infants after they have been weaned. He calls attention to the importance of supplying the child with such foods as will develop the masticatory organs after detention is sufficiently far advanced. Disuse of the jaws starves the areas supplied by the maxillary arteries, as these vessels are not fully developed. The mechanical stimulation of chewing leads to the outpouring of salivary secretion richer in amylolytic power than the secretion coming without stimulation. He regards these points important to observe. He considers the food elements which are required for the perfect development of the growing structures in the child and discusses in detail the **proteids, mineral elements, fat and carbohydrates.** [T. L. C.]

2.—C. W. Warren treats of the nature of **cutaneous epithelioma with remarks on the treatment by the X-rays.** Morphologically we have three clinical varieties of cutaneous epithelioma. (1) Flat, or superficial (nodular stage of rodent-ulcer typo-epidermoid); (2) infiltrated or nodular (imbedded or elevated); (3) hypapillomatous growths (the vegetating or fungoid variety, bearing an exuberant form of the deep-seated type). These varieties he discusses at length as well as the chief theories of causation, which are: (1) Infectivity of epithelial cells (toxic cause of over growth); (2) proliferative overgrowth of misplaced cells Cohnheim's theory, predisposing); (3) the parasitic or specific germ theory. Referring to the treatment by the X-rays he considers the questions as to whether they are beneficial and in what manner they exert their influence, the method of their employment, and the dangers which arise from their use. He believes that the use of methylene blue applications to the exposed parts is undoubtedly a useful measure, it adds to the patient's comfort during the exposures and may be a means of lessening the likelihood of burns when all other measures of prevention have been taken. [T. L. C.]

3.—John H. Pryor presents the **report of the Committee on Sanatoria for Consumptives** to the State Conference of Charities of New York, November 21, 1901. He emphasizes the curability of tuberculosis in its early stages by means of properly conducted measures, especially the establishment of sanatoria. He makes a strong and rational plea for these institutions and urges that the State "take care of the consumptive at the right time, at the right place, in the right way, till well; not at the wrong time, in the wrong way, at the wrong place until dead. [T. L. C.]

4.—Willy Meyer reports two cases of **gastroenterostomy with enteroenterostomy** which were performed with the aid of McGraw's elastic ligature. He regards that the method is extremely satisfactory as far as his experience with these two cases shows. [T. L. C.]

5.—V. Pascual reports an interesting case of penetrating wound of the abdomen with protusion of the viscera and injury to the stomach. The patient was a lad of twelve years. The wound in the stomach was closed with a continuous Lembert suture of fine silk. The exposed viscera were previously cleansed with hot decinormal salt solution and the abdomen was thoroughly flushed out with the same solution following the closure of the stomach wound. The abdominal incision was closed without drainage. The patient reacted well from the operation. Thirteen days later, however, renal symptoms appeared. These were successfully treated and the boy made a good recovery. [T. L. C.]

THE NEW YORK MEDICAL JOURNAL.

January 25, 1902. (Vol. LXXV, No. 4).

1. Curettage of the Puerperal Septic Uterus: An Inexcusable Procedure. W. H. PRYOR.
2. Notes on Cow's Milk and Infant Tuberculosis. A. JACOBI.
3. The Need of a Municipal Sanatorium for the Treatment of Tuberculosis. GEORGE A. PEABODY
4. Paratyphoid. S. J. MELTZER.
5. Nephro-ureterectomy; a Report of Two Cases. J. WESLEY BOVEE.
6. Farm Colonies and Tent-Life for the Tuberculous. E. FREUDENTHAL.
7. The Personal Liberty Plea: the Most Common Argument Raised Against Medical Legislation. FLOYD M. CRANDALL.
8. Transitional Displacement of Purulent Fluid of an Empyema by Normal Saline Solution at the Time of Operation (Rib Resection), obviating danger of Hemorrhage by Too Sudden Relief of Pressure (Mechanical), with Report of a Case and Method of Procedure. ARTHUR IRVING BOYER.

1.—W. R. Pryor in his article on **curettage of the puerperal septic uterus,** divides puerperal fever into two great classes the saprophytic and the septic. It has been determined that

so long as a case remains purely saprophytic and does not become septic, the infection is always superficial and carries no risk to life; but inasmuch as this form of infection renders the patient susceptible to the inflammation of more virulent germs, saprophytic infection has a greater importance and demands treatment of a preventive nature. In all cases of puerperal fever about 75 per cent. are non-septic and about 25 per cent. are septic. The author does not avidse curetting and quotes Whitridge, Williams and Kronig, who apply no local treatment whatever to the inside of the uterus, doing nothing to it other than what is necessary to establish the diagnosis, and only having a mortality of five per cent. [T. M. T.]

2.—A. Jacobi gives the following conclusions from Dr. Bovaird's studies on **tuberculosis in its relation to the consumption of raw milk:** (1) English reports alone show a considerable number of cases of primary interstitial tuberculosis; (2) primary interstitial tuberculosis is a very rare affection among children in or about New York, little more than one per cent. of tuberculosis having this origin; (3) the proportion of tuberculous cases found at autopsy in New York is lower than that of European observers; (4) the evidence of connecting tuberculosis among children with the consumption of milk from tuberculous cows is very scant. There have been 22 cases reported by Dr. Bovaird in which the relation between the milk and the tuberculosis of the child is fairly clear. Müller and Asher state that the milk of cows that react on tuberculin injections without giving symptoms of tuberculosis contains no tubercle bacilli and the feeding of animals with such milk will not produce tuberculosis. However, the milk of cows with tuberculous udders is highly dangerous. [T. M. T.]

3.—George L. Peabody, in advocating the **establishment of a municipal sanatorium for the treatment of tuberculosis** in the United States, says that two years ago there were 33 public sanatoria for tuberculosis in Germany and 16 others under private direction. In 1900, 11 more, and in 1901, 14 more were opened and still 13 others projected. It is estimated that in the near future 20,000 tubercular patients will be accommodated in Germany. It is well known that the best results are from the incipient cases. The treatment in these establishments consists of life in the open air, in a dust-free environment, without undue fatigue, where there are no sudden changes in temperature. It is also agreed that fever contraindicates exercise, and that food should be nutritious, wholesome and abundant. [T. M. T.]

4.—S. J. Meltzer suggests that even cases of **typhoid** with a positive Widal reaction, 1 to 20 may in reality be paratyphoid followed by a secondary invasion of a small number of typhoid bacilli. The solution of this problem can be brought about in two ways: (1) By searching the blood, feces and urine of the patient; (2) by testing the blood of such patients with paratyphoid bacilli obtained from established cases of paratyphoid. [T. M. T.]

5.—J. Wesley Bovee reports two cases of **nephro-uterectomy** and gives the indications as follows: The principal indications for nephro-ureterectomy is tubercular disease of both these structures. Malignant disease and severe traumatic injury throughout most of the course of the ureter, multiple marked strictures from ureteritis and marked destruction of kidney and ureter from calculous pus accumulations, especially the last, are other condition indicating the operation. The two principal methods of operation are the loin extraperitoneal and the transperitoneal. The former was considered preferable, as ureterectomy, especially nephro-ureterectomy, was done nearly always for tubercular disease, pus being present in nearly every case. Up to 1899, 18 cases of ureterectomy and nephro-ureterectomy had been done by this route as against one by a combined loin extraperitoneal and vaginal and one by the transperitoneal route. Records show that ureterectomy has been done without crossing the peritoneal cavity in 88 per cent. of cases and that total ureterectomy by the transperitoneal route has been done four times out of the 18 operations. This shows that the transperitoneal route has not been adopted for this work. [T. M. T.]

6.—W. Freudenthal suggests the establishment of farming colonies for these patients, and instead of erecting a large and expensive building, to erect tents and have the patients live in them. All the hygienic demands can be fulfilled in the best and cheapest way in tent life, every one who has had some experience in this subject will admit. The next step is to provide the patient with some physical work which will interest him and keep his mind off himself, and lastly to give such patient the opportunity to work under hygienic conditions, so that he cannot be forced to return to his old occupation and mode of life under which he acquired the disease. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 23, 1902.

1. Notes on the Life and Writings of Geronimo Cardano. CHARLES GREENE CUMSTON.
2. Lymphatic and Portal Injections Following Appendicitis. JOHN C. MUNROE.
3. Notes on the Management of the Anesthetic in Operations on the Respiratory Tract. HARRIS PEYTON MOSHER.
4. Notes on X-Light. WILLIAM ROLLINS.

2.—J. C. Munroe reports six cases to fourteen previously reported by him as clinical illustrations of **lymphatic and portal infections following appendicitis.** He does not believe that the extent of the lymphatic infection is dependent on the degree of appendicitis. According to Munroe the lymphatic involvement may be the result of an appendicitis dating back months. Spasm, tenderness and fulness, spasm of the quadratus lumborum, are suspicious signs of retroperitoneal infection of possible appendiceal origin. Chills and hepatic tenderness, occasionally accompanied by jaundice may likewise be the result of an appendicitis. At all events obscure cases should be subjected to a thorough *physical examination*, and if necessary abdominal exploration. Abdominal incision is to be preferred to aspirating, as the abdominal section with definite and free exploration of the liver and free opening of all abscesses within reach, is far more satisfactory, not difficult, and less dangerous than aspirating. There have been cases which recovered by reason of the abscesses bursting and being evacuated spontaneously into the lung or other structures, but the larger abscesses generally have to be incised, evacuated and drained. Munroe states that practically all lymphatic infections are curable by operation, but only a rare case of hepatic infection will be cured. [M. R. D.]

3.—Mosher contributes some notes on the management of the anesthetic in operation on the respiratory tract. He quotes the recognized difficulties in operations about the nose and mouth, namely: satisfactorily to conduct the operation and anesthetization together. He advocates the apparatus, which produces a forcible propulsion of the ether vapor through a tube. Important factors are the quietness of the etherization, the position of the patient, and the manner of holding the patient, each of which are described in detail. [M. R. D.]

4.—William Rollins reports some results of his researches to find radio-active membranes as a substiute for the X-light. He advocates the local application of capsules containing radium, or in the form of moisture-proof plasters. He urges their trial in the cutaneous diseases that have been necessarily treated with the X-rays, such a lupus, superficial cancer, etc. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

January 25, 1902.

1. Diagnosis of Smallpox. JAY F. SCHAMBERG.
2. Vaccine Virus, etc. JOSEPH MACFARLAND.
3. Reversibility of Enzymes, etc. H. GIDEON WELLS.
4. Pulmonary Fearlessness. W. T. ENGLISH.
5. The Experience of Syracuse, N. Y., with the Compulsory Tuberculin Test of all Dairies Furnishing Milk to the City. B. S. MOORE.
6. Climatography of Arizona, eac. ROBERT W. CRAIG.
7. Blood Examination from the Standpoint of the General Practitioner. F. W. HIGGINS.
8. Brain Tumor Developing in a Case of Peripheral Neur-

itis, the Latter Obscuring Diagnosis, etc.
G. W. M'CASKEY and MILES F. PORTER.

9. Surgical Correction of Malformation and Speech Defects, etc. GEO. V. I. BROWN.
10. Traumatic Artero-Venous Aneurysms of the Subclavian Vessels. RUDOLPH MATAS.
11. Report of a Death from Chloroform Anesthesia, etc. BAYARD HOLMES.

1.—Schamberg discusses **"the diagnosis of smallpox."** He states that the diagnosis of variola in the pustular stage is easy. The disease can scarcely be mistaken for anything else. During the first or second day of the eruption, especially in mild cases, the diagnosis may present perplexities. Before the eruption makes its appearance, it is seldom safe to affirm anything beyond a strong suspicion. In the study of a large number of cases the author has found that a chill most frequently announces the onset of the disease. In some patients the first symptom complained of is headache, and in other cases vomiting is the first manifestation. Backache and weakness of the lower extremities are early symptoms in some cases. Complete anorexia may develop in some individuals during the last days of the period of incubation. Fever reaching 104-105°F. may even occur in mild cases and is often accompanied by delirium and in children by convulsions. One hundred cases recently admitted to the Municipal Hospital, Philadelphia, were analysed in order to ascertain the frequency of the various initial symptoms. It was found that "headache was present in 86 per cent; chills were present in 78 per cent; backache was present in 70 per cent.; vertigo was present in 57 per cent.; vomiting was present in 55 per cent.; nausea without vomiting was present in 10 percent. more of the cases. In but 2 patients was there complete absence of an initial stage." The author states that the prodromal rashes of variola which may be morbilliform, scarlatiniform, purpuric in character, may be mistaken for measles or scarlet fever. The rash of measles is more elevated, in his opinion. The absence of early tonsillar and throat symptoms will help to distinguish smallpox from scarlet fever when the scarlatiniform rash is present in variola. The author gives some important hints for the differentiation of smallpox from chickenpox. Prodromal symptoms are absent in chickenpox. The distribution of eruption varies in these two diseases. In smallpox it particularly involves the face, arms, and legs, and upon the trunk the lesions are more sparse, while, in chickenpox, the trunk, as a rule, is chiefly involved. He also mentions that the character of the lesions of smallpox differs markedly from that of chickenpox. The shoty papules which slowly increase in size and develop into vesicles and pustules and their multilocular characters are easily distinguished from the unilocular "dewdrop-like" vesicle of chickenpox. He contends that the pustular syphiloderm is sometimes with difficulty distinguished from the eruption of variola. Information concerning the initial lesion and perhaps the antecedent eruption, and also the presence or former existence of mucous patches, alopecia, tonsillar ulceration, iritis and the remains of a chancre are points of the greatest importance in determining the diagnosis. The true nature of the disease can always be disclosed by observation of the patient for a few days. He emphasizes "that it is injudicious to base a diagnosis of smallpox upon any one symptom. A case must be reviewed in all its aspects and diagnosis made from the ensemble of symptoms." [F. J. K.]

2.—McFarland discusses **vaccine virus, its preparation, and the complications attending its use.** He is of the opinion that among some of the most practical members of the profession there is a striking lack of information on the evolution of vaccine virus. He discusses the relation of vaccinia to variola and points out that at the present day vaccinia is believed to be variola, the germs of which have been attenuated, and "that the facts of the case are thoroughly in accord with those of immunity, especially when we add that when the variolous material with which vaccinia is to be started in a cow, is first made to pass through a monkey, it becomes prepared or modified so that its growth in the cow usually succeeds the very first time instead of only after repeated attempts. He details the advantages of bovine virus over human virus and then gives a short account of the method of preparation of glycerinized vacine lymph. In spite of the precautionary measures taken to prevent the entrance of micro-organisms into the vaccine lymph, the virus becomes contaminated with three classes of micro-organisms. "1. Those specific of vaccinia. 2. Those normally living upon the skin of the animal. 3. Those accidently entering from the dust of the stable. As a rule, all forms are harmless, but it is only those of the first class that are desirable, for whether they are usually harmless or not, it is doubtful whether any well-informed physician of the present time would prefer to introduce into his own tissues or those of his patients any unnecessary micro-organisms." Glycerinized lymph possesses the advantages of containing few or no bacteria except those specific of vaccinia. The action of the glycerine will however destroy the germs specific of vaccinia shortly after other bacteria have been killed. The accidents and complications of vaccination are few at the present day and are only apt to arise when careless physicians forget that vaccination is a surgical operation and should be performed with all the precautions attending operations. He states that it is well to bear in mind the following points. "1. The skin of the patient may be infected with various organisms other than the ubiquitous skin cocci and their occasional presence should warn every vaccinator of the necessity of carefully and thoroughly cleansing and disinfecting the skin before operating—the disinfectant, of course, to be carefully removed. 2. The vaccine wound must be protected from contact with the underclothing, fingers, wash-water, dust, etc., lest secondary infection add its effects to the lesion already existing. The satistactory method of doing this has not yet been devised. In all probability a simple dressing of sterilized gauze will do as well as anything. Shields are to be carefully avoided as being unclean, irritating, obstructing the lumphatic circulation and producing anaerobic conditions suitable for the growth of pathogenic bacteria such as the tetanus bacillus. 3. The virus itself if not properly prepared or perhaps occasionally through unavoidable accident may contain infectious organisms. The most important of these are the skin cocci which occasion severe local lesions, and the tetanus bacillus which has done considerable mischief of late." [F. J. K.]

4.—See Philadelphia Medical Journal, June 22, 1901. Page 1193. [F. J. K.]

5.—Moore details **the experience of Syracuse, N. Y., with the compulsory Tuberculin Test of all Dairies furnishing Milk to the City.** Beginning with the year 1900, all dairy men supplying milk to the city of Syracuse were informed that their herds must be tested and retested every second year and that new cows added to the herds were to be tested during the intervening years. Cows reacting were condemned. The percentage of cows which reacted to the tuberculin test in 1900 was 15¼%, and in 1901 only 1¼% reacted. [F. J. K.]

6.—Craig discusses the **Climatography of Arizona with Special Reference to the Climatic Treatment of Pulmonary Tuberculosis.** The climatic conditions of Arizona are of special value in the treatment of pulmonary tuberculosis because the temperature during the summer in this state is from 15-20 higher than that of some regions of the Mississippi Valley and in the winter 30 or 40 degrees higher. There is a relatively low humidity. He mentions that thermic fever is unknown in this state, even during the hottest summer months when at times the temperature reaches 110 degrees. The variations of altitudes are very pronounced which he contends has a striking advantage, in some respects, as with the same general conditions of temperature and dryness of air, the physician is able to select any altitude he may desire. The low humidity and the

maximum amount of sunshine have advantages which can not be overestimated. [F. J. K.]

7.—Higgins gives an account of blood examination from the standpoint of the general practitioner. The author gives an outline of some of the methods for estimating the specific gravity of the blood, the hemoglobin percentage, and also gives a very brief account of the significance of leukocytosis, a low hemoglobin percentage, etc. [F. J. K.]

8.—McCaskey and Porter report a case of **brain tumor** the symptoms of which were **obscured by peripheral neuritis.** The patient was a farmer, 34 years of age, who first sought advice for "heart trouble and general nervousness." Ten years previously the patient suffered from typhoid fever. After this attack he always had more or less stomach trouble and two years after the attack developed a pain in the calf of the left leg, which was of an inconstant character. McCaskey first saw the patient in September, 1900. At this time there was evidence of chronic gastroenteritis. In the left leg was found partial anesthesia, motor weakness, and electrical actions of degeneration. In the right leg these conditions were present but much less marked. This peripheral neuritis was supposed to be due to toxemia resulting form gastro-intestinal disease. A doubt was cast upon the peripheral nature of the neuritis by the fact that there was motor weakness of the left upper extremity without sensory or electrical disturbances. Later there developed a paretic weakness of the left side of the face which proved that the patient's trouble was central and that a progressive lesion of the right motor area of the brain was taking place. Vision was practically normal but there was a beginning optic neuritis in the right eye which later became more marked and also appeared in the left eye. Porter operated on February 6, 1901, exposing the motor area. No tumor was discovered when the skull was opened but the electrodes applied over the leg centre produced absolutely no response. The arm centre did however respond to electrical stimulation. There was a marked intracranial pressure as shown by the bulging of the brain when the bone flap was removed. A tumor about the size of a pullet's egg was removed from beneath the leg centre. It was enclosed in a capsule which was easily separated from the brain tissue. A profuse hemorrhage occurred during the removal of the tumor, but was controlled with packing. The bone was not replaced. At the end of 48 hours the packing was removed and a wick of gauze substituted for drainage. This was removed in a few days, and the wound healed without suppuration. The patient was relieved at once of the pain in the head which he had complained of prior to operation. There was absolute paralysis of the right arm and leg following the operation but in about eight weeks the patient was able to walk out of the hospital. The arm has improved very slowly. The patient's family physician reported in November, 1901, that there was some return of the pain in the head and also some mental symptoms which would indicate a return of the growth. A later report, however, about the last of December, said that the pain and mental symptoms had entirely disappeared and the patient gave every evidence of making an entire recovery. Histological diagnosis was glioma. [J. H. G.]

9.—Geo. V. I. Brown, in discussing the **surgical correction of cleft palate,** presents a number of illustrations showing plaster casts of cleft palates before and after operation and also photographs of patients. In discussing acquired clefts of the hard palate Brown expresses the opinion that it is better to cover such openings by a neatly fitted denture. If, however, the soft palate is involved, an operation is indicated. Unless the vitality of an infant is threatened by the malformation interfering with the taking and digesting of food, it is thought unwise to operate at this time of life, since the mortality from such operations in infants is very high. Before operating for the closure of a cleft of the hard palate it is the author's custom to introduce a metal rod extending from one side of the maxilla to the other and arranged with a screw in such a way as to draw the two sides of the jaw gradually together. He has found this preparatory procedure of the utmost value in closing wide clefts. In early life particularly the two sides of the maxilla can gradually but readily be brought into very close approximation. When the two edges of the cleft are in contact they can be bored with a drill and union of the hard palate will not infrequently take place without further operative procedure. After union of the hard palate is complete the edges of the cleft in the soft palate can be approximated with every expectation of prompt healing. Even in adults this procedure is found to be of the greatest value. In these patients, however, it may be necessary to break the outer plate of the maxillary bone in order to approximate the two halves. The illustrations accompanying the article show the rod in position as well as the results obtained by this method of procedure. The author's conclusions are as follows: "1. The risk of operation in early infancy is unnecessary except where vitality of the child is threatened by malformation. 2. The most favorable time for operation is after the deciduous teeth have been erupted, but before the habit of speech has been acquired. 3. Difficulty of acquiring correct methods of pronouncing words after operation in adult cases can only be overcome by careful mental training. 4. There can be no cases which can not be improved by treatment and operation, both with regard to health and speech, no matter what the age may be, providing the coöperation and assistance of the patient may be assured." [J. H. G.]

10.—Will be abstracted when concluded. [J. H. G.]

11.—Bayard Holmes reports a **death from chloroform,** the first in not less than 2000 cases of chloroform anesthesia. It has been the author's custom at the Cook County Hospital to always employ chloroform unless ether is expressly asked for by the patient. He has always taken a personal supervision of the anesthetization and has personally trained the anesthetizers who have had charge of his patients. The death occurred when the author was operating in environments to which he was unaccustomed and the anesthetic was given by a physician with whom he had had no previous experience. The operation was an abdominal one for a multilocular cyst of the left ovary with a twisted pedicle. During the entire operation there was no anxiety about the patient's condition. The operation occupied about twenty minutes. During irrigation of the abdomen the patient was not completely under the influence of the anesthetic and resisted considerably, throwing her arms and legs about. At this time more of the chloroform was administered and the patient became quite. Suddenly it was noticed that she had stopped breathing. The operator turned the closure of the wound over to his assistant and devoted all his efforts to reviving the patient. Artificial respiration was kept up for some time and it seemed that occasional efforts at automatic respiration took place. The artificial respiration, however, became less and less effective, the patient became cyanotic, the heart stopped, and she died about an hour after the recognition of the danger. The heart continued to beat for three-quarters of an hour after the automatic respiration was suspended. That artificial respiration was successful for a time was shown by the disappearance of all signs of cyanosis. Holmes thinks that it is a great mistake for a physician who is accustomed to administering ether occasionally to give chloroform. [J. H. G.]

AMERICAN MEDICINE.

January 25, 1902.

1. Three Cases of Pancreatic Disease.
   FRANCIS W. MURRAY.
2. What Reliance Can be Placed Upon the Image Produced by the X-Ray from a Medico-legal Standpoint?
   CHARLES LESTER LEONARD.
3. Diffuse Peritonitis Resulting from Appendicitis.
   CARL C. WARDEN.

4. The X-Rays in So-called Sprains.
G. G. ROSS and M. I. WILBUR.
5. Thiosinamin in Chronic Joint Affections.
HENRY S. UPSON.
6. A Rapid Method of Detecting Bacillus Coli Communis in Water. B. H. STONE.
7. Hemorrhagic Typhoid Fever, etc.
C. B. LONGNECKER and JOSEPH AKERMAN.

1.—Francis W. Murray reports three cases of pancreatic disease. The first was one of **suppurative**, the second one of **gangrenous** type, and the third, one of **pancreatic cyst.** [T. L. C.]

2.—C. L. Leonard believes that from a medico-legal standpoint great reliance can be pladed upon the image produced by the X-ray. He states that the method is more accurate than any other, and is capable of rendering the greatest service by demonstrating the value and efficiency of the methods of treatment, and that its employment should be demanded wherever it is feasible. [T. L. C.]

3.—C. C. Warden discusses **diffuse peritonitis resulting from appendicitis.** His article includes the notes of an illustrative case of **diffuse ichoro-purulent peritonitis resulting from a gangrenous appendix** and complicated by septic intoxication. [T. L. C.]

4.—G. G. Ross and M. I. Wilbur demonstrate the value of X-ray examinations in cases of so-called **sprains.** They report a number of instances in which the radiograph proved the existence of fractures and dislocations which had not otherwise been determined. [T. L. C.]

5.—H. S. Upson suggests the use of **thiosinamin** in chronic joint affections. He reports six cases in which the drug has been found useful in aiding the absorption of fibrous deposits due to rheumatism. [T. L. C.]

6.—B. H. Stone describes a **rapid method of detecting B. coli communis in water.** The presence of the organism is determined in the following way: (A) A Smith tube filled with a 2% glucose bouillon is inoculated with 1 cc. of the water to be examined and grown 24 hours at 38° C. If no gas is formed, the absence of the colon bacillus is shown. (B.) If from 25% to 70% of gas is formed in the closed arm, a tube containing 10 cc. of neutral broth to which has been added 0.3 cc. Parietti's solution is inoculated with 0.5 cc. of the contents of A and grown 24 hours at 38°C. (C) A second Smith's tube is inoculated with 0.5 cc. of the contents of B. and grown 24 hours at 33° C. (If there is no gas we may be sure the gas producer in A was not the colon bacillus. If, on the other hand, the gas is produced in this tube, we may be reasonably sure that the bacillus coli communis is present). (D.) Further confirmation may be obtained by ascertaining the gas formula from C. The formula for the colon group is HCO_2—2/1, further. (E.) A pure culture can be easily obtained from B by plating and the following reactions obtained: (1) Gelatin stab does not liquefy after seven days at 22° C.; (2) Litmus milk reddens and coagulates in 24 hours at 37° C.; (3) Dunham's solution: Indol formed in three days at 37 C.; (4) Morphology in bouillon: sluggishly motile (?) bacillus. At the same time the plates for the total numbers are made. A number of organisms have been subjected to this method with only the C. coli and the allied bacillus of hog cholera survive the check solution B and grow in the second fermentation tube. [T. L. C.]

7.—C. B. Longenacker and Joseph Akerman present the full report of a case of **hemorrhagic typhoid fever with recovery.** [T. L. C.]

Acute Phlegmonous Laryngitis due to Enterococci.— At a recent meeting of the Medical Society of the Paris Hospitals, (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, July 18, 1901, No. 25). P Menetrier reported a case of acute phlegmonous laryngitis in a man of 35, an alcoholic, who had been coughing for two weeks. For three days there had been dysphagia and dyspnea, albuminuria and fever. These increased, and rales were found over both lungs. He died on the night following his admission. The autopsy showed a phlegmonous laryngitis which gave pure cultures of enterococci. The degeneration seen in the liver shows that the intoxication produced by the enterococci was severe. Barbier prefers to call these enterococci the diplostreptococci. [M. O.]

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPEDIC SURGERY.

Meeting held December 20, 1901, Dr. George R. Elliott presiding.

Dr. Royal Whitman presented a child, 21 months old, with what had at first been mistaken for tuberculous disease of the knee joint. It was **rheumatoid arthritis.** At present both knees are involved, a wrist, ankle and fingers. Rheumatoid arthritis is rare in young children, and this is a common error in diagnosis. Dr. Whitman presented a patient with **torticollis** cured by the open method, complete division of all the contracted tissues, over-correction of the deformity and fixation for several weeks in plaster. This case showed hemi-atrophy of the face. Dr. Whitman also showed the result of **radical treatment of club-foot** in a child of eight. He considered the Phelps open operation the best, the advantage being that the inner border of the foot is lengthened instead of the outer side being shortened. Dr. W. R. Townsend could not agree with Dr. Whitman as to the disappearance of the scar after operation for torticollis. Dr. Homer Gibney has seen several scars disappear in young children. He considers the subcutaneous method the safest except in very severe cases. Dr. T. H. Myers said a transverse incision would give the same exposure and would enable the deformity of the scar to be better concealed.

Dr. V. P. Gibney presented two cases showing the **extreme deformity of rickets.** Both were treated in the convex Bradford frame, with general constitutional treatment. Dr. Gibney also presented a patient wearing a **club-foot brace,** a modification of Taylor's club-foot shoe. The apparatus is a good retentive one, though it does not take the place of operation. Another case of a child, 21 months old, was also shown by Dr. Gibney, with **talipes equino-varus.** The deformity was corrected by various methods. Under anesthesia the foot was forcibly put in calcaneo-valgus, and later a club-foot spring with pelvic band served fairly well. Finally, modified braces were used successfully. Dr. Gibney also presented a boy of 11, for diagnosis. He came to the hospital with the history of an injury to his hip four weeks previous. He limped but could not sleep, having fever with delirium. He was thought to have hip disease and was treated with extension. After three weeks, the angle of extension was 110°, flexion normal, and there was no pain on pressure. Later fluctuation was detected under the vastus externus. Incision was negative. The case was considered **periarthritis.**

Dr. A. B. Judson presented a girl, 8 years old, who had been before the section on November 16, 1900. At that time she had left **hip disease,** with lameness, knee pain and reflex, night cries, muscular atrophy and limitation of motion. A steel crutch and high shoe had been worn from November, 1900, to November, 1901. Recovery had been so complete that the only traces were ⅜ inch shortening and ¼ inch muscular atrophy. The case illustrated the importance of early diagnosis. Dr. Johnson also presented a girl of 10, wearing a device useful in deformity of the knee. The patient was Case III, **white swelling of the knee,** presented to the Section October 20, 1899. The brace was made of one piece with the shoe in such a way that, when the shoe was on, the brace would be in the proper place. A light steel bar extended up the leg and was fastened to the upper part of the brace by a sliding ring. Its lower part, bent at a right angle, was screwed to the under side of the heel of the shoe at an angle to secure the effect desired, keeping the brace behind to oppose flexion, or to the outer side to oppose knock-knee

Dr. J. P. Fiske presented a case of **localized softening of**

tibia. The patient, a girl of 14, was first seen in 1898, when she complained of pain in the lower part of the leg above the ankle joint. The curve at the lower part of the tibia increased. At this time a diagnosis of tuberculous disease was made and a splint was worn for six months. Two months later exploratory incision revealed negative results. February 1901, an osteotomy was performed in the lower ¼ of the tibia, the fibula shortened ⅛ inch, the deformity corrected and the leg put in plaster. Ten days after the operation the patient was fitted with an ambulant splint and six weeks later walked without apparatus. There is no difference in the length of the tibiae now. A second patient presented by Dr. Fiske was one of **congenital absence of the fibula** and outer side of the foot, with equinus. The patient was seen at one year, when the heel was undeveloped. Osteotomy was performed, with tenotomy on the tendo Achillis, the position of the feet being corrected. At present th child is able to go about with a light brace.

Dr. Leonard W. Ely presented a patient, one year old, showing the result of treatment for **double congenital club-foot.** The right foot was treated uninterruptedly with a brace and the left with plaster of Paris. In contradic tion to the general idea that plaster of Paris causes atrophy, the right leg was much smaller than the left.

Dr. R. A. Hibbs showed the result of **tendon transplantation** for paralysis of the tibialis anticus muscle. The extensor proprius hallucis was inserted into the periosteum of the scaphoid, and its distal end into the first division of the common extensor. The foot had been in a position of marked valgus, with the scaphoid very prominent. The deformity was completely corrected. Dr. Myers said that it was important to attach the tendon to the periosteum. Lange of Munich has reported many such cases.

Dr. Elliott presented a child of 2, upon whom he had reduced **a congenital dislocation of the hip** by the Lorenz method, showing the bandage in position. He presented the patient to show the position of the leg when the dislocation had been successfully reduced. A slight degree of hyperabduction was necessary, with the knee pressed back slightly posterior to the transverse axis of the pelvis. There was frequently considerable difficulty in getting the head of the femur into the acetabulum and of getting the knee down to the mid-transverse pelvic plane or posterior to it, but unless that could be accomplished, the operation should be abandoned as a failure, since relapse was certain.

NORTH BRANCH OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting held January 16, Dr. A. M. Eaton in the Chair.

Dr. H. A. Brav read a paper on **The Diagnostic Value of Digital Examination in Diseases of the Rectum.** Patients with rectal disease usually present symptoms of extreme nervousness, melancholia, pain in the rectum, digestive disturbances, etc., and many cases are treated without discovering the cause, because no rectal examination had been made.

Dr. Charles F. Nassau read a paper on **The Operative Treatment of Hemorrhoids.** After discussing the different methods of operating, Dr. Nassau said that the hemorrhoidal area should be treated as a varicose condition. Escharotic injections were considered of no use in external piles, and although they produce some benefit in internal hemorrhoids, the dangers attending their application overbalance their merits. Local infiltration anesthesia was recommended, though it increases the technical difficulties. In cases with small internal hemorrhoids, stretching the sphincter ani was recommended. In isolated external piles, excision of the veins involved was advised. The Whitehead operation was not advised. In more difficult cases excision of the pile-bearing area, followed by suturing, is the most desirable procedure.

Dr. George G. Ross read a paper on **The Diagnosis and Treatment of Carcinoma of the Rectum.** He mentioned five varieties, epithelioma, scirrhus, encephaloid, colloid, and melanotic carcinoma or sarcoma, the frequency of occurrence being in the order named. The most common is adenocarcinoma. The most rapidly fatal is sarcoma or melanotic carcinoma, which is also the most rare, only 11 cases being so far recorded. The importance of digital and optical examination in local diseases of the rectum was emphasized. In cases of doubt, the administration of a local or general anesthetic is demanded in order to secure a specimen for microscopic examination. The history of the case will often be of aid in making the diagnosis, the most common symptoms being loss of weight and strength, cachexia, and difficult defecation, the stools containing bloody, mucous discharges. The treatment is total extirpation in the early stages of the disease, while, in the later stages, palliative measures may be employed. Statistics show that from 20% to 30% of the cases are immediately fatal when radical measures are employed, the causes of death being peritonitis, shock, and retroperitoneal infection with septicemia. There are very few reported cases in which patients have remained well for 4 years, the best authorities giving a very unfavorable prognosis. The two principal methods used for extirpation are Kraske's operation and its modifications, and one which is applicable in the female, using the perineum to reach the bowel. In the cases in which radical treatment is not indicated, colostomy is the only alternative, and this may be recommended as a preparatory measure, to allow the patient to build up his strength before a radical procedure. Dr. W. L. Rodman said that too much stress could not be laid upon thorough digital examination in disease of the rectum. He has observed several instances in which patients with carcinoma of the rectum had remained in good condition from five to fifteen years. He prefers ligation in hemorrhoids. Dr. A. H. Hulshizer also ligates hemorrhoids. Dr. E. W. Holmes uses a proctoscope by which the rectum is illuminated by electricity. Dr. G. B. Massey used the electric cautery. Dr. Mordecai Price, while formerly in favor of the Whitehead operation, now uses the clamp and cautery. Dr. L. H. Adler operates early in hemorrhoids, and uses the thermo-cautery in external piles. Dr. A. J. Downes uses both the ligature and the clamp and cautery.

Cyto-diagnosis in Serous Effusions.—Dopter and Tanton have examined the effusion in pleurisy, hydrocele, hydrarthrosis, ascites, and pericarditis, to find the cellular elements in these fluids. Of 60 cases of pleurisy all but those of metapneumonic pleurisy showed a predominance of small lymphocytes: in metapneumonic pleurisy, the polynuclear leukocytes are found in great abundance. In hydrocele very few cellular elements are found, while lymphocytes usually existed. But polynuclear leukocytes were found afterward. In tuberculous hydrocele lymphocytes existed; in gonorrheal hydrocele polynuclear leukocytes were present in excess. In hydrarthrosis lymphocytes usually existed, but polynuclear leukocytes were found in excess in gonorrheal and rheumatic hydrarthrosis. Lymphocytes were in excess in tuberculous hydrarthrosis, and in ascites with tuberculous peritonitis. In hepatic cirrhosis polynuclear leukocytes were seen. In a case of nephritic pericarditis marked lymphocytosis existed. They concluded that as a rule endothelial cells existed in all effusions not due to tuberculosis. No other conclusions can as yet be made. (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, July 18, 1901. No. 25.)

[M. O.]

Original Articles.

RESULTS OF X-RAY DIAGNOSIS AND OF OPERATION IN INJURIES FROM FOREIGN BODIES IN THE EYE.*

By WILLIAM M. SWEET, M. D.,

of Philadelphia

At a meeting of this Society in 1897, I described a method of locating foreign bodies in the eyeball and orbit by means of the Röntgen rays. The apparatus then exhibited has been employed by me during the past four years, many of the patients being sent from the Wills' Hospital and the Jefferson Medical College Hospital. Through the courtesy of the surgeons for whom I made the X-ray examinations I have been present at many of the operations for the extraction of the foreign bodies, and have been able to follow the subsequent history of the majority of the patients. A number of the earlier cases have been previously reported in detail, but, in order to exhibit the results of treatment at a considerable period after operation, these have been incorporated in the statements here given.

The cases in which the X-rays were employed for purposes of diagnosing the presence or absence of foreign bodies in the eye numbered 102, of which 65 showed a foreign body in the eyeball or surrounding tissues, while in 37 cases the result of the examination was negative. Of the bodies in these 65 cases, one was glass, five were copper, six were small shot, and 53 were iron or steel. The positions occupied by these bodies were as follows: One in the eyelid, three in the orbit outside the eyeball, one in the iris, three in the crystalline lens, and 57 in the vitreous, the retina or choroid, or imbedded wholly or in part in the optic nerve.

Of the 61 cases in which the body was situated in the eyeball, an attempt was made in 45 cases to extract the substance, which was successful in 38 cases and failed in 7 cases. In 32 instances the metal was extracted by the Hirschberg magnet, once with the Haab magnet, and five times with forceps. In 5 of the cases of failure to extract the body, enucleation was at once performed, while in the other 2 the eyeball was not removed. In 6 cases in which the body was successfully extracted, enucleation was required at a later date. In no instance was sympathetic inflammation present at the time of operation, nor did it subsequently occur.

In 16 cases extraction was not attempted, the eyeball being enucleated in 9 cases, of which 3 contained steel, 3 small shot, and 3 copper. In 4 cases the steel still remains in the eyeball, while in 3 cases the patients refused operation and their subsequent history is unknown.

Causes of Enucleation after Extraction:—The causes necessitating enucleation in the 6 cases in which the steel was successfully removed is shown in the following brief histories:

CASE 7.—Piece of percussion cap in the vitreous for 3 months. Removed with forceps. Eyeball painful 6 months later, with attacks of photophobia in the other eye.

CASE 23.—Piece of boiler steel entered vitreous, which was filled with blood when examined 24 hours later. Body weighed 27 cgms., and was removed by first insertion of small magnet. Man returned 5 months later with history of attacks of inflammation in eye, with great tenderness over ciliary region.

CASE 26.—Large piece of steel from a sledge entered through cornea; anterior chamber filled with blood. Magnet removed steel through opening in sclera. Enucleation 7 days later on account of recurring hemorrhages into anterior chamber.

CASE 45.—Piece from hammer penetrated cornea, wounding iris and lens. Body removed through entrance wound 24 hours later. Weighed 23.5 cgms. Eye never became quiet, and was enucleated 2 months later.

CASE 46.—Piece of steel entered through cornea, iris and lens 10 weeks before examination. Body removed by forceps, with a mass of exudate in which it was imbedded. Eyeball painful and shrunken 3 months later.

CASE 58.—Piece of tool steel penetrated cornea, iris and lens 5 days before. Original wound opened, and body removed by magnet. Three days later eye painful and chemosis increased. Upon enucleation eyeball showed evidence of beginning panophthalmitis.

The percentage of successful extractions, with the preservation of useful vision, would undoubtedly have been greater, had the foreign body been located and removed a few hours after the injury. Unfortunately, a majority of patients are encouraged to wait until the immediate effects of the injury have subsided, in the hope that vision will improve and no body will be found to have entered the eye. Much valuable time is thereby lost, the wound of entrance closes, and the body becomes imbedded in firm exudate that renders its extraction by any form of magnet uncertain if not fatal to the usefulness of the eyeball. Prompt operation will not succeed in every case, but it is rational treatment, free from serious effects, and gives the patient the best chance of saving some sight or securing at least a serviceable eyeball cosmetically considered.

Were the cases of iron or steel in the eye seen before the wound of entrance had closed, and if the position of the metal is known, the employment of the Haab or similar form of large magnet to withdraw the body along the path it entered would be the ideal treatment. In a certain proportion of cases where the metal has passed through the cornea, wounding the iris and lens, less damage will be caused by making a new opening in the sclera for the removal of the body than to withdraw it through the structures it passed in entering the globe.

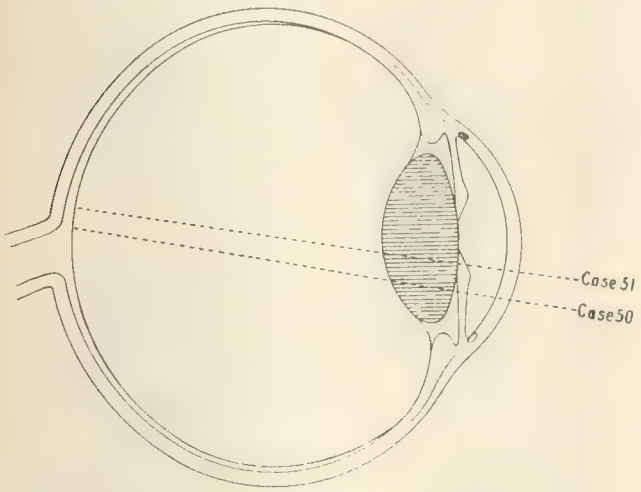
In a majority of cases of bodies in the choroid and vitreous, extraction was through a scleral opening between the external and inferior recti or the internal and inferior recti. Before making a scleral incision it is advisable to dissect up a flap of conjunctiva, and stop all hemorrhage before opening into the vitreous. The stitching of this flap in place serves to cover the scleral opening and prevent the escape of vitreous.

In 5 cases in the tables an attempt was made a few hours after the injury to remove the steel with a small magnet, the probable situation of the body having been determined by the nature of the wound, its direction, and the position of the eye at the time of injury. In every instance the attempt failed. Subsequently, the location of the steel was determined by the X-rays, but in 4 cases the metal was so firmly imbedded in new tissue that the small

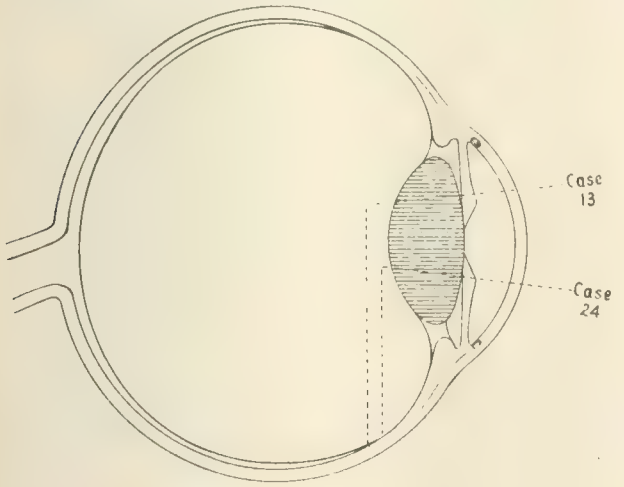
*A paper presented to the American Ophthalmological Society at its meeting in July, 1901.

magnet failed to dislodge the steel, and the eyeballs were lost.

The situation and direction of the wound of entrance is not a safe guide as to the position of the foreign body in the eye. Sometimes the force with which the steel strikes is sufficient to cause it to pass in a straight line from the entrance wound across the eye and lodge on the opposite side. In other instances the body after penetrating the external structures drops to the bottom of the vitreous. Thus, in cases 50 and 51, the metal after



penetrating the cornea and lens lodged at the posterior portion of the ball, while in cases 13 and 24, with similar injuries to the anterior structures, the



steel was found at the bottom of the vitreous, back of the ciliary body. It is in cases similar to the last two that the use of the large magnet to withdraw the body through the original wound, when the position of the steel is not known, is likely to cause more damage than would follow extraction through a scleral opening close to the previously determined position of the metal. The majority of the foreign bodies were in the lower half of the eyeball, only 8 being situated above the horizontal plane.

The use of the small magnet is never justifiable unless the position of the body is determined with some degree of accuracy. Since the magnet point must come in contact with the particle of steel to insure its removal, some definite knowledge of the position to place the magnet must be had to prevent the injury which results from its frequent passage through the vitreous. It is even a question whether the passage of any magnet into the vitreous is not more harmful than the use of a larger magnet to draw the metal to an opening made in the sclera. It is interesting in this connection to note the excellent visual results in the several cases in which no attempt was made to extract the steel, but it must be remembered that eyes containing foreign bodies are never free from danger. This is shown by a few cases in the tabular statement of metal remaining quiet in the eye for long periods but ultimately compelling operative intervention. In 2 cases the steel was in the eyeball 18 years, one 12 years, one 10 months, and one 8 months. I believe that the best results in the future in those cases seen after the entrance wound is healed will be secured by first accurately determining the position of the steel, and removing it through an opening in the sclera, employing a magnet, similar to the Johnson or Lippincott, of sufficient power to attract the body when the point of the magnet is at an opening in the sclera and is not entered into the vitreous.

When the metal has been in the eye for several months, or years, there is very little chance of removing it by the magnet unless situated in the iris, the lens, or the vitreous. If in the choroid a firm exudate soon forms that resists the attempts of any magnet to dislodge the metal, although the body may sometimes be secured with forceps, the vitreous lost being replaced by normal salt solution. While the operation may not give any vision, the preservation of the eyeball justifies the procedure. Cases 20, 44, and 50 are instances of forceps extraction, the latter case, 4 years after operation, showing an eyeball which, although slightly atrophic, is still superior to an artificial one.

Accuracy of X-Ray Localization:—So far as the findings in the cases here given could be verified by the extraction of the foreign body or after enucleation, the substance was in every instance situated at the spot indicated by the radiographs. The method of localization employed is simply the triangulation of the shadow of the foreign body from two different positions in relation to the shadows on the photographic plate of two known points, so that accuracy in the results must follow with proper care in working. Thus, in two cases, (Nos. 8 and 54) the knife in making the scleral opening at the indicated point, struck the steel, while in case 61 it was possible to indicate that the body was partly imbedded in the optic nerve, from which situation it was removed by forceps.

The injury was to the right eye is 22 cases, and to the left eye in 39 instances. The relative greater frequency of injury to the left eye is to be expected, since most workmen are right handed, and in chipping or striking metal usually stand with the left side to the work. For a similar reason left-handed

workmen are more liable to injury to the right eye.

The 57 cases in which the foreign body entered the vitreous chamber have been classified in the tabular statement into three divisions, (1) those in the ciliary region (2) near the equator; and (3) at the posterior part of the globe.

In the Ciliary Region.

Under this head are included all cases in which the body was in or close to the ciliary body. Of the 24 cases, iron and steel was in 22, glass in one, and copper in one. No attempt was made to extract the body in 6 cases, the eye being enucleated in 3, while in the other 3 the steel remains in the eyes. The magnet failed in 6 cases, in 5 of which the eyeball was enucleated. In each of these cases the body was firmly surrounded by fibro-cellular tissue, having been in the eyes, respectively, 18 years, 10 months, 3 months, 5 weeks, and 4 days. In the last case an unsuccessful attempt to extract the body a few hours after the accident increased the difficulty of securing the metal at the second trial 4 days later. In one case the eyeball was painful 2 months after the magnet extraction, but the man refused to have it enucleated. The following is a summary of the 24 cases.

Magnet not tried, enucleation		3
Magnet failed, enucleation		5
Magnet successful, enucleation later		3
Magnet successful, painful eyeball		1
Magnet successful	V. - - 6/60	1
	Light projection	5
	Light perception	1
	Atrophic eyeball	1
Magnet not tried	V. - - 6-6	1
	V. - - 5-30	1
	Light projection	1
Magnet failed.	V. - - 5-50	1
		24

Near the Equator.

In the second classification are all foreign bodies situated at or 3 mm. in front or 3 mm. behind the equator. Of the 21 cases included in this list, 2 were small shot, and 3 were copper. Of the 16 cases of iron and steel, magnet extraction was successful in 11 cases, failed in 1 case, and in 4 cases no operation was done. The results in the cases are summarized as follows:

Extracton not attempted, enucleation		3
Magnet successful, enucleation later		2
Magnet successfull	V. - - 6-6, partly	1
	V. - 6-9	1
	V. - 5-7,	1
	V. - 5-10	1
	V. - - 6/60	1
	Light projection	2
	Light perception	2
	Atrophic eyeball	1
Magnet failed.	V. - - 6-15	1
No operation.		3
		21

Posterior Part of Eyeball.

The third subdivision includes all cases in which the body was in the posterior portion of the eyeball, including the optic nerve. The total number of cases was 12, of which one was small shot and one was copper, both being in the optic nerve and in both the eye was enucleated. Of the 10 cases of iron or steel, extraction was successful in every instance, one with the Hirschberg magnet and two with forceps (Cases 50 and 61). The results were as follows:

Extraction not attempted, enucleation		2
Magnet successful, enucleation later		1
Magnet successful	V. - - 6-7	1
	V. - - 6-18	1
	Light projection	2
	Light perception	2
	Atrophic eyeball	2
	Partial retinal detachment	1
		12

In the Crystalline Lens.

In 3 cases the foreign body was in the lens. In case 1 the lens containing the steel was removed, and the man had normal sight with correcting lenses. In the second case no operation has been performed, the lens being streaked with opacities, but otherwise the eye suffers no discomfort. In the third case the metal had remained in the lens for 8 years. The iris was glued to the yellowish opaque lens at the point of injury. One week before operation the eyeball became painful and congested. Lens with the steel removed with forceps. V, with correction=5-15.

Conclusions.

From the study of the group of cases here given the following conclusions may be drawn:

1.—The Röntgen rays offer the most certain method of detecting and locating foreign bodies in the eye.

2.—The position of the foreign body should be determined in all cases before magnet extraction is attempted. Frequent insertion of the small magnet into the vitreous in the hope of finding the metal injures the eye and renders later attempts at extraction difficult, while the employment of the large magnet is not without danger when the position of the body is not known.

3.—Early extraction offers the best chance of saving the eye. When the track of the body is through the cornea and lens, its position in the vitreous will indicate whether less damage will be done by removing the metal through the open entrance wound or through a new opening in the sclera close to the indicated position of the body.

4.—The more extended use in the future of the larger magnet in cases of steel in the vitreous chamber to draw the metal to an opening in the sclera after its position has been accurately determined, will probably achieve better visual results than have been obtained in the past with the small magnet introduced into the vitreous.

5.—Iron or steel which has remained in the eyeball until a fibro-cellular covering envelops it cannot be dislodged with the magnet. Extraction with forceps, and the employment of normal salt solution to replace any vitreous lost, has resulted in several instances in eyeballs of good cosmetic appearance, and is an operation worthy of trial. Forceps extraction must also be employed when the body is of copper or glass.

6.—Extraction is a safe operation, and under proper precautions is free from the dangers of panophthalmitis or meningitis.

Summary of cases of Foreign Bodies located by Rœntgen Rays.

IN THE LENS.

Case	Surgeon.	Eye	Time between Injury and Operation.	Time between Operation and Last Examination.	Condition at Last Examination.
1	W. Thomson	L	3 months	1 year	V=6-6
2	de Schweinitz	R	No operation		
3	Oliver . .	R	8 years	4 months	V=5-15

IN IRIS.

4	Hansell	L	1 day	9 months	V=6-9

IN CILIARY REGION.

4	Hansell	L	8 days	2 months	Good light projection
6	Strawbridge .	L	5 weeks		Magnet failed. Enucleation
7 a	Hansell . . .	R	3 months		Enucleation 5 months later
8	Berens	R	2 weeks	Magnet not used	Enucleation.
9	W. Thomson	R	12 years		
10	W. Thomson	L	3 weeks		
11	Sweet	L	1 month	9 months	V=6-30
12	Ellegood . .	L	2 days	11 months	Good light projection
13	Ellegood	L	13 days	1 year	cataract
14	Hansell . . .	L	10 days	20 months	
15	de Schweinitz .	R	18 years		Magnet failed. Enucleation.
16	Oliver	R	No operation		V=5-30 one year later
17	Norris	L	4 days		Magnet failed. Enucleation.
18	Risley	L	No operation		V=6-6 partly.
19	Norris	L	1 month	2 months	Eye painful. Refused Enucleation.
20 c	Sweet	L	3 months	9 months	Slight Atrophy of Eyeball
21	Norris	L	3 months	6 months	Magnet failed. V=5-30
22	de Schweinitz	R	10 months		" " Enucleation.
23	de Schweinitz .	L	1 day		Enucleation 5 months later.
24	Schwenk	L	6 days	2 months	Good light projection. Cataract.
25	Risley	L	12 days		Magnet failed. Enucleation.
26	de Schweinitz . .	L	1 day		Enucleation 7 days later.
27	Risley	L	No operation		Eye quiet 2 months later. Cataract.
28	Oliver	R	18 years	3 weeks	Light perception.

AT THE EQUATOR.

29	de Schweinitz	L	3 years		Magnet failed. V=6-15
30	Sweet	L	6 days	2 years	V=6-9.
31	Love	L	2 weeks	2 years	No L. P. Slight Atrophy of Eyeball
32	Hansell	L	4 weeks	2 years	V=6-60 Slight Retinal Detachment.
33a	Norris	R	3 weeks		Enucleation.
34a	de Schweinitz	R	No operation		Enucleation
35b	Hansell . .	L			No light perception
36	Zentmayer	L	Refused operation		Disappeared.
37	Schwenk	L	5 days	3 months	V=5-7
38	Hansell . . .	L	4 days	20 months	V=6-6 partly
39	de Schweinitz .	L	No operation		Disappeared

AT THE EQUATOR.

Case	Surgeon	Eye	Time between Injury and Operation	Time between Operation and Last Examinat on.	Condition at Last Examination
40	Shoemaker	L	No operation		Good light projection. Cataract
41	de Schweinitz	L	1 day	1 year	Light proj. temp. side. Cataract
42	Oliver	L	6 days	3 months	V. 5-10
43b	Harlan	R	1 days		Enucleation.
44	Hansell . .	L	2 months	4 months	Good light projection.
45	de Schweinitz	L	1 day		Enucleation 2 months later.
46	Hansell . . .	L	2 months		Enucleation 2 months later.
47a	de Schweinitz	R	No operation		Refused Enucleation.
48	Love	R	4 weeks	2 weeks	Light perception.
49	Radcliffe . .	R	8 days	2 weeks	Light perception.

AT POSTERIOR PART OF EYE.

50	W. Thomson	L	8 months	4 years	No L. P. Eye slightly atrophic.
51	de Schweinitz	L	2 days	2 years	Good light projection. Cataract.
52a	Turnbull . .	R	In optic nerve		Enucleation.
53b	Hansell	L	In optic nerve	No operation	Enucleation 3 months later.
54	Harlan	L	3 weeks	8 months	No L. P. Eye slightly atrophic.
55	Oliver	L	9 days	12 days	Light perception.
56	W. Thomson .	R	8 days	6 months	V. 6/48
57	W. Thomson .	R	19 days	8 months	Retinal detachment temporal side.
58	Croskey . . .	L	4 days		Enucleation 3 days later.
59	de Schweinitz	R	4 days	2 months	V. 6/5
60	Posey . . .	L	10 days	8 months	Good light projection. Cataract.
61	Oliver	R	1 week	1 month	Light perception.

OUTSIDE OF EYEBALL.

62b	de Schweinitz	R	No operation	Small shot above eyeball.
63b	Hansell	L		atoptic forumen.
64b	Sweet .	L		removed.
65	Schwenk	L		Piece of steel close to eyeball.

a—copper.
b—small shot.
c—glass.

Hysterical Pseudo-Meningitis followed by Motor, Sensory and Psychic Disturbances.—Simonin recently presented a case of hysterical meningitis before the Medical Society of the Paris Hospitals. (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, July 18, 1901. No. 25.) A man of 24, he first lost consciousness and sight three years ago, while working at night. He recovered in three days. Bronchitis and gastroenteritis followed, while he was at work with anilin dyes. Then he entered the army. After a visit home, where he found his parents quarreling, he suddenly lost consciousness again, followed this time by melancholia. Headache, blindness, constipation, vomiting, fever, right-sided glossa-labial hemi-spasm, bilateral external ophthalmoplegia, macropsia, polyopia, incompete lateral homonymous hemianopsia, left sided hemi-hyperesthesia right sided hemi-hypoesthesia, amnesia, etc., all helped to make the diagnosis. Lumbar puncture showed the absence of all cellular elements from the cerebro-spinal fluid, thus confirming the diagnosis of hysterical pseudo-meningitis. [M. O.]

Strangulated Umbilical Hernia.—Dr. A. Ballenghien reports a case of strangulated umbilical hernia in a woman of 52. The enterocele was strangulated for 48 hours, and 33 cm. of gangrenous small intestine had to be resected. The operation was finished with circular enterorrhaphy. She died in six days. An autopsy was not permitted. Though a chronic nephritis was suspected in this case, Ballenghien believes that hypodermoclysis might have aided materially in keeping her alive after operation (*Journal des Sciences de Lille*, August 3, 1901. No. 31.) [M. O.]

A NEW LOCALIZER FOR DETERMINING THE POSITION OF FOREIGN BODIES IN THE EYE BY THE ROENTGEN RAYS.

By L. WEBSTER FOX, A. M., M. D.,

of Philadelphia.

Professor of Ophthalmology, Medico-Chirurgical College, Philadelphia, Penna.

Having experienced, in my surgical practice, much difficulty in determining the exact position of foreign bodies in the human eye by means of the Röntgen photography, I have devised a new instrument which does the work in a far more efficient manner than has heretofore been possible.

As is well known, the location of foreign bodies by means of the Röntgen rays is possible only when such bodies are either partially or completely opaque to the rays. If a photographic plate is placed in the path of the rays, the shadow of the opaque body is projected on the photographic plate, and its position is determined by means of the position of the shadow of the body, as compared with the position of the shadow of recognized parts of the body by which it is surrounded.

In a body so delicate as the eye, sunk as it is far in the orbital tisssue, considerable difficulty has been experienced in determining from some finder or localizer, opaque to the Röntgen rays, placed outside of the eye, the exact position of the foreign body. In order to minimize this difficulty I have devised a localizer which comes directly in contact with the anterior half of the eye, and its geometrical shadow, thrown on the photographic plate, aids in locating a foreign body in the orbit or eyeball. This is especially so since I have formed the outside rim of the localizer of an opaque substance, so that, if care be taken, the position of the eye will be clearly determined by the geometrical shadow of the localizer. The apparent position of the foreign body will be largely affected by its distance from the photographic plate, and it is exceedingly necessary that the direction of the rays, and the position of the plate, be borne in mind when interpreting from the skiagraph the exact location of the body sought for.



Figure 1.



Figure 2.



Figure 3.

The localizing device consists of an oval band of gold or silver, about 0.75 mm. in width, so shaped and curved as to conform with the outline of the eye, and provided with two gold strands crossing in front at right angles, thus dividing the instrument into quadrants. This form of localizer is shown in Figs. 1 and 2, where the oval band and its cross-bands of wires, are placed as indicated. I sometimes form the localizer of a slightly different shape from that shown in Fig. 1. For example, as shown in Fig. 3, there are two nearly concentric bands or circles with cross-wires connected thereto, leaving, however, a round or clear space for the cornea. Generally, however, I have obtained the best results with the form shown in Fig. 1.

My latest modification of the instrument is substituting for the outer band one of lesser diameter. This device accomplishes the same localization with less shadow. The foreign body must be very minute to be eclipsed by the shadow made by this localizer.

When in use, the localizer is adjusted directly to the surface of the injured eye—a solution of cocaine having been previously applied to the conjunctiva to produce anesthesia of the cornea and eye-lids, thus permitting the instrument to remain in place long enough to have one or two skiagraphs taken without any inconvenience to the patient.

The localizer adjusts itself to the eye-ball, but does not prevent the eye, to which it is attached, from rotating or following the other eye. In order to bring the crossed wires directly over the centre of the cornea of the eye to be photographed, it is necessary to direct the sound eye at a fixed point. The photographic plate being adjusted on the side of the temple nearer the injured eye, the Crookes' tube is then adjusted so that the Röntgen rays shall, as nearly as possible, fall perpendicularly on the surface of the photographic plate. If the foreign body lies within the shadow of the localizer, it must be in front of the equator of the eye-ball; its distance behind the shadow of the instrument also determines its location, either in the posterior portion of the globe or orbit. A control test by the occipito-frontal view at once identifies the quadrant in which the foreign boy lies.

It will be noticed in the skiagraphic pictures shown in this article, that some outlines of the localizer are sharper or clearer than others. In all cases the clearer outlines of the localizer will indicate the position nearest the photographic plate. To a certain extent, therefore, the position of the foreign body can be judged by the sharpness of its shadow. Its absolute location may be verified by a second or control test. This test is made by placing a plate, not on the temporal side, but in front of the eye, and having the X-rays to pass through the head. This second or occipito-frontal skiagraph is not clearly outlined in detail as the first or temporal skiagraph, but with very little experience one can recognize any foreign body seen in the first test. The one defect in the temporal picture is that, if the foreign body is very small, and should lie directly below the shadow of the localizer so that it cannot be seen, then an additional temporal occipito-frontal picture must be taken or an additional temporal picture must be taken with the source of the rays at a diverging angle and no longer perpendicular, as in the first instance.

Before describing the actual photographs which I have taken in the Medico-Chirurgical Hospital with this form of localizer, I will take occasion to describe, at some length, the manner in which I have diagnosed the position of the body when actually in a living eye.

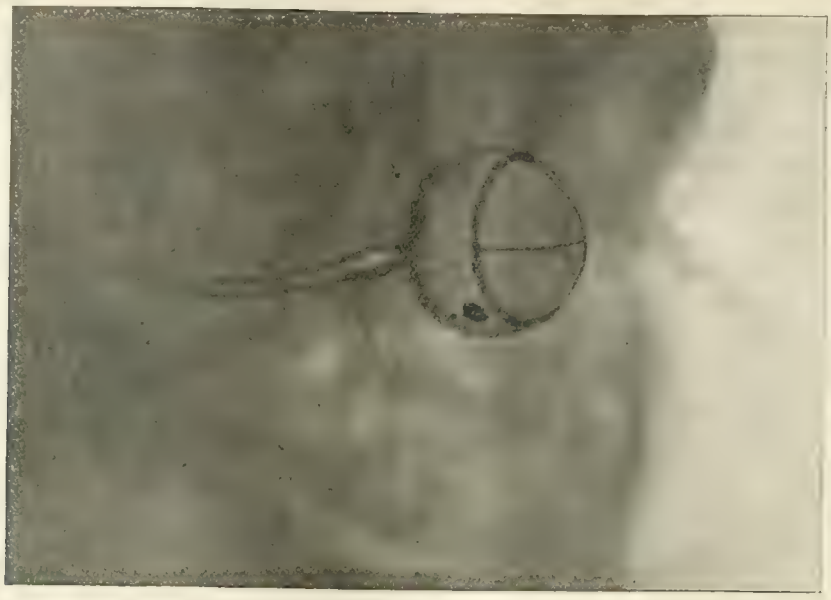


FIGURE 4.

For this purpose I will take Fig. 4, in which the outline of the localizer is plainly seen over a schematic eye. Immediately behind and to the lower and outer quadrant of the localizer is visible a dark object—a piece of steel. Dividing the localizer in two in its antero-posterior diameter, and doubling its distance, which would correspond to the posterior part of the eye, we would find that the foreign body would lie to the outer and lower quadrant, back of the equator, or about the equator of the eye-ball. The occipito-frontal view shows it in the lower and outer quadrant.

I will now describe skiagraphs in which I have taken both the temporal and the occipito-frontal views.

Fig. 13 is a temporal picture which shows the localizer in place, with a foreign body—a pellet of shot—2 inches behind the localizer. It is impossible from this picture to tell whether the shot is on the temporal side of the skull, or in the orbit, but it clearly does not lie in the eye-ball itself.

Fig. 14 is an occipito-frontal skiagraph from the same patient, care being taken to have the rays pass directly through the occipito-frontal part of the head, parallel with the crossed lines of the localizer. 2.5 minutes were given to this exposure. When the plate was developed the dark outline of the shot could be seen in the lower and nasal quadrant of the localizer. This would indicate the shot to the middle line of the orbit, above and near the optic nerve entrance.

Since taking the first skiagraph[1] four years ago —eight minutes exposure—I have reduced this time to an almost instantaneous process. This eliminates a feature which was always serious in ophthalmic work, i. e., the probability of exciting conjunctivitis or dermatitis about the temple or the eye-lids and probably to the inner tunics of the eye itself.

In ophthalmic work on living subjects the time of exposure through the temple is from 5 to 10 seconds, the occipito-frontal 2 minutes and 30 seconds, with excellent skiagraphs.[1]

Mr. Davidson[2] has designed an apparatus on somewhat similar lines. He describes it as follows: "A loop of lead wire is fixed by sticking plaster to the edge of the lower lid, opposite a known point of the eye; the point of this wire, projecting upwards, forms the landmark from which the position of the foreign body is calculated. The patient is directed to gaze steadily at a distant object in an axis parallel with the plate—that is, straight in front—and two exposures are made on the same plate with the sliding bar." The foreign body is then localized from the resulting photographic records.

The following experiments were made in the skiagraphic laboratory of the Medico-Chirurgical Hospital and I am greatly indebted to Dr. M. Kassabian for his assistance in making this work successful.

The Crookes tube was placed twelve to eighteen inches from the plate.

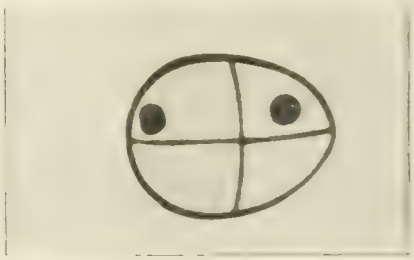


FIGURE 5.

Localizer covering a freshly enucleated human eye-ball in which two shots have been buried. One shot in the upper and nasal quadrant, lying close to the ciliary bodies. Second shot, upper and temporal quadrant, in the back of the eye-ball, above and to the outer side of the macula region.

Time exposure, one-half second.

1. For this valuable suggestion I am indebted to Prof. Edwin J. Houston.

2. "The Roentgen Rays in Medical Work." Walsh 1898 page 115.



Figure 6.

The same eye-ball with a slight change in position, giving the shot a different position from those in Fig. 2. The eye-ball being changed from one plate to another.

Time exposure, two-fifths of a second.



Figure 7.

Same eye-ball changed to a third plate.
Time exposure, one-half second.

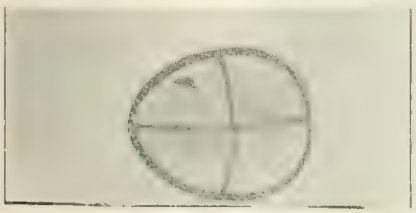


Figure 8.

Same eye-ball with a small piece of lead, one and one-half millimetres long and one-half millimetres in diameter, showing in nasal quadrant and having the same distinctness of shadow as the localizer. The foreign body was placed in the upper and inner quadrant.

Time exposure, three-quarters of a second.

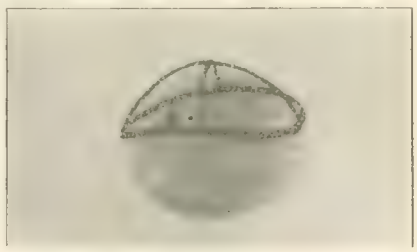


Figure 9.

Same eye-ball placed on its side to correspond to a temporal skiagraph. The foreign body is farthest away from the plate, accounting for the loss of definition. The outer rim of the localizer, that is, the temporal side, which was resting against the plate, giving a clear shadow, which is shown in this picture.

Time exposure, three-fourths of a second.

Dry skull—occipito-frontal skiagraph. Shot buried in the centre of a human eye-ball enucleated two days previously and preserved in boroglyceride. The localizer is placed over the front of the cornea, the wires crossing directly in its center. The eye-ball and the localizer being held in the orbital space by absorbent cotton. From the skiagraph it can be seen that the visual line was slightly turned down and out.

Time exposure, thirty seconds.

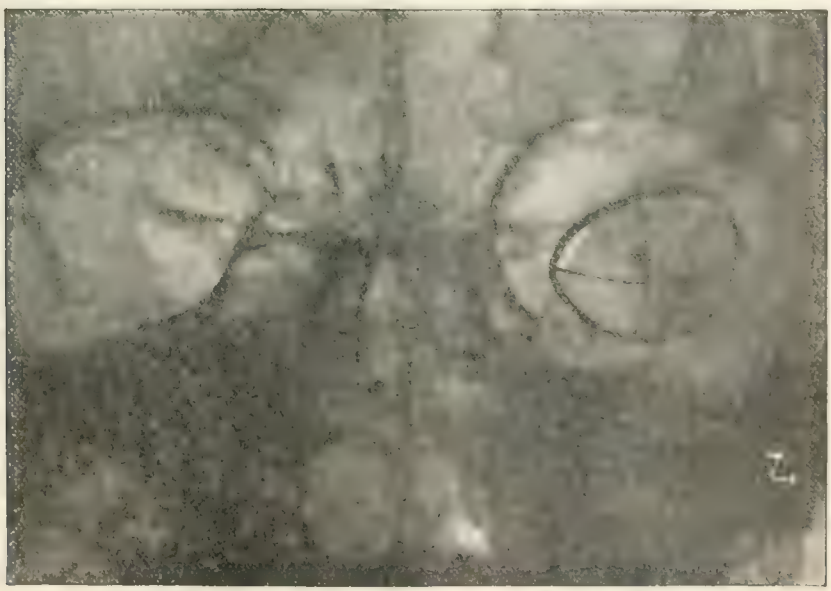


Figure 10.

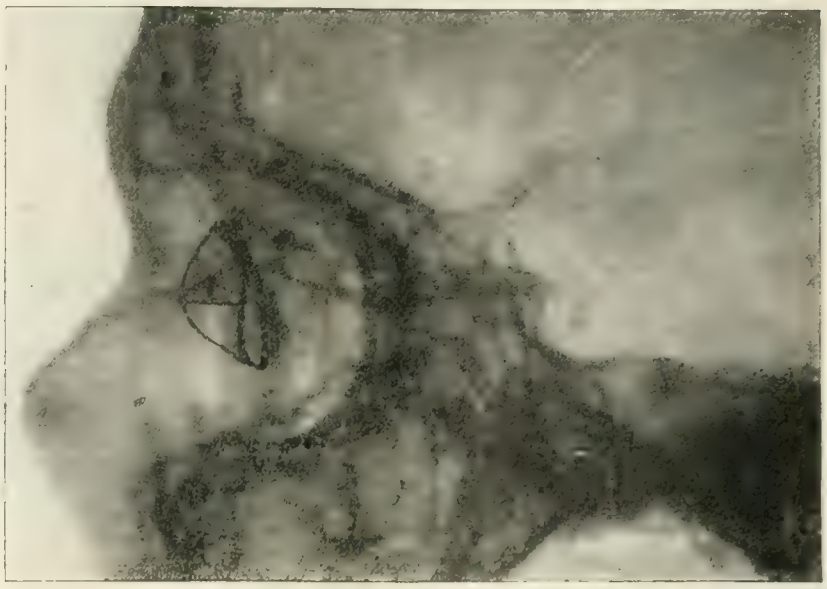


FIGURE 11.

Dry skull—temporal skiagraph. Same eye-ball as that used in Fig. 10 with a small sliver of steel, one and one-half by one-half millimetres, buried in ciliary processes on the nasal side directly in the horizontal diameter of the eye.

Time exposure, fifteen seconds.

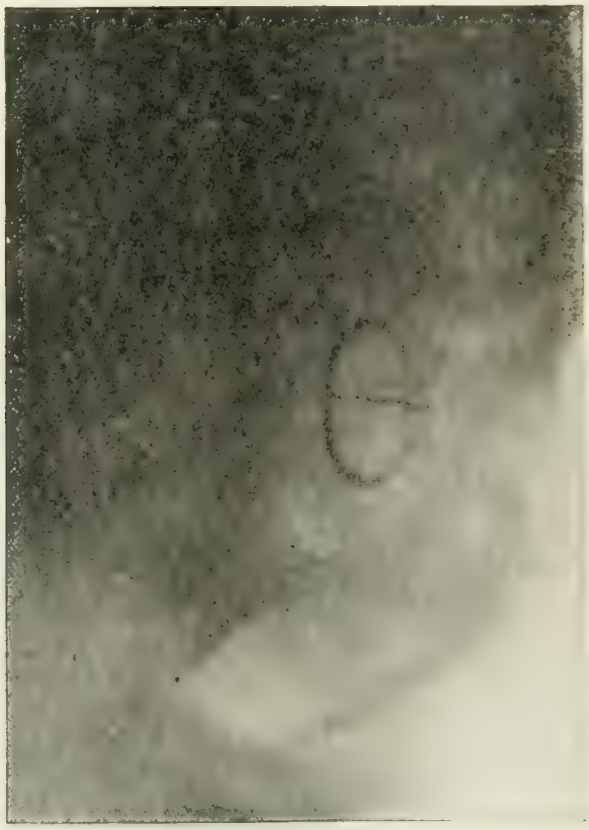


FIGURE 12.

Living subject. Pus in the anterior and posterior chambers. Localizer covering the eye, there being no foreign body. Eye-ball having been removed and glass ball implanted.

Time exposure, fifteen seconds.



Figure 13.

Showing Dr. Sweet's localizer with a foreign body in the eye. It is difficult to locate this foreign body although it is plainly seen. The contrast between this and my localizer, as seen in Figs. 14 and 15, is marked.

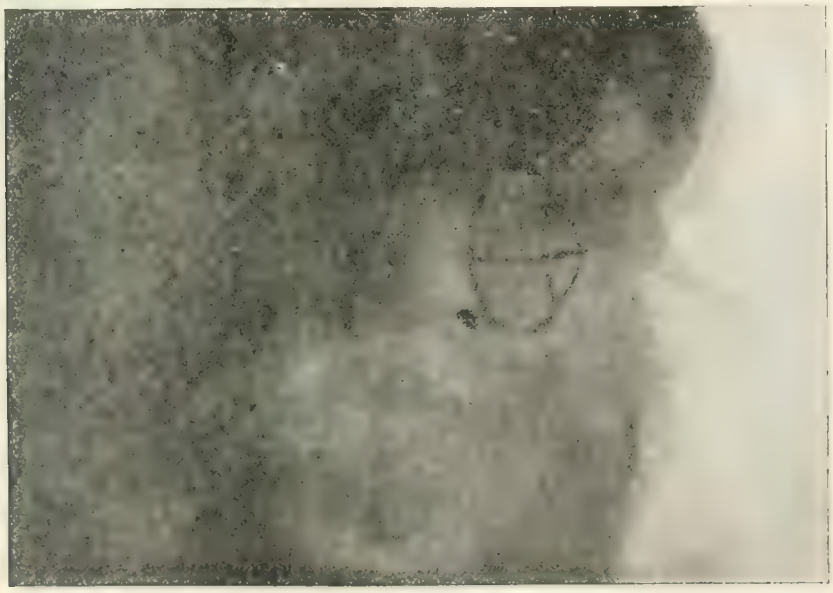


Figure 14.

Living subject. Right eye. Localizer in its place, showing foreign body with sliver of steel, down and out, just behind the equator of the eye-ball. This was confirmed by the ophthalmoscope. The patient refused to have the eye-ball removed.

Time exposure, ten seconds.

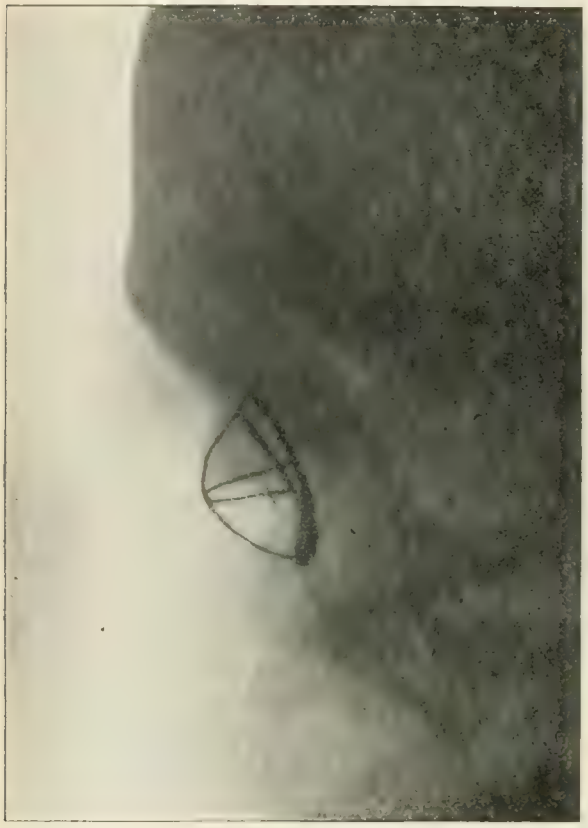


FIGURE 1.

Living subject. Left eye. Localizer in place. Foreign body is crossed by the horizontal wire nearer the nose and is found back of the ciliary bodies, near the sclerotic in the horizontal meridian.

Time exposure, twenty seconds.

Right eye with localizer in place. (see figure 101. Shot buried in the orbit. While out hunting rabbits a companion shot the patient in the right eye. He was placed on antiphlogistic treatment for several weeks. The eye was lost from the hemorrhage at the time of the accident. I made a careful examination of the eye and found that a shot had penetrated the sclerotic just above the upper line of the external muscle, a short distance in front of the equator. By extreme convergence another opening could be distinctly seen on the same line but just behind the equator, showing by the indenture and choroidal staining, that the shot had gone in and then out through the sclerotic coat and buried itself deep back in the orbit somewhere. The localizer was placed in position and a temporal skiagraph taken. According to this skiagraph one can see that the shot is not in the eye, it might be on the temporal side of the skull and flattened against it so that it could not be recognized by the sense of touch, or it might be in the orbital cavity. Fig. 17, a control test, gives the exact location.

Time exposure, twenty seconds.

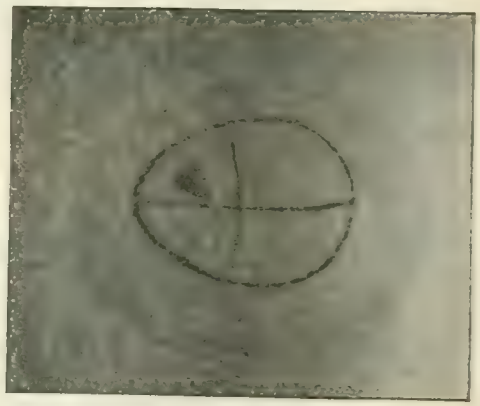
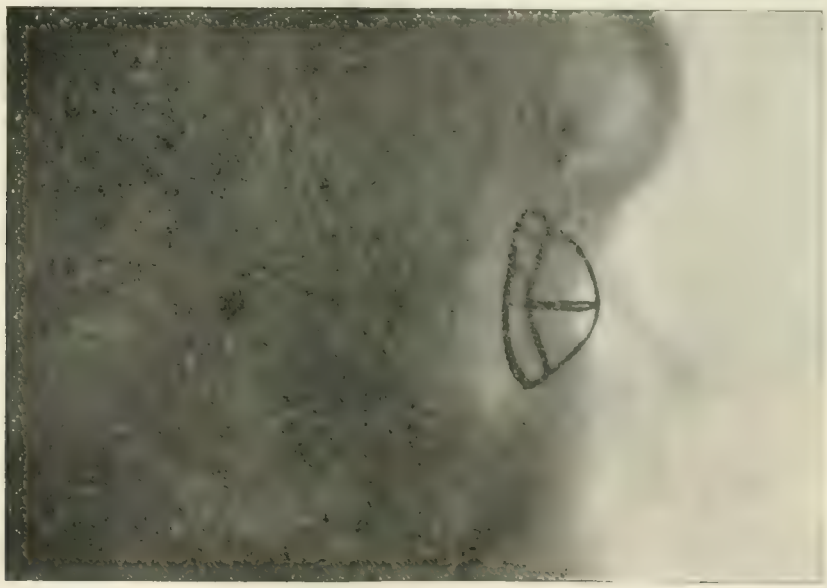


FIGURE 17.

Same patient—occipito-frontal view. This shows the largest localizer in place and a shot buried far back in the orbit on a line directly posterior to



the crossed wires which divide the cornea into quadrants. When the plate was developed the shot was located apparently on the nasal side. By comparing these two skiagraphs the exact location of the shot can be seen.

Time exposure, one minute and forty-five seconds.

Living subject, showing an implanted glass ball in the left eye with localizer. The model is different from the one now in use. The localizer covers the glass ball with the eye-lids open. (Figure 19).

Time exposure, twenty-five seconds.

The experiments prove that we can take excellent skiagraphs on the living patient, temporal side,

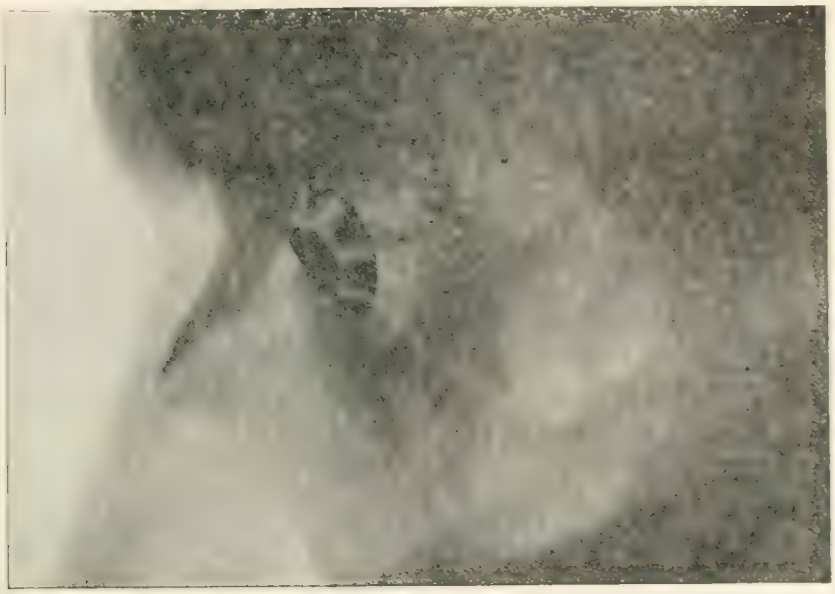


FIGURE 18.

Living subject, showing an implanted glass ball in the left eye, with a gold conformer held in place by the closed eye-lids. This is a very interesting skiagraph, as it shows the conformer displaced by the action of the lids. The glass ball is situated above the horizontal plane of the conformer, yet subsequently when an artificial eye was adjusted, its position was normal and its rotation all that could be desired.

Time exposure, thirty seconds.

in five to ten seconds, and by the occipito-frontal axis in two and one-half minutes, and in the freshly enucleated eye-ball in one-half, one-fifth or two-fifths of a second. It also robs us of any risk of starting up any secondary inflammation of the eye-lids, conjunctiva or tunics of the eye-ball. Over-exposure apparently lessens clear definition of the foreign body as well as the bony structure of the orbit. The skiagraphs of the dry skull with the human eye-ball buried in cotton (Figs. 10, 11) con-

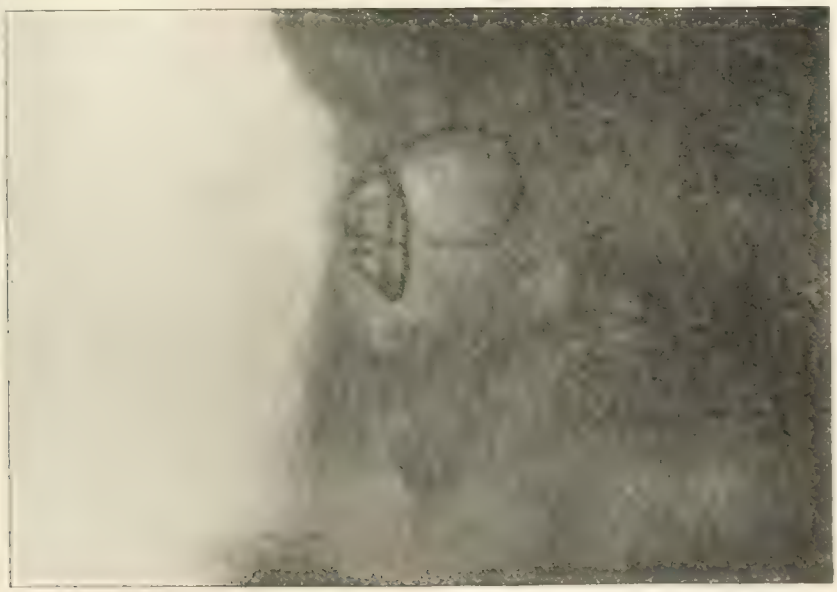


FIGURE 19.

firms the truth of the experiments. The earlier work done in our laboratory proves this when the exposures were eight to ten minutes.

PRECANCEROUS KERATOSIS PROBABLY DUE TO X-RAYS.

By JAMES C. JOHNSTON, A. B., M. D.,

of New York.

Chief of Clinic, Department of Dermatology, and Instructor in Pathology, Cornell University Medical College, New York City.

Most clinicians are familiar, at least by the published reports, with the cases of X-ray burn, which were fairly common when the discovery was recent and the potentialities of the light little understood. Greater care at present guards against these accidents almost completely. Their effects varied from an erythema with subsequent pigmentation or temporary loss of hair to deep ulcerations with indurated bases and little tendency to repair. In certain cases there was no tissue loss, but the skin of the exposed part became red, thickened and as hard as in scleroderma. Both the latter conditions were accompanied by excruciating, boring pains.

The conditions I have described differ markedly from the burn in many respects and must be classed, it seems to me, with the other precancerous keratoses, a group whose limits are constantly widening. My belief is that every squamous-celled epithelioma has a stage in which the only change is a thickening of all the layers of the surface epithelium—in other words, not only a hyperkeratosis but an acanthosis (overgrowth of the prickle-cell layer) as well. Cornification is however the principal clinical feature, and under the name keratosis, being half the truth, the diseases will do as badly as with any other term. Among the precancerous conditions already classified are leukoplasia oris with its mixed origin in syphilis and the use of tobacco, the senile or "seborrheic" wart, kraurosis vulvæ, chimney sweeps' cancer of the scrotum and that which occurs in paraffin workers. Hartzell has reported a case of epithelioma developing upon keratosis of the palms due to prolonged use of arsenic and Pringle another on the patches of erythematous lupus. In the second as in lupus vulgaris the condition is singularly favorable for such a development, since there is overgrowth of epidermis and a weakening of power of resistance to invasion by an inflamed and partly atrophic cutis. Very few cases have been reported in this particular connection, but in them the epithelioma has infiltrated rapidly.

It may be said that too much stress is laid in my title on the causative relationship of the rays and not enough on the possibilities of irritation by the various developing and toning fluids. To this objection, which is on its face well founded, I may answer that I have examined the hands of a number of photographers, amateur and professional, and while I have seen once or twice a slight roughness and dryness of the skin after years of work, there was never any approach to the nodular keratosis of my second case. In fact, it does not resemble any other so far as described. Moreover, neither was in the habit of printing and toning his own pictures, and being amateurs, could not be supposed to have made a vice of their fad. The second case is a surgeon and may have furthered the development of his disease by his vigorous preparation for aseptic operation. At any rate, the point is worthy of note and it can hardly be disputed that X-ray work should be left to those whose skins are not susceptible, on the first appearance of the keratosis. There is very likely a factor of age and individual susceptibility at play here as in other epithelial neoplasms.

CASE 1.—This illustrates the early stages of the disease, of which Case 2 shows the full development. It occurred on the hands of a man of 38, who, as I saw him two years ago, could have worked with the rays only three or four years at most. The skin of the back of his hands was slightly reddened, the distribution of the erythema being pretty uniform. It stopped somewhat abruptly everywhere at the palmar margin. Both surfaces felt dry and rough even in hot summer weather. Here and there were translucent, partly detached, but tenacious scales. The lanugo hairs and nails were little affected. There was no pain and very slight itching. The erythema faded completely on pressure, left no pigmentation and returned very slowly. Regarding this as a mere occupation dermatosis, I recommended dropping photography of all sorts and give him diachylon ointment. After a few visits to the dispensary he disappeared.

CASE 2.—A surgeon, past forty, who has probably done much more work than the first man since he used the machine for diagnosis as well as photography. His use of it extended over four or five years and was only stopped last spring, when the nature of the trouble was suspected. At that time (May, 1901) two of the keratoses were sent to the Cornell laboratories for diagnosis and the case was brought to my attention in that way. Recognition of its relationship with the earlier example was easy. As before, the backs of both hands were affected as far as the wrist joint, where the redness faded gradually into the healthy skin. The skin was rough, dry and slightly scaly, with no more itching than one would expect with the desquamation. No pain was present, except a disproportionate amount on direct injury. There was no thickening: the cuticle seemed rather thin and atrophic as it generally does when the precancerous keratoses appear. The palms were rough, dry and thick with superficial fissuring. The nails were beginning to show dystrophic changes, discolorations pits and longitudinal marking. The main feature was a number, twenty I should say, on the backs only of both hands, of hard, cornified growths. They seemed to exhibit a predilection for the palmar margins and the fingers, but no part could be said to be perfectly free. Their development could be readily traced. The first appearance was a circumscribed thickening, no bigger than the head of a pin, slightly raised in the middle above the skin level, but shading gradually into it. The growth was extremely hard, smooth with the semi-translucent, pearly character of the border of an epithelioma. From this point the lesions passed gradually to their limit of development, which seemed to be a diameter of three-eighths of an inch. The larger keratoses all showed, as is the way with cornifications, benign or malignant, a small circumscribed area in the center, where the horny material had crumbled away leaving a rough blackened pit. These growths projected about one-eighth of an inch above the skin and were surrounded by a halo of slight inflammatory redness.

Two of the largest were excised, one from the dorsum and one from the distal phalanx of the right middle finger. The first showed a low grade of subacute inflammation in the cutis with lymphocytosis and a few proliferated fibroblasts. The epidermis appeared four times its normal width, the increase occurring in every layer, horny, clear, granular and Malpighian. The interpapillary projections were widened, lengthened and somewhat distorted. There were few mitoses little increase of nuclear chromatin and no rupture of the basement membrane. This keratosis was still perfectly benign though

not likely to remain so. The second lesion showed a different picture. The sections from near its center showed in addition to the features just described a considerable increase of the chromatin in the epidermic cells of the basal layers, mitotic figures and rupture of the basement membrane with infiltration of the adjacent corium. The epithelial cells lay between the fibers of connective tissue in strings and small groups. They were round, with deeply staining nuclei and no prickles. There was no attempt to form the nests of squamous-celled epithelioma.

Peripherally, the incision had gone wide of the epithelial infiltration, but it had been too superficial and below, at the margin of the cutis in the sections, cell groups were seen divided in half. The growth was not only malignant, but it was evident a part of the epithelioma had been left. Clinically, the wound, though clean, did not heal. There was left a shallow ulcer with indolent granulations. In view of the microscopical findings I recommended the application of an arsenic paste for two hours. After a few days with the aid of poultices, the slough separated and in time the ulcer healed, leaving a good scar.

The man dropped his work altogether and went away to the country for the summer, with instructions to prevent irritation to the skin and to soothe it as much as possible. To the latter end he used Lassar paste for a time, which was not brilliantly applicable, since it contains salicylic acid in keratofying proportions (1%). We were afraid of the irritation a serviceable keratolytic would cause and, finally, it was discovered that equal parts of hydrogen peroxid and glycerin gave the best results. On his return in September, the skin was soft and supple with almost no redness. The keratoses naturally remained the same. The scar, where the epithelioma had been, showed a return at one edge of the pearly thickening. After a time, for safety, it was again excised down to the tendon and the wound grafted at my suggestion to obviate any irritation and epithelial growth into the granulations. Microscopically, the recurrence showed only the ordinary keratotic character with firm scar tissue below and no breaking through of epithelial cells. It has not since returned and the other lesions have progressed no further.

Of course, it is out of the question to leave these cornifications, since, even now, although the skin tone is much improved, they are at least potentially malignant. There being no clinical line of demarcation, the sooner the removal is done the better, or one more valuable life may be sacrificed to unjustifiable dallying. As to the means, my personal leanings are to complete excision with grafting. Salicylic acid (10-20 per cent.) in collodion may be tried confining its action to the keratoses alone, and may do well. It does in other precancerous states, particularly the senile wart.

TREATMENT OF EPITHELIAL SKIN-CANCERS AND SYCOSIS NON-PARASITICA WITH THE X-RAY.

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of Oakland, California.

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By far the most common form of primary cancer of the skin is the epithelial variety. It may manifest itself in one of three ways. The first is in the form of one or more papules, reddish or yellow in color. The second is the warty, or papillary form. The third is a simple infiltration of the skin occurring around some point of irritation such as a mole.

In all of these forms there is after a variable length of time a disposition to fissure or excoriate, and to be covered with a brownish or yellowish crust.

In time these deposits increase in size or new ones appear, the tissues invaded break down and an ulcer forms.

Occasionally nature makes such decided efforts at repair that these diseased areas become so covered with granulations as to form elevations instead of depressions. This variety is known as the vegetating form of the disease.

At times instead of simple crusts from dried pus and serum the sore is covered by a horny layer of dried epidermis which on being shed leaves a raw surface beneath.

Primary skin cancers are usually slow in their growth, there is no involvement of the glands or deeper tissues, but there is a latent danger always present that the process may become deep-seated. So their treatment by any means which will remove them in their entirety is to be recommended in all cases.

Skin cancers are curable in almost all instances with the knife or with some one of the various caustic applications recommended by the text-books for their treatment.

It is particularly to recommend the use of the X-ray in their treatment that this article is written. The adavntages of the X-ray treatment of such cases are manifest. There is no pain, there is little scar left after the sore has healed, and there is the possibility of a more thorough eradication of the disease, as the effect of the light is to destroy all the cancer cells within the area exposed.

The description given under case five of sycosis non-parasitica will be all that is necessary to say as to the symptomatology of the disease.

CASE 1.—J. H. B. had had upon his right cheek a vegetating epithelial growth for about eight years when I saw him. It was one inch in width, one and one-half inches in length, and was elevated one-half inch above the surrounding healthy skin. It had begun as a small scratch, received in attempting to arrest a drunken woman, inflicted, as the patient thought, by the finger nail. Instead of healing it became covered by unhealthy granulations and grew a little, year by year, until it had reached the size mentioned. The area was covered by a crust of dried pus and other exudations from its surface, which, upon being detached, left a raw mass of what looked like unhealthy granulations beneath. Various applications had been made in the way of caustics and salves from time to time but without benefit. My diagnosis was vegetating epithelioma.

Having seen a case reported by Stenbeck, of Stockholm, of rodent ulcer, which he had cured by means of the X-ray, and having heard of a case of epithelial cancer of the face which had been cured in himself by Dr. J. M. Selfridge, an eclectic physician of this place, and also having had favorable reports made to me by Dr. Clarke, in charge of the county hospital in this city, I determined to try its effects in the present case. The method of treatment was as follows: The sore was cleansed of all crusts, the face was covered with a mask of thin sheet lead in which a hole had been made of the proper size to expose the sore and about one-fourth inch of healthy skin around it.

The tube was placed within six inches of the sore and in such a way that the light fell upon the part exposed.

The tube was then brought to a "red glow," i. e. the square platinum electrode within the tube was brought to a red heat. The applications were made in the manner indicated, for five minutes the first day, six minutes the next and so on until the eleventh day, when the treatment was continued for fifteen minutes. No very marked effect was noticed for the first ten days except that there was less exudation of serum and less pus than before, together with a diminution of the pain and burning which had before been very troublesome. On the eleventh and twelfth

days the treatment was continued for fifteen minutes each day. The effect of these two treatments was to cause a very marked inflammatory reaction. The growth itself and the small margin of healthy skin exposed became very much inflamed. The inflammation gradually disappeared, leaving a dry scab, which peeled off in a few days.

This case healed without a scar, due, I think, to the fact that the efforts at repair had been in excess of the destructive process, so that the growth had never destroyed the true skin.

CASE 2.—This was a patch upon the left cheek of a patient fifty-six years of age. It was marked by a hard crust of the nature of horn, which being shed once every three or four weeks, left a raw sore underneath. The sore when exposed was level with the surface of the surrounding skin, and about the size of a nickel. It was of two years standing, within which time it had gradually grown to its size as given above. The same method was followed in this case as in the one above, viz., reaction was obtained as quickly as was deemed best for the patient.

It is not best to be in too great a hurry to obtain this reaction, lest too much inflammation be caused. There is a great difference in people as regards the ability of their skins to withstand the X-ray. Some burn very easily, while others do not. It is best, then, to begin with a five minute exposure at six or eight inches and try that for a day or two, and if no reaction is obtained, to increase the time of exposure until the desired effect is produced. The result in this case was a complete cure within two weeks from the time the treatment was begun.

CASE 3.—This was a case of rodent ulcer in a patient sixty-seven years of age, was of eight years standing and one inch in diameter. It was situated on the temple just back of the right eye. A reaction was obtained after six treatments and the sore healed promptly.

CASE 4.—This was very similar in character to case two, except as to minor differences of location, and age of patient. The sore in this case was midway between the left eye and the ala of the nose, was of the same size and character as case two and was treated in exactly the same way and with the same result. The patient was sixty-three.

CASE 5.—This was one of sycosis non-parasitica of the upper lip in a patient fifty-two years old. For several years the sore had been present, the skin over a place covering the entire width of the lip and extending to within one-half inch of the corner of the mouth on either side being affected. The disease was marked by exacerbations occurring at intervals of three or four weeks, in which a dozen or more hair-bulbs would become inflamed and suppurate, resembling so many small boils. This would be followed by crusting over with pus from the suppurating points. The crust would peel off in a few days, leaving a thickened condition of the skin, like eczema, which would continue until the next out-break.

The treatment was the same in this as in the other cases, a reaction being obtained after eight treatments. This was followed by cure of the disease with death of the hair over all the area exposed.

In thinking over this case it occurred to me that there must be something more than inflammation produced by the light. Certainly the inflammation alone would not produce the death of the hair; it could not do so without being violent enough to cause destruction of the epidermis or even of the true skin. Its effect was as though each hair had been removed by the electric needle, the lip being left as smooth as though it had never grown a mustache, and yet the skin had only been inflamed, not blistered or destroyed. Might not the effect be in the nature of electrolysis, and might not it be this which destroys the cancer cells in these cases instead of its being the inflammation which causes their death? It may be that the amount of light required to kill an embryonic cell, which is of low vitality, is just sufficient to inflame a healthy one.. Whichever theory is right, whether the proximity of the current by a species of electrolysis, or the inflammation occasioned by the light does it, one thing is certain, and that is that the best results follow an inflammatory reaction in such cases as I have detailed.

Just at this point it might not be out of place to quote from Professor Elihu Thomson's experiment to determine whether the effect upon the tissues is due to the light itself or to the brush discharge.

He first produced a burn on one of his fingers with the light and then exposed another finger so covered with aluminium foil as to insure only the light effect, while it was shielded from the brush discharge, with the result of producing a burn in the second finger also. ("Treatment of Fractures—Scudder—page 422.")

This would seem to indicate that the light and not the static electricity produces the effect of destroying the cancer cells and the hair as well.

Stenbeck's case, one of rodent ulcer of the tip of the nose, healed rapidly after the second reaction had been produced. Dr. W. A. Pusey (*Journal Cut. and Gen. Urin. Dis.*, July, 1900) says that four classes of affections may be dealt with by means of the X-ray. (1) Superfluous hairs may be removed in hypertrichosis; (2) diseased hairs may be removed in sycosis, tinea tonsurans, and favus; (3) tissues may be stimulated and absorption of inflammatory products brought about as in chronic eczema; (4) the destruction of tissues of low vitality, as lupus, may be accomplished by it.

Lambin comes to the following conclusions: (1) The action is beneficial in lupus, chronic eczema, destruction of hairs growing on moles, and occasionally in cases of acne, lupus erythematosus, favus, elephantiasis, hypertrichosis and freckles. (2) On the other hand, it may cause dermatitis of varying severity, sometimes followed by abscess and necrosis, alopecia, pigmentation and desiccation of the epidermis.

THE ACCURACY OF THE NEGATIVE ROENTGEN DIAGNOSIS IN CASE OF SUSPECTED CALCULOUS NEPHRITIS AND URETHRITIS.

By CHARLES LESTER LEONARD, M. D.,
of Philadelphia.

The confidence expressed in the accuracy of the negative diagnosis by the Roentgen method in cases of suspected calculus has been entirely justified by the results obtained since the author made the following claim in 1898 (*Phila. Med. Journ.*, August 20, 1898):

The absolute conditions essential to the detection of calculi in the kidney have been determined and proved repeatedly by clinical evidence, so that it is certain that under these known conditions a renal calculus must be detected, and that the absence of the shadow of a calculus in a negative showing certain definite details, is conclusive evidence of the non-existence of all calculi in that region. This is the positive evidence of the non-existence of calculi that has heretofore been wanting."

The accuracy of the negative Roentgen diagnosis should not be doubted because operators, who have in certain instances succeeded in finding calculi,

have failed to find other calculi. The defect is not in the Röntgen method, but in their technique and their lack of clinical experience. A technique capable of detecting some of the more opaque calculi does not guarantee the detection of all, nor the ability to produce a negative upon which a negative diagnosis, excluding all calculi, can be based.

It should be distinctly understood that the negative diagnosis is much the more difficult. Accuracy in the negative diagnosis can only be assured by the development of a technique capable of producing negatives in which a differentiation can be made between shadows of tissues less dense than the least dense calculus. Not only is the development of such technique necessary, but the diagnostician must be able, through clinical experience, to interpret the data given by the negative. He must be able to realize whether he has a negative or not, upon which he is justified in basing a diagnosis.

The technique of the production of such negatives has been described (*Annals of Surgery*, April, 1899). They should show the shadow of the kidney, or the psoas and iliacus muscles; or, in the pelvis, the ligaments and structures of the pelvic outlet. In favorable instances the author has shown displaced and hydro-nephrotic kidneys and the bladder walls.

The translation of the diagnosis, from the data obtained in a negative that is recognized to be satisfactory, is often the most difficult part. It is here that the personal clinical experience of the diagnostician enters into an otherwise mechanical method of diagnosis. The introduction of this personal equation introduces the only source of error. Infallibility has never been claimed as an attribute of this method, but clinical experience has proved that it possesses greater accuracy than any other method, and that it justifies all the claims of accuracy, when it is correctly employed.

The delicacy in detail, essential in a negative before the exclusion of all calculi is justified, shows how ridiculous are the claims of those who think they can detect or exclude calculi by fluoroscopic examinations. The rays that produce the best fluorescence on the fluoroscopic screen are those of the higher penetrating power that would readily pass through any but the most dense calculi. It is impractical to differentiate between the less dense tissues with the fluoroscope, and this is essential to a diagnosis excluding calculi. Moreover it is often very difficult to detect small calculi when the diagnostician has a permanent picture to study carefully. In the fluoroscope he has only a transient image, and he never has evidence, it is always only what he thinks he sees.

Since claiming that accurate negative diagnoses can be made by the Röntgen method, the author has detected calculi in 65 of the 206 cases that have been referred as cases of calculus, or as having suspicious symptoms. Contrary to previous opinion the frequency of ureteral calculi has been shown to be greater than that of renal calculi; this of itself is a proof of the greater accuracy of this method.

In only one case (Dr. Keen's), previously reported, has operation disclosed a calculus that had not been detected, though many of the cases, in which a negative diagnosis had been rendered, have been operated upon and the diagnosis confirmed by the operation. In this case the error was due to defective technique in placing the plate, as the shadow of the calculus was cast outside it. In three other cases of negative diagnosis the patients subsequently passed small calculi. Here the error was made in correctly reading the negative.

The percentage of error so far in the negative diagnosis has been less than two per cent., a result that compares favorably with other methods of diagnosis. It should also be noted that the calculi overlooked were all so small that they subsequently passed.

The value and harmlessness of this method of examination should be taken into consideration. The patient is subjected to only slight inconvenience, there is no pain, no danger of infecting the urinary tract by the introduction of instruments, or the performing of exploratory operations, and yet the results of the examination are more comprehensive than those obtained by any or all of these other methods.

The accurate negative diagnosis renders rational the treatment of the patient by purely medical or dietetic and hygienic methods. Such treatment without the assurance of the absence of calculi is very hazardous and irrational. The blocking of the ureter by a calculus may result in an intermittent hydronephrosis, which lessens the functional efficiency of the kidney and renders it liable to infection and less able to resist. It may terminate in an insidious unilateral anuria with a relief from all symptoms and the destruction of the kidney and the entire loss of its utility. Or it may, if the other kidney is unable to sustain the labor thrown suddenly upon it, terminate in absolute anuria and death. The danger of treating suspicious cases, without the absolute assurance that no calculus is present, is therefore very manifest, and, with it, the value of the negative diagnosis to a patient suspected of calculous renal disease. The accuracy of the negative diagnosis is also valuable in cases in which calculi are found in one kidney or ureter, as it shows that the other kidney is not involved in a process which because of its systemic character is liable to involve both kidneys or ureters.

The frequency with which this does occur is shown by the detection of eight such cases in which calculi have been found in both ureters or kidneys, and by five cases in which calculi have been found in the kidneys by this method, after operations had been performed for their removal by careful operators.

The value and accuracy of the positive diagnosis has been shown in the establishment of a (*Amer. Med.*, November 30, 1901; *Journ. Amer. Med. Ass.*, November 30, 1901) rational non-operative method of treatment in cases in which calculi have been detected in the ureter and their size so accurately determined that it could be said they would pass without the necessity of operative intervention.

The wisdom of this method of procedure has been illustrated by the passage of calculi in ten cases in which it had been suggested.

The value of the positive diagnosis is shown, in addition, by the accuracy and completeness of the

operations performed with the data it affords. The field of operation is limited to the exact portion of the kidney or ureter that holds the calculus. Further search and the danger of infection and the resulting traumatism are avoided, because the exact knowledge obtained points to the location of all calculi and gives the assurance that there are no others to be sought for or removed.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended January 25, 1902.

SMALLPOX—United States.

			Cases	Death
CALIFORNIA	Los Angeles	Jan. 11-18.	11	
	San Francisco	Dec. 28-Jan. 12	1	
ILLINOIS	Bloomington	Jan. 12-18.	8	
	Chicago	Jan. 4-18.	11	
	Freeport	Jan. 4-11.	2	
	Galesburg.	Jan. 11-18.	2	
INDIANA	Evansville	Jan. 4-18.	4	
IOWA.	Clinton	Jan. 4-18.	3	
	Ottumwa	Nov. - Dec.	3	
KANSAS:	Wichita.	Jan. 11-18.	1	
KENTUCKY	Lexington	Jan. 4-11.	1	
LOUISIANA	New Orleans	Jan. 4-18.	3	
MAINE:	Portland	Jan. 4-18.	2	
MASSACHUSETTS	Boston	Jan. 4-18.	4	
	Brockton	Jan. 11-18.	2	
	Brookline.	Jan. 11-18.	1	
	Cambridge	Jan. 4-11.	1	
	Chelsea	Jan. 4-11.	1	
	Holyoke.	Jan. 11-18.	1	
	Lowell.	Jan. 11-18.	1	
	Marlboro	Jan. 4-18.	2	
	Medford.	Jan. 4-18.	1	
	Quincy	Jan. 4-18.	1	
	Somerville	Jan. 4-11.	1	
	Weymouth	Jan. 4-11.	1	
MICHIGAN.	Ann Arbor	Dec. 28-Jan. 4	2	
	Detroit.	Jan. 4-18.	3	
	Grand Rapids	Jan. 11-18.	2	
MINNESOTA:	Winona.	Dec. 28-Jan. 4.	1	
NEBRASKA	Omaha.	Jan. 4-11	12	
	South Omaha.	Dec. 1-Jan. 18	216	
NEW HAMPSHIRE	Nashua	Jan. 4-18.	2	
NEW JERSEY	Camden	Jan. 4-18.	27	2
	Jersey City.	Dec. 29-Jan. 11	15	
	Newark	Jan. 4-18.	68	12
	Passaic.	Jan. 4-11.	2	
	Plainfield.	Jan. 11-18.	4	
NEW YORK	Binghamton	Jan. 4-18	3	
	Mount Vernon	Jan. 11-18	2	
	New York.	Jan. 4-18.	38	8
OHIO:	Cincinnati.	Jan. 4-17.	7	
	Cleveland	Jan. 4-18.	9	
	Dayton	Jan. 11-18.	3	
	Hamilton	Jan. 11-18.	1	
	Toledo.	Jan. 4-18	4	
	Youngstown	Dec. 28-Jan. 18	7	4
PENNSYLVANIA	Allegheny	Jan. 4-11.	2	
	Altoona.	Dec. 28-Jan. 4.	4	
	Lebanon.	Jan. 4-11.	1	
	Norristown	Jan. 4-11	1	
	Philadelphia.	Jan. 4-11.	1	
	Pittsburg	Jan. 11-18	2	
RHODE ISLAND:	Providence.	Jan. 12-18.	1	
SOUTH CAROLINA	Greenville.	Jan. 4-11.	1	
TENNESSEE:	Memphis.	Jan. 4-18.	11	
UTAH:	Salt Lake City.	Jan. 11-18.	1	
VERMONT:	Burlington.	Jan. 4-11.	3	
WASHINGTON:	Tacoma.	Dec. 29-Jan. 12	3	
WISCONSIN:	Green Bay.	Jan. 4-18	1	
	Milwaukee.	Jan. 4-18.	2	

SMALLPOX—Foreign.

AFRICA	Mozambique	Dec. 1-15.	6
AUSTRIA	Prague	Dec. 24-Jan. 4	2
BRAZIL:	Rio de Janeiro.	Dec. 7-22.	71
CANADA	Hamilton	Jan. 4-11.	1
	Quebec	Jan. 4-18	11
	St. John	Dec. 28-Jan. 11	1
COLOMBIA:	Panama.	Dec. 25-Jan. 13	8
FRANCE	Lyons	Dec. 24-31	2
	Paris	Dec. 24-31	2
GREAT BRITAIN	Glasgow	Dec. 21-Jan. 4	2
	Liverpool	Dec. 21-Jan. 4	2
	London	Dec. 21-Jan. 11	18
	Newcastle-on-Tyne	Dec. 24-31	2
	Sheffield	Dec. 24-31	2
INDIA:	Calcutta	Dec. 14-15.	6
ITALY	Naples	Dec. 24-31	2
RUSSIA:	Moscow	Dec. 7-21	21
	Odessa	Dec. 14-28	2
	St. Petersburg	Dec. 14-28	7
SPAIN	Barcelona	Dec. 24-	7
	Bilbao	Dec. 24-31	2
	Cadiz	Dec. 24-31	2
	Malaga	Dec. 1-31.	2

YELLOW FEVER.

BRAZIL:	Santos	Dec. 8-22	2
MEXICO:	Vera Cruz.	Dec. 28-Jan. 4	1

CHOLERA.

INDIA:	Bombay	Dec. 7-14.	6
	Calcutta.	Dec. 14.	6
	Madras	Dec. 14.	2
JAVA:	Batavia	Nov. 1-Dec. 1	4

PLAGUE.

BRAZIL:	Rio de Janeiro	Dec. 28-Jan. 4	3
CHINA:	Hongkong	Dec. 14.	1
INDIA:	Bombay	Dec. 14-17.	10
	Calcutta	Dec. 4.	1
	Karachi.	Dec. 7-15.	9
TURKEY:	Smyrna.	Dec. 28	1

WIENER KLINISCHE WOCHENSCHRIFT.

November 7, 1901. (XIV Jahrgang No. 45.)

1. Diabetic Cataract. S. KLEIN.
2. Electricity and Chloroform Narcosis. S. JELLINEK.
3. a. The Operative Treatment of Ileus. b. A Modification of the Wölfler Goitre Dislocation Method. JOSEPH PREINDLSBERGER.
4. Acute Iodism Resembling Mumps. KARL FUERTH.

1.—Klein has found a peculiarly formed **cataract as first sign of an unsuspected diabetes** in a number of cases. This is a complete, posterior, polar and cortical cataract, such as is seen with retinitis pigmentosa. When no cause for the latter is found, the possibility that the condition is diabetic should lead to examination of the urine for sugar. It is sharply differentiated from the anterior cataract due to old age. Rarely diabetes may develop in a man who already has a senile cataract. The technical details of the condition are given. [M. O.]

2.—Jellinek's further experiments upon animals show that **the same high, interrupted current which kills rabbits ordinarily, will bring them back to life when in deep chloroform narcosis.** Not only are the animals awakened at once, but no injurious after-effects from the electricity were noticed. Yet no other known stimulus had any influence upon the nerve centres of anesthetized animals. His investigations are to be continued. [M. O.]

3.—a. Preindlsberger gives the case-histories of three more **operations performed** by him upon patients with **recurring ileocecal invagination, strangulated ileus, and volvulus** of the sigmoid flexure. While the two first patients died, the last recovered. The technique of the operation performed follows. b. He also reports a case of **goitre** in a woman of 23, with compression of the trachea. While Woelfler's dislocation of the lobe of the goitre left after extirpation of the tost was performed. Preindlsberger also **ligated the superior thyroid artery, following** which occurred a certain amount of shrinking of the tumor. He advises this modification of the Wölfler dislocation method. [M. O.]

4. Fürth reports a case of acute iodism in a woman of 32, who was taking potassium iodide in large doses. Sudden swelling of the salivary glands appeared with fever, malaise, headache, thickened and difficult speech, palpitation, etc. The condition resembled mumps. The potassium iodide was immediately stopped and all the symptoms disappeared in a week. An attempt later to take more potassium iodide resulted in a reproduction of the symptoms. Similar cases are quoted from the literature. [M. O.]

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See Advertising Page 8.

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A Neurological Symposium.—It has been the custom of this journal to offer occasionally to its readers an enlarged number devoted to some special field of practice. This custom, we believe, is a good one; and just as good wine needs no bush, so a good custom needs no apology. In accordance with this usage we present in this number a series of papers on psychiatry and neurology. It is in no spirit of self-laudation—but rather in one of compliment to the authors—that we refer to this array of writers and subjects. We are certain that no group of neurologists could be summoned together that would excel this group as representative of American neurology—and it would be hard to say where is the head of the table. We commend these papers to all practitioners who desire (and need) to keep up with that specialty which by general consent is the one that touches every department of practice most intimately.

The Röntgen Diagnosis of Encephalic Lesions.—When we consider that it is the second case on record in which a brain tumor has been localized in the living subject by means of the X-rays, and the first in which this localization was of service in correcting the clinical interpretation of the symptoms and in indicating the field for successful operation, it must be admitted that the article of Drs. Mills and Pfahler is one of the most important of the recent contributions to neurological literature. Naturally the subject is still too young for us to estimate its value. In all these matters, as in fact in most of the advances of modern medicine, the perfection of technique is the most important factor, and until this is attained we are unable to determine just what reliance can be placed upon any particular method. It is only necessary to read the conclusions of Dr. Pfahler, and particularly the report of his experiments, to discover that, important as they were, and demonstrative as the results seemed to be, the question of over or under exposure, position of the vacuum tube, strength of the rays, and various other factors combine to make the range of error very considerable; and it is possible that this range will ultimately be found to be so great that positive reliance cannot be placed upon X-ray diagnosis. This is the pessimistic view. Even under unfavorable circumstances Dr. Pfahler was able to recognize and demonstrate a tumor placed in the brain of a cadaver, and although it is of course rather easier to do this when the existence and position of the tumor are known, than when they are not, his plates are sufficient evidence of the accuracy of his work.

If, therefore, we reach the Scotch verdict "not proven," we can add parenthetically "probably guilty" of a valuable contribution to the advance of the localization of brain tumors.

Political Assassination.—In attempting to comment on Dr. Spitzka's paper, which we publish in this number, it is somewhat difficult to know just where to begin with most advantage. The author has given us such a compendium of historical information on the subject of political assassination, that we are almost lost in the mere wealth of illustration. As a trenchant criticism of the rampant doctrine of "degeneration" the paper may be regarded as a fine example of what the logicians call the *reductio ad absurdum*. Dr. Spitzka shows that by reason merely of its universal distribution, its growth out of so many and diverse motives, and in the midst of such a wide variety of historical settings, political assassination is rather too complex a problem to be solved by this convenient and superficial catchword, "degeneration." Regarded from this standpoint the paper is a most significant one, and is of even greater value for what it suggests than for what it actually teaches. It has the supreme merit of mapping out an extensive field of original investigation, even though it leaves to the future and perhaps to other pens the full exploration of it.

Compared with Dr. Spitzka's elaborate historical monograph (for it is such) the attempts of the writers he names to exploit a few political assassins as the exemplars of a new cult of "degenerates," seem poor indeed. We commend the paper to the careful perusal of those persons especially who may have felt their minds somewhat confused by the writings of the coddlers of political assassins. Dr. Spitzka's paper will at least give such readers a

glimpse of the extent of this wide field; a field which not a few recent writers seem not to have appreciated either in its far-reaching limits or in its tremendous significance. Certainly it is a field that cannot be covered by the flourishes of an amateurish criticism.

Myasthenia Gravis.—Among the interesting neurological papers which this number contains we call particular attention to that by Dr. Wharton Sinkler of this city on the subject of Myasthenia Gravis, or asthenic bulbar paralysis. This condition was first described by Wilkes in 1877, but attracted little notice until the appearance of Goldflam's paper in 1891. Dr. Sinkler furnishes us with a history of this disease but so lately recognized as an entity, and refers especially to the article of Campbell and Bramwell (1900) which gave the details of sixty cases, to the diagnosis of one of which Dr. Sinkler takes exception for reasons which he states. This writer has also searched the literature from 1900 and found thirteen additional cases reported. The essential features of the disease are weakness, beginning in the bulbar muscles. The most typical symptoms are the exhaustion that follows the use of these muscles, with the partial recovery which follows after rest. The muscles are in the best condition in the morning, the paralysis becoming more or less complete as the day goes on. All of the voluntary muscles may be involved after exercise and the affected parts frequently exhibit the so-called "myasthenia reaction" of Jolly. This consists in the exhaustion of the irritability of the muscles, similar to the effect of voluntary effort, and is produced by prolonged faradic stimulation. Sinkler calls attention to the tendency of the disease to fluctuate in the intensity of the symptoms from day to day, or week to week. Marked remissions may occur for a long period of time and then the symptoms reappear. The majority of these cases prove fatal after varying periods, but recovery takes place in a certain number. Neither subjective nor objective sensory disturbances are present, nor have any pathological lesions been revealed at autopsy to explain the symptoms. Both sexes are equally affected. We know of no satisfactory treatment for the condition. Dr. Sinkler believes that the best plan is to adopt measures similar to those employed in the treatment of pronounced cases of neurasthenia.

The Sensory Areas of the Brain-Cortex.—In spite of a great deal of agitation of this subject, we cannot but regard it as still one of the most undetermined in neurology. That it is also one of the most important is almost self-evident, for when we consider the vast physiological significance of the immense number of sensory impressions that are constantly reaching the brain-cortex, we can readily appreciate the fact that without definite knowledge of their localization we are still far from accurate knowledge of the physiology of the brain. The causes for this continued obscurity are not far to seek. In the first place, clinical observations on the human subject are the ones that must apparently be most relied on, and the opportunities for making exact observations of this kind are not numerous. Secondly, even when opportunities occur they are frequently not utilized, either because the observer does not know what to look for or how to look for it.

In view of these facts it is well for neurologists to be modest as yet in their claims for knowledge on this subject, and, instead of theorizing and dogmatizing, to encourage an educational movement along lines that promise to give some results. Satisfactory beginnings have been made in this field, and we have been impressed especially with a recent paper by Dr. Walton and Dr. Paul of Boston, which appeared in *Brain* (Autumn number, 1901).

These authors call attention to the fact that the data needed refer especially to the following subjects: (1) the temperature sense; (2) the pain sense; (3) the contact sense; (4) the localizing sense; (5) the posture sense; (6) the spacing sense; (7) the pressure sense; (8) the stereognostic sense, or ability to recognize objects (and a part of which, we think, is included in some of the others).

Observers should understand that there are several "modes of sense" (catalogued in the above list) and that they are evidently localized differently in the nervous system. In the spinal cord their course is better understood than are their objective points in the brain-cortex, and the subject will remain obscure and complex until more accurate observations are made in cases of strictly localized lesions.

When we come to examine the data already obtained we are impressed with the fact that some of them are contradictory and many of them are worthless. The former idea that the central or Rolandic region is exclusively motor, has been vigorously assailed, and with some effect; and yet cases do occur in which those particular modes of sensation which may be called elementary or primary, *i. e.*, contact, pain and temperature, are not involved in limited lesions of the Rolandic region. Drs. Walton and Paul, who evidently maintain an open mind on this whole question, have themselves reported several such cases, and other observers have done likewise.

When, however, we come to the stereognostic sense, we find that this is sometimes impaired in such Rolandic lesions as well as, and especially, in lesions of the parietal region. The difficulty seems

to be to find cases of limited lesions in which the contact, pain and temperature modes of sense are alone or especially impaired.

It is well to recall, what we have once pointed out in these columns, that the stereognostic sense is much more complex than the others, and involves elements of judgment and comparison which mark it as a more truly psychological function, and hence one which may be much more widely housed in the brain-cortex, than some of the simpler modes.

We have attempted here to do nothing more than to state some terms of this problem, for the problem itself is much too complex for satisfactory editorial comment.

The Surgeon and the Neurologist.—One familiar with current medical literature can but be struck with the frequent association of surgery and neurology. It is true that not many years ago the profession was continually agitated over the apparent prospects of brain surgery, when some bold operators were trephining for epilepsy and insanity on "general principles." These extremists followed in the wake, but not the example, of such pioneers and conservative operators as Horsley, Ferrier, Krause, Keen and others. Such reckless operating and such hopeful literature are always to be expected when some new field has been opened up, but now cerebral and spinal surgery seems to have made for itself a definite and dignified place and one which it behooves every practitioner to understand and appreciate. No one believes it right and proper to operate upon every case of epilepsy, but all should know that there are certain cases of epilepsy which if operated upon early enough will be benefited. These poor victims cannot be dealt with as a whole when it comes to their treatment, and physicians should be made to realize this fact. Surgeons and neurologists have pushed ahead together, and this cooperation is necessary in the future if the surgery of the nervous system is to continue its advance. It is a mistake for either surgeon or neurologist alone to decide the question of operative interference in case of brain or cord disease; the two should carefully study the cases together and then there will be a continuance of the steady and sure advancement of cerebral and spinal surgery. We present to-day in the paper by Dr. Mills and Dr. Pfahler on a brain tumor, and in the ones by Dr. Starr and Dr. Samuel Lloyd of New York on spinal surgery, examples of the advantages of cooperative work.

The Study of Psychic Phenomena.—The Annual Report of the Smithsonian Institution, which was distributed during the past year, contains a review of the Psychical Research of the century just passed, by Andrew Lang. The article is reprinted from the *New York Evening Post* of January 12, 1901, in which journal it formed one of a series of reviews of the results of nineteenth century investigations. The author refers to the work of the Society for Psychical Research in critically studying examples of reported supernormal phenomena. It seems to us that this society is the proper body to consider phenomena of this kind. Many medical men have never considered the question as to whether or not there is such an entity as a soul as distinct from the intellect, and many others would consider the time wasted that might be spent upon solving such a problem. Other members of the profession are much interested in this question, however, and some of these are active members of the society. The neurologist is constantly in touch with phenomena which, if not precisely supernormal, border upon that realm, as distinct from the *supernatural*. His hysterical patients dream dreams, see visions, and have experiences that are unaccounted for as yet by known physical methods. But whether these manifestations are due to purely "subconscious cerebration" from pathological stimulation is an open question, and one which is obscurely expressed. The experiences in alleged telepathy, and those concerning phantasms and presentiments in educated persons cannot, it seems to us, always be satisfactorily explained by the temporary lack of control of the subconscious by the conscious intellect. They are as likely to be explained as mere coincidences or the results of faulty observation. If, however, this explanation of loss of control by higher centres is the true solution of the cause of these phenomena, the boundary between sanity and insanity is indeed narrow. There is a tendency among some observers to place all criminal acts in the class of impulses dependent upon loss of the control referred to. One of the phases of the utility of the Society for Psychical Research lies in the analysis of these problems. It may be that a satisfactory conclusion will never be reached; but since the transmission of electric force has been accomplished without the aid of wires, some enthusiasts may see a possibility that nerve force may be transmitted in a similar manner. No one has yet succeeded in demonstrating the physical characteristics of the electric fluid; no one has yet demonstrated the characteristics of nerve force. Possibly neither of these forces will ever be described; but all work done toward the end of obtaining accurate knowledge of either will surely be of benefit and will tend to eliminate the humbuggery that now clings to hypnotism, clairvoyance, spiritualism and similar manifestations which undoubtedly contain a germ, if a distorted one, of truth. The chief danger in such an organization as the Society for Psychical Research lies in the opportunities the society gives for visionary and in-

expert observers to advertise themselves under the guise of science. Some of its results have been nebulous in the extreme.

The Psychoses and the Genital Sense in Women.—From the days of antiquity it has been recognized that a distinct though occult relationship exists between the genital sense and certain of the mental processes. Not only has this relationship been observed, but it has also been noted that it is more marked in certain neurotic individuals, and that in these individuals, as well as in others, it is more pronounced at certain periods of the annual cycle or of the individual's existence. A most cursory examination, moreover, of the psychology and religions of the ancient and modern peoples will reveal the same curious mingling of the sensual with the esthetic and psychical side of nature. The Hebraic doctrine and the mythologies of the Persians, Greeks, and Romans are strongly based on the sensual side of life, while in some of the modern religions the same curious taint, if we may so call it, may be clearly traced. It is a well-recognized fact that women are essentially more religious than their consorts, and it is to be expected, therefore, by analogy, that in women we should find this intermingling of the sexual life with the higher processes of the mental and moral being more marked than in man. The well-recognized developmental or climacteric forms of insanity, originating either at puberty, during the puerperium, or after the menopause, and partaking of the nature of melancholy, mania, or dementia, sustain the view of the close association of these physical and mental functions, and the exaggeration of the hysterical manifestations of the individual at these critical periods of the sexual life also tend in the same direction. It is from this well-defined association that has arisen the belief, which is both erroneous and harmful, that all insane women should be castrated in order to remove the baneful influence of the powerful ovarian function. The wave of opinion as regards the surgical treatment of feminine insanity has violently fluctuated from one extreme to another, but it has now practically settled upon the happy medium that pelvic surgical procedures in the insane should have the same limitations as in the sane; that is, that they should be restricted to those insane suffering from gross lesions of the pelvic viscera. It has been experimentally proven that castration, pure and simple, with removal of organs to all appearance sound and healthily functionating, has no beneficial influence whatever upon the course of the insanities or other mental or moral stigmata. Another very interesting and practical side of this question was propounded by the distinguished gynecologist, Macnaughton-Jones, before the British Gynecological Society two years ago, when he called attention to the correlation between the sexual function and the commission of certain crimes. He showed that irregularities of the menstrual function exerted a profound influence on the mind of woman, and not infrequently by dominating her will-power resulted in distorted mental visions and erratic moral acts, vulgarly called crimes, which the woman was helpless to evade or subdue. His conclusions on this subject are valuable and worthy or reproduction here He summed up the matter as follows: 1. That the correlation of insanity and disordered sexual functions arising out of affections of the generative organs is a factor to be taken into serious consideration in the treatment of the mentally afflicted. 2. That when there is ground for the suspicion that some physical condition of the uterus or adnexa exists, which might produce or aggravate the mental affection, a careful examination, under an anesthetic, if necessary, should be made. 3. That in the investigation of criminal acts committed by women, either during the menopause or while the menstrual function is either active or suppressed, due weight should be given to the influence exerted on the mind of the women by its irregularity or abeyance. 4. That the special dangers of the climacteric period should be remembered, and the symptoms indicative of threatening climacteric mania recollected. 5. That in operations on the female generative organs there is a greater predisposition to mental disturbance than after other operative procedures. 6. That women who have been previously insane are predisposed to a relapse by the development of disease in their sexual organs, and especially to such recurrence of insanity after operations on these organs.

The Nations in Their Cups.—Mr. J. H. Schooling, in the *Fortnightly Review*, contributes to the study of the liquor problem by presenting some figures that are calculated to shock the readers' nerves. Mr. Schooling makes a comparison of the drinking records of the English, American, French and German peoples. We regret to see that John Bull makes a particularly bad showing, but we are especially pleased to note that the American people are proved by the figures to be the most temperate of all. In the last five years of the nineteenth century the annual consumption of drink for each individual in the several populations was as follows: The United Kingdom, 33.1 gallons; France, 32.3; Germany, 21.0; the United States, 14.2.

These figures are truly surprising, and rather flattering to our national sense of self-righteousness. They show that we are not so drunken a people as some of our contemporaries; and not so often drunk as our temperance lecturers would have us believe. Few persons will be prepared to hear that man for

man (and woman for woman) we drink less than one-half of England's measure. Moreover, when an American takes one drink a Frenchman takes two and a fraction, and when the former takes an ordinary glass of beer a German takes a schooner. These facts are proved by the figures—and figures in such cases do not dissemble the size of the drinks.

We are sorry to note, however, that according to Mr. Schooling's statistics the nations are gaining upon England, and that the United States shows an unfortunate tendency to catch up with her—in this as in other things.

But such figures as those prepared by Mr. Schooling, in order to be accurate, should take count of the *kind* of liquor consumed, and of its strength in alcohol. By such a test England is not so much of an alcoholic power as either France or Germany. The actual amount of proof spirit per head represented in this deluge of drink was as follows: France, two gallons; Germany, 1.9; the United States and the United Kingdom, 1.1 each. Thus it is seen that Americans are not far in the rear, but are still behind the wine-drinking Frenchmen and the beer-drinking Germans.

A New Treatment for Epilepsy.—It is generally in those diseases whose etiology and pathology are obscure that our therapeutic resources become limited. A notable example is epilepsy, against which quite a concentrated effort at cure has been made during the past year. Indeed, there have been so many contributions that only a few of the most important can be mentioned here in conjunction with the cerebrinum or opocerebrinum therapy of Lion, of Samara, Russia. One of the recently introduced methods still on trial is that of Richet, Tolouse and Balint, who recommend the incorporation of bromides with the diet of the patient. The cervical sympathetic has been resected nine times during the past year, as reported by Braun (*Archiv für klin. Chirurgie*, 1901, Vol. 64, No. 1) and in eight of the cases the operation was bilateral. He removed in each case the upper and middle ganglia, as well as the nerve as high as the inferior thyroid artery. Of course this operative treatment cannot as yet receive a definite position in the therapy of epilepsy, in the absence of further and more extensive observation. There is no record of absolute cure as a result of the resection, but only some abatement in the severity of the attacks. It must not be lost sight of, however, that the psychical element in these cases may have been beneficially influenced as a result of mental impression. Other dietetic measures, nitroglycerin, the combination of opium and bromides, various new bromine preparations, and several newly instituted home-treatments for epilepsy, have as yet proven themselves to be quite remote from definite therapeutic value. The latest observation, and one that is claimed to be established upon a scientific basis, is that of Lion, and represents the result of a four months' clinical study at the insane asylum in Samara, Russia. The substance employed, cerebrinum or opocerebrinum, is prepared presumably from brain tissues, as described by Prof. Poehl in *Vratch*, 1897. Its employment is as yet simply based upon theoretical grounds, like those advanced by Ehrlich, who believes that certain cells have definite toxic affinities, and also that normal nerve tissue contains chemical combinations which have distinct antitoxic properties. The author without qualification claims excellent results in twenty cases treated with cerebrinum, especially as far as its influence upon the psychical condition of the patient was concerned. He admits however that the efficacy of the drug was enhanced by the addition of small quantities of bromides, incorporated with the food of the patient. Until, therefore, the treatment has been more extensively tried without the addition of bromine salts, it may be well for us also to accept it, at least for the present, *cum grano salis*.

An Omnipotent Lunacy Commission.—The tendency in this country to the centralization of power is evident everywhere. It is not without its good points—and it is also not without its bad ones. Its bad points are nowhere more glaringly shown than in the proposed scheme in New York State to place all the insane hospitals under a central board or commission with headquarters in Albany. The true inwardness of this move is unknown to us—but we do not hesitate to criticise it adversely, for we believe it is fraught with mischief. Our insane hospitals should each have their own board of managers. Such a board insures efficiency, secures individuality, places responsibility, and promotes the welfare of the patients and the interests of the community. We trust the day is far distant when we shall have a "ripper" bill in our state legislature for our insane asylums in Pennsylvania, and when the destinies of our insane population will be committed to the care of a highly centralized body of statesmen sitting in Harrisburg.

Danger from Fire and Danger from Firemen.—The most unfortunate accident last week in this city, by which Dr. R. J. Harris, a young physician, was run down in his carriage by a fire-truck and sustained a fracture of the skull, calls forcibly to mind what is sometimes an abuse rather than a benefit. We refer to the fast and furious driving of our fire department. Surely human life is of quite as much value as human dwellings, and it is hardly desirable to sacrifice the one in order to save the

others. It is not an uncommon thing in this and other large cities to see ponderous fire apparatus driven through the streets at breakneck speed. The wonder is not that somebody gets hurt but that many people are not killed. We lately saw a horse attached to a fire-engineer's wagon, driven down Broad Street at a dead run just at an hour in the evening when many persons and vehicles were abroad. People lined up at the curb as at a race-track.

The Philadelphia firemen maintain a high reputation for faithfulness and bravery. Their life is often an arduous and dangerous one. Far be it from us to cast unmerited reproach upon them. But we protest that their pace is sometimes too fast, and that even in order to put out fires it is not necessary to kill people on the streets.

Current Comment.

DIVISION OF THE FEE.

The giving and taking of commissions has been repeatedly decried and the concensus of opinion among honorable men is that, unlike charity which "blesses him who gives and him who takes," it debauches both. That the practice is growing there can be no doubt The peddling of cases from surgeon to surgeon by "drummer physicians" who make a trade of their profession, caring less for the ability of the operator than for the percentage he gives, is ordinarily dwelt upon at length. It is clear, however, that the consultant surgeon or specialist who gives a commission is equally culpable. He defrauds the patient, places himself in the power of the case-vendor, and does himself a great injustice. He defrauds the patient by charging him for something he does not give. The surgeon is called to the case in question because of his supposed superior knowledge and operative ability. For the exercise of this knowledge and ability he has a right to command a fair price, but anything added to this, for the "drummer," is nothing more nor less than obtaining money under false pretenses. He puts himself in the power of the case-vendor the moment he bribes this individual to send him a case. Bribe-givers and bribe-takers are equally guilty in criminal courts, and they are equally despicable according to the code of ethics which governs the actions of all honest practitioners. The bribe-taker may at any time, either by intention or indiscretion, bring justly merited disgrace upon the unprincipled operator. No self-respecting surgeon can afford to hazard his reputation in the hands of such a bartering auctioneer. The percentage demanded by the case-vendor can be gradually increased, and the operator, having taken the first wrong step, must compete with other men as dishonest as himself. The injustice done the operator is a justly merited punishment, since he allows a third party to receive pay for the exercise of his own ability. The essential wrong, however, is that the patient is defrauded. As we stated some time ago, the question simply resolves itself into this: Does the patient know of the transaction? If so, then it is legitimate and ethical: if not, it is collusion.

—*Journal of the American Medical Association.*

THE BOGEY STATE.

It does not speak well for the tender mercies of the State that the people are afraid to trust the care of their helpless ones to its political visitations. Despite the would-be pacification in the altered terms of the Brackett-Rogers Bill, the fact remains that it abolishes the local Boards of Managers of the State Hospitals for the Insane: and the State Commission in Lunacy threatens like a Bogey to swallow the control and leave no trace behind it of that excellent system that has been the pride of the State.

The scare is real. It has taken one hundred people to Albany to protest against the Bill. It has called forth decided opposition from the most influential clergymen in the State. It has brought out a storm of opposition in the daily press; and it has agitated every one who knows anything about the control of an institution under the board of manager system versus the control by a commissioner. *The Medical News.*

Reviews.

Alcoholism, A Study in Heredity. By G. Archdall Reid, M. B., C. M., F. R. S. E., author of "The Present Evolution of Man," A Theory of Acquired Immunity," etc. New York, William Wood & Company. MDCCCCII.

This work is a philosophical treatise on Alcoholism—a study in heredity. The greater part is taken up with an exposition of the theory of evolution and the author endeavors to show the superiority of the theory of Darwin to the complicated theory of Lamarck, especially as far as both deal with the doctrine of inborn and acquired characters. Acquired characters are not transmissible, inborn characters are. Applying this fact to the problems which alcoholism presents for solution he states that a drunkard drinks because he is so constituted that experience of alcohol awakens in him a craving for alcohol. Whether he drinks or not he tends to transmit this inborn constitution of mind to his child. He places alcoholism among the zymotic diseases in its effects as a powerful cause of human elimination. The doctrine of the "survival of the fittest" teaches us that ultimately Nature will weed out the unfit, whether removed so by alcohol or by whatever cause. Reid points out that every race is resistant to every deadly disease strictly in proportion to its past experience of it, and he cites how much more resistant are the West African negroes to malaria than Englishmen, who, on the other hand, are as highly resistant to consumption when compared to the Australian blacks. The races which have used alcohol for the longest periods are far less likely to present a high death-rate, due to the use of alcohol; while a race which has been accustomed to the habit but a short time shows a terrific death-rate from this cause, either directly or indirectly. In this connection may be mentioned the comparative freedom from drunkenness of the Southern races of Europe, who have long known its use, to the Northern races, who have been acquainted with alcohol for a much shorter time. The further comparison of the Northern races to the American Indians bears out this point still further. The terrific cost to the races who have passed through this period of elimination is awful to contemplate, and it is but fitting when we witness the ravages of alcohol on every hand, to consider what means lie within our power of remedying the evil. In this connection Dr. Reid considers "every scheme of temperance reform hitherto enunciated, which depends upon the diminution or extinction of the supply of alcohol—Total Prohibition, Local Option, the Gothenburg System, etc., is, in effect, a scheme for the promotion of drunkenness," and he quotes numerous authorities to bear him out. He goes on to say that men drink alcoholic solutions for three distinct reasons to satisfy thirst, to gratify taste; and to produce a direct effect on the brain, only the last is a cause of drunkenness. Men differ in their predisposition to inebriety and as a rule they drink in proportion to their individual predispositions. Satisfaction is a subjective thing and not at present [illegible] The author believes that civilization is inimical to the temperance reformers method that it is a form of barbarism and can only aggravate the evil. He believes that temperance reform is impossible from the biological standpoint and his facts in our opinion bear him out. The history of man shows how in the process of elimination Nature herself solves such problems and experience teaches us how great is the cost to man. Dr. Reid's argu-

ment forces him to the conclusion that we must eliminate drunkards by forbiding the procreation of children by them. He would impose certain legal penalties upon all drunkards convicted of this offence. He admits the scheme is Utopian, undoubtedly Malthusian and perhaps impracticable, but he points out that the alternative is open even to graver criticism. If by any means we save the inebriates of this generation but permit them to have offspring, future generations must deal with an increased number of inebriates. There is every reason why we should use the means at our command to assist the individual drunkard in every case to rehabilitate himself, but Dr. Reid contends we are doing an unworthy deed to permit him to have children and thus transmit the problem made graver by additional difficulties for future generations to solve. This book is crisp, decidedly novel and its sincerity is genuine. We do not for an instant believe that the scheme proposed by Dr. Reid is by the widest stretch of the imagination of far-reaching *practical* value, but this does not in any sense destroy the validity of his argument from the standpoint of a cogent literary essay. All literature need not have a utilitarian side, but still may possess a sufficient claim for being and of admitted merit. We can commend the book heartily to our readers. [T. L. C.]

On the Cure of the Morphia Habit, without Suffering (Physiological Demorphinisation). With a Note on The Physiological Method of Relieving the Craving for Drink. By Oscar Jennings, M. D. (Paris), M. R. C. S. (Eng.), Fellow of the Royal Medico-Chirurgical Society. Second edition, Revised and enlarged. New York, William Wood & Company. MDCCCCI.

This second edition of Dr. Oscar Jennings' work is a further exposition of the treatment laid down by him in his first edition in 1890. He has devoted himself to the treatment of morphinism and other drug-habits for a number of years and declares that he was the first to introduce the rational treatment of the morphin craving founded upon therapeutic indications. His method has been named by Pichon, "physiological demorphinisation" and he now adopts the term. Jennings has found that there is a physical reason for the craving which morphin habitués feel for the drug, that there is a perceptible heart weakness, when this stimulant is not forthcoming, which is not easily recognized except in sphygmographic tracings in which the change from the normal pulse wave is most striking. In a large number of observations Jennings found this weakness of the heart revealed constantly by patients who were deprived of the morpnia, and he also observed that the pulse wave quickly returned to normal after the administration of the drug. This first suggested to him the method of combating the habit by the substitution of such cardiac tonics as would restore the heart to its proper tone, this was the inception of Jennings' method which we shall describe in brief and which bears evidence of scientific soundness. In the first place we will mention that Jennings advocates a gradual and not a sudden withdrawal of the morphia. His experience has convinced him of the fact that a certain amount of morphia is necessary to the habitués of the drug and that this is an important point to be considered in the treatment. He has found that two grains would seem to be the "vital requirement." When the reduction is carried to this point he begins at the same time to substitute rectal injections giving twice as much by the rectum as the patient fails to receive by the skin. By this method of gradual suppression the patient will be taking four grains by the rectum when the subdermic injections are suppressed. The great point which is thus accomplished is the renunciation of the syringe—a veritable mania of itself with such patients. Success in the treatment in morphinism depends upon the willingness of the patient to subject himself absolutely to the physician's direction. If the sufferer is addicted to any other drug than morphia, this must be suppressed, not a difficult matter according to Jennings, if no attempt is for the time made to reduce the morphia. When the time comes to begin the treatment of the latter habit, there must be a gradual but voluntary suppression. Upon this principle will depend the amount of suffering which a patient undergoes; the more gradual the reduction the less the suffering. Absolute truthfulness and confidence on the part of the patient must be secured in order to bring about a successful termination. Jennings depends upon sparteine or digitalis to restore tone to the circulation, which is weakened by the withdrawal of the morphia. He formerly used trinitrine, partly for its effect as a heart tonic and partly as a means of reproducing in a milder degree the feeling of euphoria. He sounds a note of warning against the use of the synthetic derivatives of morphia and particularly heroin as a substitute for morphia. He combats the insomnia by means of mild applications of electricity to the head and he also is a strong advocate of the Turkish bath. He has found bromide of sodium a valuable agent and lays especial stress upon the great advantages to be derived from the use of bicarbonate of soda in the persistent hyperacidity which is so constantly met with in treating morphinism. [T. L. C.]

A Guide to the Clinical Examination of the Blood for Diagnostic Purposes, by Richard Cabot, M. D. With colored Plates and Engravings. Fourth Revised Edition. New York, William Wood and Company, 1901.

The great demand for treatises upon hematology is manifest. Three previous editions of Cabot's Clinical Examination of the Blood have been rapidly exhausted since December, 1896. Up to this time no other work upon this subject meets the demands of the physician so well as the one before us. The recent important original researches in the field of hematology coupled with the valuable and abundant statistics from various sources have made it necessary for Dr. Cabot to almost entirely rewrite the text. Many of his conclusions are based upon the twelve-thousand observations contained in this work, of which three thousand represent the product of his own labor. The wealth of the statistical data contained in this volume may be illustrated by referring to the chapter on typhoid fever. Two-thousand and eight-hundred examinations have been made in 1,000 cases of enteric fever.

This work of 494 pages discusses the methods for the clinical examination of the blood, the physiology of the blood, the general pathology of the blood, and the greater part is devoted to the special pathology of the blood. It is fully illustrated with colored plates and engravings. The text throughout is clear and concise. References are indicated at the bottom of each page. Dr. Cabot clearly and definitely states his personal views in regard to many topics, the value of various instruments and methods, and his reasons for doing so, which comprises a feature of the book to be highly commended, especially in the view of the author's extensive experience. He believes that Tallqvist's hemoglobinometer is to be preferred for clinical purposes to other instruments for four reasons. First, because it is seldom practically important to obtain greater accuracy than is possible with this instrument; secondly, because an observation can be speedily made in about twenty-five seconds with this instrument; third, because the instrument needs no cleaning or preparation and is compact, and finally, because it is so cheap. This instrument undoubtedly possesses great advantages over all other methods for the busy practicing physician, but, for hospital work, we believe that this method is distinctly less valuable than some of the other methods because of their greater accuracy. The discussion of blood staining occupies less than two pages. The author thinks that a well made Ehrlich's triple stain followed by methylene blue for a second or two is to be preferred over other methods for clinical purposes. Dr. Cabot is convinced that for diagnostic purposes the triple stain is the only one needed. Undoubtedly Ehrlich's stain is the most valuable method at our command and as nearly all differential counts are based upon it, the reason for its employment whenever possible is obvious. One objection which should not be overlooked is the tedious fixation process by means of heat always necessary before applying this stain. There are other staining methods, however, which may be used and it often becomes necessary to employ them when the element of time is a factor. Fairly good results can be obtained by a well-prepared

Jenner's stain in five minutes (which includes fixation of the specimen). The chapter on blood parasites contains a number of valuable illustrations. The index in some respects is not as full as might be desired. The general make-up of the book is excellent, and it seems almost needless prophecy that the demand for this work will be greater than ever before. [F. J. K.]

Gynecological Pathology, A Manual of Technique and Diagnosis in Gynecological Practice for Students and Physicians. By Carl Abel, M. D., Privat-Docent, Berlin. Translated and edited by Samuel Wyllis Bandler, M. D. 100 illustrations. 237 pages. William Wood & Company, New York. 1901.

This volume fills a place that has hitherto been occupied by no other book; hence it is a work of the greatest value to the gynecologist and public surgeon. Not only is the microscopical pathology of the uterine mucosa given in detail, but the normal histological characteristics are also fully presented, for, as the author says, a knowledge of these is necessary before one can appreciate pathological changes. The drawings, 100 in number, are in large part taken from the true microscopical pictures of specimens in the possession of the translator, and schematic drawings have been avoided as not suitable for practical instruction. Dr. Bandler, the translator, has added an admirable chapter on embryology and on the origin of growths from embryonal cells and organs, and has most ably and clearly translated Dr. Able's scientific chapters. The book is one that can be most heartily endorsed and commended to the pelvic surgeon. [W. A. N. D.]

Epileptic Headache and Hemiathetosis.—A recent clinic upon nervous diseases by Dr. L. Mesnard is reported in the *Annales de la Polyclinique de Bordeaux* for July, 1901. Mesnard presented a case of epileptic headache in a woman of 38, which had existed 13 years. The attacks of headache were periodic, appearing every 8 or 10 days, lasting for at least 48 hours. During the headache, periods of unconsciousness occurred, preceded by an aura. Insomnia persisted. Upon 60 grains of potassium bromide daily, she improved early. During the seven months that treatment had lasted, she has had no symptoms at all. The second case was one of hemiathetosis, resembling paralysis agitans. The patient, a man of 64, had a partial hemiplegia, and attacks of vertigo. But his face was unaffected. The tremor was noticed only in the left arm. Mesnard believes the cause of this condition to be right-sided cerebral atheroma. The treatment has consisted of potassium iodide and bromide, sulphur baths, laxatives, and milk diet. He seems to have improved somewhat during the five months of treatment. [M. O.]

An Error of Sex.—Dr. Theodore Weiss reports an interesting case in the *Revue Medicale de l'Est*, (August 1, 1901. No. 15.) A girl of 19 was sent to him for his opinion. Upon examination he found that the supposed girl was a man, and that she had right-sided orchitis. The other testicle was small, and between them was a pseudo-vulva. The penis was rudimentary, yet corpora cavernosa were palpable. While there was no vaginal opening, the urethra was seen to open below the tiny penile prominence, a condition of hypospadias. Rectal examination revealed the prostate gland and seminal vesicles. The pseudo-vulvar fissure was filled with a secretion which resembled that seen in gonorrhea. The orchitis spread to the other testicle, showing a distinct epididymitis. Though brought up as a girl, he was decidely masculine in appearance, in spite of his long hair. He had had intercourse with a woman, followed by this pseudo-vulvitis and double orchitis. He begged Weiss to castrate him, but Weiss did not consider the operation authorized. A splendid photograph of the condition accompanies the article. [M. O.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Nathan Lewis Hatfield Prize for Original Research in Medicine.—The College of Physicians of Philadelphia announces that the sum of five hundred dollars will be awarded to the author of the best essay on "The Relation between Chronic Suppurative Processes and Forms of Anemia." Essays must be submitted on or before March 1, 1903. Each essay must be typewritten, designated by a motto or device, and accompanied by a sealed envelope bearing the same motto or device and containing the name and address of the author. No envelope will be opened except that which accompanies the successful essay. The Committee will return the unsuccessful essays if reclaimed by their respective writers or their agents within one year. The Committee reserve the right not to make the award if no essay submitted is considered worthy of the prize. The treatment of the subject must, in accordance with the conditions of the trust, embody original observations or researches or original deductions. The competition shall be open to members of the medical profession and men of science in the United States. The original of the successful essay shall become the property of the College of Physicians. The trustees shall have full control of the publication of the memorial essay. It shall be published in the Transactions of the College, and also when expedient, as a separate issue. For particulars, address J. C. Wilson, M. D., Chairman, College of Physicians, Philadelphia, Pa.

Pennsylvania Hospital.—The portrait of the late Dr. D. Hayes Agnew, painted by Miss Rebecca Van Trump, of Philadelphia, has been purchased by the Pennsylvania Hospital.

Harrisburg Academy of Medicine.—At its regular meeting, January 31, the following officers were elected for the ensuing year: President, Dr. Hugh Hamilton; first vice-president, Dr. J. Walter Park; second vice-president, Dr. D. S. Funk; secretary, Dr. Thos. S. Blair; treasurer, Dr. E. H. James; trustee, Dr. W. H. Seibert; committee on admission, Dr. D. J. Hetrick; library committee, Dr. C. H. Saul, social and scientific committee, Dr. C. C. Cocklin.

Society Meetings Next Week.—The following societies will hold meetings next week, at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening, February 10, Section on Medicine; Tuesday evening, February 11, Pediatric Society; Wednesday evening, February 12, County Medical Society; and Thursday evening, February 13, Pathological Society.

Typhoid Fever in Philadelphia.—There is at present an epidemic of typhoid fever in Philadelphia, 291 cases with 21 deaths having been reported during the week ending February 1. But six wards have escaped the disease. The majority of the cases have occurred in West Philadelphia. There has been a remarkable increase in the number of typhoid fever cases reported since the first of the year. During the first week there were 70 cases and 6 deaths. For the week ending January 11, 41 cases and 8 deaths; for the week ending January 18, 81 cases and 5 deaths; for the week ending January 25, 117 cases and 9 deaths; for the last week 291 cases and 21 deaths. It is now believed that the disease may reach the proportions of the epidemic of the spring of 1898.

German Hospital.—At a meeting of the Board of Trustees of the German Hospital, January 28, all of the Board were re-elected. Dr. John F. Sinclair was elected dispensary physician and Dr. Alexander A. Uhle, dispensary surgeon. Dr. Jesse H. Allen was elected on the gynecological staff and Dr. E. K. Moore in the pathological and bacteriological department. Four resident physicians were also appointed.

Smallpox in Philadelphia.—There has been a decrease in the number of smallpox cases in the week ending February 1, only 73 cases with 13 deaths being reported. During the week 56 persons were discharged cured. Since January 1, 1902, there have been reported 434 cases of smallpox, 79 deaths and 305 discharges. Since January 1, 1901, there have been 1593 cases, 235 deaths, and 1458 patients were discharged as cured. There are now in Philadelphia 447 sufferers from smallpox.

Bequests to Charity.—By the will of the late J. A. Kay provision was made for reversionary bequests of $5000 each,

to the Pennsylvania, Germantown, University, Jefferson, Orthopedic and Polyclinic Hospitals, upon the death of the testator's sister. As she has already died, these bequests, to endow a bed in each hospital in memory of a sister, Mary Kay, become operative at once. The codicil contained additional bequests of $1000 each to St. Agnes's, St. Joseph's, the Jewish, the Hahnemann, the Presbyterian, the German, the Children's, the Howard, the Medico-Chirurgical and the Gynecean Hospitals, and the Old Man's Home, the Pennsylvania Institution for the Instruction of the Blind, the Philadelphia Dispensary, the Society to Protect Children from Cruelty, the Society for the Prevention of Cruelty to Animals and the Church Home at Angora. $1000 was left to the Germantown Hospital by the late Mrs. K. P. Bockius.

Mount Pocono Hospital.—The Pocono Protective Health Association intends to erect, equip, and maintain a small hospital building for emergency cases in the immediate vicinity for residents or summer guests. It is not intended that treatment shall be free. It is hoped that work can be commenced on the hospital in the spring.

Smallpox in Pennsylvania.—Vigilant quarantine has been established in Wilkesbarre to prevent the introduction of smallpox into the city on three sides. Quarantine has also been established in Hazleton, against the inhabitants of Park View, four miles away. The railroads will not carry passengers from Park View to Hazleton. The smallpox hospital at Washington was burned January 27. While no one was injured from the fire, one patient has died since, as a result of exposure and excitement. It is claimed that the building was fired by convalescent patients, who were tired of confinement. The smallpox is raging with renewed vigor in the town, and all the surrounding towns have declared a quarantine against it.

The Death of Dr. Burnett.—After an illness of ten days' duration, Dr. Charles H. Burnett, one of the best of that small number of physicians who have devoted themselves wholly to the diseases of the ear, a specialist of more than national reputation, died at his home in Bryn Mawr, early Thursday morning, January 30, of pneumonia. Dr. Burnett, born in Philadelphia May 28, 1842, attended Saunder's Academy in West Philadelphia before going to Yale, where he received the degrees of A. B. in 1864 and A. M. in 1867. In 1867 he also took his M. D. degree at the Medical Department of the University of Pennsylvania. After spending one year as resident physician in the Episcopal Hospital, Dr. Burnett went to Berlin, where he worked upon optics, ophthalmology, and otology under the guidance of von Helmholtz. Upon his return to Philadelphia in the early seventies, Dr. Burnett started in the practice of his specialty, otology. Dr. Burnett filled a number of important posts. In 1876 he joined the Philadelphia County Medical Society, and in 1883 he became a member of the Medical Society of Pennsylvania. In 1872 he was made aurist to the Presbyterian Hospital; in 1878 consulting aurist of the Pennsylvania Institute for the Deaf and Dumb; and in 1883, professor of otology at the Philadelphia Policlinic. Later he became consulting aurist to the Bryn Mawr Hospital. He was a member of the Pathological Society of Philadelphia; fellow of the College of Physicians of Philadelphia, of the Otological Section of which he was vice-president from 1878 to 1882, and president from 1883 to 1885; member of the American Otological Association; member of the University Club, etc. Soon after his return to America, Dr. Burnett gained a wide reputation as an otologist. Besides being the author of a number of smaller articles upon diseases of the ear, he has written a large text-book upon otology and has edited an encyclopedia of the diseases of the ear, nose and throat. Not only was he skilled in the diagnosis of intricate conditions affecting the ear, but he also excelled in the performance of difficult operations upon the minute components of the auditory organs. In their loss, Mrs. Burnett and her four children have the deep sympathy, not only of his personal friends, but of the many otologists in this country, the acknowledged head of whom was the late Dr. Charles H. Burnett.

The Smallpox Epidemic Not Alarming.—The report of the commission appointed January 20 by Director of Public Safety English, to determine whether everything possible was being done to stamp out the epidemic of smallpox in Philadelphia, was issued February 3. The commission consisted of Dr. John V. Shoemaker, president of the Board of Charities and Corrections, Dr. James Tyson, Dr. H. A. Hare, Dr. F. P. Henry, and Dr. J. M. Anders. They say that the seriousness of the epidemic is not such as need alarm the inhabitants of the city or vicinity of Philadelphia. They especially emphasize the necessity of acquiring immunity through successful vaccination. They quote the statement of Dr. Welch that during the present epidemic no one has been admitted to the Municipal Hospital with smallpox who had been successfully vaccinated recently. They conclude their report with a statement of the methods used in Philadelphia to prevent the spread of smallpox, house to house vaccination, isolation and quarantine, disinfection, and the excellent service at the Municipal Hospital.

The Philadelphia County Medical Society has announced that Dr. William M. Welch, of Philadelphia, formerly treasurer of the County Medical Society, and twice its president, the well-known expert in contagious diseases, is its candidate for president of the Medical Society of the State of Pennsylvania.

NEW YORK AND NEW JERSEY.

Woman's Hospital, New York.—The new site obtained by the Woman's Hospital, forced to leave its present home at Fiftieth street and Lexington avenue on account of the New York Central Railway, which has recently bought its building for $450,000, is located on Amsterdam avenue, from One Hundred and Ninth street to One Hundred and Tenth street. This property cost much less than the above amount.

Smallpox in Camden, N. J.—The epidemic of smallpox in Camden is gradually decreasing. But few new cases are reported, while less than 30 patients now remain in the Emergency Smallpox Hospital.

Brooklyn Medical Society.—At the annual meeting held in January, the following officers were elected for the ensuing year: President, Dr. William H. Haynes; vice-president, Dr. Malcolm E. Parrott; recording secretary, Dr. Hugh E. Rogers; corresponding secretary, Dr. Alfred Bell; treasurer, Dr. Albert H. Brundage; librarian, Dr. Lewis E. Meeker.

Marine Hospital at Buffalo.—The House Committee on Commerce ordered a favorable report, January 28, on the bill to establish a Marine Hospital at Buffalo, N. Y., recommending the appropriation of $125,000 for this purpose.

Isolated Pavilion for Consumptives, Blackwell's Island.—On the last day of January, the tuberculosis pavilion at the Metropolitan Hospital on Blackwell's Island was opened for the reception of patients. It contains 120 beds which will be filled as soon as the weather moderates so that the transfer from other hospitals can be made without danger to the patients. Five buildings, recently occupied by insane patients, have been converted to the use of the consumptives. It is expected that an extra appropriation will be obtained from the Charities Department to pay for the refitting of the four other buildings.

A Suit for Malpractice.—In the New York Supreme Court, before Justice McLean, an action was recently brought by Selina Schneider against Dr. Thomas H. Manley for alleged malpractice in the unnecessary removal of a joint of her thumb. The jury, after a two days' trial, rendered a unanimous verdict for the defendant, after a few moments' deliberation.

Smallpox From London.—January 27 the English steamship *Winchester* was again quarantined on her arrival in New York, on account of a case of smallpox on board. This makes the third case of smallpox discovered upon this ship, the first case having appeared after her arrival, December 29, 1901. The second case appeared during her return trip to London, and this third case was found on her way back to New York.

NEW ENGLAND.

Harvard University.—President Eliot, of Harvard, announced February 1 that John D. Rockefeller had given the university $1,000,000, upon the condition that other friends of the institution raise half that amount. The money is to be devoted to the medical school for the construction of new buildings and the establishment of a fund to pay the running expenses. Following J. Pierpont Morgan's gift of a million last Commencement for the construction of new buildings for the medical school, the University faculty is delighted. Mr Rockefeller's gift will probably be used to construct two new laboratories. President Eliot does not

believe there will be any difficulty in complying with Mr. Rockefeller's conditions.

Smallpox in Massachusetts.—But few new cases of smallpox have been reported in Boston, although the Warren Line steamer *Sachem*, which arrived January 26, brought some cases of smallpox and was quarantined. New cases are reported in New Bedford, Everett, Newburyport, Lawrence, and Woonsocket, R. I. 47 cases are now under treatment in the latter town, with but one death so far.

Sanatorium for Medical Missionaries.—A movement has been inaugurated for a sanatorium which will include educational features, to be known as the School for International Medical Missionaries. The object is to educate medical missionaries, and the children of missionaries who are in foreign fields, and to provide a home for retired missionaries. The sanatorium is to be in Goshen, Mass., and a building is to be erected at a cost of $25,000.

Charitable Bequests.—By the will of Miss Ellen O. Proctor, of Brookline, Mass., who died January 26, $50,000 is left the Harvard Medical School for the study of chronic diseases. By the will of Miss Cecilia Tully, of Boston, $65,000 is divided among Catholic institutions.

Against Tuberculosis Patients.—An ordinance exists in the town of Rockland, Me., imposing $50 fine upon any one conducting a sanatorium for consumptives. Strangers with tuberculosis are not allowed in the town, even to visit relatives.

WESTERN STATES.

Lakeside Hospital, Cleveland, Ohio.—Samuel Mather, of Cleveland, who has already given thousands of dollars to the Lakeside Hospital,, has just completed arrangements for a further donation of $40,000.

A Man's Skin Bought.—Five dollars was the price paid by Dr. A. L. Buchan, Racine, Wis., for sufficient human skin to put on the limb of a little boy who had been badly scalded. The physician approached a well and healthy man with the proposition to sell a patch of his skin. A bargain was made, and the skin removed from the man and grafted to the boy, whose injuries are healing.

Scarlet Fever in Chicago.—While Chicago's mortality remains very low, there has been quite an increase in the number of smallpox cases reported. Scarlet fever is also prevalent throughout Wisconsin, the largest number of cases being reported in Hayward.

Louisiana Purchase Exposition, St. Louis.—Dr. L. H. Laidley, a graduate of Jefferson Medical College, Philadelphia, in 1868, and of Bellevue Hospital Medical College, New York, in 1872, a St. Louis physician, has just been appointed Medical Director of the World's Fair to be held in St. Louis in 1903. He is professor of gynecology in the Marion-Sims-Beaumont College of Medicine, surgeon to the Protestant Hospital, consulting surgeon to the Female Hospital, etc.

Supposed Consumption.—From Los Angeles comes the news that a veteran soldier, supposed to have consumption, recently coughed up the tip of a bayonet and is now expected to get well. He confessed that he often used his bayonet as a can opener, and it is supposed that the point broke off and was swallowed.

Tobacco Hearts in High School Pupils.—Cigarette smoking is held responsible by the medical examiners of the Chicago School Board for a startling increase in heart disease and nervous ailments among pupils in the high schools. The condition was revealed by examinations recently held for admission to athletic sports. Twenty-one out of one hundred were found unfit and all but three suffered from some form of heart trouble.

Milwaukee Isolation Hospital.—The citizens of Milwaukee have decided to ask the county board to erect a hospital for contagious diseases. $500 was recently appropriated for emergency cases, and is available for this purpose. There has recently been an increase in the number of contagious diseases in Milwaukee.

Sanitation in Ohio.—A bill to place the sanitation of Ohio under the control of the State Board of Health was introduced in the Ohio House of Representatives, January 20. By this bill the Secretary of the State Board of Health is designated as officer to enforce the quarantine of the State Board of Health upon the order of the president of the Board, besides requiring the regulations which are already laws in most of the other States.

The Chicago and Alton Railway will place a surgeon's chest on every passenger car on the road. The chest will contain everything a physician needs to perform a simple operation or dress an injury, before the removal of a patient to a hospital.

An English Surgeon in California.—Sir Thomas Fitzgerald, an eminent surgeon of Melbourne, Australia, who was appointed consulting surgeon to the British army in South Africa some months after the breaking out of the Boer war, is visiting San Francisco. He was knighted by Queen Victoria in 1897.

Library Books Baked.—The Secretary of the Board of Health of Evansville, Ind., has ordered the City Library to bake all books before they are taken out. He says disease is often contracted through books.

A New Milwaukee Hospital.—A citizen of Waverly, Iowa, has given $25,000 to start a fund for the erection of a non-sectarian hospital for the Milwaukee poor. More contributions are now being solicited. It is proposed to build a thoroughly scientifically equipped hospital as soon as sufficient money has been collected.

Northwestern University's Medical School for Women.—Women medical students thrown out of the class room by the closing of Northwestern University's medical school for women, are to be admitted to full privileges in Rush Medical College.

Resolutions on the Death of Dr. Parkhill.—The medical and surgical staff of St. Luke's Hospital, Denver, Col., have passed a number of resolutions eulogizing the late Dr. Clayton Parkhill, professor of surgery in the Gross Medical College, Denver, and a member of the staff of St. Luke's Hospital, who died January 16.

Smallpox in the West.—Chicago has remained remarkably free from smallpox, having had only 18 cases since January 1st, a total in all of 30 cases since August 12, 1901. A quarantine is likely to be established against Iowa, Wisconsin and Indiana on account of the smallpox epidemic raging in those States. There are 500 cases in Des Moines, Iowa, and the Chicago Health Commissioner has been informed that the authorities there are exceedingly lax in their work of prevention. In a score of other Iowa towns there is smallpox, and many cases are reported in Wisconsin and Indiana cities and towns. 200 cases have been reported in Appleton, Wis. Smallpox has also broken out among the Indians at Susanville, Lassen county, Cal., but there are as yet very few cases. January 31 an entire Michigan Central train was held at Grayling, Mich, for three hours because of a case of smallpox on board. The Health Officer would not allow the train to proceed until every one on board had been vaccinated.

Sacred Heart Hospital.—A new hospital will soon be built in Oakland, Cal., to cost $50,000, by the Sisters of the Sacred Heart. It is hoped that the building, which is to be located near the proposed Oakland College of Medicine, will be completed before the end of the year.

Fiftieth Anniversary of Dr. E. H. Gregory.—On Friday, January 17, Dr. E. H. Gregory, professor of Clinical Surgery in Washington University, St. Louis, Mo., celebrated the fiftieth anniversary of his teaching of medicine and surgery in St. Louis. Dr. Gregory, now in his 78th year, came to St. Louis in 1848, graduating from St. Louis University in 1849. He started teaching anatomy in 1852, becoming professor of clinical surgery in 1857. His clinical lecture delivered on his fiftieth anniversary appeared in the *St. Louis Medical Review*, January 25. He was the recipient of many congratulations and gifts.

CANADA.

An Epidemic of Diphtheria in Canada.—From Knowlton, Canada, comes the interesting history of a recent epidemic of diphtheria. The disease was exceedingly fatal and its spread for a long time puzzled those engaged in fighting it. New cases appeared in houses at some distance from one another, even in families who had completely isolated themselves, refusing all communication with human beings. Then the discovery was made that a number of cats had sore throats and died, and upon investigation the entire epidemic was traced to the cats. After all the cats had been killed, farmers in the neighborhood reported the deaths of foxes and other wild animals, also from diphtheria. Later Indians, who had found the skins of dead bears, minks, martens, etc., were also attacked by diphtheria. This interesting history vouched for by the physicians of

Knowlton, shows the wide spread of the infection made possible by that domestic animal, the cat.

Canadian Notes.—Since the outbreak of smallpox a year ago in the Province of Ontario, there have been 1900 cases, of which 750 were in the unorganized districts. Twelve deaths have been recorded, a mortality of only two-thirds of one per cent.—Vancouver B. C., is to erect a fine new hospital at a cost of $100,000.—Since the outbreak of smallpox in Ottawa, there have been 208 cases. There are at present 78 cases on Porter's Island.—Since October last, 19,000 persons have been vaccinated in Montreal.—A new hospital was opened at Fergus, Ont., on the 14th of January. —Laval University will celebrate the fiftieth anniversary of its foundation on the 24th of June next.—Amongst Treaty Indians in Canada last year there were 2479 births and 2240 deaths.

MISCELLANY.

The Ages at Which Different Diseases Cause Death.—Deaths from consumption are divided by ages: Under forty-five, 59%; forty-five to sixty,29%; above sixty, 12%. Thirty per cent. of the deaths from other general diseases, smallpox, measles, diphtheria, erysipelas, cancer, diabetes, etc., (which cause in the aggregate nearly one-eighth of all deaths) occur under forty-five, 36% between forty-five and sixty, and 34% above sixty. Only 12% of the deaths from apoplexy, softening of the brain, paralysis, etc., occur under forty-five years; 33 per cent. occur between forty-five and sixty; 55% occur above sixty. Thirty-five per cent. of the deaths from other nervous diseases than apoplexy, paralysis, etc., take place under forty-five; 38% between forty-five and 60; 27% above sixty. Not more than 11% of the deaths from heart disease occur under forty-five; 33% between forty-five and sixty; 56% above sixty. Twenty-nine per cent. of the deaths from pneumonia occur under forty-five; 35% between forty-five and sixty, and 36% above sixty. Other respiratory diseases, such as bronchitis, pleurisy, etc., grant a little longer lease of life. From such causes the deaths under forty-five are 24%; between forty-five and sixty, 30%; above sixty, 46%. Thirty per cent. of the deaths from some derangement of the digestive system occur under forty; 38% between forty-five and sixty, and 32% above sixty. Only sixteen in 100 of the victims of Bright's disease are under forty-five; thirty-seven in 100 die between forty-five and sixty; the remaining 47% die after completing three score years. Other complaints, classified as genito-urinary, are old age diseases, 77% of the deaths from such causes occurring at ages above sixty. Fifty per cent. of the deaths from violent causes occur under forty-five. Human bodies that have been subjected to the wear and tear of three score years or more are most subject to the kind of breakdowns that puzzle the doctors. Fully 68% of the typhoid fever deaths occur under forty-five; 23% between forty-five and sixty, the remaining 9% at higher ages.—*Insurance Press.*

When Children Walk.—The following table records experiments upon 1220 children and gives the age at which they commenced to walk:

Age.	*No. of Children.*	*Per Cent.*
8 months	3	0.2
9 months	53	4.3
10 months	120	9.8
11 months	213	17.5
12 months	393	32.2
13 months	520	42.6
14 months	680	55.7
15 months	803	65.8
16 months	886	72.6
17 months	941	77.1
18 months	1,048	85.9
19 months	1,073	88.0
20 months	1,098	90.0
21 months	1,106	90.7
22 months	1,128	92.5
23 months	1,135	93.0
24 months	1,165	95.5

Havana Hospital for Tuberculosis.—It is reported that $8000 has been appropriated by General Leonard Wood for the establishment of a hospital for tuberculosis patients at Arroyo Apolo.

Nurses for Lepers.—Superintendent Reynolds, of the leper settlement in Hawaii, is constantly besieged by people who are really anxious to be sent to the Molokai leper settlement to act as "kokuas," or helpers to the afflicted. In many instances these applications come from relatives of inmates of the settlement, but many are from persons who apparently have no other desire but to go to the settlement in hope of having an easy existence, horrible and revolting as their surroundings would be.

Why Hair Turns Gray.—Metchnikoff, the bacteriologist, says that he has discovered the cause of gray hair. He ascribes it to a bacillus which devours the coloring pigment. He has christened this pigmentophagus. He says it is a voracious feeder and proliferates with an activity approximating perpetual motion. The strong vital resistance of youth keeps it down, but low vitality, arising from care, grief, moral shock, or sedentary life favors its growth and multiplication. Metchnikoff is studying means to combat it.

The Prevalence of Blindness.—There are about 1,000,000 blind people in the world, says a statistician. The largest proportion is found in Russia, for there, nearly 200,000 people walk in literal darkness. The chief cause is ophthalmia, due to bad ventilation of the huts of the peasantry and the inadequate facilities for treatment. The sands of Egypt are responsible for a good deal of blindness in the Khedive's land. Amongst the world's inhabitants the known proportion is something like one blind person in every 1500.—*Health.*

Obituary.—Dr. Frederick Gundrum, at Riverside, Cal., January 15, aged 83 years.—Dr. Henry E. Watkins, at Farm-Louis, Mo., January 21, aged 72 years.—Dr. Warren Montgomery Sweetland, at Highland Park, Ill., January 23, aged 82 years.—Dr. Harvey Parkhurst, at Danvers, Ill., January 16, aged 79 years.—Dr. William Merwin Smith, at Redlands, Cal., January 17, aged 75 years.—Dr. W. C. Brown, at Sierra Madre, Cal., January 12.—Dr. Peter R. Furbeck, at Saratoga Springs, N. Y., January 17.—Dr. Louis J. Archambeault, at Brooklyn, N. Y., January 12, aged 54 years.—Dr. Harry Peters, at Davenport, Iowa, January 16, aged 30 years.—Dr. George M. Wellman, at Dover Plains, N. Y., January 13, aged 65 years.—Dr. Harry D. Kline, at Seattle, Wash., January 19.—Dr. Augustus Hibler, at Bellefonte, Pa., January 16, aged 72 years.—Dr. William Wixom, at Italy Hill, N. Y., ville, Va., January 16.—Dr. E. Price, at Jackson, Mich, January 18.—Dr. Cassius O. Jackson, at Victor, N. Y., January 27.—Dr. Dominick George Bodkin, at Brooklyn, N. Y., January 26, aged 68 years.—Dr. Charles H. Burnett, at Bryn Mawr, Pa., January 30, aged 61 years.—Dr. J. Willard Liggett, at Philadelphia, Pa., January 27.—Dr. Irwine Waddell Gilkeson at Augusta, Va, January 30, aged 58 years.—Dr W. A. Dudley, at Petersburg, Va., February 1, aged 70 years. —Dr. Armistead Peter, at Georgetown, Washington, D. C., January 28, aged 62 years.—Dr. Bowman H. Shivers, at Haddonfield, N. J., February 1, aged 67 years.—Dr. Henry Rutgers Baldwin, at New Brunswick, N. J., February 3, aged 73 years. Dr. S. H. Whitmer, at Newport, Pa., February 1, aged 57 years.

CONTINENTAL EUROPE.

Notes.—So many cases of scarlet fever have recently been reported in Quimper that none of the soldiers, quartered in the city, are allowed to leave the barracks.—At a recent meeting of the French Academy of Medicine Dr. Lancereaux was elected vice-president, replacing Dr. Riche. Dr. Lancereaux is 72 years old, and is a well-known pathologist. Dr. Vallin was elected secretary.—As a result of the recent French experiments with balloons, Dr. Robin and his colleagues now declare that they can decide exactly what constitution ought and what ought not to be sent to mountain health resorts.—It is reported that an epidemic of typhoid fever has made its appearance in Lorient, near Nantes, and the number of cases is constantly increasing.—Doctors in Sweden never send bills to their patients. They cheerfully accept whatever sums the patients choose to give them.—Thirty-eight out of every 100 deaths in the Hamburg Marine Hospital are caused by tuberculosis.—The salaries of Russian army surgeons range from 600 to 4200 roubles ($300 to $2100) a year.—In Russia physicians who own drug stores are not permitted to practice.—There are 5,189,000 Hebrews in Russia, according to the latest census returns.—9 cases of glanders in man occurred during the

past year in St. Petersburg. The City Council decided to abolish the common wells used for watering horses and substitute fountains with running water.—Baroness de Rothschild, of Paris, has donated $250,000 for the erection of a home for consumptives in the Taunus Mountains, Germany, in memory of her father.

The Total Emigration of Swedes to America during the last fifty years has exceeded 850,000, while about 150,000 Swedes have gone to other countries. Of the emigrants to the United States only 5% have returned to their native country.

Antituberculosis Dispensary in Paris.—A municipal dispensary for the treatment of tubercular patients is soon to be erected in Paris, thanks to the liberality of two ladies, whose donations amount to $800,000. The dispensary will bear their names, and will be called Taniés-Jouyve Dispensary.

Smallpox in Valencia, Spain.—The Alcalde of Valencia has issued the following proclamation: 1. Vaccination and revaccination of all inhabitants not already vaccinated is declared compulsory in Valencia. 2. To facilitate compliance with this order, without expense or trouble to the inhabitants, all sanitary posts and relief stations shall be permanently open. 3. All municipal doctors shall make known to the sick poor that they can only assist and supply medicines gratuitously on condition that patients and their families be vaccinated within twenty-four hours. 4. All schoolmasters, both of public and private schools, shall require certificates of vaccination from pupils. 5. Laborers employed by the municipality will not receive wages unless they present medical certificates of vaccination. 6. Directors and owners of factories and workmen of all classes shall exact from all employés certificates of vaccination under penalty of fine. 7. Directors of penitentiaries, hospitals, almshouses, homes for invalids, asylums, sanatoria, or similar establishments, shall proceed immediately to vaccinate or revaccinate all those under their care, and refuse admittance to visitors not furnished with vaccination certificates. 8. In the shelter sheds and casualty wards for paupers no admission or assistance will be given to the unvaccinated unless they submit to vaccination on the spot. 9. Charity tickets distributed on feast days by submayors will not be honored unless accompanied by certificates of vaccination. 10. All applications for stalls and booths in public markets must be accompanied by such certificates. 11. No name of any unvaccinated person shall be inscribed on the parish poor list. 12. Submayors shall visit and inspect all houses in their respective districts, beginning with those in which cases of smallpox exist and shall insist upon the immediate vaccination of all who have not already complied with this order. 13. Proprietors of hotels and lodging-houses shall refuse to admit anyone without proof of recent vaccination. The infraction of any of the foregoing articles will be punished with a fine of 50 pesetas, (about $10.00).

The Ollier Monument.—The subscriptions collected to erect a statue in Lyons, France, in memory of the great surgeon, Ollier, now amount to over $10,000. The largest sum, $1200, comes from the German physicians, while Americans have contributed $640.

France contains more people over sixty years of age than are found in any other European country. The next greatest percentage of old people is found in Ireland.

Moscow, Russia, is successfully operating a new method for purifying the city's water. The plan is to sterilize the water by the introduction of ozonized air. It is said that the bacteria in the water are thus destroyed, and at a comparatively small cost the product is rendered safe for drinking. The system is based upon the principle that oxygen burns all organic matter with which it comes in contact in water. Experiments with the system have been made in France, Germany, Holland, and Belgium. The water by this method is rendered colorless, sparkling, and odorless. The cost is about $6.25 for each 1,000,000 gallons. —*Medical Age.*

Obituary.—Adolphe Burggraeve, the well-known Belgian therapeutist, died recently in Ghent, aged 95. He taught for many years in the Ghent Medical School, and was a member of the Royal Belgian Medical Academy.—Dr. Louis Kugelmann, a former student of Semmelweiss in Vienna, died in Hanover, where he had practiced almost half a century, in his 74th year.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

January 18, 1892.

1. Observations on the Surgical Treatment of Obstructive Jaundice from an Experience of over 2000 Cases. A. W. MAYO ROBSON.
2. Case of Excision of Clavicle for a Round-Celled Sarcoma. GEORGE T. BEATSON.
3. On Blindness of the Retina from Exposure of the Eyes when Watching the Eclipse of the Sun. SIMEON SNELL.
4. A Report of Nine Cases in which Haab's Magnet was Used for the Extraction of Foreign Bodies from the Eye. W. T. HOLMES SPICER and A. F. MACCALLAN.
5. The Relation of Glaucoma to Thrombosis of Retinal Veins, etc. E. HARRIES JONES.
6. Reflections on Ophthalmic Work in the Army. JOHN GRIMSHAW.
7. Ambulatory Treatment of a Ruptured Tendo Achillis. J. LYNN THOMAS.
8. Bullet Wound of the Motor Region of the Brain, etc. DOUGLAS DREW.
9. Excision of Spina Bifida and Encephalocele. JOHN LITHGOW.
10. A Possible Predisposing Cause of Cancer. HAROLD MASON.
11. Two Cases in which the Activity of Phthisis was Excited by Operations for Local Tuberculosis. A. J. RODOCANACHI.

1.—Robson says the following conditions must be taken into consideration in all cases of chronic jaundice: (1) Common duct cholelithiasis; (2) chronic pancreatitis; (3) simple stricture of the common bile duct; (4) inflammatory adhesions causing pressure on, or stenosis of the hepatic or common bile ducts; (5) hydatid disease of the liver pressing on or discharging into the bile ducts; (6) gummata implicating the ducts; (7) chronic catarrh of the bile ducts; (8) cancer of the common bile duct; (9) cancer of the head of the pancreas; (10) cancer of the liver associated with jaundice either due to catarrh or pressure; (11) cirrhosis of the liver; (12) other rare conditions such an aneurysm of the hepatic artery or of the aorta, and other tumors of the liver, gall bladder, pylorus, kidney, or intestine pressing on or occluding the common bile duct. Surgery holds out a good prospect of cure in the first five causes enumerated; medical treatment is advisable for causes 6 and 7; in the remaining conditions relief can only be hoped for whether the treatment be medical or surgical. A painless onset of chronic jaundice is suspicious of chronic catarrh dependent on cancer of the liver or of occlusion of the hepatic or common duct by the growth, and if this be associated with distension of the gall bladder and rapid emaciation, cancer of the head of the pancreas may be found. An acute attack of pain in the upper abdomen preceded by the so-called spasms and followed within 24 or 36 hours by jaundice is strongly suggestive of cholelithiasis, especially if accompanied by chills, fever and sweats. A large liver is much more common in cancer than in gall stones although it may be present in either: in cancer nodules may be palpated and in cholelithiasis an elongation of the right lobe of the liver can often be felt. Ascites strongly indicates malignant disease and as a rule negatives any radical operation on the bile ducts. The jaundice of gall stones is rarely continuous, that of a growth steadily increasing or tends to become absolute, especially in cancer of the bile duct or of the head of the pancreas; the jaundice of malignant disease runs a short course, whereas the jaundice of gall stones may last several years. Fat in the stools and sugar in the urine suggest pancreatic trouble. After the abdomen has been opened [illegible] a [illegible]

contracted gall bladder point to gall stones. If no gall stones be found, but the head of the pancreas be swollen and hard, the surgeon should not hastily pronounce the case one of cancer even if enlarged glands be present, for the condition may be chronic pancreatitis which is curable by cholecystotomy. Tenderness one inch to the right and one inch above the umbilicus is as suggestive of gall bladder trouble as tenderness of McBurney's point is suggestive of appendicitis. Before tearing through dense and extensive adhesions it is well to inspect the liver and adjacent parts to be assured of the absence of secondary nodules of carcinoma. A hemorrhagic condition is common in case of chronic jaundice; if not excessive it may be controlled by calcium chloride, or possibly suprarenal extract or gelatine; if severe it will seriously add to the risks of operation. Elderly patients with heart or kidney disease should as a rule be content with medical treatment. Surgical treatment depends on the diagnosis. If the diagnosis be doubtful an exploratory laparotomy is advisable; if malignant disease be positively diagnosticated, with a few exceptions where it is possible to remove it, operation can do but little good; if gall stones or one of the first five enumerated causes of jaundice, operation is demanded. Robson has operated upon 212 cases suffering from obstructive jaundice; of these 182 recovered, showing a mortality of 13.6%; 60 were under the subjects of malignant disease either of the liver, the bile ducts or of the pancreas, and of these 46 recovered from operation, a mortality of 23.3%; of the 152 operated upon for some nonmalignant cause, 135 recovered, a mortality of 9.8%. Nearly every case recovering is a life saved since in the greater number, whether arising from gall stones, hydatid disease, chronic pancreatitis, or stricture or adhesions obliterating the lumen of the bile ducts, death after more or less prolonged suffering is the usual termination. The greatest dangers from operation are hemorrhage and shock, and the two next serious, exhaustion and sepsis. Up to December, 1899, Robson's mortality was 16.4%, whereas since that time, the mortality has been 14.2%. The mortality of the choledochotomies has sunk from 14.5% to 7.4%. This improvement is due to greater experience, greater accuracy in diagnosis, better selection of cases, and improved technic. To combat hemorrhage calcium chloride should be administered for at least two days before the operation, all adhesions should be ligatured whenever possible, all bleeding points should be caught and tied, and oozing should be controlled with gauze packing. [F. T. S.]

2.—Beatson reports a case of **angio-sarcoma of the clavicle** successfully treated by excision of the clavicle. A girl, aged 16 years, had noticed a swelling in the neck 7 months before coming under observation at which time it commenced 1½ inches from the outer end of the clavicle, crossed the median line and reached close to the sternal border of the right clavicle. Above it reached the thyroid cartilage and below descended over the second rib. After a flap had been dissected up, the clavicle was sawn through in its outer quarter and the remaining inner portion of the bone removed. A portion of the sternal end of the second rib was also excised. At a second operation some enlarged glands were removed from the edge of the trapezius muscle. The tip of the shoulder has fallen downwards and is three quarters of an inch nearer the middle line. The function of the arm is but little impaired. [F. T. S.]

3.—Snell's case of **blinding of the retina from exposure to the sun** was a man, aged 40 years, who watched the eclipse, May 29, 1900, for one hour in periods of from two to ten minutes. He looked through a blue glass, then through a ruby glass, and also a short time with the naked eye. About an hour later he noticed that direct vision was blurred. Later in the same day he attempted to read a paper and found that a round hazy blankness covered the sheet except at the edges. The next day direct vision in each eye was 6/24 and eccentrically 6/9. No ophthalmoscopic changes were found. Potassium iodid and colored glasses were prescribed. The blindness has gradually disappeared except for a little gray disk which still remains before his eyes but which is growing smaller and fainter. [F. T. S.]

4.—Spicer and MacCalan report **nine cases in which a particle of steel became imbedded in the eye and which was abstracted with the magnet.** They conclude as follows: "When the patient is brought up to the magnet it is the rule for severe pain to be experienced by him if a magnetisable particle is present in the globe. Haab's magnet is therefore of valuable diagnostic service in determining the presence or absence of a magnetisable particle. Localization by the rays is extremely important. By their means it is possible sometimes to avoid injury to a clear lens in the extraction of a foreign body, and entanglement in the iris can be avoided if its precise situation is known. Nevertheless, if some delay is unavoidable before the X-rays can be applied, we advise in certain cases immediate extraction of the foreign body by Haab's magnet without precise localization. If there is a recent wound we attempt to remove the foreign body through it, using the Haab's magnet alone. If this wound is healed it is necessary to make an opening for its exit. This may be corneal in which case the foreign body is withdrawn with the Haab's magnet; or peripheral, in which case we usually employ the small magnet for the removal of the foreign body from the anterior chamber, after it has been brought forward by Haab's magnet. The latter method is the one we generally adopt. In all cases it is most essential that entanglement of the particle in the iris and ciliary body should be avoided. By bringing the patient up to the magnet gradually from a distance and by increasing the strength of the current up to the maximum slowly, this is to a certain extent guarded against. The idea of this maneuvre is to prevent the particle from rushing forward from its posterior position and burying itself in the iris." [F. T. S.]

5.—Jones publishes four cases illustrating the fact that **glaucoma may occur as a sequel to thrombosis of the central vein** associated with arteriosclerosis but without albuminuric retinitis. In three of the cases the glaucoma was acute and followed the retinal condition in about six weeks. In one case the glaucoma was chronic. In two of the cases glaucoma also appeared in the unaffected eye. The prognosis in many cases of glaucoma complicating thrombosis is not at all bad, the patient often retaining some useful vision after the re-establishment of the circulation and the absorption of hemorrhages. The occurrence of glaucoma as a sequel, however, renders the prognosis extremely grave, since, owing to the condition of the vessels, an iridectomy does not promise much success. [F. T. S.]

7.—Thomas describes the treatment he has adopted for **ruptured tendo Achillis.** He molds an aluminum spatula to the shape of the bend of the ankle, encases it in a rubber tube to act as a padding, and holds the splint in place by inserting it between the shoe laces. He has treated himself and two others with this apparatus with a very satisfactory result in each case. The leg is massaged and the patient is allowed to walk about. He also speaks of the value of the X-rays for determining a rupture of a tendon and mentions a new sign of rupture of the tendo Achillis. This new sign is a discoloration on each side of the tendon running down below the malleoli, and joining at the level of the rupture by a transverse band of discoloration, thus giving the bruise an H shape. [F. T. S.]

8.—Brew gives the history of a soldier who was shot in the head five days before coming under his observation. The wound of entrance was over the anterior part of the right parietal bone about two inches from the middle line. There was paralysis of the left face and arm except for a slight movement of extension at the elbow. The tactile sense was impaired and there was a sensation of numbness in the forearm and hand. A skiagram failed to reveal the position of the bullet. A flap of scalp was turned

down, splintered bone, disorganized blood and brain removed, and the bullet found just beneath the surface of the cortex. The paralysis gradually disappeared. [F. T. S.]

9.—Lithgow reports the successful excision of a **spina bifida**, and a case of **encephalocele** in the occipital region; the latter was excised and the patient died on the 14th day in convulsions. [F. T. S.]

10.—Mason has collected and analyzed 400 cases of **cancer** occurring in the Leamington district. Fifty-five and one half percent affected the alimentary system and 13¾% the generative organs. He concludes that the cancer death-rate has increased during the last 60 years, during which time the water-closet system of drainage has developed. The infection of the alimentary canal is so frequent because in those houses in which the drains are in a faulty condition, the subsoil is contaminated; this in turn infects the food which is often kept in cellars. Individuals over 40 years of age are predisposed to infection because they are more confined to dwellings. Females are more liable to attack because their domestic duties necessitate their remaining in these houses. Even the shape of the female garments would favor infection of the generative organs. Consecutive houses in the same street are found often to be cancer houses; many have a common drain which has become faulty. A large percentage of cancer houses are at the end of a row, a place where any defect in the drain would be most likely to be severely affected by sewage. Old houses are subject to carcinomatous invasion because the drains are often imperfect or worn out. Buildings erected on a porous subsoil are more likely to become cancerous than those built on clay. [F. T. S.]

11.—Rodocanachi reports **two cases in which the activity of phthisis was accelerated by excision of localized tuberculosis.** The first patient was operated upon for extensive disease of the metatarso-phalangeal joint; he died two months later from a rapidly spreading pulmonary tuberculosis. The second patient underwent an operation for the removal of enlarged glands from both inguinal regions; death occurred about one month later from phthisis florida. [F. T. S.]

LANCET.

January 18, 1902.

1. A Postgraduate Lecture on Ocular Pain, etc. PERCY DUNN.
2. Typhoid Fever in South Africa. A. ELLIOT and J. W. WASHBOURN.
3. Note on the "Blood Relationship" of Man and the Anthropoid Apes. ALBERT S. F. GRUENBAUM.
4. On the Advisability of Removing the Appendix Vermiformis After Suppuration Caused by Appendicitis. WILLIAM H. BATTLE.
5. Izal in the Treatment of Phthisis. F. W. TUNNICLIFFE.
6. Observations on the Nature and Treatment of Pernicious Anemia. ALEX. McPHEDRAN.
7. Friedreich's Ataxia. GUTHRIE RANKIN.
8. Report and Commentary on School Sanitation and Hygiene, etc. STUART ALEXANDER TIDEY.

1.—Dunn delivered a lecture on **ocular pain, its significance, varieties, and treatment.** He states that the pain which occurs in some diseases of the eyes is an invaluable symptom and oft times indicates to the physician the character of the disease. In acute glaucoma it is the pain which compels patients to seek medical aid As a rule, the greater the pain the more serious is the case. In glaucoma the symptom of pain indicates the peril to which the eye is subjected and marks out the line of treatment. In iritis pain is the symptom of importance, for when it continues in these cases no improvement can be expected. The cessation of pain indicates the commencement of the retrocession of the disease and the progress towards recovery. Diseases of the fundus are not accompanied by pain. The absence of pain in inflammatory diseases of the eye may be regarded as a favorable sign. Conjuctival affections are accompanied by very little pain, because this structure is sparcely endowed with common sensation, on the other hand, the cornea is richly so supplied. Inflammation of the latter structure is attended with acute pain. The iris is also richly supplied with nerves, but this structure when inflamed is not always subject to pain. At times a high degree of inflammation of the iris may only be accompanied by slight pain. When the ciliary body is inflamed, tenderness of the globe is always present. The pain of syphilitic iritis is variable, sometimes intense and at other times scarcely noticeable. In rheumatic iritis severe pain is commonly present and is usually most intense at night. In certain atrophic conditions of the eye dull aching pain is experienced and tenderness on palpation. The pain of acute glaucoma is due to increased intraocular tension, pressure being exerted upon the nerve supply, especially that of the sclera and much of the pain must also be ascribed to compression of the ciliary process. [F. J. K.]

2.—Elliott and Washbourn contribute an article on **typhoid fever in South Africa.** These authors have investigated 262 cases in which detailed notes were taken. They have carefully analyzed these cases; the mortality was 13.7 per cent. Relapses occurred in 61 of the cases and second attacks in 12. Antityphoid inoculation was practiced in 211 cases. They found that inoculation had no effect either in rendering the attack short or in influencing the susceptibility to the disease. Intestinal hemorrhage occurred in 6.1% of the cases, and phlebitis in 5.6% of the cases, Pneumonia was a complication in 3.05% of the cases, pleurisy in 3.05%, and periostitis in 2.2%. The accident of perforation was an incidence of 2.2%. Convulsions, parotitis, pharyngo-tonsillitis, abscesses, gangrene of the skin, appendicitis, jaundice, otitis media, pericarditis, and malaria were intercurrent conditions in a small percentage of the cases. They have drawn the following conclusions: "The conclusions which we draw from the analysis of these cases is that the type of typhoid fever met with in South Africa does not differ in any essential respects from that met with in England and America. The mortality and the incidence of complications are much the same as in the variations which are met with elsewhere. The only complication which appears to be especially prominent is phlebitis, which occurred in 5.6% of our cases. This was not very much higher than in Dr. Poole's cases at Maidstone, and in Dr. Caiger and Dr. Goodall's cases at the Metropolitan Asylums' Board Hospitals, which were 3.8% and 3.4% respectively. We do not feel that inoculation has any marked influence either in preventing or modifying the disease." [F. J. K.]

3.—Grünbaum has contributed a note on the **blood relationship of man and the anthropoid apes.** He remarks that a brief recapitulation of what is already known in regard to the new biological test for blood is rendered necessary by the newness of the subject. "The serum from an animal—e. g. a rabbit—which has been injected intraperitoneally several times with any given organic fluid will, if mixed in a small quantity with a dilute solution of the fluid used for injection, produce a more or less marked precipitate. Such a serum has been named antiserum." When the serum from a rabbit is treated with human blood, the precipitate of the rabbit's serum follows when it is mixed with human blood. Rabbit's serum under such circumstances has been called, although somewhat paradoxically, "human antiserum." Attention has been called to the fact by some observers that human antiserum precipitates the blood of the lower monkeys to a slight extent. He confirms this view by his experiments and he has found that human antiserum gives a precipitate when treated with the blood of the gorilla, orang, and chimpanzee. The blood of the orang gives a more gelatinous precipitate as compared with the granular precipitate of the other bloods. He remarks that this may have been due to accidental circumstances. He also compared gorilla, orang, and chimpanzee antiserum with human serum. These sera not only reacted with their own blood but also with the blood of each other and also with human blood. He emphasizes that he is unable to assert that there is any difference of reaction amongst the many combinations of antiserum and the blood which can be made with the four mentioned bloods and sera. [F. J. K.]

4.—Wm. H. Battle, in discussing the advisability of removing the appendix after an appendix abscess has been opened and drained, reports a number of cases showing

the advisability of doing this second operation. His attitude in the matter is best expressed in his own words. "I think there is only one exception to the rule that the appendix should be excised in all cases after the patient has recovered from the suppuration, if it was not found possible or advisable to remove it when the abscess was opened. This exception is when the appendix has sloughed off and is lying free in the pus or comes away during the healing of the abscess—not a very common occurrence when the suppuration is localized, but I have found it. It may be held, I think, that the evacuation of pus from an appendix abscess may be safely done through the ordinary incision; that it is not necessary to complicate the operation by any procedure which increases the risk; and that the removal of the appendix at a second operation, when the parts are quiet, will give a better chance to the patient in many, if not most, of the cases than a removal unwisely attempted or persisted in at the first operation. The adhesions forming after inflammation of the surface of the opposed coils of intestine are not necessarily numerous, strong, or vascular; indeed, it is a matter for surprise to find so little change in the normal condition of the parts in many cases." [J. H. G.]

5.—Tunnicliffe states that **izal is a valuable drug in the treatment of phthisis.** This drug possesses antiseptic properties *in vitro*. The antiseptic power of izal is relatively high and its toxic property is relatively low. Izal exerts a marked antiseptic action in the alimentary tract which can be demonstrated by examination of the feces. One of the paths of its elimination is through the respiratory mucous membrane. The dose of pure izal medical oil is fixed at about 10 minims. It may be administered in capsules with cod-liver oil. He has used this drug in a number of cases and found that "the best results are to be obtained with it in cases of active pulmonary tuberculosis and of old cavities with active expectoration. According to my experience it seems to exert a beneficial influence in cases in which diarrhea is present, where this be due merely to decomposition of the intestinal contents or to actual tuberculous lesion of the intestine. In those cases in which the bronchitic element is well marked it is, as was a priori to be expected, less useful." [F. J. K.]

6.—McPhedran discusses **some observation on the nature and treatment of pernicious anemia.** He mentions that the exciting factor of this disease is generally believed to be a toxine which is thought to be of gastro-intestinal origin and that it acts on the blood of the portal system and produces rapid hemolysis. Other effects produced are secondary. Some sustain the view that the toxine effects the blood producing organs. He maintains that it is probable that both views in part are correct. The fact that blood formation is atypical in pernicious anemia is suggestive that the toxemia is an irritant to the blood-making organs. This is also suggestive because the course of the disease is irregular, and remissions and exacerbations are common; fever of an irregular type is present, and because mental symptoms, diarrhea, and vomiting are frequent. He thinks that the general condition of the patient does not bear a definite relation to the blood state and that there is something else than a poverty in the blood corpuscles on which the symptoms depend. Marked weakness in most cases is the first symptom, appearing sometime before the pallor is observed. **He seems to oppose the view that carious teeth and diseased gums have an etiological relationship to the disease.** In 22 of his own cases, he found carious teeth in ten. In 9 of the 22 cases symptoms referable to the nervous system occurred. These were, however, as a rule, slight. He states that until recently arsenic has been regarded as a specific in the treatment of pernicious anemia. At present there are those who have little confidence in the value of this drug in the treamtent of this condition. The only case of complete recovery which he has had, was apparently due to the action of arsenic. The plan of treatment by intestinal antiseptics in his experience has not been satisfactory and no favorable results have been obtained from their use. He mentions that "no plan of management or treatment so far devised avails to cure the disease or even, in most cases at least, to alter its erratic course. Before the recovery can be considered complete, the blood on histological examination must be found quite normal. A restoration of even the full complement of 5,000,000 red corpuscles per cubic millimeter is not sufficient, as that may occur in a prolonged and marked remission. Not a few of the cures reported have doubtless been remissions of this kind." [F. J. K.]

7.—Rankin discusses Friedreich's Ataxia. He reports three cases. The patients are three sisters aged respectively, 20, 18, and 11 years. They are members of a family of four. The remaining member being a boy aged 16 years, whose general health is excellent, but he is afflicted with stammering. There is no history of alcoholism or syphilis in either the father or mother. In these cases the disease has not reached its full development. The absence of such symptoms as well marked nystagmus, pronounced ataxia of the upper limbs, emotional instability, etc., he explains on the ground that the disease has only existed for a comparatively short time. The article is illustrated with a number of photographs of the cases. [F. J. K.]

8.—Tidey submitted a **report and commentary on school sanitation and hygiene.** This article deals with the sanitary laws in the following five countries: France, Belgium Germany, Switzerland and Italy. [F. J. K.]

MEDICAL RECORD.

February 1, 1902.

1. Carbonate of Creosote in Pneumonia. W. H. THOMSON.
2. Ringworm; A Note on Its Treatment. GEORGE THOMAS JACKSON.
3. Progress in Veterinary Medicine in its Relation to Public Health. WILLIAM HERBERT LOWE.
4. A Case of Acute Articular Rheumatism, etc. R. J. CHIPMAN.
5. Early Mechanical Effects of Altitude of the Rocky Mountain Plateau in Pulmonary Tuberculosis. J. E. COURTNEY.

1.—W. H. Thomson reports **eighteen cases of pneumonia treated with carbonate of creosote.** Of these patients fifteen were males and three females, two were boys ten years old, while the ages of the others ranged from thirteen to forty-five, of these patients one (male) died, and the others made good recoveries. Carbonate of creosote may exert a special effect upon the course of pneumonia as shown by the temperature curve after its administration. The **disease terminated** in Thomson's series **by lysis in twelve cases and by crisis in only five.** In a number of cases a fall of the temperature from one to three degrees occurred within twenty-four hours after the remedy was given, but the next day it would rise again and so continue with a very irregular course for a number of days before it reached normal. **Carbonate of creosote** (creosotal) seems to affect favorably the **tympanites** so often present. This writer has been impressed by the fact that the drug is better tolerated by the stomach for prolonged periods than any other agent of this class, such as creosote itself, or guaiacol carbonate. In pneumonia the writer recommends that it be given in fifteen grain doses every two hours night and day. He prescribes it in a mixture of glycerin and peppermint water. [T. L. C.]

2.—G. T. Jackson recommends **goose grease** for the treatment of **ringworm.** It is to be applied twice a day until it produces slight inflammatory reaction, then once a day will be sufficient. This remedy has been found espcialy efficient in cases of ringworm of the scalp and beard. [T. L. C.]

3.—W. H. Lowe discusses the **progress of veterinary medicine in its relation to public health.** In this paper he mentions that no fact has drawn a closer relation between animal diseases or the protection of the public health through domestic animals than the introduction of the antitoxin principles of serum thearpy. He emphasizes the importance of the veterinary inspection of meat and the sanitary supervision of dairies. [T. L. C.]

4.—R. J. Chipman reports a case of **acute articular rheumatism, with pyemic temperature, treated by anti-streptococci serum.** The patient's condition was most unfavor-

able in every way when the serum was first used and the improvement was marked from the first injection. Her condition became practically normal after the third injection. [T. L. C.]

5.—J. E. Courtney discusses the **early mechanical effects of altitude** of the Rocky Mountain Plateau **in pulmonary tuberculosis.** The bronchus and bronchioles leading to the diseased area are quickly dilated by the rarified air and the deeper respiration necessary to get sufficient oxygen. The quantity of expectoration may therefore at first be increased. Courtney is convinced that a small cavity may even be emptied by this mechanism. The beneficial effects are plain; quantities of bacilli are removed; the foci for the generation of toxins for reabsorption of pyemic material and the chief source for irritating cough by accumulating mucus, are cleaned out. The stagnant and toxin-laden air in the bronchi and vesicles is evacuated and oxygen admitted. [T. L. C.]

MEDICAL NEWS.

February 1, 1902. (Vol. 80, No. 8.)

1. On the Value to the Physican of Modern Methods of Diagnosis. HENRY L. ELSNER.
2. Note on the Glycosuria Following Experimental Injections of Adrenalin. C. A. HERTER and A. H. RICHARDS.
3. Sanitary Aspects of Nicaragua vs. Those of Panama. J. EDWARD STUBBERTS.
4. A Word on Specialization in Medicine and Surgery. WILLIAM POLK.

2.—A. H. Richards emphasizes the following facts: (1) Adrenalin given intraperitoneally is capable of inducing a marked glycosuria in which the percentage of sugar may reach 9.17 per cent., and the ratio of nitrogen and dextrose, 4.98; (2) adrenalin glycosuria is not dependent upon the presence of a diastatic ferment stored or formed by the suprarenal gland; (3) injections of the drug are sometimes followed by destructive lesions of the gastro-enteric tract and pancreas; (4) after fatal doses the cells composing the islands of Langerhans were found to be the seat of granular degeneration, very pronounced in some places. The nuclei of many of these cells showed extensive loss of chromatin substance. In some parts of the pancreas the cells of the islands of Langerhans were much more injured than the surrounding cells of the secreting acino; (5) with equal doses of adrenalin the intraperitoneal injections proved much more efficient in the production of glycosuria than injections under the skin. [T. M. T.]

3.—J. Edward Stubberts does not agree with Mr. Soper who wrote an article on the **Sanitary Aspects of Nicaragua vs. Those of Panama,** on January 11, 1902, in the *Medical News.* His conclusions which he says are from reliable statistics are as follows: (1) The natural conditions of the Central American Nicaragua route are far more conducive to health than those along the Panama route; (2) the endemic diseases of the Panama route are far more fatal than those along the Nicaragua route; (3) during the time of actual construction, while there would necessarily be an increase of sickness, the mortality would be remarkably below that on the Panama route; (4) after the completion of the canal, the regions bounding the Nicaragua route would be capable of development by the Anglo-Saxon, while he could not safely live along the Panama line. Finally, he draws attention to the fact that much more money was spent per capita by the medical department of the Panama Company than by the Nicaragua Company, and yet the results are in favor of the latter Company; and perhaps the most significant of all as weakening the argument of the article referred to, is the fact that the writer acknowledges that he had been unable to obtain authenticated statistics of the French Company while those of the American or Nicaragua Company have always been open to those who cared to read them. It is a well founded belief of many students in this country that there is a very patent reason for withholding the statistics of the Panama route. [T. M. T.]

4.—William Polk in his article **on specialization in Medicine and Surgery** says that the tendency of all specialization is to narrowness and to exaggeration of minutiae and the safest guard against this is a broad foundation and a thorough knowledge of all the principles governing the whole field and a practical acquaintance with their expressions as witnessed in disease and their application as required in remedial measures. He believes that the curse of the profession to-day is in the half-baked, underdone specialist whose exaggeration of details and magnifying of minutiae blinds the credulous, preys upon the nervous and the apprehensive and ends in disappointing the patient and bringing discredit upon the profession they claim to adorn. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

February 1, 1902. (Vol. LXXV, No. 5.)

1. The Management of the Tendency of the Upper Fragment to Tilt Forward in Fractures of the Upper Third of the Femur. RUSSEL A. HIBBS.
2. Meckel's Diverticulum and its Relation to Ileus, with Report of a Case. C. O. THEINHAUS.
3. A Case of Hydrencephalocele. DAVID E. WHEELER.
4. The Influence of Electric Ozonation Upon Disease. G. LENOX CURTIS.
5. The Treatment of Defectives.
6. Typhoid Perforation, its Frequency, Prognosis, Diagnosis and Treatment. HUGH M. TAYLOR.

1.—Russell A. Hibbs says that the only way of correcting the displacement caused by **the tilting forward of the upper fragment and securing coaptation of the fractured ends of the bone in a straight line** is by placing the lower fragments in the line indicated by the position of the upper fragment, that is, by placing the limb in a flexed position: and, as the upper fragment is usually displaced outward, also to some extent the limb should be slightly abducted. The first condition necessary to secure union is by tilting forward of the upper fragment until there ceases to be a displacement in its relation to the lower. The second condition necessary to secure union in such position is immobilization, and this is accomplished by two means: (1) extension or traction; (2) coaptation splints. The author recommends the long traction hip splint which offers a means of applying extension in such cases which is direct and constant, is always in the same line, and may be made to a degree that will absolutely control muscular traction. To the sheath of the splint are attached two steel bands, one running posteriorly half around the thigh near the groin, taking the direction of the gluteo-femoral increase, and another at the middle point of the thigh, with a felt or leather backing resting upon them, completed by two webbing bands anteriorly, the sagging backward of the thigh is prevented when the patient's pelvis is elevated in the use of the bed pan, etc., and it is all that is needed. [T. M. T.]

2.—C. O. Theinhaus states that chiefly males in the prime of life between the ages of 17 and 45 years are subject to strangulation caused by Meckel's diverticulum. Ketteler collected 160 cases of which 91 were in males and 18 in females. He also found that the following alterations in the abdomen caused by Meckel's diverticulum were: Strangulation 52 times; bending 12 times; volvulus, 6 times; knot formation, 7 times; abscess in the diverticulum, 5 times; diverticulum in the hernia, 6 times; pocket formation in the diverticulum, twice; and communication with the bladder once. In operation in this condition the stump should be treated the same as in appendicitis. Roser reports that in Germany every year 4000 people die from ileus caused by intra-abdominal strangulation. Naunyn has collected statistics of 258 cases of ileus in which operation has been performed; of those done on the first or second day, 75 per cent. recovered, on the third day only 37 to 40 per cent. recovered. Theinhaus emphasizes the following: (1) When the diagnosis can be made that the case is one of ileus caused by intra-abdominal strangulation no internal treatment whatever can come into question. Immediate oper-

ation is the only justifiable treatment for this class of cases; (2) if a positive diagnosis concerning the nature of ileus cannot be made and the internal treatment, as advocated in this article, does not relieve the symptoms of ileus within five hours from the onset, advise immediate surgical intervention; (3) do not obscure the picture in a case of ileus by large doses of morphine or opium, thereby rocking the patient and yourself into a state of euphoria which is only apparent and looks like calm before the storm—the catastrophe of death. [T. M. T.]

4.—G. Lenox Curtis concludes with the following important facts: (1) The device is not complicated and the cost of the apparatus is not prohibitive, and its maintenance amounts to practically nothing. A nurse can be easily taught to operate the machine: (2) the high tension and the low amperage of the current eliminate all danger from shock: (3) the high tension current and the great quantities of ozone liberated are productive of rapid therapeutic results; (4) the efficiency of the machine is not impaired by damp weather, and it is, therefore, always ready for use; (5) the machine is portable and well-adapted for use in the sick-room; (6) it generates pure ozone and, for that reason, it is superior to any oxygen apparatus; (7) chronic and acute cases are alike amenable to the curative effect of electric ozonation; (8) this appliance is a valuable diagnostic aid. [T. M. T.]

6.—Hugh M. Taylor's article is summed up as follows: (1) In very many sick typhoids perforation or peritoneal infection cannot be diagnosticated until the results are already widespread and of fatal extent; (2) in mild typhoid of fair general condition an abdominal operation is readily borne, provided no peritoneal infection is present; (3) operations must be done at once, for general infection may become past relief in from one to five hours, and walling off of the perforation by protecting adhesions is so rare as not to be counted upon; (4) in the majority of mild cases, beginning infection (whether from perforation or not) is marked by comparatively slight symptoms—local pain, tenderness, spasm, and leukocytosis. The severe following symptoms mean general peritonitis; (5)these warning symptoms demand serious consideration and study, but in many cases are either not rightly understood or acted upon; (6) complaint of abdominal pain in a case of typhoid should always lead to a suspicion of beginning peritoneal infection; (7) frequent leukocyte counts are needed in every case of typhoid. In the presence of abdominal pain an hourly count is necessary; (8) pain associated with local tenderness, muscular spasm and a rising white blood count, points in most cases to an operation; in all cases to a surgical consultation; (9) in not a few of the series of cases reported operation was imperative a varying number of hours before it was done: (10) in bullet wounds of the intestines there are no reliable symptoms until the advent of peritoneal infection—the character and location of pain, the existence or absence of shock, an increased temperature, pulse rate, or hepatic area of resonance in place of flatness, etc., furnish guides of but little value. The author's experience prompts him to attach most importance to (a) pain, (b) muscular rigidity, (c) inhibited peristalsis. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

January 30, 1902.

1. On the Value to the Physician of Modern Methods of Diagnosis. HENRY L. ELSNER.
2. Suggestions in Medicine. GEORGE C. SMITH.
3. A Case of Raynaud's Disease. GEORGE S. C. BADGER.
4. Vaccination and Smallpox. S. H. DURGIN.

1.—George C. Smith calls attention to the need of thorough preparation in psychology for the medical school, and the danger that is liable to ensue from bad suggestive therapeutics. The psychical element in patients is often ignored, and some believe that its consideration falls exclusively within the domain of the neurologist. Adult patients, according to the author, are usually especially recipient, sometimes pessimistic and even melancholy. Such features, therefore, cannot be entirely ignored, and form important elements in the individual cases. Inquiries as to symptoms may often cause the patient to suspect a lesion of the organ to which he (the patient) refers the symptoms. Several instances are reported by Smith. The deleterious influence of bad suggestive therapeutics is illlustrated by the victims of railroad accidents, who are subjected to the influences of sympathizing friends, unscrupulous lawyers, and sometimes the expert testimony given for or against them. The latter is especially to be deplored. The dismissal of a patient after an operation without receiving subsequent treatment is, according to Smith, another cause of detriment. [M. R. D.]

3.—George S. C. Badger reports a case of Raynaud's disease occurring in a woman, 45 years of age, and presenting quite a diversity of symptoms. The family history was excellent. The first symptom was intense burning in both feet, followed by discoloration, but no swelling of those members. These symptoms continued, and were followed within two months by similar conditions in the fingers. There was polyuria and some glycosuria, the latter however, not persisting. Areas of local syncope developed, cough and rapid decline. Death took place two years and three months after the onset of the symptoms, and thirteen months after the author first saw the patient. Badger discusses the two conditions, glycosuria and arteriosclerosis, which are often associated with gangrene. [M. R. D.]

3.—S. H. Durgin, Chairman of the Boston Board of Health, calls the attention of the medical profession to the fact that there are too many cases of smallpox occurring among those that have been vaccinated, and he believes that this is due to not vaccinating enough. He also believes that children should be vaccinated when very young, and the vaccination repeated until it will no longer take effect. The question should be carefully studied as to whether the occurrence of the disease among the vaccinated is due to carelessness in conducting the operation or to the deterioration of bovine lymph. The operation of vaccination is described, shields considered useless an hour after vaccination, asepsis to be observed as in other operations, and likewise the subsequent treatment of the arm. If a typical vesicle does not form, the operation should be repeated. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 1, 1902.

1. Indications for the Utility of Altitude Treatment in Pulmonary Tuberculosis. S. E. SOLLY.
2. Adaptability of Southern California and Similar Climates to the Needs of Consumptives. NORMAN BRIDGE.
3. Nineteen Years' Experience with Creosote in Tuberculosis. JAMES A. BURROUGHS.
4. Treatment of Acromegaly with Pituitary Bodies. SYDNEY KUH.
5. The Teaching of Practical Dietetics in Medical Schools. R. O. BEARD.
6. Three Cases of Paralysis of the Serratus Magnus and the Trapezius-Alar Scapula. A. A. ESHNER.
7. Dementia Preceding and Following Inebriety. T. D. CROTHERS.
8. Dyspeptic Asthma. MAX EINHORN.
9. The Immediate Diagnosis of Blastomycetic Dermatitis. A. W. BRAYTON.
10. Sudden and Temporary Mental Aberration, etc. SAMUEL AYERS.
11. Rapid Sugar Testing with Haines' and Purdy's Solutions. WILLIAM H. GERMAN.
12. The Traumatic Arterio-Venous Aneurysms of the Subclavian Tissues, etc. RUDOLPH MATAS.
13. The Organization of the Medical Profession.

1.—See Philadelphia Medical Journal, June 22, 1901. Page 1190.

2.—See Philadelphia Medical Journal, June 22, 1901. Page 1190.

3.—See Philadelphia Medical Journal, June 22, 1901. Page 1190.

4.—See Philadelphia Medical Journal, June 22, 1901. Page 1192.

5.—See Philadelphia Medical Journal, June 29, 1901. Page 1233.

6.—See Philadelphia Medical Journal, June 15, 1901. Page 1144.

7.—See Philadelphia Medical Journal, June 15, 1901. Page 1145.

8.—Einhorn contributes an article on "Dyspeptic Asthma." He discusses the literature pertaining to this subject, the work of Henoch, Traube, Silbermann, Barrié, Lauterbach, Oppler, Boas, Ehrlich and Murdoch. He mentions that dyspeptic asthma is not a rare condition and it is of great importance to the practitioner. He thinks that the term "dyspeptic asthma" should be applied to those cases free from involvement of the chest organs and in which the affection has a distinct connection with the digestive apparatus. Cardiac and pulmonary asthma is sometimes excited or increased during gastric digestion. The author has observed 31 cases of dyspeptic asthma in which the chest organs were apparently normal. These cases he has arranged into two groups: "(1) cases in which dyspeptic asthma appears in an acute form periodically; (2) cases in which dyspeptic asthma assumes a more chronic type." He has also observed two varieties of the chronic form "(a) cases in which the attacks of asthma appear quite soon after meals, either without any peculiar provocation or after some slight exertion; (b) cases in which attacks usually occur two or three hours after meals either spontaneously or again after some exertion, walking, etc." Some of the chronic cases of dyspeptic asthma closely resemble true angina pectoris. These cases are difficult to diagnose. He gives a report of a case of such an instance. As a rule, cases of dyspeptic asthma yield to treatment. By directing attention to the digestive apparatus good results usually follow. Many of the cases can be permanently cured. A considerable number of patients afflicted with dyspeptic asthma are also sufferers from achylia gastrica; and others from hyperchlorhydria.

[F. J. K.]

9.—Brayton discusses **"the immediate diagnosis of blastomycetic dermatitis."** The author mentions that the affections which are most likely to be mistaken for blastomycosis are epithelioma and tuberculosis. He also states that blastomycetic dermatitis and tuberculosis or syphilis may coexist. The author discusses the diagnosis of this condition and concludes that "if any part of the body, notably the exposed parts, as the hands, face and feet, a portion of the skin presents the pustules followed by small crater-like ulcers which coalesce, causing progressive destruction of the skin, blastomycosis may be suspected. At first the patient thinks the lesions are small boils, and resorts to poultices. Upon consulting the physician, the lesions are mistaken for boils, possibly for lupus, or syhpilis, or epithelioma, and appropriate treatment given according to the diagnosis. If regarded as lupus or cancer, the physician may cauterize the lesions with the actual or chemical cautery, and no doubt, in the past many cases have been cured in this way, for the disease can in no sense be regarded as new to the human species, and indeed, is probably as old as cancer, lupus, or syphilis." The microscope offers great aid in the imemdiate diagnosis of blastomycetic dermatitis. A small piece of tissue taken from the margins of the lesions is macerated in from 20 to 30 per cent. potassium hydrate solution for from five to ten minutes. The alkaline solution produces no action upon the yeast cells and they stand out prominently in the macerated material as highly refractile bodies from five to twenty microns in diameter. The budding stage is almost always noticed. In order to avoid confusing the yeast cells with oil droplets, the tissue should be washed in ether before the potassium solution is added. [F. J. K.]

10.—Ayres contributes an article on **"sudden and temporary mental aberration—unconscious automatism—temporary irresponsible states."** He remarks that the problems in psychology are numerous and fascinating and many are yet unsolved. There are certain individuals who perform at times certain automatic acts or are seized with sudden delusions or hallucinations who after a short time (a few minutes, a few hours or a few days) recover suddenly their usual cerebration and who have no recollection, however, of the acts previously performed. Some may recollect the hallucinations or delusions as one remembers a dream. The author emphasizes that such individuals may commit serious crimes and great care must be taken to avoid the deliberate criminal using these facts as a cloak for his crime and thus escape punishment. The author reports three cases of mental aberration, one occurring in an epileptic, another in a man, 35 years of age, who was suffering from neurasthenia resulting from alcoholism or syphilis, and the third case was that of a man who after severe muscular exertion developed this condition.

[F. J. K.]

10.—German suggests a method for testing sugar with Haines' and Purdy's solution. The apparatus which is needed consists of a graduated test-tube and pipette and a Bunsen burner or spirit lamp. The author states that "when the presence of sugar in the urine has been determined, as by Haines' test, fill the test tube to the 12 c.c. mark with Purdy's solution, and the pipette to the zero mark with the urine to be tested. Heat the test solution to boiling, and add the urine drop by drop in the test tube, boiling for a few seconds after the addition of each drop, until the blue color has entirely disappeared, trying to decolorize with the smallest possible quantity of urine. If less than 0.2 c.c. of the urine is required to decolorize the test, the urine contains above four per cent. of sugar, and should be diluted with an equal volume of water and the results obtained multiplied by two." In this article there is included the following table which gives all ratios of reduction from one-half of 1 per cent. up to 4 per cent.

"Cubic cm. Urine		Per cent. Sugar		Gr. per oz.	
.2	[illegible]	4	2	19.2	9.6
.225	[illegible]	3.75	1.75	18	8.4
.25	.6	3.5	1.5	16.8	7.2
.275	.7	3.25	1.25	15.6	6
.3	[illegible]	3	1	14.4	4.8
.325	1.2	2.75	.75	13.2	3.6
.35	1.4	2.5	.5	12	2.4
.375		2.25		10.8	

[F. J. K.]

12.—Rudolph Matas concludes his extensive article on **traumatic arterio-venous aneurysms of the subclavian vessels** with an analytical study of 15 reported cases including one upon which he operated. The following is a synopsis of his own case: "A case of traumatic (gunshot) arterio-venous aneurysm of the right subclavian vessels, involving the artery within the scaleni; division of the artery between ligatures placed on the first and third divisions; detachment of the anastomotic connection; lateral suture of the venous orifice; osteoplastic resection of the clavicle under eucain B. anesthesia; recovery, with partial loss of hand and forearm from artificial ischemia." The anesthesia in this case is interesting. Twenty minutes before beginning the operation the patient was given ¼ of a grain of morphia hypodermically. During the first two hours of the operation local anesthesia was employed, but chloroform had to be substituted later because of pain caused by encroachment upon the deep branches of the cervical plexus which could not be infiltrated. The operation was begun at 9.20 and was completed at 2.30; much of this time, however, was spent in giving the patient rests, the actual work not consuming three hours. The operation is divided into eight stages as follows:

First Stage. Section of the clavicle at the junction of the middle and outer thirds.

Second Stage. Formation of osteoplastic clavicular flap.

Third Stage. Dissection and elevation of osteoplastic flap formed by clavicle, skin, sternomastoid, and subcutaneous tissues.

Fourth Stage. Exposure and preparatory control of the venous side of the aneurysm.

Fifth Stage. Exploration in search of the innominate and provision loop around anomalous subclavian applied.

Sixth Stage. Detachment of the subclavian vein from the artery at the point of injury after failure to identify the third portion of this vessel outside of the scaleni on account of mass of exudate which masked it completely. Profuse hemorrhage from the artery at the anastomotic orifice, in spite of complete control of this vessel at its

origin. Final ligation of the artery on each side of the bleeding point. Closure of the venous orifice by suture without obstructing the lumen.

Seventh Stage. Readjustment of flap; closure of wound; drainage.

Eighth Stage. The bullet was extracted by an incision over the anterior edge of the trapezius, and found to be a 38-caliber and absolutely undeformed.

The condition is summarized as follows: A continuous direct channel existed between the artery and vein which was the result of a primary hemorrhage occurring in the rigid and unyielding space between the scalene muscles. The vein was enormously distended and the circulation of the upper extremity was kept up chiefly by collateral circulation. The bullet had also caused a contusion of the brachial plexus which led to a paralysis of sensation and motion which was intensified by arterial ischemia of the arm. It is possible to restore the continuity of the subclavian vein by lateral suture after detaching it from the aneurysmal orifice. The possibility of gangrene of the extremity should not be overlooked in considering the prognosis and post-operative results. The advantages of massive infiltration of very dilute eucain and cocain solutions are well shown in this case. Matas recommends the use of chloroform, should a general anesthetic become necessary, as it is not accompanied by so much respiratory disturbance and over-distension of the veins as occurs when ether is given. Stress is also laid upon the importance of administering morphia before beginning the chloroform anesthesia. Following the report of his own case is the history of arterio-venous aneurysm in this situation and an analysis of cases already reported. [J. H. G.]

AMERICAN MEDICINE.

February 1, 1902.

1. On the Value to the Physician of Modern Methods of Diagnosis. HENRY L. ELSNER.
2. Erysipleas in the Negro, etc. R. P. STOOPS.
3. The Passing of Drug Giving. JOHN MADDEN.
4. The Comparative Value of the Thorner Stationary Ophthalmoscope. HOWARD F. HANSELL.
5. "The Vexed Question of Vaccination" Again, etc. F. J. RUNYON.
6. A Durham Tube in the Right Bronchus. E. D. FERGUSON.
7. The Abandoment of Digital Examination by the Vagina in Labor. W. A. BRIGGS.

1.—See *Boston Medical and Surgical Journal*, January 30, 1902, and *Medical News*, February 1, 1902.

2.—R. P. Stoops reports a case of erysipelas in a negress of 45 years. Infection occurred during the menstrual period. A brief summary of the literature illustrating the rarity of this condition is given. [T. L. C.]

3.—John Madden writes on "the passing of drug giving." He says we are still sadly lacking in rational remedies to cure disease, but there is something to be hopea for in the production of antitoxins, for by their development nearly all acute febrile diseases are self limited. He also makes this statement: "There is always hope that chemistry will unlock the secrets of immunization and point out the exact nature of those valuable chemic bodies which confer immunity or make so many diseases self-limited, and it is not unthinkable that synthetic chemistry may sometimes imitate nature and build them up in the laboratory. [T. L. C.]

4.—H. F. Hansell discusses the comparative value of the **Thorner stationary ophthalmoscope.** The instrument can never replace or substitute the hand ophthalmoscope because of its size, nonportability, inferority for the study of lenticular and vitreous opacities, and its indifferent measurement of the state of refraction of the eye under examination. Notwithstanding these objections, the instrument is almost indispensible for those interested in ophthalmoscopy and the **relation of general disease to fundus changes.** It affords a beautifully illuminated view of the magnified fundum. It is especially useful for purposes of teaching, in sketching or painting the eye ground, and for diagnosis, especially on account of the fact that a large part of the fundus is visible at one time. Cuts of the instrument accompany the article. [T. L. C.]

5.—F. J. Runyon devotes this article to a reply to a criticism of former papers of his which appeared in the *Memphis Medical Monthly*, June, 1900, and August, 1901. The criticism referred to occurred in the paper of Dr. Charles Good, *American Medicine*, November 16th, 1901. Runyon believes that glycerinated lymph is a dangerous virus for general use and that it is calculated to bring discredit upon the discovery of vaccination. [T. L. C.]

6.—E. D. Ferguson reports a case in which a Durham tracheotomy tube became lodged in the right bronchus necessitating operation for its removal. The faulty construction of the instrument is described. [T. L. C.]

7.—W. A. Briggs presents a paper on the **abandonment of digital examination by the vagina in labor.** He believes that the information obtained by vaginal examination may be secured by another means as **abdominal palpation and auscultation,** and **antepartum pelvimetry.** He calls especial attention to the systematic use of **digital examination per rectum,** simple and bimanual and **palpation of the perineum.** He believes that diagnosis of the position may be made at an earlier stage by the rectum than by the vagina. [T. L. C.]

ANNALS OF SURGERY.

August, 1901.

1. Intraperitoneal Rupture of the Bladder Treated by Laparotomy and Suture. Report of Forty-five Cases. SAMUEL ALEXANDER.
2. Strangulation of the Testis by Torsion of the Cord. A Review of all Recorded Cases, Together with the Report of One Recent Case. CHARLES L. SCUDDER.
3. Fracture of the Carpal End of the Radius, with Fissure or Fracture of the Lower End of the Ulna, and Other Associated Injuries. CARL BECK.
4. An Operation for Saddle Nose. F. W. GWYER.
5. The Artificial Production of Connective Tissue by Means of Injection of Agar-Agar. SIMON PENDLETON KRAMER.
6. An Operation for the Radical Cure of Umbilical Hernia. W. J. MAYO.
7. Sarcoma of the Wall of the Thorax. Successful Excision of a Part of Three Ribs and a Portion of the Diaphragm. C. B. PORTER.
8. Congenital Anterior Dislocation of the Tibia Treated by Arthrotomy. J. B. ROBERTS.
9. Cancrum Oris Successfully Treated by Excision and the Cautery. A. Z. C. CRESSY.
10. Forward Dislocation of the Semilunar Bone. P. R. BOLTON.

1.—See Summary of Genito-Urinary Literature, Department for Co-operation and Original Research, for January. **Philadelphia Medical Journal.**

2.—See Summary of Genito-Urinary Literature, Department for Co-operation and Original Research, for January. **Philadelphia Medical Journal.**

3.—Beck extols the use of the Röntgen ray after **fracture of the lower end of the radius,** as it is by this method alone that a correct anatomico-pathological diagnosis may be formed. At least two exposures in different positions should be made. A soft tube should be chosen and the exposure should be long enough to show the bones distinctly and the soft tissues hardly at all. In a doubtful case in which the primary exposure is negative, several skiagrams at different stages of the after-treatment should be taken; a fissure fracture may be overlooked until callus formation begins. Beck classifies fractures of the lower end of the radius as follows: epiphyseal separation; fissure; complete fracture; incomplete fracture; fracture of the carpal end of the radius complicated with fracture of the styloid process of the ulna; fracture of the carpal end of

the radius combined with fissure or fracture of the lower end of the ulna; fracture of the carpal end of the radius complicated with fracture of the scaphoid bone; and chipping of the bone. Diagrams and skiagrams of these varieties are given. He believes that many fractures of the lower extremity of the radius which are accompanied with the so-called sideward pushing of the ulna, are complicated by fracture of the lower part of the ulna. Fissure fracture is treated by encircling the wrist by a bracelet of moss-board, free motion of the hand is permitted. In complete fracture without tendency to displacement a plaster of Paris dressing may be applied immediately. To keep recalcitrant fragments adjusted, a long wire splint is applied while strong traction is maintained and a pad of adhesive plaster is placed over the displaced bone; in dorsal displacement a short splint is bandaged to the back of the forearm. If the deformity is towards the palmar surface, the wire splint rests on the extensor aspect and the short wooden splint is applied to the flexor surface. When the displacement is lateral two short splints are employed, one on either side, the pad of adhesive plaster being placed over the projecting fragment. After the first week, if the fragments are agglutinated, short wooden splints running from the metacarpophalangeal joint up to the middle of the forearm are worn. During the third week a moss-board bracelet is so applied as to permit of free motion of the fingers. After the third week massage and motion are indicated. Malposition may often be corrected after two or three weeks. In old cases with deformity and severe functional derangement, reposition may be effected after osteotomy. [F. T. S.]

4.—Gwyer proposes to remedy **saddle nose** by filling the hollow of the deformity by a flap taken from the tip of the nose. An incision is made in the median line, the flaps dissected outward, and a mass of tissue consisting of subcutaneous tissue and cartilage separated from the tip of the nose except at its upper part, this mass is turned over into the depression and the skin flaps sutured in place. The broadened and flattened alae are made more shapely by excising a portion of the cartilage lying on either side of the median line. [F. T. S.]

5.—Kramer injected into the pleural cavities of rabbits melted agar jelly; this jelly solidified, became infiltrated with round cells, and in the course of from 30 to 40 days became replaced by vascularized connective tissue. In several cases of inguinal hernia the sac and canal have been filled with this jelly which has become organized and has cured the defect. [F. T. S.]

6.—See **Philadelphia Medical Journal**, Vol. 7, No. 23, page 1080.

7.—Porter reports the following case: Male, aged 41 years, had suffered with pain in the right chest for three and one-half months; three weeks after the onset of pain a tumor was detected. At the time of operation the tumor had reached the size of a medium-sized cocoanut, the centre of which lay in the anterior axillary line at the level of the eighth rib. After performing a preliminary tracheotomy in order to inflate the lung by means of bellows should sudden collapse of the lung occur, a large flap was turned up, and the growth together with the anterior halves of the seventh, eighth, and ninth ribs, and a portion of the diaphragm removed. The opening in the diaphragm was closed with a suture of animal tendon. A drain of rubber tissue gauze was placed in the pleural cavity. At the end of 35 days it was necessary to open the incision to allow several ounces of straw-colored fluid to escape from the pleural cavity. At the end of 16 months the patient is in good condition with no signs of recurrence. Microscopic diagnosis: **Medullary sarcoma originating in the rib.**
[F. T. S.]

8.—Roberts publishes the result of an **arthrotomy for congenital anterior dislocation of the tibia** occurring in a girl aged five years. When the child lay upon her back the tibia extended upward, making an angle with the plane of the bed of about 50 or 60 degrees. The joint was opened by a curved incision carried across the front of the knee. After lengthening the ligamentum patellae, the external lateral ligament of the knee was partially divided and reduction effected. When the child was discharged, the limb was straight but the movements of the knee joint were greatly restricted. [F. T. S.]

9.—Cressy details the history of a child aged 7 years who developed **cancrum oris** after an attack of measles. The sloughing tissues were freely excised by an external incision and the resulting wound cauterized. Recovery ensued. [F. T. S.]

10.—Bolton reports a case of forward **dislocation of the semilunar bone** associated with a fracture of the styloid process of the radius. Stimson states that there are but 13 instances of dislocation of the semilunar bone on record.
[F. T. S.]

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

January 1, 1902.

1. Cases Illustrating Ureteral Surgery. HENRY COE
2. A Case of Blindness from Congenital Deformity of the Occiput. CHARLES OLIVER.
3. Double Hydrocele in an Infant—Prolapse of the Rectum—Case of Osteomyelitis of the Tibia—Necrosis of the Lower Jaw Following Measles—Case of Knock-knee—Cellulitis of the Penis and Scrotum. HENRY WHARTON.
4. Inpacted Calculus in the Urethra of Children; Report of Two Cases. JOHN JOPSON.
5. A Case of Chronic Lymphatic Leukemia in an Infant. J. ALLISON SCOTT.
6. Uncinariosis (Anklyostomiasis); Further Report of a Case. THOMAS CLAYTON.
7. Laparotomy for Perforation in Typhoid Fever. C. E. BRIGGS.
8. Two Cases of Typhoid Fever Complicated by Noma. JOSEPH SAILER.
9. Thyroiditis Complicating Typhoid Fever. WILLIAM ROBERTSON.
10. Cause of Death in Aneurysms of the Thoracic Aorta. H. D. ARNOLD.
11. The Association of Pulmonary Tuberculosis with Both Primary and Secondary Endocarditis. JAMES ANDERS
12. A Report of a Case of Dementia Praecox. WILLIAM DUNTON
13. On Sarcoma of the Radix Linguae, with Report of a Case. GEORGE SHAMBAUGH.
14. Review of Echinococcus Disease in North America. IRVING LYON
15. Recent Views of the Origin and Nature of Herpes Zoster. ARTUR VAN HARLINGEN.
16. Some Experiments on the Intermediary Circulation of the Bile Acids. ALFRED CROFTAN.

1.—Coe reports some interesting cases in which **operations upon the ureters** were required. The first, a woman of 23, had a huge fibromyoma of the uterus. During its removal the uterine artery and the ureter were ligated and then divided. After the uterus was removed a ureteroureteral anastomosis was performed, but subsequently some leakage occurred. The fistula ultimately closed entirely. The second patient, a woman of 51, had a double intraligamentary dermoid cyst. During the removal, the left ureter was torn across, but was immediately repaired, and although the condition was complicated the patient recovered completely. The third patient, a woman of 31, had a large myxosarcoma of the pelvis. During the removal of this a portion of the trigone and about an inch of the left ureter were dissected off, and the right ureter was severed close to the bladder. The left ureter was implanted into the bladder and the right simply surrounded by gauze. Six weeks later there was a huge fistula involving the base of the bladder, with continual dribbling of urine. Two months later an operation for repair of the fistula was performed, and the patient made a complete recovery. The author believes that in all cases in which the ureter is injured during operation an attempt to repair it should be made immediately as the difficulties of a secondary operation are very great. [J. S.]

2.—Oliver reports the case of a girl, 4 years of age, the 4th of 5 children, 3 of whom were born dead. She had always slept with the eyes open, had been able to see a little until at the age of 3 when she had become totally blind. She was deformed at birth. When examined it was found that the eyes were abnormally prominent, that the eyeballs were freely movable, that the palpebral fissures were abnormally long, and there was constant rotary nystagmus, The irides were freely and equally mobile to light stimulus, and various attempts to bring accommodating action into play caused prompt contraction of the pupils. There was no dilatation of the pupils when the skin of the neck was pinched. There were no areas of analgesia or of anesthesia. The eye-grounds were entirely normal. Intraocular tension was normal. The patient, however, was absolutely blind, not even perceiving the strongest day-light. Wernicke's sign and the Kneis pupil symptom were not present. Examination of the mental function showed that probably a true cortical visual amnesia existed. All the organs were healthy; the deep superficial reflexes were normal; adenoids were present in the retropharangeal space. Photographs of the patient show a very marked defect in the posterior portion of the head. The case is interesting on account of the sex of the patient, the majority of cases occur in males, and the noninvolvement of the motor functions of the eye. [J. S.]

3.—Wharton reports some interesting cases. A male infant, 7 weeks old, had gradually developed enlargement of the scrotum. This did not increase in size during coughing and was translucent, and therefore the case was one of double hydrocele. Treatment consists of cooling lotions or the injection of mild irritants. A boy of 7 had pus in the urine and moderate prolapse of the rectum. For this cauterization with nitric acid appears to be the most effective treatment. In severe cases the actual cautery may be used. A boy of 11 had fallen from a fence striking the left leg. Pain then developed above the ankle followed by redness, swelling and fluctuation. A diagnosis was made of acute infectious osteomyelitis, and pus and necrotic bone were found beneath the tibial periosteum. The bone was thoroughly cleansed, the medullary cavity packed with iodoform gauze, and the patient recovered rapidly. A child of 18 months after an attack of measles had an offensive discharge from the mouth. When examined there was found to be necrosis of a considerable portion of the lower jaw. Treatment consisted in the thorough removal of all loose tissue, and cauterization of any parts that were necrosed. The mortality is high. A child 4 years of age, with knock-knee, was treated by osteotomy, the legs were then placed in a position of over correction and fixed with plaster of Paris bandages. At the end of 8 weeks after this treatment the patient can usually walk. In a child of 7 weeks cellulitis of the penis and scrotum occurred which was apparently the result of forcible measures to relieve phimosis. Cleansing lotions are all that is required in treatment. [J. S.]

4.—Jopson reports two cases of **impacted calculus in the urethra of children.** The first, a boy of 3, had difficulty in urination for about two weeks. For 28 hours before admission he passed no urine, and had been very restless. The abdomen and scrotum and thighs were swollen and tender. A diagnosis of urinary extravasation was made, probably due to rupture from impacted calculus. At operation a small red, rough stone was found in the spongy urethra. The child did well for 3 days, and then developed an attack of what was apparently scarlet fever. It improved and then grew worse and died in collapse. The second patient, a boy, 3½ years of age, had complained of pain over the bladder and passed no urine for 24 hours. When a catheter was passed a stone could be felt in the urethra. Medium urethrotomy was performed and a smooth round stone removed. The patient recovered satisfactorily. Jopson believes that the tension is usually reflex in character. The operation is often difficult. [J. S.]

5.—The patient, an Italian boy, of the age of one month, was noticed to be unnaturally pale. He frequently had attacks of intestinal catarrh with green stools and mucus. He first came under observation at the age of 9 months, when the spleen was found to be enlarged. Examination, extremely variable leukocytosis, the range being from 18,000 to 105,000. The differential count showed usually a very large percentage of small lymphocytes ranging from 17% to 67%, and a great reduction in the polymorphonuclear cells. The eye-grounds showed a neuro-retinitis; there was only moderate emaciation and no enlargement of the superficial lymph glands. Death occurred from asthenia and no autopsy was obtained. The diagnosis of this condition appears to be **leukemia.** Splenic anemia is excluded on account of the presence of leukocytosis. In general it corresponds to the co-called pseudoleukemia anemia infantum of von Jaksch. After reviewing the evidence at hand Scott is inclined to include splenic anemia and von Jaksch's disease among the secondary anemias. [J. S.]

6.—Clayton, discussing the disease **uncinariosis,** or ankylostomiasis states that it is remarkable that is is not more common in the United States as the climate seems favorable to its development. He describes the anatomy of the worm, the appearance and development of the egg, and he quotes Looss in proof of the fact that the embryos are carried to new hosts through water or through moist earth. There is some evidence that the embryos penetrate the skin. The morbid anatomy of the disease is anemia and sometimes catarrhal thickening of the intestinal wall. The patients often have a peculiar anxious expression which often leads to a suspicion of the disease, and the diagnosis can then readily be made by the discovery of the ova. Treatment consists of the administration of thymol in doses of from 15 to 30 grains repeated 4 times at intervals of four and a half hours. If the bowels have not acted 12 hours after the first dose, a purgative should be given. It is also well to use a laxative before beginning the treatment. This treatment should be repeated for 7 or 8 days until the ova are in the stools. Twelve cases have been reported in the United States, 5 of which were unquestionably indigenous, 3 were imported, and in 3 the place of infection is uncertain. The ova have been found in a number of cases in Texas. Clayton's patient, a man of 19, had the characteristic symptoms and although the ova continued to be found in the stools after several weeks treatment they were decreasing, and the prognosis appeared to be good, when the patient died suddenly of cerebral hemorrhage. At the autopsy the liver and spleen were enlarged; there were ecchymotic spots in the wall of the intestine, and 29 worms were found. [J. S.]

7.—Briggs reports 6 cases of **typhoid fever** in which operation was performed for **perforation.** Four of these cases were fatal and all were very severe forms of infection. In one of the cases a perforation was not found, and this patient recovered. One of the patients was admitted to the hospital suffering with signs of peritonitis; in the other 5 pain was present occurring suddenly in 3 and gradually in 2 cases. In 3 of them it was confined to the lower portion of the abdomen. Tenderness on pressure was very variable; in some cases considerable, in some slight. It was usually general. Muscular rigidity was pronounced in 4 cases; in the 5th case it was very slight, and no perforation was found. There was moderate distension in 4 of the cases; slight vomiting in 3, and none at all in 2. The pulse always increased in rapidity. In 2 cases the temperature was unaffected; in 2 it rose, and in one it fell one degree. The respiratory rate was always considerably increased; leukocytosis invariably developed and was present even in the case in which perforation was not found and which recovered. The operation was performed in spite of the very desparate condition of 4 of the patients. The 2 cases that recovered, however, were both in good condition. The operation was always performed as soon as possible after the symptoms had appeared, the interval ranging from 1

to 8 hours, with the exception of the case admitted after perforation occurred, in which the duration was anywhere from 24 to 48 hours. General anesthesia was used 4 times, and local anesthesia once. Incision was made in the right semilunar line, the cecum, appendix and ileum were opened and when perforation was found it was closed by two rows of long sutures. In all cases of perforation there was peritonitis at the time of operation. All perforations were small and single; the peritoneal infection showed the colon bacillus and staphylococcus, with the exception of one case in which the bacillus mucosus capsulatus was found. In all cases death apparently did not occur from general peritonitis because this condition was not found at autopsy. [J. S.]

8.—Sailer reports two cases of **typhoid fever** occurring in a brother and sister. In the case of the brother, upon the 16th day of the disease swelling appeared in the right jaw which rapidly developed into typical **cancrum oris**. Cultures from this area showed the presence of the diphtheria bacillus, and twice after the subcutaneous inoculation with 4000 units of diphtheria antitoxin improvement occurred. The patient, however, gradually grew weaker and died on the 27th day of the disease. The second patient developed necrosis of the lower jaw, suppuration from the middle ear, and cultures from both areas showed the presence of diphtheria bacilli. Antitoxin was given although the local process appeared to be mild and the patient was convalescent from the typhoid fever. Recovery ultimately ensued. The first patient had had diphtheria the previous summer, and Sailer believes that the diphtheria bacilli probably remained in non-malignant form in the buccal cavity, and subsequently produced necrosis when the vitality of the patient had been reduced. He collects the cases of noma associated with diphtheria bacillus that have previously been reported. [J. S.]

9.—Robertson, after a discussion of the literature of the condition, reports the case of a man, 42 years of age, who, during convalescence from an attack of typhoid fever, began to complain of difficulty in swallowing. The thyroid gland enlarged, became tender and was soft. There was some elevation of temperature, extreme dysphagia and severe dyspnea. Gradually, however, the tumor diminished in size and the patient recovered. This apparently was a case of simple **thyroiditis**. [J. S.]

10.—Arnold classifies the cases of **aortic aneurysm** in which death is not due to rupture, according to the cause of death as follows. First, those in which the aneurysm is not an important factor in the fatal result. Second, in which death is produced by disease or disturbance of the circulatory system, that is not the result of direct pressure of the aneurysm, and third, cases in which death is due to pressure of the aneurysm upon structures of vital importance. He reports the case of a man, 51 years of age, who had suffered from several attacks of dyspnea. He had trachial tug and died of pulmonary edema. At the autopsy aneurysm of the transverse arch was found, but death was apparently due to lobar pneumonia. The second patient illustrates the second class of cases. There were symptoms of aneurysm of the ascending portion of the arch, and these symptoms were confirmed by a fluoroscopic examination. He died rather suddenly after a visit to the hospital for treatment, and at the autopsy there were signs of acute heart failure. The remaining cases illustrate death caused by pressure. A man of 42 with aneurysm of the ascending portion of the arch, died of exhaustion and pulmonary edema. This aneurysm compressed the pulmonary artery causing dilatation and hypertrophy of the right ventricle. In the 4th case, a man of 39, with aneurysm of the ascending arch, there was marked compression of the trachea, and the lungs were considerably distended. In the 5th case, a sacculate aneurysm of the transverse arch had compressed the esophagus and the right primary bronchus leading to atelectasis of the lung. [J. S.]

11.—Anders has made a careful study of the **relation of pulmonary tuberculosis to endocarditis**. He states that this relation may be either due to the presence of tubercle bacilli in the heart, (tuberculous endocarditis) or endocarditis secondary to tuberculosis and caused by other organisms than the tubercle bacillus; or valvular heart disease due to various non-tuberculous etiological agencies, and preceding tuberculosis of the lungs. With regard to the first group, study of the available satistics showed extraordinary variations in the figures obtained by different writers, the variations being from 0% to 32% of all cases examined. Anders reports a case in which endocarditis developed in the course of pulmonary tuberculosis, and although no autopsy was obtained he regards it as belonging to the first group. No statistics are given of the second group, but a case is mentioned in which a negro suffering from constitutional syphilis and pulmonary tuberculosis developed aortic regurgitation which was considered to be of syphilitic origin. With regard to the third group the statistics are very elaborate. It appears that in from about 1% to 8% of all cases of valvular heart disease pulmonary tuberculosis may develop. That is to say, comparitively few cases of valvular heart disease develop pulmonary tuberculosis, and therefore the old doctrine of an antagonism seems to find some support. As far as Anders can determine the explanation is venous congestion, although some authorities support the view that it is due to hypertrophy of the heart. It appears that in these cases tuberculous infection may remain latent. Hemoptysis, however, if it occurs has less tendency to arrest. The dyspnea is usually more severe and the pulmonary condition tends to aggravate the cardiac affection. Such patients should not be sent to high altitudes. If compensation is established a fairly good prognosis can be given. Aortic disease appears to be almost never associated with pulmonary tuberculosis. Anders reports 6 cases which illustrate various points in the paper. Disease of the right side of the heart appears to predispose to pulmonary tuberculosis. [J. S.]

12.—The patient, a woman of 31, began to accuse herself of wrong-doing and to neglect her household duties. She became more and more demented, could not dress or feed herself, developed katotony, antagonized passive movements; Chvostek's sign was present. She then improved slightly, occasionally laughed and once was violent. Superficial circulation was poor. The patient was finally discharged from the hospital and taken to an insane asylum. A diagnosis of **dementia praecox** was made. The unusual feature was the katatony. [J. S.]

13.—Shambaugh reports the case of a man, 38 years of age, who developed pain on swallowing, then a swelling at the base of the tongue which gradually assumed the size of a hen's egg. This tumor was soft and bled readily. A piece was removed and found to consist of spindle cells. Shambaugh discusses the symptomatology and the differential diagnosis of **sarcoma of the root of the tongue** and tabulates 10 cases including his own, that he has collected from the literature. [J. S.]

14.—Lyon gives references to 141 cases of **hydatid disease** that have been reported in the United States. From the statistics collected from these reports he finds that the disease is most common between 20 and 60 years of age. It is more common in males than in females, although this is the reverse of the results noted in Europe. It is vastly more common in persons of foreign birth than in natives, in a proportion of 91 to 9, and a very large proportion of the foreigners come from Iceland. It is common in the states of New York, Pennsylvania, and Massachusetts, and very common in Manitoba. The organs generally affected are the liver in 73.7%, the omentum, peritoneum and mesentery in 10.8%, the lung in 4.5%, and then in order the spleen, kidneys, bladder, pelvis, pleura, brain, breast and the abdominal wall. In a number of cases several of these organs or structures were affected. In 10 cases cysts were passed by rectum. The diagnosis is usually made

simply by inspection. It is possible that the disease is now increasing ;it is certainly on the increase among animals. The echinococcus appears to be very rare among dogs in America. The disease can probably be suppressed by enforcing proper sanitary regulations in the slaughter houses, killing stray dogs, and in not making too intimate pets of dogs. [J. S.]

15.—Van Harlingen gives a brief summary of the **theories regarding herpes zoster.** These consist chiefly of the nervous theory in support of which cases have been reported due to irritation of the nerves or myelitis, and other cases in which the trophic action of the sensory nerves appears to have taken part. Frequently visceral disorders are observed in connection with herpes zoster. The other causes suggested are, cancer, infection through disturbance of an artery and the vasomotor nerves, trophic disturbances of the sympathetic nerves. Van Harlingen concludes after a careful and critical estimation of the evidence, that herpes zoster is a specific infectious and probably contagious exanthema probably attacking chiefly the posterior sensory ganglia of the cord and the Gasserian ganglion. Zosteriod eruptions were sometimes observed as a result of poisoning from coal gas and after the ingestion of arsenic. [J. S.]

16.—Croftan, having shown that a large proportion of the **bile acids** are absorbed in the intestine to be subsequently excreted by the common duct of the liver, attempts to trace the **circulation** of these acids in their path from the intestinal mucous membrane to the liver. As it is impossible to find them in any appreciable quantities in the blood, although minute quantities can be found in the lypmh or thoracic duct, he assumes either that they are firmly combined with the mucin or taken up by the phagocytes. He therefore submitted 50 cc. of the coagulent obtained from dog's blood to artificial digestion. At the end of 48 hours no bile acids were present. He then mixed 50 cc. of blood with 300 cc. of absolute alcohol warmed to 40° C. The precipitate was filtered off and repeatedly washed with alcohol and finally dried. It was then extracted with boiling water and the extract tested for bile acids but they were absent. The alcoholic filtrate, however, contained them, providing that bile acids are present in the blood of a normal dog. The serum and blood corpuscles were then examined separately by the alcoholic method and bile acids were found in the latter. In the minute doses in which they exist in the body they may have a cytolytic action and a cholagogue action and may aid in coagulation. The discovery of bile acids serves to prove that hematogenic icterus is possible.

NORDISKT MEDICINSKT ARKIV.

1901. (Abt. 2. Anhang.)

This volume contains a report of the proceedings of the Third Northern Congress on Internal Medicine, held in Copenhagen, July, 1900. The main subject discussed was **serumtherapy.** Aaser stated that, since the introduction of the antitoxin treatment in 1895, deaths from diphtheria in Christiania have fallen from over 100 to 30, and in the rest of Norway from over 1600 to 300, annually. This mortality is greater when the patient only receives the antidiphtheritic serum on the third day of the disease or later. While formerly 75% of those cases in which operation was needed died, now but 10% end fatally. The main causes of death in diphtheria are laryngeal stenosis, paralysis of the heart, and pneumonia. In most cases treated with serum, all membrane disappears by the third day. In no case of diphtheria in which antitoxin had been injected, did membranes appear upon the tracheotomy wound. 1000 units were generally given, 3000 in severe cases. Paralyses and albuminuria occurred half as frequently as before. Hellström states that Stockhom had an epidemic of diphtheria in 1898 and 1899, yet the mortality only reached 5%. In children under 10 years, the mortality was 7%, while 3% died during their first 48 hours in the hospital. Serum was always used in the severe cases, but not in all mild cases. While 6657 patients received serum injections, 2659 recovered without it. Of those who had antitoxin, 7% died, over 4% in 48 hours. 668 cases were operated upon. Though it is impossible to estimate the strength of the antitoxin accurately, Hellström advises its use, especially in the severe cases. Sörensen found similar results in Copenhagen. He advocates the employment of serum in all cases of diphtheria as early as possible, especially when laryngeal stenosis is feared. Sievers reported 200 cases of diphtheria treated with antitoxin in Helsingfors, with 18 deaths. Many physicians reported the results of their experience throughout Scandinavia.

Among other interesting subjects was a report by de Fine Licht, who made 262 searches for **bacteria in the blood,** by his centrifugal method. He found the bacteria in 119 cases, pneumococci, typhoid bacilli, streptococci, staphylococci, etc. Holsti spoke upon the **diagnostic significance of hemorrhagic effusion into the right pleural cavity.** He reported 2 cases in whom hepatic affections seemed to be the cause. Ribbing believes that not only tuberculosis, but any tumor of the pleura will cause pleural hemorrhage. Chorea, tuberculosis, infantie atrophy, and other subjects were also discussed, articles which have mainly been already published elsewhere. [M. O.]

VRATCH.

November 24, 1901. (Vol. XXII, No. 47).

1. Graphic Methods for Determination of the Fluctuations of Blood-pressure in Man. I. M. LEVASHOFF.
2. On the Influence of Antipyrin on the Animal Organism. E. SUDZILOVSKI.
3. On the Etiology and Pathogenesis of Eczema. G. A. KUZEL.
4. On Intrauterine Injections. B. A. LIBOFF.
5. Concerning Lisle's and Julien's Bacillus of Syphilis. Z. V. SOVINSKI.

1.—Will be abstracted when concluded.

2.—Sudzilovski performed a considerable number of experiments on dogs, rabbits and frogs with a view of **determining the action of antipyrin both on the healthy animal and one suffering from staphylococcus infection.** He found that in healthy animals small doses of antipyrin produce loss of appetite, increased secretion of urine and increased nitrogen-elimination. On animals suffering from fever, as the result of infection, antipyrin has the same effect, only to a greater degree. The urine (in rabbits) contained large amounts of albumin (4% by volume) and hyaline and granular casts. Two of the rabbits had considerable hematuria. All the rabbits which received antipyrin **died with the appearances of extreme exhaustion.** On autopsy the liver was found in a condition of cloudy swelling and covered with metastatic abscesses. In 2 animals there was amyloid degeneration of the liver, spleen and kidneys. The spleen was found enlarged to 2-3 times the normal size, anemic and friable. The kidneys presented the picture of so-called "large white kidney," and occasionally contained a few abscesses. The possible explanation that the deleterious effects of antipyrin in fever are due to the reduction of temperature was controverted by the following experiments: Frogs were placed in water of various temperatures (from 3-30° C.) and then received injections of antipyrin. It was found that at a temperature of 28-30° C. 0.1 grm. of antipyrin produced convulsions in 4-5 minutes. At a temperature of 17° C. slight convulsions appeared at the expiration of 53-55 minutes, while at a temperature of 3-5° C. no effect whatever was produced. The results obtained from the experiments on frogs were fully corroborated by

similar experiments on rabbits placed under conditions preventing the loss of heat. These experiments prove that **antipyrin gains in toxicity with the rise of temperature, becoming highly toxic at the height of fever,** a fact which explains the untoward effect of the drug when administered in febrile conditions. The action of antipyrin is summed up as follows: Under normal as well as febrile conditions, **antipyrin stimulates the centers controlling heat production and heat distribution.** The center controlling heat radiation is usually, but not invariably, stimulated to a greater extent, causing a reduction of temperature. This explains the fact that during the administration of antipyrin nitrogen elimination is increased despite the reduction of temperature. It also shows that the reduction of fever is obtained at the high cost of increased metabolism in a body already exhausted from excessive disintegration, not to mention the highly toxic properties of the drug. [A. R.]

3.—Kusel, as a result of clinical and bacteriological observations and a study of the literature on the **etiology and pathogenesis of eczema,** arrived at the following conclusions: (1) The clinical, anatomical and etiological factors peculiar to each case cannot be taken as a basis for an all-round definition of eczema. (2) Eczema may be considered as a "catarrh of the skin" similar to the catarrhs of the mucous membranes. (3) From anatomo-pathological and etiological considerations the following forms may be excluded from the eczemas: The so-called "eczematoid dermatomycoses" (eczema marginatum seborrhoicum), "piodermiae superficiales" (impetigo simplex, contagiosa, herpetiformis), lichen simplex, acute and chronic, chronic neurodermitis circumscripta, dishydrosis, dermatitis herpetiformis, and, finally, medicamentous dermatitis. (4) Eczema cannot be called a constitutional disease in the true sense of the word, although there is undoubtedly some connection between eczema and some diseases of the internal organs. There are cases of eczema in which no external cause can be discovered, and the existence of some internal cause must be assumed. (6) Occasionally, eczema develops as the result of intoxication and autointoxication of the organism, especially from the intestinal tract, without the aid of any external irritant. With the removal of the cause the eczema disappears. (7) In the pathogenesis of eczema considerable significance is to be attached to changes in the nervous system, disturbances of innervation of the vasomotor and trophic nerves of the skin. (8) The infectious nature of the eczema has not been established. (9) Eczematous changes in the skin, more than any other moist or desquamative dermatosis, form a rich soil for the various forms of microorganisms, including pathogenic. (10) Of the pathogenic organisms the following are found with a frequency in the order named: Staphylococcus pyogenes aureus and albus, streptococcus pyogenes and others. (11) Fresh eczematous eruptions (vesicles) are sterile. (12) The pyogenic cocci found in older vesicles and postules and the secretion of moist eczema are of a secondary invasion. (13) These micrococci are identical with the ordinary pyogenic cocci, as far as the cultural, morphological and tinctorial characteristics, as well as the virulence. (14) Inoculations of staphylococci (yellow and white) on the skin produce only impetigo simplex, and not the clinical picture of eczematous changes. (15) In the pathogenesis of chronic eczema, a great many secondary causes (both internal and external) play a certain role; among these the above named cocci form an important and constant factor. (16) The pyogenic cocci and their toxins favor the chronic course of eczema and are capable of producing more or less serious complications, beginning with impetigo, lymphangitis, (streptococci), abscesses, boils and phlegmonous inflammations of the skin, and ending, especially in the disseminated forms of eczema, with pyemia and death. (17) General treatment (intestinal antisepsis) gives occasionally brilliant results without any local medication. [A. R.]

4.—Liboff opposes the tendency on the part of several gynecologists, notably Grammatikati, to **extol intrauterine injections** as the best treatment of various uterine diseases. He proves by a long series of observations that **in many cases, especially of gonorrheal origin, intrauterine injections have no beneficial effect whatever.** Over 60 cases are briefly described. [A. R.]

5.—Sovinski announces in a brief preliminary communication that he succeeded in cultivating from a milan fly a **bacillus identical with that of Lisle and Jullien.** A detailed report is promised. [A. R.]

December 1, 1901. (Vol. XXII, No. 48.)

1. On the Treatment of Fracture of the Clavicle. V. A. TILE.
2. Correct Methods of Overcoming the Morbidity and Mortality Among Infants. I. V. TROITSKI.
3. Graphic Methods of Determination of the Fluctuations of Blood-pressure in Man. I. M. LEVASHOFF.
4. A Hard Lipoma in the Pharyngo-laryngeal Region. Subhyoid Pharyngotomy. N. N. POROSCHIN.
5. On the Application of Caustic Potash in the Later Stages of Anthrax in Man. M. IA. POTEROZEN.
6. Contemporary Status of the Koumiss Treatment and the Imperative Need of it in View of the Fight Against Tuberculosis. N. A. ZOLOTAVIN.

1.—Tile points out the recent change which has taken place in the treatment of **fractures.** It has been observed that a **slight mobility of the fragments favors the formation of callus and brings about a more rapid and satisfactory union.** On the other hand, the effusion of blood between the fragments delays union, and on that account **massage** enters as an important and indispensible method of treatment. In view of these facts, the author enjoins the old method of immobilization of fractures by plaster of Paris and urges the employment of **light dressings and massage.** In the treatment of **fractures of the clavicle** the author employs a light bandage sufficient to produce fixation without in any way inconveniencing the patient. The fragments are **inspected daily** for the first 5-7 days and any tendency to deformity corrected by manipulation. In addition, **massage** is applied once or twice daily for 10-15-20 minutes. In cases in which the patient cannot be under constant supervision, a simplified Desault dressing is applied. This consists of a cotton padding and two soft gauze bandages applied directly on the body. The bandage is secured by a few stitches, being changed about once a week. This method was employed in a large number of cases with the best results. An illustrative case is described. [A. R.]

2.—Troitski cites a number of statistics from various countries, showing that **infant-mortality in Russia (75.7%) is higher than in any of the other countries.** To overcome this dreadful extermination of infants, due to ignorance and bad feeding, the following suggestions are made: 1. It is the moral duty of the well-to-do classes, private and government institutions, to organize children's *creches* and nurseries where the infants of the poor could find permanent or temporary care free of charge or for a slight remuneration. The mothers should have the right to bring their babies into the institution and visit them without any restrictions, in order that they may see and learn how to take proper care of infants. 2. The *creches* and nurseries should be built according to the demands of hygiene, should contain a limited number of children and be under constant and direct supervision of a physician. 3. Besides the necessary number of good wet nurses, the institution should also have the best infant foods for artificial feeding, partial or complete, of the inmates as well as for distribution among the mothers who are willing to nurse their own infants but do not have sufficient milk. 4. At the *creches* there should also be established schools for mothers where physicans-specialists should verify the results of mother's nursing and instruct them personally on the fundamental principles of feeding and care of infants. 5. Independent of the *creches*, systematic assistance should be rendered to mothers who are compelled by circumstances to forgoe the pleasure of nursing their children, but who at the same time are able to adhere strictly to their maternal duties. [A. R.]

3.—Will be abstracted when concluded.

4.—Poroschin removed a **hard lipoma** (lipoma durum) from the pharyngo-laryngeal region of a soldier 25 years

old. The patient was well nourished and healthy, except for the difficulty in deglutition and breathing. After a preliminary tracheotomy and intubation Malagaigne's operation was performed under cocain anesthesia, as the patient showed an idiosyncrasy towards chloroform. However, only a portion of the tumor was removed and a secondary operation was made about a month later. This time Rosenbaum-Lacour's method was preferred as giving more room and better results. The patient made an uneventful recovery. [A. R.]

5.—Poterozen employed local applications of caustic potash in 3 cases of anthrax during the stage of systemic disturbance characterized by fever, delirium, cephalalgia, etc. Contrary to expectations, the patients recovered. The author explains beneficial effects of caustic potash so late in the disease by the observations of Renault who found that in man anthrax remains localized for a long time. [A. R.]

6.—Will be abstracted when concluded.

THE SCOTTISH MEDICAL AND SURGICAL JOURNAL.

January, 1902. (Vol. X, No. 1.)

1. Some Clinical Observations upon the Temperature of Phthisis, based upon experience of one hundred consecutive cases treated by Open-Air Methods. DAVID LAWSON.
2. A New Method of Rapidly Preparing Histological Specimens. W. RAMSAY SMITH.
3. "Latah" among South African Natives. ANDREW GILMORE.
4. Observations on Cases of Pernicious Anemia, with special reference to the blood changes. ALEXANDER GOODALL.

1.—David Lawson urges that more general use of the rectal method in taking temperature in all cases of pulmonary tuberculosis for the following reasons: (1) It is not so liable as the mouth to be disturbed by external conditions; (2) in some cases of genuine relapse the rise in temperature appears in the rectum sometime before it gives any indication elsewhere. The difference in time may amount to as much as twelve hours. This early indication enables the physician in charge to recognize and therefore to treat the disturbance at an earlier stage than if he had depended upon the axillary or oral reading; (3) the rectal temperature rises higher both realtively and absolutely at such times than it does elsewhere. It is therefore more likely to attract attention to the disturbance than the smaller rise which the oral reading would show; (4) the rectal temperature is disturbed by trivial factors, such as slight indigestion and nervous causes, which often do not affect the axillary range; (5) when we begin to deal with the question of when to start and how to regulate a patient's exercise, then the great value of rectal reading is seen. With regard to the relation of temperature to exercise it is more complicated and intricate than is supposed. The effect upon tuberculosed patients is twofold: (1) Exercise depresses temperature; (2) exercise raises temperature. The conclusions from the article are: (1) The rectal method of taking temperature should be more generally adopted; (2) more frequent and systematic records of temperature reading should be kept than at present; (3) the custom which prescribes further exercise where a temperature of 100.4° has been recorded, is useful in a number of cases, but its application as a rule to all cases is discredited; (4) an attempt to carry out any phase of the treatment by fixed regulation and rules must frequently end in disaster; (5) the too common tendency to consider the lungs only must be discouraged. The examination of the chest must be thorough, but the condition of the various organs and their excreta, together with the light which systematic laboratory investigations throw upon them, is hardly less important. [T. M. T.]

2.—W. Ramsay Smith gives the following method for cutting sections by means of the Cathcart microtome for those who are not fortunate enough to have a fully equipped laboratory, or a country practitioner who has not the time or facilities: Take a piece of liver or kidney that has been in a solution of formaline for a few days. Cut a block about three-eighths by three-eighths by five-eighths of an inch in size. Press it gently between the folds of a towel to remove the surplus solution from it. Split the cork of a ten or twelve-ounce dispensing bottle lengthwise, with the end projecting a quarter of an inch beyond the thick end of the cork. Place the cork in the clamp in such a position that its top is flushed with the top of the cylinder, the clamp just holding it. Take a tube of chloride of ethyl. Direct a spray from it against the top and side of the block of tissue projecting beyond the cork and on the upper parts of the exposed surfaces between the pieces of cork. Now commence to tighten the clamp gradually. As the tissue freezes and the screw is tightened, the block will become quite hard and immovable. Take a carpenter's plane iron, mounted in a wooden handle or not. Place the edge of this on the runners and screw down the cylinder with the cork until the top of the tissue to be cut just touches the plane's edge. Now with a slow continuous motion of the screw bring the tissue up, at the same time moving the plane iron swiftly to and fro over the tissue. The section will accumulate on the plane iron or fall on the cork or over the cylinder, and may be lifted by a needle into a dish of water. If the plane iron is put in the water sweep both sides of it before resuming cutting it. The tissue should be cut just on the thaw when the section appears neither too white and stiff (overfrozen), nor mealy (too little frozen), nor sloppy (too much thawed). Now and then, if many sections are wanted, stop for a few seconds and re-apply the spray to the block of tissue. The advantages of these methods are: (1) Everything from blood clot to bone, and from a perfectly fresh specimen to one that has been preserved for years can be examined; (2) anything from the capacity of the microtome cylinder to the smallest piece that can be handled can be utilized; (3) from 300 to 400 sections can be cut in a minute and experimenters have shown that to prepare and complete a stained permanent preparation six to seven minutes from receiving the fresh tissue from the body, is only required. [T. M. T.]

3.—Andrew Gilmour defines "Latah" as a mental affection the subject of which displays a strongly marked susceptibility to the influence of suggestion. The disease was thought to be found only in the Malay Peninsula, but the author has seen three well marked cases in South Africa among the Kaffirs. The subjects were adult males. They seemed to be of good intellect and excellent physical development. In all three sudden auditory, tactile or visual stimuli produced the diseased condition. The duration of this hypnotic-like condition varied, lasting from a few seconds to a few minutes or until the removal of the suggestion. Latah seems to be closely allied to cases of convulsive tic and akin to the emotional diseases by no means uncommon in all barbarous and semi-civilized countries. It differs from the latter condition in that the attacks are always of sudden onset, produced by shock or suggestion, are not under the control of the individual, while the subject always tries to avoid exhibiting his weakness and never voluntarily induces an attack. The only resemblance, indeed, is in the absence of any gross lesion and in the acceleration of the heart's action during the period of excitement. [T. M. T.]

4.—To be abstracted when concluded.

BERLINER KLINISCHE WOCHENSCHRIFT.

December 16, 1901. (38 Jahrgang, No. 50.)

1. Microscopic Investigations upon Hemolysis in Heterogenous Serum. P. BAUMGARTEN.
2. The Morphology of the Typhoid Bacillus and the Bacterium Coli Commune in Cultures. E. SAUL.
3. Inadmissible Resection of the Intestine. A. ALBU.

4. Gastric Splashing, Gastric Atony, and Gastroptosis. L. KUTTNER.
5. A Few Words upon Gastric Atony. B. STILLER.
6. Lumbar Hernia and Related Conditions. M. BO.. TARDT.

1.—Baumgarten, who gives a comprehensive review of **hemolysis in heterogenous serum,** states that Ehrlich's immune bodies and agglutinins are probably identical. Hemolysis in heterogenous serum is a physical process due to the difference in the osmotic pressure of the blood corpuscles and the blood serum, not a digestion. Microscopically the erythrocytes undergo the same changes of shape and volume in heterogenous serum which they show in an isotonic salt solution of known concentration. When heated, agglutination occurs. Serum-agglutinin prepares the hemoglobin of the erythrocytes for hemolysis, should a slight grade of osmotic disturbance occur. Chemical substances in the blood have the same effect. [M. O.]

2.—Saul describes a number of **colonies of typhoid and colon bacilli,** weeks and months old, with excellent photographs. While both plants show a central stem with branches, following the principle of dichotomy, the foilage of the typhoid tree is finer, less large and less crude than that of the colon bacilli culture. Familiarity with cultures will permit differentiation easily. This Saul suggests as a means of diagnosis. [M. O.]

3.—Experiments upon animas show that over half of the intestine may be resected without causing death. The investigation upon human beings who have had 300 cm. of intestine removed by operation show that they can live without digestive disturbances. Yet the length of the human intestine varies from 600 to 1100 cm. Beneke believes that for every 100 cm. of height, a man has 387.5 cm. of small intestine, excluding duodenum. Albu's experiments in feeding a man, who had **almost one third of his intestine resected,** show that the removal of so much intestine endangers the power of food assimilation. A large quantity of ileum can best be spared, both duodenum and jejunum being necessary for digestion. [M. O.]

4.—In a long discussion, Kuttner states that **sounds of splashing in the stomach** are pathological and show a loss of tone in the muscles of the stomach and abdominal wall. The position of the stomach is secondary. If it is heard during digestion, gastric atony is present; if heard a long time after meals, there is motor insufficiency of the stomach. Following gastric atony, gastroptosis may develop. [M. O.]

5.—Stiller adds that **gastric atony** is the earliest and most constant sign of enteroptosis, and is due to an affection of the neuromuscular apparatus of the stomach. Ptosis, atony, and nervous dyspepsia are identical. Ptosis is the morphological condition which accompanies that functional affection, gastric atony, the sign of which is gastric splashing. A change in the percussion note, when bending to the left side, occurs only in high grade atony and ptosis. By these means the diagnosis may be made without using gastric bougies. [M. O.]

6.—Borchardt gives a full historical revief of the subject of **lumbar hernia,** citing 53 cases from the literature. He divides lumbar hernia into four groups, those due to traumatism, those following abscesses, those which are spontaneous, and those which are congenital. 19 cases followed traumatism, and 19 followed abscesses, the majority occurring through Petit's triangle. The congenital variety is due to lack of ribs or part of the abdominal wall. These conditions must be differentiated from pseudo-herniae, hernia-like ectasia of the abdominal wall, due to weakness and atrophy of the abdominal muscles. The 53 case-histories follow. [M. O.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

(No. 46).

1. The Theory of Anti Bodies: First Antitoxin Immunity. M. GRUBER.
2. Neuritis and Polyneuritis. R. STINTZING.
3. Cyclical Albuminuria, and New Points of View for Combating It. P. EDEL.
4. The Action of Sterile Yeasts Upon Bacteria. L. GERET.
5. Remarks Upon the Treatment of Seasickness. O. ROSENBACH.
6. A Case of Osteotomalacia With Tumor Formation. G. FELDMANN.
7. The Significance of Individual Statistics Upon the Question of Heredity. W. STROHMAYER.
8. Remarks Upon the Article of Professor Cramer "Bacillol and Lysoform." VERTUN.

1.—Gruber, in discussing **the nature of immunity** and the difficulty in the solution of the various problems that are presented by its manifestations, together with the results of experiments, calls attention, among other things, to the remarkable fact that if a solution of the toxin is preserved for any length of time it gradually loses its efficiency, that is to say, increasing doses are required to produce the fatal effect. In spite of this, however, the amount of antitoxin necessary to neutralize the effect of the toxin solution is constant. This has led to the supposition that the molecules saturated by the antitoxin are not the same as those which produce the fatal action. According to Gruber, however, the question is not quite so simple as this would make it appear. For in addition to the toxin there are substances in the solution that sometimes promote, sometimes retard its action, and this promotion and retardation may differ in different species of animals, and therefore it is possible that the diminution of the lethal power of the toxin solution depends not upon the alteration in the toxin molecules, but upon other chemical processes by which substances are produced that inhibit the toxic action. There is no reason for supposing that unsaturated toxin always manifests its full activity. The paper is still unfinished. [J. S.]

2.—Stintzing, after a brief consideration of the different forms of **neuritis,** suggests the following **classification:** First, genuine multiple nerve inflammation, teleneuritis multiplex (1) leprosy; (2) beri beri : (3) idiopathic. Second, multiple degenerative atrophy of the nerves, teleneurosis (1) diffuse neuroses; (a) toxic (alcohol' arsenic, and mercury), (b) infectious, after typhoid, and other infectious diseases, puerperal state, tuberculosis, and syphilis; (c) constitutional, carcinoma, marasmus, diabetes; (2) systemic forms (lead poisoning). Third, a multiple inflammatory degenerative form, teleneuritis, multiplex degenerativa. (1) tele neuroses, post diphtheritic; (2) primary forms of unknown cause as Landry's paralysis. [J. S.]

3.—Edel reports some experiments upon cases suffering from the clinical manifestations of cyclical albuminuria. All the patients showed considerable albumin in the morning urine, and very little in the afternoon. In one case the urine was usually free from albumin between the hours of 3 and 6 in the afternoon. As this seemed to be the result of the mid-day meal, it was decided to determine this point by altering the time of the meal. As a matter of fact alteration of the time of dinner caused a corresponding alteration of the period during which the albumin was absent, and the omission of dinner showed a large quantity of albumin existing throughout the day. This relaxation did not appear to be altered whether the patient lay down or walked about the room. There seemed to be some inverse relation between the quantity of urine and albumin; thus, a considerable quantity of urine of clear color usually obtained absolutely less albumin than a small quantity of urine of a dark color. When the patient fasted, the quantity of albumin remained considerable unless a diuretic was given. Under these circumstances the quantity of urine increased, its reaction became alkaline, and the quantity of albumin decreased. The same effect was produced by external diuretics, such as hot baths, although subsequently the urine would be dark and the quantity of albumin increased. It therefore seems that the treatment of cyclical albuminuria should involve diuresis. [J. S.]

4. -Geret has performed a series of experiments in order

to determine what influence active yeast has upon the growth of bacteria. For this purpose he first showed that active fermenting yeast had a distinct bactericidal action in vitro, causing a marked reduction in the number of colonies of an active culture of typhoid bacilli which was added to it. Under certain circumstances this may produce complete sterility of the solution. If, however, the solution is slightly alkaline the action is diminished. The results appear to be due first, to the presence of an active zymase, and to the presence of fermentable sugar, for when the latter was absent the bactericidal action was not nearly so pronounced. However, the nature of this activity is not clearly determined. [J. S.]

5.—Rosenbach is rather sceptical regarding the action of deep inspirations for inhibiting seasickness. He believes the effect is largely psychical. [J. S.]]

6.—Feldmann reports the following case: At the age of 17, while operating a machine that required foot power, the legs became bent outward. This deformity was cured by operation. The patient's leg remained weak, and at the age of 20 he fell on the street and developed an inflammation of the spinal column. At the age of 23 he had a double fracture of the femur while walking about in his room. Subsequently various deformities occurred in the skeleton, and he had fractures in various parts of the body. The right lower jaw gradually became enormously swollen. The diagnosis was osteomalacia and tumor of the jaw. [J. S.]

7.—Strohmayer continues his study of degeneration and accepts the grouping of Morel according to which the 5 stages are as follows: (1) Nervous temperament and offenses against society, excesses; (2) tendency to apoplexy and neurasthenia; (3) phychical disturbances, suicide, and mental deficiency; (4) congenital idiocy, monstrosities, and defects in development; (5) the disappearance of the family. Strohmayer has frequently observed that in the first stage of degeneration not infrequently individuals singularly gifted appear and moreover, that in many cases, the tendency to degeneration disappears completely. It is often impossible to understand how this tendency to regeneration occurs, although the factors aiding in degeneration are easily determined. Among these are alcohol, syphilis, probably tuberculosis, although it is difficult to understand just how its influences act; the marriage of near relations, although this is relatively unimportant unless it gives rise to an accumulative degenerative tendency. Curiously enough a tendency to regeneration is not often produced by the marriage of a degenerate and a healthy person, and this is probably because many apparently sound individuals have latent degenerative tendencies. However, the study of individual statistics on this subject is exceedingly difficult, and it is probable that no positive conclusions will ever be reached. [J. S.]

8.—Verlun defends lysoform against the criticisms of Cramer. He claims that it is relatively non-poisonous, and nevertheless has considerable disinfectant power, and as it also has an influence upon the spores it is particularly valuable against bacteria that form them. [J. S.]

(No. 47).

1. The Present Status of the So-Called Fatty Heart. C. HIRSCH.
2. The Action of Alcoholism Upon the Secretion of Gastric Juice in Human Beings. R. SPIRO.
3. The Practical Significance of Lactation Atrophy of the Uterus. W. THORN.
4. The Control of the Condition After Parturition by the State of the Pulse. O. AICHEL.
5. The Treatment of Anthrax With Intravenous Injections of Soluble Silver (Collargolum). FISCHER.
6. The Theory of the Antibodies: First, the Antitoxin Immunity. Conclusion. GRUBER.
7. Cyclical Albuminuria, and a Few New Points for the Treatment of Albuminuria. P. EDEL.

1.—Hirsch calls attention to the fact that there are two types of cardiac symptoms occurring in persons suffering from obesity: First, the ordinary symptoms of cardiac insufficiency such as dyspnea on exertion, palpitation of the heart and occasionally slight dizziness. In another group there are from time to time attacks of fainting, occasionally with apoplectiform symptoms. He believes this indicates that we have 2 types of change occuring in the heart, that is to say there is an actual distinction between fatty degeneration and fatty infiltration of the heart muscle. We know now that in certain of the lower animals fatty degeneration of the musculature may occur which has for its object the temporary transference to certain other organs, particularly the ovaries, of nutrition, and that the muscles completely recover from this state. Therefore it seems unreasonable to suppose that the fatty degeneration of itself produces all the peculiar clinical phenomena. The observation has been frequently made that hearts between the muscle fibres of which there is a considerable amount of fat are often capable of perfect functional activity. Measurements appear to show that in many cases there is a relative disproportion between the heart muscle and the muscle of the body, especially in large persons. Moreover, not infrequently arterial sclerosis is associated with obesity. Hirsch therefore concludes that we should not speak of a "fatty heart," and prefers Leyden's term, "the heart symptoms in obese persons.', Variation of the symptoms is really due to the variation in the causes, among the most important of which are disproportion between the size of the heart and the body weight, and disease of the coronary artery, although in patients who are well developed there is always the possibility of a vascular lesion. All these points are of great value in the treatment of these conditions. If the heart is apparently healthy various cures designed to reduce flesh may be employed. If there is merely disproportion between the heart and the body weight exercise treatment may be employed. Digitalis and similar drugs should not be employed. In plethorical persons treatment at some spa carefully conducted is often of value. Alcohol seems to be contraindicated. [J. S.]

2.—Spiro has performed some experiments in order to determine the influence of alcohol upon the secretion of the gastric juice: upon a case of gastroptosis, one of hysteria, one of atony of the stomach, after gastroenterostomy, and one of gastroenteritis. The alcohol was administered per rectum, and the patient took no nourishment by the mouth. It was found that the enema caused an active secretion of gastric juice provided the amount of alcohol was not less than 7 to 10 cc. The acidity reached its maximum about an hour after the injections, and then gradually decreased. In 2 cases of achylia due to carcinoma of the stomach no effect was obtained. [J. S.]

3.—Thorn discusses the fact that with the advancement of culture the ability of women to nurse their children has declined. The most important result of this is the effect upon the atrophy of the uterus which usually reaches its maximum during the 4th month of lactation. It is difficult to draw a boundary between this change and the ordinary physiological processes. It appears to be due partly to the contraction of the uterus, partly to a general loss of nutrition as a result of the drain upon the system during lactation; rarely it is permanent, and a complete restoration of the uterus to its normal functional activity is indicated by the recurrence of menstruation. When it is at all pronounced it interferes with conception. Occasionally the process becomes more severe, especially in women living under unfavorable circumstances, and may involve the external genitalia, the tissues around the uterus, and eventually the entire body. Ordinarily the only bad result is retroflexion of the uterus. It often disappears spontaneously. It may be considered that the number of women who as a result of lactation atrophy become sterile, is exceedingly small. [J. S.]

4.—Aichel calls attention to the importance of a careful observation of the pulse during pregnancy. He believes that an increase above the normal rate indicates the existence of some diseased process, and he quotes an illustrative case. [J. S.]

5.—A man of 35 had handled a cow suffering from anthrax. Five days later a small red spot appeared upon the right cheek; he had difficulty in swallowing, and finally the characteristic lesion of anthrax appeared. Fifteen days after the infection he was brought to the hospital, and the diagnosis was confirmed by microscopical examination. No local treatment was employed, but colloidal silver was injected into the cephalic vein, the first dose being 5 cc. of a one per cent. solution. This was repeated the following day and the next day the patient showed considerable improvement. A third injection was, however, made, the temperature fell to normal and the pulse and respirations de-

creased. A week later the local lesion in the cheek had dried, the slough had separated, and the patient was finally discharged cured. As no incisions were made the results may be ascribed only to the silver. [J. S.]

7.—Edel, in his effort to discover the cause of the cyclical albuminuria in the case reported in a previous number, made a careful study of the relation of the pulse to exercise. It was found that after slight exertion the pulse was usually worse in the morning than in the afternoon. The frequency of the pulse did not appear to bear any relation to the albuminuria; the activity of the heart bore a very close relation to it, and it was found that stimulating the heart either by vigorous walking or by mountain climbing caused the albuminuria to decrease. He therefore believes that in the treatment of cyclical albuminuria exercise of the heart is a very important element. He calls attention to the great importance of examination of the urine at very short intervals in the study of such cases.

[J. S.]

THE JOURNAL OF NERVOUS AND MENTAL DISEASE.

November, 1901. (Vol. 29, No. 11.)

1. The Separate Localization in the Cortex and Subcortex of the Cerebrum of the Representation of Movements and the Muscular and Cutaneous Sensibility. CHARLES K. MILLS.
2. On Certain Studies with the Ergograph. AUGUST HOCH.
3. The Stadia of Mental Disease. THEODORE H. KELLOGG.

3.—Kellogg, in his article on the **stadia of mental disease**, sums up the main conclusions of his paper as follows: (1) The vast majority of attacks of mental disease have but four simple stadia. The main stadium acutum is constituted chiefly of the maniacal, melancholic, or stuporous states, which are mere symptom complexes alternating or replacing one another, though sometimes mistaken for separate attacks of insanity; (2) mental disease must be regarded as one continuous pathological process with periodic fluctuation, so constant that remission and intermissions are to be vied as part of the morbid phenomena; (3) the diversified curricula of insanity and the artificial variety of its forms described by modern writers, may in great measure be reduced to clinical simplicity by the law of the stadia, conjoined with the maniacal, melancholic and stuporous states, as here rightfully assigned to the position of symptomatic syndromes, rather than independent forms of alienation; (4) in fine and in fact the law of stadium and rhythm and of the dominant states of expansion, depression and stupor are the only stable data capable of any wide purpose for the logical unfication of the multiform manifestations of mental disease. [T. M. T.]

December, 1901, (Vol. 28. No. 12.)

1. On Tumors Involving the Corpus Callosum. JAMES J. PUTNAM and EDWARD R. WILLIAMS.

1.—James J. Putnam and Edward R. Williams report three cases, strictly speaking not instances of pure **corpus callosum tumors**, as one or both hemispheres or the central ganglion were considerably involved, although the growths showed a distinct preference for the corpus callosum. In the first case the points of special interest were the temporary cessation of symptoms and the fact that a well marked optic neuritis developed at a time when opisatrophy had been for sometime complete. In the second case there was the early appearance of slight changes in character and slight impairment of mental power and of memory, coming at a time when neither signs of focal lesions nor of general pressure had shown themselves. Very early occurrence of isolated epileptic seizures several years before was important. Paralysis was due to pressure, for which there was abundant cause in the presence of the mass on the left side. The last case showed a striking example of latency with eventually rapid outburst of symptoms. The damage to the brain mechanism showed itself first through disturbed mental action. Both legs and one arm said to have become weak or awkward without any great involvement of the other arm. The involvement of the legs was most likely due to pressure on the paracentral lobule. The authors give Schupfer's subdivision of tumors of the corpus callosum, who says that a growth at the level of the "knee" may be suspected: (1) When the disorders of motion that appear have been preceded for a considerable period by mental disorders; (2) when the lower facial muscles of one or both sides become paretic independently or relatively early; (3) when the head turns toward the paralyzed (hemiplegic) side, or, in general, when there is contracture of the neck and head muscles; (4) when the paralysis of the arms is relatively greater than that of the legs; (5) when disorders of gait are present which recall cerebellar ataxia, though when these signs are associated with vomiting and vertigo they are more apt to be due to tumors lying posteriorly, in such a position that they compress or damage the cerebellum. When the middle portion of the corpus callosum is the seat of the gowth, vomiting is, he thinks, often absent or only of occasional occurrence and the weakness of the arms and legs is contemporaneous and at first of slight degree. Tumors lying posteriorly, in the splenium, are more apt to cause impairment of motion of the legs before the arms; the face remains unaffected. Uncertain and reeling gait, frontal ataxia, occurs late in such cases. In general the symptoms in these cases suggest cerebellar disease, but the optic neuritis is of less rapid development. Mental symptoms occur either contemporaneously with the paralysis or later. Visual disorders would be likely to occur, but have not been noted. The authors in summing up the reports of 38 cases come to the following conclusions: Out of the 38 cases mental changes of one kind or another occurred very early in 34 at least; while of the smaller group of 12 selected cases some sort of change of character or mental disorders was present in all but two. "Physical inertia" was present in nine cases out of the 38, and in one of the selected 12. Paralysis of the limbs, of hemiplegic distribution, was seen in 14 cases and 4 of the selected. Bilateral paralysis was present in nine out of the 38, but in one only of the 12. "Weakness or helplessness was a common sign. "Rigidity" or contracture either with or without obvious paralysis was occasionably observable; and in one case the patient could not raise the legs from the bed while in a recumbent position. As a rule, impairment of memory, dulness and intellectual failure were the marked features. Where alterations of the emotional tendencies were present these were far oftener of an excitative than of a depressive character, and outbreaks of violence and maniacal excitement now and then occurred, perhaps supervening on more chronic forms of degeneration. Equally interesting with the latency of symptoms was the fact that apparently isolated indications of the presence of these tumors showed themselves long before the case fully disclosed itself. General tumor symptoms, that is, headache, nausea and vomiting occurred early in 17 cases of the large group and later in five cases. In five cases these symptoms were wanting. In the smaller group the general symptoms appeared early in seven. Knee jerk was occasionally diminished. Convulsions without very definite characteristics were present in 16 cases out of the 38 and in six out of the selected 12. Optic neuritis was present in 15 cases and absent in 7 of the larger group; present in four cases and absent in two cases of the smaller group. [T. M. T.]

WIENER KLINISCHE WOCHENSCHRIFT.

November 14, 1901. (XIV Jahrgang, No. 46).

1. Senile Brain Atrophy and Subcortical Lesions. ALOIS PICK.
2. The Influence of Food upon Epilepsy. HEINRICH SCHLOESS.
3. Juvenile Tabes. HEINRICH VON HALBAN.
4. Agglutination in Normal Blood. KARL LANDSTEINER.

1.—Pick reports the case of a woman of 28, who, for three years, had shown psychical disturbances; first confusion and irritability, and later aphasia, word-deafness, and right-sided hemiplegia with decreased intellect. There were slight facial paralysis on the right side, contractures of the right elbow, partial optic asymbolia, and, while unable to say a word herself, she could at times repeat it after someone else. The diagnosis seemed at first simple brain atrophy. The autopsy, performed two weeks after admission, showed **senile brain atrophy** especially marked in the left hemisphere, and an acute, fresh **degeneration of the right pyramidal lateral and anterior tracts** throughout the entire cord, due to two areas of softening above the olivary bodies. Pick believes that the hemiplegia was due to the lesions above the medulla, but that the other symptoms were the result of the senile brain atrophy. [M. O.]

2.—Schlöss has made a series of experiments among 16 **epileptics with different foods.** While, upon six weeks of absolute meat diet, the attacks decreased in number below those occuring when upon mixed diet, they increased again upon six weeks of milk and vegetables only. Upon food without sodium chloride, weight decreased and weakness was noted. In two cases the attacks ceased while the salt was omitted, and, in the others, psychical disturbances remained unchanged, though the number of attacks diminished. The bromides were continued throughout the tests. When fat and acids were added, epileptic attacks increased in a few cases, but in the rest no difference was noticed. Small amounts of alcohol do not seem to increase the number of epileptic attacks. Many tables are given to illustrate his experiments. [M. O.]

3.—Only two cases of **juvenile tabes folowing syphilis** were found in the literature. von Halban's previous cases were in patients with hereditary syphilis. Now he reports the case of a girl of 23, whose mother, maternal grandfather and great-grandfather all had migraine. There was no history of syphilis, until the child reached the age of two months, when a typical secondary eruption appeared, following infection from the wet-nurse. Mercury was given at that time. At five years she had scarlet fever, and attacks of paroxysmal hemoglobinuria appeared during the following three years, disappearing when mercury was given. Since 16 years old, she has had frontal and occipital headache, nausea, vomiting, etc. Upon potassium iodide the pain always grows less. There were slight weakness of the bladder muscles, absence of the patellar and tendo Achillis reflexes, unequal pupils, beginning atrophy, sensory disturbances, and the Argyll-Robertson and Westphal signs of tabes. Few such cases have as yet been diagnosed. [M. O.]

4.—Landsteiner, who has performed 22 **experiments** in which the **blood of well men** was **mixed with the blood serum of other individuals,** well or ill, found that agglutination occurred in many instances. Even those experiments with fetal blood gave such different results that no conclusions were possible. The agglutination occurred after the blood had been kept for some time, and was diluted before trying the reaction. The reactions of the different blood sera of well men, when attempted again nine days later, gave exactly the same results. [M. O.]

November 21, 1901. (XIV Jahrgang, No. 47).

1. Erythema Gyratum, Papulosum, and Bullosum Caused by the Internal Use of Fowler's Solution in Moderate Doses. NEUMANN.
2. Fluctuation in the Diagnosis of Pleural Effusion. R. R. VON STENITZER.
3. Influenza with Measles. JULIUS SUESSWEIN.
4. Ménière's Disease Cured by the Galvanic Current. JULIUS DONATH.

1.—After fully reviewing the literature, Neumann reports the case of a man of 37, who had taken moderate doses of **Fowler's solution** for furunculosis during almost six weeks, when an **eruption appeared** on his hands, feet, thighs, and scrotum. Large bullae formed upon an erythema, and crusts were noted upon the scrotum. Besides, there were marked constitutional symptoms, all of which gradually disappeared during the two weeks following the cessation of the arsenic. This is the first reported case of a bullous eruption due to arsenic. [M. O.]

2.—von Stenitzer first reviews the subject, then reports a number of cases of **pleural effusion** in all of whom **fluctuation** was distinctly obtainable. This is obtained even with a moderate amount of effusion. The investigations to determine the presence of fluctuation are hindered by the intervening soft tissues, the bony thorax, and the fluctuation which occurs in ordinary fatty, muscular, edematous tissues, etc. To obtain fluctuation, he advises having an assistant hold his hand flat against the patient's back, with his middle finger in the interspace where the percussion note changes. The physician then taps the chest with the fingers of his left hand, while he feels fluctuation with his right hand against the side of the chest, best in the anterior axillary line. When sought in this manner, fluctuation is distinctly felt, even in small effusions. The case-history of a man of 42, in whose chest fluctuation was plainly elicited, follows. von Stenitzer believes that this is valuable sign in the diagnosis of pleural effusion of moderate size. [M. O.]

3.—Inflammations of the respiratory tract are very common with **measles.** Süsswein reports 21 cases of measles complicated with affections of the respiratory passages, in ten of whom **influenza bacilli** were found. This great number of cases shows how frequently influenza occurs with measles. Five of these patients died. The occurrence of mixed infection makes the prognosis bad. While it would be well to divide the cases of measles with influenza from those of simple, uncomplicated measles, the differentiation is often impossible. The ten case-histories follow. [M. O.]

4.—Donath reports a case of **Meniere's disease** in a man of 40, which had existed 17 years. Opium had caused the disappearance of symptoms for some time, but vertigo, ataxia, etc., continually returned. After the first application of the **galvanic current** to the auditory nerves, all vertigo disappeared. After six applications he went back to work. The attacks of vertigo reappeared twice, but four more applications of galvanic electricity permanently cured the condition. Others have achieved the same success with galvanism in the treatment of Ménière's disease. [M. O.]

ARCHIV FUER KLINISCHE CHIRURGIE.

1901. (Volume 65, No. 1.)

1. The Position of the Hip-Joint in Congenital Dislocation. JOACHIMSTHAL.
2. The Diagnostic Significance of Esophagoscopic Excision. GEORG GOTTSTEIN.
3. The Diagnosis of Glanders in Human Beings. JOSEPH KOCH.
4. Plastic Operations upon the Penis. FRANZ COLMERS.
5. Plastic Operations on the Penis and Scrotum. F. BESSEL HAGEN.
6. The Parasites of Cancer. NILS SJOEBRING.
7. A Case of Unilocular Cyst of the Kidney. BERNARD ENGLAENDER.
8. Changes in the Kidneys after Laparotomy. WALTER VON BRUMM.
9. The Significance of Altmann's Granules in the Cells of Malignant Tumors. L. BURKHARDT.
10. Lateral Abdominal Hernia. F. DE QUERVAIN.
11. Traumatic Defects of the Skull Treated by the Müller-König Method. ADOLF DEHLER.
12. Tuberculosis of the Ankle. MAASS.
13. Excision of the Abdominal Wall in Gangrenous Hernia. JAR. ELGART.

1.—Joachimsthal describes five preparations of **congenital dislocation of the hip.** Some scoliosis existed with unilateral dislocation, while the upper end of the femur, especially the head, showed marked atrophy. Changes in the soft parts and rotation of the femur may also occur. He also describes five cases treated by the bloodless method, with permanent success, and gives skiagraphs in each case to show the position of the femur after treatment. Lordosis disappeared and the pelvis became horizontal. Joachimsthal has operated upon 23 cases of congenital luxation of the hip, three of them double, with 17 perfect results. Reluxation occurred in 6 cases, three of which recovered after reposition. Dressings are left in place only three months. Röntgen photographs show that the acetabulum becomes deeper and the head of the femur longer after reduction,

though these changes occur in the other hip as the child grows. He believes that dislocation of the hip may occur early in uterine life, from atony and softening of the ligaments. The shortening of the neck of the femur alone persists throughout life to point to an earlier luxation of the hip. [M. O.]

2.—By the esophagoscope functional and organic diseases of the stomach and esophagus are differentiated. Gottstein gives the case-histories of 7 cases, in two of which **excision with esophagoscopy** was not permitted, the patients dying later of cancer, though gastric ulcer had been suspected. In one case esophagoscopic excision showed cancer, and not ulcer. In another case, excision of a bit of tissue proved that the condition was a peptic ulcer. In one case, actinomycosis, in two others cancer of the esophagus was diagnosed by this method. To differentiate the causes of these ulcers clinically was impossible. Excision of some of the tumor seen is only advised where no inflammatory process exists, when it cannot harm the patient. Iodoform and cocain is applied to the spot before excision is attempted. Even with microscopic examination of the tissue removed, it is often impossible to make a diagnosis. The instruments employed are fully described. [M. O.]

3.—Koch reports a case of **glanders in a veterinary surgeon**, aged 45, who had been ill but three days. There were slight fever, pain in the left chest, and cough. Dulness appeared over the left base, increased, and soon fluctuated. On incision, pus was evacuated from the pleural cavity between two ribs. Then a pustular eruption appeared over the entire body, with marked septic symptoms. Death occurred on the eleventh day of the disease. The diagnosis of acute glanders was made, since the patient was known to have broken a test-tube contained glanders cultures. Cultures made from the pustules the day before death showed pure glanders. The autopsy revealed adherent pericardium, hypertrophy and dilatation of both ventricles, glanders nodules in both apices, pleural effusion, hyperplasia of the spleen and both kidneys, nephritis, hepatitis, and myocarditis. Animals inoculated developed glanders. The primary affection was probably pulmonary. Fourteen cases were found in the literature, the eruption appearing in 13 of them. In about half of them there were several nasal symptoms. [M. O.]

4.—**Small defects in the skin of the penis** are easily replaced by plastic operation, using nearby skin. Large defects may follow recent injury or gangrene. After reviewing the literature, Colmers reports the case of a man of 35, whose penis had been crushed in an accident. A skin flap taken from the abdominal wall remedied the resulting defect. The result was excellent. Similar cases are quoted from the literature. The skin used for flaps in these cases should come preferably from the scrotum, next from the abdomen, and lastly from the thigh. All the flaps must have pedicles. [M. O.]

5.—Bessel Hagen believes that after accidents leaving **large defects in the skin of the penis and scrotum**, plastic operations are necessary to permit future erection. The difficulty of the operation varies with the severity of the defect. He prefers a double pedicle flap from the abdominal wall. The technique of his operation is described, and diagrams are given to illustrate it. The flap formation is very complicated, and diagrams are given to illustrate it. The results are very good. [M. O.]

6.—Sjöbring calls the **parasites seen in cancer** rhizopods. The most simple forms are the sarcodae. A description of the numerous parasites found, with drawings of them, follows in detail. In development and morphology they resemble amebosporidia. Some of these parasites are always present in cancer, and can be cultivated outside of the body upon artificial media. Tumors resembling skin cancer have been caused by inoculating them in mice. [M. O.]

7.—Engländer reports a case of **unilocular cyst of the kidney** in a woman of 42, with amenorrhea for five months, and a movable, fluctuating tumor in the right hypochondrium. As the right ovary was not palpable, this was supposed to be an ovarian cyst. Laparotomy showed a cyst of the kidney which was extirpated. The patient recovered. While the diagnosis is often obscure, operation is advised when a cyst of the kidney is found. A review of the literature follows. [M. O.]

8.—von Brunn examined the **kidneys of 21 patients who died following abdominal operations.** In most cases **degeneration with final necrosis of the renal tissue** occurred. In fourteen cases in whom death was due to peritonitis, necrosis of the renal epithelium was found; in three cases necrosis of the renal epithelium occurred without peritonitis; and in five cases there was neither peritonitis nor necrosis of the renal epithelium. Opening the abdomen and peritonitis, suppurative but not diffuse, do not cause renal necrosis, nor is the anesthetic to blame for renal necrosis, though chloroform may cause slight degenerative changes. von Brunn concludes that renal necrosis is almost always associated with peritonitis; that this necrosis resembles that due to intoxication; and that the necrosis occurs wth peritonitis as quickly and as intensely as with the most severe intoxication known. [M. O.]

9.—Burkhardt examined fifty malignant tumors for the **Altmann granules**, which bear the same relation to the cells in the different tumors noted. In the majority, they appeared in large quantities at the beginning of growth, while in two cases of medullary carcinoma no Altmann granules were seen; nor were fuchsinophilic granules found in any of the tumors which had recurred. When a tumor resembled the parent tissue, these granules were numerous; when it was different, but few granules were found. They are present as long as the cells perform their specific function, the change of structure being the result of functional stimulus. Their disappearance follows malignant growth. [M. O.]

10.—de Quervain reports a case of **lateral abdominal hernia** in a boy of two years. Since three months of age a swelling appeared upon crying, in the lumbar region, between the ribs and the crest of the ilium on the left side. At 14 months slight kyphosis appeared. Operation showed very few pale muscle fibres, the muscles being but thin aponeuroses. After suturing the abdominal walls together, the child recovered, only to die a few weeks later of bronch-o-pneumonia. Microscopic examination of the muscle removed showed great atrophy, the aponeurosis consisting mainly of connective tissue. Seven other cases are quoted from the literature. Not only is there a congenital defect, but paralysis and atrophy also existed in the abdominal musculature, probably dependent upon some disease of the subcostal nerve or its origin in the cord. [M. O.]

11.—Dehler describes the skull of a patient upon whom a large **skull defect had been operated by the Mueller-Koenig method.** Secondary implantation in large traumatic defects of the skull is indicated to prevent infection and suppuration; because the fragments cannot close the defect alone; since the granulations offer a support for the bone; and while the patient can overcome the loss of blood from the injury, before the plastic operation is performed. Any scar that has formed should be excised, when possible, and the bony edges must be refreshened. Two successful cases treated by this method are described, with accompanying photographs. [M. O.]

12.—Maass examined 167 **tubercular ankle-joints** in the surgical clinic in Göttingen, 101 of these were male, 66 female. Of the 156 patients operated upon, 76 showed tuberculosis of the bones, and sequestra were found in 24 cases. The bones were softened in 23 cases, while the cartilages were normal in 24, loose in 30, and badly destroyed in 38 cases. The ankle-joint itself was diseased in 142 patients, in 76 cases alone in 66 with some affection of the bones also. 39 cases had plaster bandages applied, 29 of which came to operation. Arthrectomy was performed 4 times, partial resection 6 times, and resection in 102 cases. 11 of these were resected by the Langenbeck method, 41 by the Konig method, and 46 with extirpation. Amputation was done 54 times, primary in 36, secondary in 18 cases. Maass concludes that whenever possible resection should

be done, as it is not dangerous or difficult, and admits of simple after-treatment. [M. O.]

13.—Elgart, who gives the case-histories of four patients upon whom exision of the intestinal wall was performed, describes the indications and the technique of the operation, with the sutures necessary. Lembert's sutures should be employed in two stages, always applied straight. Elgart has performed 38 such operations. [M. O.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

October 17, 1091.

1. A New Method of Treating Carcinoma. F. LOEFFLER.
2. Contribution to the Knowledge of Lymphomata. E. BECKER.
3. A Case of Epidemic Parotitis With Peculiarly Severe Symptoms. E. SCHWARZKDPF.
5. Further Contributions Concerning the Differentiation of Human and Animal Blood with the Aid of a Specific Serum. E. ZIEMKE.

1.—Löffler discusses some of the earlier observations which seem to indicate that some infections have a favorable influence upon carcinoma. He particularly refers to the influence of malaria, which in earlier times was thought by some observers to check the course of carcinoma or cure it. He also states that since malaria has practically disappeared in Northern Europe, carcinoma has decidedly increased, while in the tropics carcinoma is exceedingly rare, and malaria is extremely frequent. He thinks it is possible that infection with malaria might be a useful treatment for carcinoma, and since it is possible to infect a person with malaria by injecting blood from a person who already has the disease, he advises that this treatment be tried in carcinoma as it may produce some useful results. [D. L. E.]

2.—The case reported was that of a woman of 33, who had previously been well, but who noticed swelling of the lymph glands of the neck. This swelling gradually involved the various other glands and within about 3 years the greater number of the superficial glands were swollen, some of them to the size of a walnut. The spleen was somewhat enlarged; the blood showed decided increase in the lymphocytes, particularly of the larger forms. There was, however, but a slight increase in the total number of the white corpuscles. Otherwise she showed no abnormal physical signs. The tumors had a decidedly benign charcter, the general condition was but slightly disturbed, and under treatment with arsenic the swelling of the glands and spleen decreased decidedly. The case is classed under the general name of pseudoleukemia. Becker then proceeds to discuss this condition. Under this name, as is well known, there are included a series of conditions which differ decidedly from each other. First among these he mentions lympho-sarcoma, malignant lymphoma, and multiple swelling of the glands of tuberculous origin. (To be continued.) [D. L. E.]

3.—The case was that of a man of 29, whose illness began with the usual symptoms of mumps, together with severe headache, giddiness, fainting attacks and profound weakness. He subsequently became extremely somnolent and apathetic, and had repeated vomiting. On the 3d day of the disease there was distinct swelling of the right parotid glands. He had severe pains in the abdomen at the same time, and frequent diarrheal stools. When seen he was severely ill with a general appearance of a case of typhoid fever; answered questions slowly and with difficulty; had moderate fever; the regions of the liver and spleen were tender, but these organs could not be palpated. There was albuminuria and marked swelling of the right parotid gland. The diazo-reaction was negative, the Widal reaction is not mentioned. There was subsequently pain in the left testicle, but no swelling of this organ. The fever soon subsided, and on the 3d day after he was first seen, and the 6th day of the disease, the temperature reached normal and soon became permanently so. There was an epidemic of mumps at the time this patient was seen, and the presence of the fever, the very early appearance in the disease of the parotid swelling, and the subsequent course of the symptoms, led Schwarzkopf to decide that it was an unusually severe case of mumps. [D. L. E.]

5.—Ziemke states that owing to the diffculty of obtaining a sufficient amount of fresh human blood in treating rabbits in order to produce the specific antiserum, he was led to try the blood obtained from corpses, and found that when serum was obtained from the blood of those who had been dead for as long as 3 or 4 days, it could be satisfactorily used for this purpose. The fluid blood was placed in tall vessels and stood on ice until the serum suppurated well, and then chloroform was added. He never saw infection of the animals result from the use of this serum. He believes, however, that the subcutaneous use of the serum is better than using it intraperitoneally, as infection would be much more likely to take place if the latter method were used in case the serum were in the least infected. For procuring the serum from rabbits he employs the following method: The animal is tied on the operating table; the carotid is isolated and tied in two places, and then a sterile glass cannula introduced, the carotid is cut through at once, and the blood is received in a sterile vessel. The defibrinated blood is then placed in sterile test tubes, and kept on ice, and the serum is sucked off with a papette, and put in other tubes. While bleeding the animal rhythmic compression of the heart should be carried out, as it assures very complete emptying of the blood vessels. For the preservation of the serum he has tried, as suggested by Uhlenhuth, adding chloroform; he has found, however, that after a time the serum loses some of the intensity of its action, and he has therefore attempted to make use of the fact described by Nolf, that the active principle of the serum is in combination with the serum globulin. He precipitated the globulin with magnesium sulphate, and thus isolated it from the serum albumen. This precipitate gives the reaction when kept for a long time and subsequently dissolved in salt solution, but its intensity was by no means so great as that of the fresh serum, and he thinks that we have at present no satisfactory method for preserving the serum. As to carrying out the reaction he states that it is best to use physiological salt solution or 0.1% soda solution. Stronger solutions of soda cannot be used. In doing the reaction he uses small test tubes which will hold from 2 to 3 cc., and have a diameter of about 5 mm. These are partly filled with various dilutions of the blood, and with a capillary pipette serum from the animal is added. If the reaction occurs, the mixture will become cloudy in a few minutes; if flaky precipitation occurs, the reaction may be considered to be very characteristic. Very slight cloudiness is not specific. He has also investigated the question as to whether reaction is given by a mixture of animal and human blood, and found that it is. This is important as animal blood might be smeared over human blood in cases of medico-legal importance. He also considers it of importance that he has been able to extract the blood from the spots when it was so old that it would not dissolve readily from the solutions. This he accomplished by using a concentrated potassium cyanide solution, and then adding tartaric acid in substance until the mixturo was neutral; the blood when extracted by this mixture, gave the specific reaction. He considers, however, that it is not only important to treat the animals properly in order to get a sufficiently active serum, but a considerable amount of practice and acquaintance with methods of this kind is necessary in order to get results that can be depended upon. [D. L. E.]

October 24, 1901.

1. Studies of an Epidemic of Dysentery in Japan, with Especial Consideration of the Bacillus Dysenteriae. K. SHIGA.
2. Concerning Uremic Conditions. A. LAQUEUR.
3. Cytodiagnosis of Meningitis. E. BENDIX.
5. External Manipulation for Rendering Defecation Easier. GUMPRECHT.
6. Contribution to the Knowledge of Lymphomata. E. BECKER.

1.—Shiga first gives a review of his previous article concerning the dysentery bacillus, describing its morphology, cultural characteristics, its behavior toward various antiseptics, and then its relation to the disease itself. The dysentery bacilli are found in the latter half of the first week of the disease in the fresh stools; in the later stages of the disease they are rather difficult to cultivate. They disappear more or less completely as the patient improves. If there is a relapse they again appear in large numbers. One finds the bacilli in almost pure culture in fresh catarrhal or diphtheritic areas in the bowel; in fresh conditions they are found more superficially in the lesions; in the old infection, the colon bacillus and other microorganisms overgrow them. The bacilli are often found in the mesenteric glands, but the author has never found them in the liver or spleen. He examined 5 cases of parotitis which occurred in the course of dysentery and was unable to find the bacilli in extirpated portions of the glands or in juices of the gland. The urine, blood and milk are always sterile. Because of the localized character of the disease one finds in dysentery no tumor of the spleen, no eruption and no inflammatory conditions of the bone and bone marrow, etc., such as are found in typhoid fever. The agglutinative reaction he has tested in hundreds of patients and found it generally parallel in intensity with the severity of the disease. It appears in some instances in dilution as great as 1 to 130, and so on down, very mild cases being negative at 1 to 10. He has seen the reaction present as long as 8 months after the attack. It is not, however, of importance in diagnosis in many instances, because it is very likely to be absent in very mild or doubtful cases. He discusses the relation between the typhoid serum reaction and the prognosis, and then states that after making quantitative investigations on the agglutinating power of the blood in dysentery, he found that its intensity is practically parallel with the severity of the disease excepting in very grave cases which are commonly fatal, in which the reaction is usually but slightly marked. Agglutination appears only in the second or third week of the disease, and reaches its highest point in convalescence. It sometimes appears as late as the sixth week, and this late appearance makes it of little importance in diagnosis. The bacteriological diagnosis of a case of dysentery may be made by carrying out the agglutination test of a culture with immune serum, by cultivating on glucose agar, and in milk. If agglutination occurs at once, if there is no gas production, and if milk has not coagulated, the dysentery bacilli may be considered to be present. [D. L. E.]

2.—The present paper is based upon the observation of Neisser and Döring that the usual reaction between human blood serum and the blood of animals of another species was curiously modified in a case of uremia. The patient had been bled and the serum was tested with the blood of a rabbit. One tenth cc. of the native serum dissolved the blood cells of the rabbit in 1 cc. of blood in the usual manner, the fluid becoming quite clear within 2 hours. When, however, non-active serum—namely that which had been heated and the thermolabial complement had been destroyed—was added to the native serum, and then the mixture added to the rabbit's blood, the usual reaction was not observed, the corpuscles being undissolved and the fluid remaining cloudy. Laqueur adds 2 similar observations both of them occurring in patients who, like the one mentioned, were suffering from uremia. The reaction, as above described, was hindered by adding to the native serum a somewhat larger quantity of serum which had been heated to 55° C. In one case it was noticed that this alteration in the human serum appeared with the onset of uremia, for the patient's blood had been examined previous to the onset and showed normal conditions, while during the uremia this modified reaction was present. The author has examined a considerable number of other cases, some of them persons with nephritis, but without uremia, and others subject to other diseases, and has never found this modified reaction in any other instances. This curious reaction would seem to indicate that the blood in uremia loses some of its power for protecting against poisons. The practical clinical importance of such an observation he does not consider great, for the hemolitic action of human serum upon rabbits' corpuscles varies decidedly in pathological conditions, and in one of the cases reported he found after a few days, that the native serum had no power of over solution of agglutination of the corpuscles; there is probably very little of clinical importance to be gained from this form of study of the protective action of the blood. He notes that in the cases reported there was extremely high blood pressure as determined by the Gärtner tonometer: in one it was about 215 and another 180. The symptoms of uremia in both cases were delayed for a considerable time by using complete wet packs. [D. L. E.]

3.—It has been stated by a number of writers chiefly of the Widal school, that the fluid in cases of tuberculous effusions of various kinds contains an extremely large percentage of lymphocytes as compared with leukocytes, while in other inflammatory conditions the percentage of leukocytes is much greater than that of the lymphocytes. Bendix has examined 8 cases of meningitis, 5 tuberculous and 3 sporadic epidemic meningitis. The diagnosis was confirmed in all cases by the autopsy. In the 5 tuberculous cases attempts were made to find the tubercle bacilli, but these succeeded but once. The morphological result of the examination seemed therefore of the greater importance since it was determined that in every instance almost all of the cells present were lymphocytes. In one case of meningitis following trauma, which seemed clinically to be purulent meningitis, but in which the cytological examination showed that the cells were chiefly lymphocytes, a probable diagnosis of tubercular meningitis was made, and the autopsy subsequently showed that this was correct. In one of the 3 cases of epidemic meningitis due to the meningococcus, however, the cells were found to be chiefly lymphocytes. This he attributes to the fact that this case was one of very slow progress; he believes that the presence of a majority of lymphocytes is due purely to the chronicity of the case, and not to the fact that it is tuberculous, or due to any other variety of infection. Ribbert has shown that in acute inflammation polynuclear leukocytes are found in large numbers, while in chronic inflammations one finds chiefly lymphocytes. [D. L. E.]

5.—The method recommended is: at the moment before defecation occurs the patient should place the flat left hand over the sacrum so that the tips of the fingers reach just beyond the end of the coccyx. When the pressure of the feces is felt through the rectum, pressure is gradually increased and thereby the column of feces is more or less broken up. Repetition of this pressure throughout the whole process of defecation results in making this process much less painful in instances in which it would otherwise be painful, and is of use in some cases for actually relieving constipation. Gumprecht discusses the anatomical reasons why this pressure should act as an aid to defecation, and states that through advising its use he has relieved many patients of extreme pain during and after defecation. [D. L. E.]

6.—The three other groups which Becker makes, are lymphomata occurring with syphilis, the lymphomata occurring with anemia splenica infantum, and finally the so-called cases of pure pseudoleukemia. The latter are not in any pathological sense different from lymphatic leukemia. There is a more or less marked diffuse hyperplasia of the lymphatic tissues, widespread throughout the digestive tract, the spleen and various parenchymatous organs. The only difference between pseudoleukemia and leukemia is in the circulating blood cells, i. e., in pseudoleukemia there is a relative increase of the lymphocytes, but no decided increase of the total number of white cells. In lymphatic leukemia there is a very marked lymphocytosis. There have been attempts to describe pseudoleukemia under lymphatic and myelogenous varieties. The cases are mixed, however, and are never confined definitely to any one of these systems, and Becker believes that whatever causes the disease, it acts from the beginning upon the whole lymphatic tissue, but involves the lymphatic tissue of certain organs more markedly than that of others. Under the 6 varieties mentioned he believes that all conditions which can be brought in the clinical picture of pseudoleukemia are included. As to the question whether these various grades form well characterized disease pictures, he considers this entirely true in lymphosarcomatosis, in the tubercular form, in the syphilitic variety, in sarcoma and in anemia splenica infantum. But this is less true of malignant lymphoma, and pure pseudoleukemia. As to malignant lymphoma Bilroth admitted that some of the cases which he had described under this heading belonged to the

tuberculous lymphomata, while others were cases of lymphosarcomatosis or pure pseudoleukemia. Many authors, therefore, have cast aside the name malignant lymphoma. Fischer, however, believes that this is a special disease, and Becker believes that his case speaks for such a view. Examination of extirpated glands in this case had shown the absence of histological appearances of tuberculosis, and of tubercle bacilli; there was no disease of the lungs, and there was also nothing indicating that the patient had syphilis. Against a diffuse pseudoleukemic process was the favorable course of the disease and the decided localization of the process to the lymph glands and the spleen. The case, therefore, does not belong to the classes, tuberculosis, syphilis, lymphsarcomatosis, or diffuse pseudoleukemia. Becker believes that the names "malignant lymphomata" and "benign lymphomata" are not well chosen. Benign lymphomata are supposed to appear as solitary tumors, but this Becker thinks is not true, and considers that this is shown by the present case. He believes that the designation "malignant lymphoma" should be given up and prefers for the general designation of glandular disease the name "lymphomatosis." He would then divide such conditions into (1) lymphomatosis tuberculosa; (2) lymphomatosis syphilitica; (3) lymphosarcomatosis; (4) lymphomatosis hyperplastica simplex, with the subdivision anemia splenica infantum; (5) lymphomatosis diffusa. This case comes under the latter heading. He would entirely give up the name pseudoleukemia. The blood examination in this case showed constant relative increase of the lymphocytes. The increase of the lymphocytes, however, became less marked with the improvement in the condition of the glands. Certain authors state that the most important sign of pseudoleukemia is this relative increase of the lymphocytes. With this view Becker does not agree. He draws attention to the fact that we see such relative increase in the lymphocytes in a series of other diseases such as tuberculosis, syphilis, typhus fever and measles. Lymphocytosis, he believes, is really merely a result of swelling of the lymphatic tissue, and does not in any way indicate the true nature of the disease. [D. L. E.]

October 31, 1901.

1. Testing the Function of the Liver. H. STRAUSS.
2. Concerning the Theory of Fat-Staining. L. MICHAELIS.
3. Some Biological Peculiarities of Phenyl Hydrazin. L. LEWIN.
4. The Excretion of Typhoid Bacilli in the Urine. SCHUEDER.
5. Studies of an Epidemic of Dysentery in Japan with Special Reference to the Dysentery Bacillus. (Continuation.) K. SHIGA.

1.—Strauss refers to the fact that Sachs has previously shown that levulose is not assimilated by the frog after the removal of the liver, while other sugars are. He, therefore, tested the functionating power of the liver by administrating 100 grms. of levulose on the empty stomach, and testing the urine passed in the subsequent 4 hours for the presence of levulose. **In 29 patients with liver disease he found in 26 an alimentary levulosuria; in 58 persons who had no disease of the liver he found it in 6 instances.** The latter instances do not destroy the value of the test because it is quite possible that these patients had some liver trouble which was not discoverable, and indeed all of them had conditions which might readily be complicated by disease of the liver. The other methods of testing which he used, namely the determining of the percentage of ammonia in the urine as related to the percentage of total nitrogen, and the determination of the amount of volatile fatty acids in the urine proved to be unsatisfactory; the determination of the fatty acids in the urine seemed, however, to show some relation between their amount and the disease of the liver. (To be continued). [D. L. E.]

2.—Michaelis decides that indifferent stains are regular specific fat stains, while there are also week basic dyes and weak acid dyes which stain fat. Some are so weakly basic or acid that the fat extracts the base from the stain, or those which are slightly more markedly basic or acid in which only the bases or the acid stain the fat. There is a theoretical consideration of the chemistry of the subject. [D. L. E.]

3.—Lewin discusses his experiments with phenylhydrazin poisoning. He has himself noted that when his fingers came in contact with this substance they became yellowish brown, the stain could not be removed, the fingers became red, itched severely and swelled, and showed peculiar sensory disturbances. This condition was followed by eczema. He also had a general feeling of weakness with pallor and sensation of weariness, with disturbance of appetite, and a frequent tendency to diarrhea. All these symptoms disappeared after the cessation of the experiments with phenylhydrazin. Somewhat similar symptoms were observed by Emil Fischer. This shows that **phenylhydrazin has a cumulative toxic action**, and that the sensitiveness to its effects increases with the time of exposure, and that by ceasing the exposure the effects of the poison are gradually overcome. Experimenting with the effect upon blood showed that blood exhibited most rapid and marked changes from injections of phenylhydrazin; the color frequently became altered, when seen in a thick mass appearing brownish red, when a thin layer was observed it was green. If the blood was heated with nitric acid the color became so very green as to resemble chlorophyl, and the coagulated masses were not unlike spinach. **This green substance which results from heating with mineral acids** he terms hemoverdin. It is known that if phenylhydrazin and an aldehyde are heated with concentrated hydrochloric acid the solution becomes green, and it is possible that the substance when in the blood current, acting on the red blood corpuscle in particular, produces an aldehyde, and that therefore by subsequent heating with acids this green substance is produced in the same way as when phenylhydrazin is heated directly with an aldehyde. The substance which he has obtained with blood, however, and that obtained synthetically, are not the same. Dead blood when mixed with phenylhydrazin produces only a small amount of hemoverdin, and gives practically no reaction within the time that the reaction is obtained when living blood is mixed with phenylhydrazin and subsequently heated with nitric acid. He describes the spectral bands of hemoverdin; they are similar to those of acid hematoporphyrin and chlorophyll. [D. L. E.]

4.—Schüder has made studies of a series of cases for a prolonged period of time to determine how often and at what period of the course of typhoid fever or convalescence from this disease one may find typhoid bacilli in the urine. In all he made 671 bacteriological tests of the urine in 22 cases of typhoid fever. That is on the average, he **investigated each case for 30 days.** The shortest period of investigation was 15 days; the longest 51. Typhoid bacilli were found in 5 cases. In 4 of these they were found on one day only; in the other they were found on 4 days. With one exception the cases were severe. In 3 of the cases there was also albuminuria. In one case he made the interesting observation that **albumin was found in the urine only on the day during which typhoid bacilli were excreted in the urine.** He also notes that in several of the cases he found numerous colonies which had the general appearance of colonies of typhoid bacilli, but which upon further investigation proved to be not typhoid bacilli. This case shows how important it is in investigations of this kind to determine definitely that the bacilli are typhoid bacilli, and how easy it is to consider that such bacilli are present when they are not actually discovered. In some of the cases he found numerous numbers of bacilli present. One of the important results of his work was to demonstrate that **typhoid bacilli may be excreted at an advanced period of convalescence when they have not appeared previously**; in one case they were found only on the 49th day after the onset of disease. He then gives a table of the previous investigations concerning typhoid bacilluria, and shows that altogether **typhoid bacilli have apparently been looked for in the urine 599 times, and in 177 instances—that is 29.55%—they have been found.** If all doubtful examinations, which were performed before the proper methods of identification were known, as excluded, the percentage remains about the same, 28.31%. He believes that the typhoid bacilli are probably found even more frequently than these results would indicate, since they were, in most cases, not searched for on a very large number of days. His results, and the others to which he refers, indicate the **importance of disinfecting the urine in typhoid fever cases, for weeks after convalescence** has been established. They also show the ready possibility of infection of

attendants though the water of the bath which in many instances probably contains urine infected with typhoid bacilli. [D. L. E.]

5.—(To be concluded.)

November 3, 1901.

2. The Differentiation of Meat From Different Species of Animals With the Aid of Specific Sera and the Practical Use of the Method in Meat Inspection. UHLENHUTH.
3. An Unusual Form of Cirrhosis of the Liver. L. JORES.
4. Studies of an Epidemic of Dysentery in Japan With a Special Consideration of the Dysentery Bacillus. (Conclusion). K. SHIGA.
5. Testing the Functions of the Liver. (Conclusion). H. STRAUSS.

2.—Uhlenhuth has made further studies of the **specific serum reaction,** and now reports that it is **possible to determine the kind of meat in sausages and in similar preparations** which are often made from the meat of horses, cats, dogs, etc. It has previously been practically impossible in such mixtures to determine definitely whether the meat was from the proper source or not. If a rabbit is treated with the blood of a hog for instance, this rabbit's serum will react to an extract of hog's flesh, but not with extracts of other meats. In the same way if the rabbit has been treated with cat's blood it would react to extract of cat's flesh and not to extracts of other meats, etc. This he considers a specific reaction and one that will be important in meat inspection. [D. L. E.]

3.—The case reported was a man who had had gastric disturbance of rather short duration 11 years before his death. His liver trouble was first notable about 2 months before his death. He had then icterus, ascites, followed by general edema and enlargement of the spleen. The liver was enlarged and showed marked granulation over its surface during life. The course was very rapid. The nodules in the liver were so large, and the course was so rapid that it was thought that the man probably had a carcinoma. The post mortem showed that there was a marked gastritis with état mammelloné and numerous small scars over the surface of the stomach. The liver was at this time found to be small; the **surface was very irregular and showed numerous nodules from the size of a pea to that of a wal nut.** The nodules were yellow while the tissue between was grayish red. The cut surface had a similar appearance the yellowish nodules being chiefly in the form of islands in the grayish ground substance. Microscopically the yellowish islands proved to be remnants of liver tissue with hyperplasia of the liver cells, with some increase of connective tissue within these islands of liver tissue. The grayish red tissue was purely connective tissue without any liver cells remaining. The increase in connective tissue proceeded from the periportal connective tissue, and also from about the hepatic vein. In other words it was bivenous cirrhosis. The liver cells near the central connective tissue growth were small and atrophied, and this atrophy could be noted in certain areas where there was as yet no increase in connective tissue. About the central vein the grayish red tissue was also remarkable for the fact that it contained large numbers of small round cells, and the liver vessels were not occluded. The hepatic artery and the intralobular bile passages showed their normal relations to each other, and the numerous white capillary vessels could still be seen. Jores refers to the possibility that this case might be an instance of acute yellow atrophy of the liver in the process of regeneration. He does not believe that this can be the case, and thinks that it is rather a progressive condition, the most marked indication of this being the connective tissue growth within the hyperplastic areas of liver tissue. He believes, however, that it bears a certain relation to regeneration after acute atrophy, because the cells near the central vein showed marked atrophy even before there was any other growth of connective tissue, and because in this region the connective tissue was found bearing no nuclei, while in the periportal connective tissue there were numerous nuclei. This indicates that **to some extent at any rate the liver atrophy was primary and the connective tissue overgrowth secondary,** but he believes that this is true only in a limited sense, and that the connective tissue over-growth did not depend entirely upon primary atrophy of the liver tissue. As to the etiology, the ordinary causes of cirrhosis of the liver such as alcoholism and syphilis were not to be found. He considers that **the gastric condition was probably the cause of the liver disease,** and refers to the increasing testimony that it is largely the disturbance of the gastro-intestinal tract caused by poisons such as alcohol that ultimately produce cirrhosis of the liver, rather than the direct action of the poison inself. [D. L. E.]

4.—Shiga first reports a series of cases in detail in which his serum was used, and then presents tabulated **statements of the effects of the serum.** The use of the serum shortened the course of the disease in the cases that were cured, as compared to those who recovered without serum treatment. If the cases were fatal in spite of the serum treatment, the course was nevertheless longer in those fatal without serum treatment. The nervous symptoms in particular and most of the other symptoms were markedly reduced by the use of serum, and the **general majority in those cases in which serum was used was from 8 to 12%; while in the cases treated otherwise it was from 22 to 55%.** The location of the disease had a marked influence upon the prognosis when serum was or was not used. Those cases in which the whole of the colon or a large part of it, or both the small and large intestines were involved showed without treatment from 88% to 100% of mortality. Five cases treated with serum in which the ascending and transverse colon was involved, recovered, while of the other cases of wide-spread involvement only 40% to 75% died. The most striking result was seen in cases involving the ascending colon in which with general medical treatment 52% died; with serum treatment only 9% died. As to the **importance of the dysentery bacillus as a cause of dysentery,** he gives the following points. The bacillus is constantly found in all cases of dysentery of this variety, and it is not found in persons with other diseases or in healthy persons. The dysentery bacillus is found in the fresh lesion and in the deeper portion of the bowel wall, while in old lesions, and on the surface of the intestine other bacteria have over-grown it. The bacillus or its toxins produce hemorrhagic effects. The bacillus produces agglutination with the blood of dysentery patients but not with the blood of other persons. The agglutinating power varies with the course of the dysentery and describes a definite curve. It is at first rapid, reaching its highest point in convalescence and then sinking. Dead bacilli produce in healthy persons marked local inflammatory infiltration, while if injected into dysentery patients in convalescence they are much more rapidly dissolved and absorbed. The **serum produced by means of these bacilli has a preventive and therapeutic influence upon dysentery.** In a brief discussion of the symptomatology and pathology of dysentery he states that the infection occurs per os. The bacilli remain in the folds of the intestine, constipation and digestive disturbances aiding in the infection, until they produce inflammation which may be catarrhal, hemorrhagic, or diphtheritic. This process advances over various areas of the intestines and may involve both the small and large intestines. The sigmoid flexure, the rectum, the hepatic and splenic fissures, the ileocecal valves and the appendix are favorite seats of dysentery, because the stagnation at these points favors infection. The bacilli probably do not enter the general circulation.. The **general symptoms of dysentery are produced by the solution and absorption of the toxins contained in the bodies of the bacilli.** They are chiefly fever and prostation, or there may be headache, severe prostation, pains in the muscles, sleeplessness and other nervous symptoms. The general symptoms are more marked the higher the situation of the lesion. The rapidly appearing emaciation which is seen in many cases is also, Shiga believes, a specific tonic effect of the dysentery bacilli, since it is produced by the injection of toxin, and is not wholly explainable upon the basis of the diarrhea or the inanition. He divides dysentery into **colo-dysentery, and entero-dysentery,** a division of great importance from a therapeutic and prognostic standpoint. Two other forms may also be described, the ascending and descending varieties. Amebic and epidemic dysentery differ from each other as follows Amebic dysentery has a chronic course, one does not find the dysentery bacillus, and the toxic symptoms are absent. Liver abscess is a common complication of the amebic form, but Shiga has never seen it in epidemic dysentery. In

amebic dysentery the lesion is generally in the rectum or descending colon, and the small intestine is never involved. Shiga believes that Flexner and Kruse's bacilli are identical with his. Celli's bacillus is of a wholly different variety. [D. L. E.]

5.—Strauss states that additional evidence of the **importance of alimentary levulosuria is an indication of disease of the liver** may be seen in the fact that 2 diabetics, who were also subjects of hypertrophic cirrhosis of the liver, showed alimentary levulosuria, while diabetics ordinarily respond to the administration of levulose by excreting dextrose; also 2 cases with coexistent disease of the liver showed alimentary levulosuria, but no dextrosuria. In these cases, therefore, the levulosuria must have been due to the liver disease, for a pancreatic diabetes would have produced dextrose. He decides that alimentary levulosuria is a means of testing the function of the liver, if only positive results are considered of importance, and if it be remembered that no diagnosis can be made under any circumstances by observing only one symptom. He has been **able in 3 cases of ascites of doubtful nature, to make a diagnosis** by means of alimentary levulosuria which diagnosis was confirmed after removal of the fluid. In one case there was an interesting combination of cirrhosis of the liver with tubercular peritonitis. He believes that these results give added testimony that there is no distinct class of diabetics which deserve the name "hepatorgenous.' ' He has made further studies of the occurrence of alimentary dextrosuria in liver disease, and in 20 cases found only one instance of dextrosuria. This was in a case of Banti's disease. He has altogether made 50 observations himself, and has found 49 other observations concerning **alimentary dextrosuria in disease of the liver.** In only 2% of these cases was the result positive, and it is not impossible that these positive results depended largely upon giving too much sugar or giving cane sugar which furnishes levulose. Strauss objects to Glenard's classifying a portion of the cases of diabetes as of alcoholic origin. The alcohol, in Glenard's belief, first causes the production of a hepatitis which leads on to diabetes. Strauss' objection is partly based upon the previous statements that patients with liver disease do not show any tendency to alimentary dextrosuria, and partly upon the fact that he has been unable in his own work or in his investigations of that of others, to see any definite indication that alcohol tends to produce either diabetes or a tendency to alimentary dextrosuria. He has made tests for alimentary dextrosuria altogether in 158 cases and has collected a series of other cases observed by other persons and in all has been found less than 5% in which there was alimentary dextrosuria. He believes that the conditions which Strümpell has observed in beer drinkers are perhaps largely due to carbohydrate contained in the beer, and perhaps to the carbonic acid, and spices. For he has made special investigations of beer-drinkers and has found that they have no distinct general tendency to alimentary glycosuria. While he does not absolutely deny that alcohol may be the cause of diabetes, he considers that we should not consider it of great importance as a cause. [D. L. E.]

LA PRESSE MEDICALE.

November 13, 1901. (No. 91).

1. Cellular Secretions. A. HUTINEL.
2. Rachicocainization. A. GUINARD.
3. The Preventive Treatment of the Pest. NAGEOTTE WILEBOUCHWITCH.
4. The Administration of the Salicylates. ALFRED MARTINET.
5. Diet in Bright's Disease. ALFRED MARTINET.

1.—Typical **cellular secretions** are found in the gastro-intestinal glands, salivary glands, and the pancreas. These secretions contain a ferment, an enzyme, a distase, etc. Not only are the toxins, produced by the presence of bacteria, also ferments or diastases, but the secretion of cells themselves may become toxic. Fermentation ceases after a time, being limited by the destruction of the ferment, its surroundings, the elimination of bacteria, etc. Bacteriolysis, cytolysis, hemolysis and phargocytosis all occur, and agglutins, lysins, and coagulins are found in the blood. The production of antitoxin is regulated, not only by the quantity of the poison injected into an animal, but by the activity of the animal's cells. These facts apply especially to the secretions of the leukocytes. Hutinel's article is full of technical details. [M. O.]

2.—Guinard believes that the **main cause of the accidents seen with rachicocainization** is the solution of the cocain in water. He uses cerebro-spinal fluid removed from the individual to be injected as the solvent for the cocain, and has not had a single accident out of 70 cases. [M. O.]

3.—The first **vaccination against the pest** was made by Haffkine in Bombay in 1896. Statistics show that it certainly had no injurious effects upon the individuals vaccinated. in Aden, in 1900, 1.9% of those vaccinated caught the pest, with 34.7% of deaths, and, while the pest attacked 8.4% of those not vaccinated, they showed 78% of deaths. Even when vaccination was performed during the period of incubation, its effect was excellent. In Ahmadnagar in 1899, while 415 cases died out of 563 unvaccinated, from a larger number who had been vaccinated, but 70 were attacked with only 31 deaths, a decrease of 73%. No solitary case of pest appeared among 270 vaccinated students who lived in the pest-stricken quarter. When the pest developed in those who were vaccinated, it appeared to be less severe, shorter, and less likely to prove fatal. [M. O.]

4.—**Sodium salicylate** should be given diluted in a large quantity of water, with meals, every two or three hours, up to 120 grains in 24 hours, for acute rheumatism. This administration should be continued some days after fever has disappeared, then it can be gradually decreased till the twentieth day. It may be given in powders with sodium bicarbonate, or in rum. In affections of the gall ducts, gout, or gravel, as much as 60 grains daily may be ordered, continued at intervals of two weeks. Besides, methyl salicylate can be applied locally by inunction, in rheumatism. [M. O.]

5.—While absolute milk diet is necessary in acute cases of Bright's disease, Robin's experiments show that in chronic cases, after being upon milk diet for a while, vegetables and some meat may be added, the appearance of albuminuria being carefully watched for, and the amount of albumin present being carefully determined. Thus the quantity of vegetables and meat to be allowed, in each case, may be easily estimated. [M. O.]

November 16, 1901. (No. 92).

1. The Opening Lecture in Ophthalmology. F. de LAPERSONNE.

1.—Dr. de Lapersonne, formerly of Lille, the newly elected professor of ophthalmology in the Paris Medical School, delivered his first lecture upon the twenty-second anniversary of the foundation of the chair of ophthalmology by Dr. Panas, who has just been retired. He reviewed the **progress of ophthalmology** during the past twenty years, speaking of the discoveries of the microbic causes of ophthalmia, the infections, auto-infections, dystrophies, etc. Hereditary syphilis causes but 40% of the cases of interstitial keratitis, the rest being due to cachectic, diathetic conditions. Arrest of development in the eye is generally due to previous inflammation. He also spoke of antisepsis, asepsis, sterilization, and operation in eye work, noting the improvement in operative technique, and in the treatment of concomitant strabismus. The pathogeny of glaucoma, while complex, is yet undetermined. Iridectomy is still the best method of treatment. Javal has invented many useful instruments, and Cuignet has discovered keratoscopy. He concludes by sketching the outline for the course of ophthalmology to be given this year. [M. O.]

November 20, 1901. (No. 93).

1. The Serum Treatment of Typhoid Fever. CHANTEMESSE.
2. Tuberculosis in Children After Intubation or Tracheotomy. R. ROMME.
3. Gumma of the Frontal Lobe with Jacksonian Epilepsy. G. DIEULAFOY.

1.—In 1892 Chantemesse began the administration of an **anti-typhoid serum,** yet the results were useless until 1899, when soluble typhoid toxin was found. This enabled Chantemesse to produce his anti-typhoid serum. The average hospital mortality for typhoid fever in Paris was 29%; that of the army, 17%. Even in the Children's Hospital it was 10%. Chantemesse injected 100 cases with anti-typhoid serum, and all those injected before the tenth day recovered. Only six died, three of perforative peritonitis, one of pneumonia, one of hyperpyrexia, and one of gangrene. Yet Chantemesse only treated the most severe cases with

serum. In seven cases, rapid defervescence followed the injection of antityphoid serum, the charts being given. The same effect was noted in relapses, when the injection was repeated. There is no doubt that the disease is shortened, the general condition improved, diarrhea made rare, the pulse fuller, and the fever less. When the infection is intense, the reaction to the injection is more prolonged. Cold baths are also given. The serum seems to increase the elimination of urine, causing polyuria with the disappearance of albuminuria. Blood examination shows the changes found during normal convalescence, after the serum injection, hyperleukocytosis with a gradual return to normal. All complications were rare but perforation. It is preventive, anti-infectious, and antitoxic in action. Ten or twelve c.c. are at first injected, and if the temperature does not fall in a week, 4 or 5 c.c. more are injected. Acidulated water is given, and milk, after the diarrhea has ceased. Wherever typhoid contagion is suspected, the serum should be injected prophylactically. As its preparation is long and exceedingly difficult, the cost is high. [M. O.]

2.—Trump and Pfaundler have collected statistics upon the occurrence of **pulmonary tuberculosis following intubation or tracheotomy.** Landouzy, in 1899, said that phthisis commonly occurred in children after tracheotomy or intubation for diphtheria. Trump's investigations do not prove this. Pfaundler concludes that tracheotomy certainly does predispose to pulmonary affections. Therefore intubation is to be preferred to tracheotomy, since there will be less danger of phthisis occurring later. [M. O.]

3.—**Professor Dieulafoy answers the criticism** and discussion which followed the publication of his article upon his error in diagnosing gumma of the frontal lobe with Jacksonian epilepsy, in *La Presse Medicale*, October 22, 1901). [M. O.]

JOURNAL DE CHIRURGIE.

October-November, 1901.

1. An Ectromelic Hemimelus.
   ALBERT MUCHET and CHARLES VAILLANT.
2. The Vesical Relations in Genital Prolapse.
   DESGUIN.
3. Two Cysts of the Round Ligament. LEBESGUE.
4. Resection of the Superior Maxilla. LEBESGUE.
5. Bottini's Operation after Suprapubic Cystotomy.
   LE CLERC-DANDOY.

1.—Mouchet and Vaillant report a second case of **ectromelic hemimelus,** a man of 37, whose left arm is shortened, the forearm flexed at an angle of 100°, the hand having but a thumb and one deformed finger. There is pronounced inward rotation of the arm, and outward rotation is impossible. The elbow seems firmly ankylosed. A photograph and a radiograph accompany the article. The humerus and radius form one continuous bone, there being complete absence of the olecranon and elbow. There is also one large carpal bone, with atrophy of the metacarpal bone of the thumb, and lateral, internal dislocation of the second phalanx of the single finger, probably the index finger. 17 similar cases have been published. [M. O.]

2.—As urine collects in the **bladder of a woman with genital prolapse,** the bladder descends so that it cannot be completely emptied. But when the bladder becomes distended, it returns to its normal position. To prevent incising the bladder wall in performing hysterectomy, anterior colporrhaphy, or other operation, upon women with genital prolapse, Desguin **advises distending the bladder before operation,** which will cause it to resume its normal high position, out of the way of the operator. His technique follows. [M. O.]

3.—Lebesgue reports the case-histories of two women with **cysts of the round ligament,** a condition which is rather rare. [M. O.]

4.—Lebesgue also reports a case of **resection of the upper jaw for sarcoma,** in a woman of 71. She recovered rapidly after operation. [M. O.]

5.—Le Clerc-Dandoy operated upon a man of 68, performing **suprapubic cystotomy** with the removal of a calculus weighing 60 grammes, **followed by Bottini's operation** upon an hypertrophied prostate. He recovered slowly, and is at present perfectly well. Le Clerc-Dandoy believes that advanced cases of prostatic hypertrophy should preferably be operated upon openly, as was possible with suprapubic cystotomy. [M. O.]

Society Reports.

COLLEGE OF PHYSICIANS, PHILADELPHIA.

SECTION ON OPHTHALMOLOGY.

Meeting January 21, 1902. Dr. William Thomson, Chairman.

Dr. Geo. C. Harlan showed a case of **Congenital Orbital Cyst with Microphthalmus** in a girl of 7. The left lower lid was pressed forward by a large incompressible, but tensely fluctuating bluish cyst. The tumor measured 40 by 25 mm. The lower margin of the orbit was 5 mm. below that of the other side. The interpalpebral commissure was 5 mm. shorter than that of the other side, was pushed upward, and opened into a deep conjunctival sac above the cyst. At the bottom of this sac could be felt a rudimentary eyeball, hardly larger than a pea, moving freely with the other eye. Congenital orbital cysts with microphthalmus or anophthalmus are rare. A few cases have been recorded in England, France, and Germany, and but one in this country, by Dr. Harlan in 1893. Their pathology is very obscure, but they are probably formed by embryonic elements intended for the development of the eye.

Dr. C. W. Le Fevre reported a case of **Bullet Wound of the Orbit** in a man aged 47. The wound was in the right temple midway on a line from the angle of the orbit to the top of the attachment of the auricle. Except for immediate complete blindness, there were no symptoms. Six weeks after the healing of the wound, panophthalmitis with sympathetic irritation occurred, the latter disappearing after the enucleation. A study of the bulb showed that a fragment of bone 9 mm. long, 5 mm. wide, and 2½ mm. thick had been driven from the orbital plate into the eyeball. Dr. Risley recalled a simliar case which he had reported to the Section two years ago.

Dr. G. E. de Schweinitz read a paper on **The Treatment of Detachment of the Retina by Scleral Puncture, Followed by Large Subconjunctival Injections of Salt Solutions.** After referring to the literature of the subject, he gave the history of a case of retinal detachment completely cured by nine large (25 min.) subconjunctival injections of salt solution followed by scleral puncture. Vision before treatment was hand movements; after reattachment with—4 D. it was 5/25. Prior to this treatment, dorsal decubitus, pilocarpine diaphoresis, and iodide of potassium had proved ineffectual. Dr. de Schweinitz referred to the solutions which had been used by French observers. He also stated that many of these reattachments of the retina were not permanent. Dr. Risley had cured a case by the subconjunctival injection of salt solution in smaller quantities, but the detachment recurred.

Dr. Willam Thomson showed a boy, aged 19, with normal vision after the **Removal of a Piece of Steel from the Vitreous by the Sweet Magnet.** The metal entered in front of the attachment of the external rectus, and could be seen with the ophthalmoscope in the outer upper portion of the vitreous. As the lens was uninjured, the wound in the conjunctiva was opened with a spud, and the cone-shaped point of the magnet placed against the sclera then the current was turned on, the boy was conscious of the movement of the steel. A slight incision was then made in the sclera, the magnet again applied, and the steel was found attached. Three weeks after operation V=6/6, with a slight scotoma corresponding to an area of chorioidal degeneration where the steel rested. The formation of an opaque cyst without infection is rarely seen and watched during absorption.

Dr. E. A. Shumway reported a number of cases of **Acute Contagious Conjunctivitis of a severe type, characterized** by pronounced swelling and the formation of phlyctenules. The Koch-Weeks's bacillus was found in all cases examined. This differed from the reports of Veasey and de Schweinitz who found the pneumococcus the most frequent cause of acute conjunctivitis. Dr. J. F. Frank gave a description of the epidemic of conjunctivitis which prevailed among 47 children in St. John's Orphan Asylum during 1900-1901. It was found impossible properly to isolate them and the cases occurred during a period of six months, some of the boys having infected a second time. In about 20 cases phlyctenules developed. The epidemic was caused by the Koch-Weeks's bacillus.

Special Article.

REGENTICIDES NOT ABNORMAL AS A CLASS.—A PROTEST AGAINST THE CHIMERA OF "DEGENERACY."

By E. C. SPITZKA, M. D.,
of New York.

It may require decades to clear the field of forensic psychiatry from the ruinous confusion wrought therein by doctrinaires who confound the lunatic with the tramp, the thief and ne'erdowells generally, by combining them under a common head, as a so-called "degenerate" class. Through assiduous labor alienists had forced the recognition of certain equitable rights, to which the irresponsible lunatic was, as such, entitled. But these rights are now jeopardized, insofar as they are not already seriously impaired, through this ill-balanced and compulsory partnership, wherein, the lunatic having something and the criminal nothing to lose, the position of the former may be inferred; for there is one party which always is and must be the loser under like circumstances.

The propaganda of the Degeneracy Doctrine has most recently entered a field in which its unsubstantial and delusive characters appear combined, to attain the very acme of extravagant assertion. It is the mentality of political assassins. As these also have been promoted to a sub-class in the all-comprehending domain of Degeneracy, the subject presents an opportunity for legitimate and high timed protest against the fallacious system thus exemplified.

Regarding the mental state of these offenders commonly through inaccurately termed regicides, a subject whose study appears to have been revived by our recent national tragedy, Talbot, Channing, the distinguished alienist of Bordeaux, Regis, as well as others active in kin fields, contribute articles whose conclusions may be summarized as claiming that regicides, generally speaking and as a class, are abnormal. In offering views which differ from this, I shall use the article of Regis as a main text, inasmuch as it best exemplifies, what I venture to pronounce the erroneous method that has been and is followed by the school, with which its writer therein indentifies himself.

Those holding the extreme view cited have limited their analysis of cases to a comparatively few which favor their position, instead of including all regicides or at least all regicides of one country or of a given period of time in their tables. Likewise also has Regis, beyond a minority of cotemporary assassinations, a few from French history and three cases of a semilegendary character, cited but few representative ones of this class. He ignores such important groups as the Jacobite and other Stuart plotters of the reigns of Elizabeth, William and Mary, Anne, the two first Georges, as well as the Guy Fawkes, Rumbold, Cato Street and Despard conspirators—all in their day contemplating, and, most of them, nearly realizing regicide.

If Regis deemed it necessary through a desire to represent all aspects of his manysided subject, to exhume cases from the murky records of a remote past, I think he could have obtained reliable data regarding the character and career of assassins, and of cases much more appropriate than an apocryphal Mucius Scaevola, a mythical Judith and a problematical Chud. Chion, Leptinus, Hermolaus, Cleander, Milon, Charon, Nicanor, Pelopidas, Mithridates Eupator, the Persian Udiastes, Mithridates the son of Tiribazus, Hecataeus, Harpates, Philammon, Martialis, Charaea and particularly the slayers of Hasdrubal, Piso, and Adolphus the Goth, present clear and characteristic pictures of regicidal deeds in the olden time. So also do Johannes Parricida, Joseph the Carizmanian, Obilitz the Servian, the three Charagites of Kufa, and the Afghan slayer of Goru Gowindh of a later day. And if antiquity have its charm, enhancing the value of an illustration, Harmodius and Aristogiton of Europe, the African Danaus (the would-be assassin of Sesostris), the Asiatics Sisera, Adramelech and Sareser, would have at least served to swell Regis' thin ranks.

But more surprising than his presenting defective or doubtful material of ancient days, is the failure to refer to whole groups of terrorists of the present one; whose deeds have become a most serious object of governmental attention and sociological study. A knowledge of the "Nihilist" and "Invincible" would not have permitted him to make such assertions anent the alleged rarity of female regicides as that his four (Judith, Mignon, Regnault and Corday) comprise "almost the only ones to be cited." Regis could have almost trebled this list from a mere reminiscence of his cotemporaries. What was Peroskaja executed, and Vera Sassulitch prosecuted for? Has Regis never heard of Vera Gelo, Leonie Leon, or of Yseult Dudley? Has the attempt of Madame Encore on Bonaparte been excluded from French history? Has not the commutation of the sentence of death of one of Alexander the Second's assassins on the ground of pregnancy, as well as the prolonged newspaper agitation on this head, sufficiently pointed out the sex of a seventh such assassin, making an eleventh when added to Regis' quartette?

The disproportion of females to males is accepted by Regis without further ado as a distinguishing element in the regicide question. One wishes he had given us some figures to sustain this proposition. I shall endeavor to supply the omission, although it be but imperfectly. The following relates to 261 "magicides" in the sense of Regis.[1] Of these 14 were females, or 5.36 per cent. Now taking figures for the years 1894 and 1898 furnished by the U. S. Census Bulletins, it is found that in each of these years the percentage of female homicides is nigh exactly the same, namely 5.35 per cent.

Having here entered the statistical domain it may be well, in order to leave the field clear for the controversial, to conclude the presentation of the concrete proof as furnished by these figures.

Table showing the main ascertainable data anent the mental state of 261 "magnicides."

	Males.	Females.	Total.
Total	247	14	261
(a) Acknowledged to have been insane, legally so pronounced or so disposed of	12	5	17
(b) Notoriously insane, but the disposition made of the case unascertained by writer	2	1	3
(c) Assumed to have been insane, but adjudication evaded through suicide	2	0	2
(d) Notoriously insane and executed	4	0	4
(e) Notoriously insane, and transported	1	0	1
(f) Total of those undoubtedly of unsound mind	21	6	27
(g) Mental state subject of controversy or asserted to have been doubtful, yet too imperfectly reported to admit of an opinion	10	1	11
(h) Suicides and attempting suicides aside from those included in above categories	13	2	15
Total of categories f, g, and h	44	9	53
Ratio of figures in category f	10 34/100		
Ratio of figures in category f plus g	14 53 100		
Ratio of figures in categories f, g and h aggregated	20 34/100		

It is here seen that, admitting the inseparability of suicide from insanity, which it would be absurd to do serious-

1. To avoid violating my intention of brevity, I refrain from discussing a question arising out of what I regard as the one-sidedness of Regis limiting the terms "magnicide" and "regicide" to assailants in humble circumstances. This crime has been frequently committed by persons in other rank, and every shade of such rank, of society; and any demarcation would be arbitrary, from an historical and legal point of view even impossible; as it has been treated and punished in the ordinary way, in the cases of such prominent criminals as Ladislaus Hunyadi, and Duke Demetrius III., not to mention the Earl of Athol and the Archbishop of St. Andrews. Were I to include in the tables all cases collected by me, and regarded in the wider sense as properly belonging here, the number of assassins would be 613 males, 72 females, 685 total, and the female ratio would therefore be 10.51 and hence practically twice as great as that of ordinary murderesses. (Of 808 victims of assassinations, 59, or 7.34 per cent., are females as against the ratio of 10.51 per cent. of aggressors.)

ly, merely for the sake of argument therefore, the proportion of morbid regicides would not exceed one-fifth, and that even requiring the liberal allowance of disputed and problematical cases to the scales of those entertaining the views here opposed. This conceded but extravagant proportion is somewhat higher than that among ordinary murderers, but even its exaggerating figure is far from furnishing a shadow of justification to those maintaining abnormality as a universal or even as a dominant trait; so far is it from being a feature of a majority, that the minority presenting it can not be called a "respectable" one.

Among the actual observations mentioned as supporting the view endorsed by Regis is the frequent development of insanity amongst that part of his corporal's guard of regicides who were imprisoned instead of executed. Aside from the sparseness of the figures and unrepresentative character the development of mental disease, under such circumstances, cannot be utilized without further ado. It must be shown that the proportion of cases exceeds that of the "folie penitentiare" among ordinary life-prisoners.[2] Unless its influence and that of mental strain growing out of the act itself and the ensuing trial, as of injuries possibly received in the act of arrest be allowed for, this evidence deserves the qualification "inadequate" and nothing more.

But, aside from this evident oversight, Regis makes a more serious omission. He fails to consider the large number of regicides who escaped execution and remained sound, as well as those whose identity and, hence also, whose mental state remained and forever remains unknown. We know nothing whatever of the assassins of Ferdinand Charles III of Parma, of Rossi, and Minuoli in 1848; of Prim in 1870, of Morales, Comonfort, Balta, Blanco, Dessalines, Salnave and Gill, Presidents of Mexican, South American and West Indian Republics! We know little of the would-be assassins who followed the example of their bullets, after failing in their attempts on Narvaez, Amadeo, Linares and, but yesterday, on Thiotis, the Greek Minister. Is it necessary for me to state that a claim of insanity here were, of all gratuitous assumptions, the most unprecedented?

No record exists justifying a suspicion as to the mental status of either the executed or eloping assassins of Archbishop Sharpe, unless the fact be so considered that Balfour—and no wonder—manifested a gloomy spirit. The same negative applies to the assassins of a German emperor, Albrecht, and a German king, Philipp. Hamilton, of Bothwellhaugh, lived a sober life in France after the assassination of the Scotch regent. Neither Chalturin nor Hartmann[3] have as yet broken down. I have not heard of Vera Sassulitch becoming an inmate of an asylum and I doubt whether the mystic "Number One," of Phoenix Park fame (recently identified and since deceased) was ever suspected of derangement. In the cases of the two last plotters against the life of Francis Joseph, clinical observation was interrupted in one, Overdank's, by his execution; but the acquittal of Ragosa (tried in Italy) permitted the observation of a career, affected by mental disorder to no degree exceeding such as may be asserted to be a factor of an endemic; manifesting itself in such outcrops as the Irridente, Maffia, Carbonari, and other products of that land which, not content with keeping the home-market well stocked with assassins, has apparently undertaken to supply the foreign demand for this article as well.[4]

We are informed by Regis that Regicides manifest remarkable power to resist pain; and in asserting this to be a characteristic feature; which, together with the tenacity of life manifested, for example, by Damiens, he regards as pathological; he cites the cases of Charlotte Corday, Staps, Sand and Guiteau, as types of this resisting power to torture. Now I will venture to assert that not Corday,** not Staps, not Sand nor Guiteau were ever tortured; and this at the risk of admitting myself to be a shockingly bad student of history if the contrary be proven. I will venture to assert that not only was torture not applied to these persons, but that they were not even roughly handled, unless the inevitable ligation and final coup be regarded as such, or the aberrant bullet discharged by Sergeant Mason at Guiteau.

So far are regicides from showing an indifference to bodily suffering that the English law notes the successful protest of Felton against the use of torture, when suggested in the Star Chamber, as marking a turning point in English Practice. Had it not been as well for Regis to have noted this documented fact, rather than to quote the opinion anent Felton's stoicism expressed by the genial author of the "*Trois Mousquetaires*?"

What but a dormancy of the logical faculty can be responsible for attributing the regicide's anesthesia to an exaltation of mind and sentiment causing the suspense, so to speak, of mental life and consequently of sensibility to pain; comparable to that of "Ecstatics and Martyrs" on page 143 of Regis' article; and yet his mentioning on the very next page, in the record of his chief illustrative case, the "piercing cry" provoked by contact of the culprit's elbow with a live coal?

If any common characters of regicides were to be utilized as a basis of formulas, why has Regis overlooked the numerous records showing the great solicitude manifested by regenticides at all periods of history and in all lands to avoid mob violence? Was it because it had been difficult to harmonize these unquestionable facts with the "exaltation of mind and sentiment" so strangely illustrated in the foregoing instance? Charlotte Corday's barricade in Marat's "tepidarium," Guiteau's message to General Sherman to "order out the troops," Czolgosz's indignation and surprise at the "right-hander" which landed on his nose, are but a few of the many instances exemplifying this trait in all classes of assassins, sane or insane, noble or ignoble!

I do not find it necessary to refer to the fact that the stoicism of Mucius Scaevola manifested in endurance of incineration of his hand, not being history, has no place in a scientific article. An authentic illustration of intense purpose and inveterate hatred, raising the mind above the level of bodily suffering—or at least of betraying such—might have been cited from Livius—where that historian remarks that the tortured assassin actually seemed to laugh as he recalled that the hangman's worst efforts would not bring to life the Carthaginian general on whom he had avenged his beloved master's death.

But, even where, within the days of reasonably reliable records of such observations, Regis finds evidence of pathological insensibility; he does so in a most remarkable way and detrimentally to his views: Suleyman stoically enduring the torture inflicted in accord with his cruel sentence, winced when a trifling pain occurred to another part of his body *unexpectedly*. Now one would not be justified in expressing surprise even had this victim not winced, as notoriously a greater pain may so overwhelm the general sensory field, as to render a lesser one relatively blunted. However, the contrary was here noted; exquisite sensibility was retained; and Suleyman solved the problem of regicidal stoicism when, taunted by his persecutor, he responded: "You dog, continue your employment as executioner, you are too unworthy to be permitted to address me. The pain which caused me to cry out was *one not ordered by my judges*."

It were a strange kind of pathological insensibility which the subject had elective distributing power over! Suleyman's case clearly shows the voluntary nature of the stoicism and insofar as it demonstrates a determination of

2. Recognized and ably studied by Regis' colleagues and unless we err—by himself as well.

3. Winter Palace and Moscow railway mine contrivers, respectively.

4. This is serious history, the President of France and the Empress of Austria alike fell victims to Italian assassins and their favorite weapon. The last international plot, simultaneously unearthed in Europe and South America involves the names of Pietrucci and Romagnoli. (Spanish Premier Canovas was slain by Italian Golli.) How long is it since Paterson was startled by Sperandio's deed, and is the New Orleans tragedy not still a fresh recollection? Orsini, Rudio, Grilli, Tibaldi, Pieri and Pianori were Italians operating in France. Even of the assassins of French citizenship, several being Corsicans, like Fieschi, were practically of the same race; while the names of others, like Bellamare, are suggestive of a like origin.

**That Regis may, with crude notions of American customs, such as prevail "outre-mer," picture an entr'acte of "tarring and feathering" as among the extras to which an American regicide might be treated; we are not disposed to deal seriously with. Likewise, were it too much expected from a Frenchman to familiarize himself with the fact that in 18[illegible] when Sand was executed, the torture no longer existed in Baden. Of Staps' case we, however, had a right to expect him to have had more authentic information, as his act belongs as much to French as to Austrian history. But that Regis should be so imperfectly acquainted, as he here shows with the history of his own country-woman, the brave Charlotte, is indeed surprising.

the will, and a power of mind over coarse matter, it illustrates anything else than a pathological state.

Regis is doubly unfortunate in this field; first the facts advanced in support of his view are mostly "not so," and the few which "are so," prove exactly the reverse of what he intends.

If the reader of Regis' article emerges in a lamentable state of confusion from a perusal of his introduction, and inspection of his picture-gallery,[5] he fails to find any promise in the sequel that Futurity may resolve the obscurity of the Present. For example, he states among the grounds for regarding regicide deeds as outcomes of the frame of mind predicated, that they are always performed singly; and he points to the vain attempts to find the accomplices of Caesario, Lucheni, Bresci and Salsou. It had been well for Regis to have given Time a chance to complete one of these records. Yesterday an *accomplice* of Bresci was sentenced to life-imprisonment, and at the time of the latter's deed every man, woman and child of reading capacity—in New York City at least—knew that Bresci's act was in obedience to a Paterson group of anarchists, that he had drawn the fatal number in a lottery, and, that the drawing of that lottery had become necessary because Sperandio on whom the lot had fallen at a previous drawing, had "gone off at a tangent," killing an indifferent party, together with himself. In the light of such incorrectness regarding cotemporary and accessible history, it becomes unnecessary to point out his inaccuracy relative to Clement, Chastel, Ravaillac and Damiens who, he claims, were equally without accomplices. They were, however, as much or as little so, as was Bresci. The connection of Mademoiselle Montpensier and Father Bourgoing with Clement,and the very probable association of Ravaillac with interests similarly represented, can be found referred to in most if not all historical works. Regis does not mention the execution of Guignaud as teacher if not prompter of Chastel, and seems to be unmindful of such many-headed *attentats* as those on the two Russian Alexanders, on Bratianu, on Obrenovitch, on Kentucky's Goebel and Bolivia's Flores.[6]

The elopement of a number of students prominent in the secret society to which Sand belonged, does not sustain the view of Regis that the assassination of Kotzebue had been contemplated by a solitary mind. I confess to standing nonplussed before Regis' sweeping statement when recalling the more prominent assassin plots found mentioned even in general compendia; such as the successful ones against Cardinal Beatoun, Inquisitor Arbues, Girolamo Riario, Julius Caesar, Pompejus Magnus, Sertorius and the Duke of Orleans of the earlier line. Regis needed not to have gone very deeply into historical research to have learned of the cases of Pierluigi Farnese, Inez de Castro, James I, of Scotland, Lincoln and his cabinet, Caligula, Caracalla, Commodus, Cronin, Burke and Cavendish, Concini, Domitian, Loulé (by the Miguelites) Dion of Syracuse, the Gills of Paraguay, Guardiola, Lessing the agitator, the Pisistradidae, Rizzio and the Pazzi plot. And if unsuccessful plots be equally significant in a question involving the mental state of assassins, he could have crowded his paper with about sixty records like those unconsummated or incompletely consummated ones against Oliver de Clisson, General Hullin and Louis Napoleon, of his own land, and against Elio, Nicholas I and II, Cromwell, Charles of Hungary, Timoleon, Francis Joseph and Nero, in other lands and times. Even from among the cases he cites a goodly number of associated assassins could be culled Thus in the Orsini case three were executed and one sent to Cayenne to be liberated *sane* within the present quarter year, after nearly half a century's imprisonment. Three were executed in the Fieschi plot and one imprisoned; Ravachol, Emile Henry and Vaillant were surely affiliated; Reinsdorf and Küchler suffered in the Niederwald case, their fellow, Rupsch, having his sentence commuted. The suicidal attempts of Pietrucci and de Burgal, each revealed plots involving the association of a number of their ilk.

Superficiality and carelessness manifested in the ignoring of such important data on the part of an otherwise substantial author, seem so inexplicable, that I have sought for mitigating circumstances in the imperfect and unimpressive way in which most books on history are compiled. But with all allowances made on this ground it does seem remarkable that an investigator like Regis should be utterly oblivious of those occurrences directly contradicting his dictum, which happened almost under his very eye. I refer to the anarchist-prompted explosions in the theatre of a city in the neighboring land of Spain, caused by six criminals—not so very far from Bordeaux—Barcelona; to the probably associated, if apparently separate attempts of Golli, Otero, Moncasi and the murder of Captain General Primo-Rivera; as well as the Clerkenwell horror across the channel. He need not to have passed beyond the column of European news, in his newspaper, to learn of the Topschider Park tragedy or the more recent killing of Stambuloff; nor was it very long, if at all, before Regis' day that the Mauromichaelis brothers killed the Greek minister, Kapodistrias. Had Regis perused the foreign news columns he might have had the strange problem arise of accounting for "consecutive magnicides" or quasi assassinations 'tandem," like the Katosujammi-Hittosubaschi series of Japan (in the Sixties). It were indeed a strange sort of 'transfert" from individual to individual which would account on pathological grounds for the assassination of assassins by assasins in their turn. There was for example Alessandro Medici, who poisoned Hippolytto Medici, (both illegitimate, by the way); Alessandro was poniarded by Lorenzino Medici, whereupon Cosimo Medici had Lorenzino despatched by two bravos. Which was insane here, has not yet been determined. However, there is one consolation; the law was sane in this case at least, for inasmuch as the execution of assassins is from the standpoint of some of those who believe as Regis does, little better than assassination under legalizing forms, it might also be regarded as in a pathological phase, in case it continued or closed the chain of retributive deaths. Fortunately for its reputation from the same point of view, shall I add from that of the regicide's as well? Cosimo and his bravos remained undisturbed by its "degenerate" offices, equally as in the case of the Vico-Vico-Manfredi series, as also with similar transactions among the Ptolemies, Seleucides and in the Androclides-Leontidas-"Theban liberators" affair.

What, if the assassin impulse be pathological, accounts for so wide-spread a "morbid" disposition to assassination as is manifest in the following series of cases, in which an assassin was retributively killed by assassinating bystanders; Martialis, who slew Caracalla; Pausanius, slayer of Philip of Macedon; the would-be slayers of Hippias; Chion, the Platonian scholar, who killed Clearchus; Davila's and Barrios' assassins; Clement; Joseph the Carizmanian; the Servian Obilitz; one of the Mauromichaelis brothers; as well as Belisar's unsuccessful foe, Constantine, and Guiscard, who merely wounded Harley?

From Regis' standpoint the case of the slayer of Hikites emissary against Timoleon would be a complication, inasmuch as it involved the association of an "acquired disposition" to assassinate together with a harmonizing momentary "impulse" provoked by the sight of an attempted assassination of a third person by his destined victim. It

5. Regis' paper is illustrated by portraits of a number of magnicides, several of these resembling cuts from newspapers, illustrate nothing whatsoever. Of the recognizable pictures, the best shows nothing within the range of insanity or degeneracy I am familiar with, but (if permitted to express a judgment) instead exhibits a type of irreclaimable and uncompromising treacherous scoundrelism as marked as any extant: It is that of the assassin of the Empress Elizabeth of Austria. Do some of the mistaken humanitarians, defending this creature's degeneracy and irresponsibility, lose sight altogether of the victim who was a defenseless woman, and herself the sufferer from a genuine mental disorder? Has it ever occurred to them to classify the morbid clinical form, which manifested itself in Lucheni's selection as scene of his cowardly act, a land where the death-penalty had been abolished?

6. Four prisoners were hanged, as participators, "red-handed," in the death of Alexander II., together with Sheljabow as accessory before the fact. As many suffered for the "attentat" of 1887. Four "blancos" are known to have accomplished the assassination of the Bolivian President, Flores, and the number concerned in that of ex-President Uruquiza of Uruguay has not been ascertained. The same may be said of the cases of Krapotkin, Sudeykin, Gutschow and Stambuloff.

was in this wise: Timoleon was about to be struck with the dagger's blow when a bystander intercepted it by killing the one wielding that weapon. In addition to accounting for the act by the emergency of the moment, he excused himself by showing the departed to have assassinated his, the last assassin's, father.

Another fact on which Regis lays stress is the youthfulness of the enterprising class under consideration, and he mentions, as exceptional, the cases of Ravaillac, Louvel and Guiteau, their ages being over thirty. Now as it could have been easily ascertained even from a general cyclopedia, that at the time of the notorious deeds, Orsini was 38, Damiens 43, Fieschi 45 and Malet 58 years old, it may not appear presumptuous to ask Regis to reconsider this statement. The coincidence of youth with an act involving exaltation, enthusiasm, and hasty impulsive execution would not strike us as an inexplicable circumstance; nor, if it were universal, as a very startling revelation. But if we were to have accepted Regis' radical claim we would certainly have more than shared the feeling of the bystanders had we been amongst them, who when Fieschi and Pepin were cropped by the tonsorial associate of the *Maitre de la Guillotine*, noted that he spared Morey this humiliation, because of his "thin *grey* locks."

In my humble judgment a study promising more suggestive results were the grouping together, according to kind of motive, the assassins of corresponding ages. Without having completed such comparison—as nearly half of my cases lack the necessary data—I will state an impression to the effect that, barring anarchistic motives, which are as promiscuous in their distribution as the anarchistic principles are heterologous, it will be found that the more immature the offender, the more likely are phantastic and romantic motives to prevail; the older the offender, the more are such found which involve the accession of disappointment, despair, *taedium vitae* or that bitterness which grows with the nursed grievance, that fanaticism which develops with prolonged brooding.

It is true, as Regis says, "One might say that they (regicides) existed at all times and in all lands." But why Regis deduces thence, that "their historic antiquity and their universal existence" is "the *most*[8] characteristic trait," is enigmatical. One might claim both to be equally characteristic of punsters, for example; in fact, of most achievers of foibles, virtues and arts. If any truism in this direction justified emphasis it were that regicide is as old as kingship; and reasoning by analogy one might infer its existence rudimentarily as "magnicide" or "eximicide" in the tribal phase of social evolution. For under analogous circumstances Arminius and Pontiac fell; and their assassins were animated by the same motives which moved Ankarström and Gerard to encompass the destruction of Gustavus III and William the Silent. The price merely differed—in kind mainly; Pontiac's life was destroyed for a barrel of rum; William's for a patent of nobility and estate granted to Gerard's family.

The strongest evidence that has been urged in behalf of the insanity of those regicides whose mental state is regarded as doubtful is found in the visions of Ravaillac, Poltrot and Damiens. But those who have laid stress on these, uniformly failed to consider the environment of those assassins and they have certainly failed to study the normal standard of mentality of earlier days. Were inquisitive probing to be as diligently performed in the case of their cotemporaries—whose sanity and normality has never been questioned, the result might induce those advocating the mental unsoundness—of Ravaillac for example—to moderate their positiveness of tone. I cite but one of several available examples, as showing the disposition to the visionary in average and even educated minds of the sixteenth and seventeenth centuries. The sober Busbesq[7] relates how Catherine de Medici saw the ghost of the Cardinal of Lorraine, and even tried to point it out to those with her; her daughter relates of her several like instances, as well as others of second sight. If such visions are to demonstrate mental incapacity, then adieu to the cherished and prevalent views of the Massacre of St. Bartholomew's. I am indeed prepared to find a revision of History in the light of psychopathology reveal some prominent events in a new or modified light, but I must confess myself startled by the prospect of finding the assassins of Coligni so shown, when cast under its searching rays. Let us see!—first Maurevert is hired by the Medici coterie to "remove" the inconvenient Admiral, but, encountering obstacles, like Sperandio, murders his host, provisionally, I presume, to keep his hand in, till an opportunity for firing the wounding shot occurs. Next the incompleted murder is consummated by Besme; Guise and others lend some aid and encouragement; and, behind all, we have the prompting Catherine, who is at the head of a bevy of court-ladies, most of whom are educated in "Judith-tactics" and provided with pistolets and succession-powders against the "emergencies" of the hour. Now *where* the pathological domain begins in this combination, *where* it ends,[8] it were well to define before claiming too much for Ravaillac, Poltrot and Gerard. All France can not have been a lunatic asylum, lacking merely the walls.

Regis presents the following as evidence of mental abnormality, speaking of Poltrot:

"Having dismounted from his horse in a wood, in the neighborhood of the Duke's house, he fell on his knees—as he stated himself—prayed to the Lord fervently to strengthen him in his design to kill the tyrant if the design came from the Divine Majesty and to deliver him from the evil, if it came from the Evil Spirit. After this prayer he felt himself more fortified than ever." (Histoire de deThou.)

I beg to protest against such puerilities of interpretation in the name of all who have ever had the unwelcome task imposed of defending the insanity of a criminal against public and legal prejudices. These are sufficiently strong without being fortified by such sapping of the scientist's position as these reckless and baseless claims involve. The true expert is ever assailed by that kind of strategy, which the savage employs, when he erects a counterfeit image of his foe, to hack at and revile. He may assert ever so emphatically that he is of no "Moral Insanity School," that he does not claim a majority or even a large part of mankind to be insane, nor believe in momentary insanity; the mere asking of these questions with a material background of public knowledge that such views *have been held* by the colleagues of the alienist examined as a witness, invalidate whatever sound and substantial position he advocate. Not sufficient is this evil, however: Benedict, Lombroso and Talbot and others enter the lists and in scientific archives, basing their studies on clinical and serious historical material, and following methods of a scientific semblance, involve the champions of psychiatrial truths in their false position before the public—for nothing is disseminated so widely and rapidly as the half-truth, the glittering generality and the paradox. I need not point out how a legal antagonist could justly handle such a claim as Regis' implies, that earnestness of religious belief, serious fervor and fanatical zeal are or that they could in the days of Poltrot have been even suspected to be signs of a morbid mind. If I am not profoundly in error, such an assertion would in a day not very remote from the date of Guise's assassination have been rewarded with the Order of the Stake and Halter or the Decoration of the "Wheel"—in Spain, perhaps so distinguished, even in the Eighteenth century. Does Regis mean to insinuate that the general public opinion and way of regarding religious matters which would have made a doubt in the efficacy of prayer, in the reality of Divine assistance and in the fortifying power of religious faith Heresy, was the outcome of a psychical disorder, one which must have been universal? Or will he deny that the action invidiously cited was in harmony with Poltrot's

7. Busbecq's relation is confirmed in L'Estoile's memoirs according to marginal reference in Foster and Daniell's "Life and Letters of Oghier Ghislain de Busbecq." Any faithful student of the memoirs and other literature of that day will find revealed the frequency of similar occurrences in the careers of persons not only regarded as of sound minds, but intellectually superior for their day, as for example Grimmelshausen. I hope to be able to offer a brief discussion of this subject in the near future.

8. Lest those who have had the history of his period presented to them in the conventional one-sided way reason that the Huguenots were "healthy" exceptions from this point of view, I refer to the fact that Besme was in turn assassinated and by them, and that his assassination involved the co-operation of many persons. Maurevert also perished by retributive murder.

environment? If he does not deny this, how can he claim the same to demonstrate anything abnormal?

Errors in identity or misdirection of aim have somtimes led to the murder of a person not intended, both by sane and insane assassins. As the latter more frequently committed this error, I am surprised that Regis does not refer thereto. Thus Theodatus the Aetolian, a sane asassin, instead of Ptolemy Philapator, slew the latter's physician; Mr. Drummond became a victim of an insane assassin who mistook him for a Cabinet minister, his superior; similarly Santi, of Marseilles, received the death-shot intended for the Mexican Consul by the paranoiac Domenique Miller. Perhaps this is because in other ways those unconnected with the object of assassination-plots have become its victims. Ladmiral, who failed to more than wound Colot d'Herbois, nearly killed the concierge of the house where the assassination was attempted; and Zelanine, interposing to prevent her friend, Vera Gelo," from assassinating Professor Deschanel, received, and died from the effects of the bullet intended for the latter Even those who have appeared on the scene sufficiently early to intercept the destruction of others, sometimes sacrificed their own lives instead, as did those who surprised the Thistlewood Cutters of Cato Street and the police-commissioner who attempted to arrest the nihilist Lissionski at Clarkow in 1885.

But if in the sane, amongst these cases, the aggravating feature of indifference to human life be imputable to vices of the passive kind, such as lack of foresight, or the recklessness of despair and self-defense, not so where explosives are prepared with a distinct understanding of their proving fatal to those, whose personalities are as remote from the objects of, as they are strangers to the persons of the assassins. Malice monstrous in its diabolism, and callous as well as ingenious in premeditation and intent, must be assumed as alone compatible with the perpetration of such deeds as the explosion of the Winter Palace, at Clerkenwell Prison and in the Tower; the mining of the Moscow and Livadia railways and particularly of one, fortunately failing, the intended hole aust Reinsdorf and his gang prepared for the occasion of the consecration of the monument on the "Niederwald."

In the first-named case an entire company of infantry was destroyed, wantomly destroyed even from the assassin's standpoint, inasmuch as the Czar and family escaped without a scratch In the last-named instance the same sovereign, having taken his place in a pilot-train, again escaped, but the occupants of the train next following suffered the fate intended for him. Regarding the heartless brutality of the Tower of London and Clerkenwell dynamiters there has been but one cry of indignant horror throughout the non-terrorist population of the civilized world, barely tempered with sympathy for that people, whose cause suffered no more serious blow than was inflicted through unauthorized but self-elected champions known as "Dynamiters."

Of what may be called Political and Terrorist murder-plots, since the beginning of the sixteenth century, numbering forty-six, of which sixteen realized their object and thirty failed; the latter number nine in which unconcerned persons were sacrificed; the former, two. Of the plots enumerated as failures, fifteen had not been carried to the final point; but in seven of these the completed arrangements were such, that consummation would have inevitably resulted in the loss of human lives other than those chiefly aimed at.

The quality thus shown to have been a positive and prominent feature in nearly forty per cent. of these plots, may be justly inferred to be largely present in the terrorist-movers of the others as well. If anything justifies Draconian repression, it is this very tendency. To grant those yielding to its dictates of atrocious brutality, immunity, through false humanitarianism, misplaced theoretical zeal or mistaken diagnosis, may well arouse resentful protests from lay and legal quarters. Only clear concise methods and definitions should be employed in such, as in any cases, unless our representatives would expose our profession to ridicule and suspicion.

In this light it is a strange sentimentality which expresses itself in the public feeling referred to by Regis thus: "In our days, this superhuman energy has called out our sympathy towards more than one of these unfortunates, such as Charlotte Corday, Staps, Louvel, Alibaud *and even Orsini.*"

I regard the proper balance between reason and, shall I call it—"romance" or "hysteria?"—seriously disturbed here, and suggest as the remedy most likely to prove restorative a perusal of the results wrought by Orsini's bombs on the lives, limbs and health of the large number of innocent people involved in a catastrophe, the chief engineers of which were not even natives of the land into whose governmental mechanism they presumed to wantomly thrust their clumsy and brutal hands. The latter they did as fruitlessly as is done in most such cases.[10]

When the conventional demarcation between the conceptions of what is decent, proper and honorable is so far blurred as the quoted clause seems to indicate, we need not wonder that the reward of a chivalrous Labori defending the victim of worse than Calas like conspiracy against Truth and Justice, was an assassin's bullet, and one fired without arousing a cry of indignant horror in France or even an echo of that cry which went forth from other lands. It is in such environment—and this renders that subject germane to the theme—that immunity may reward a successful assassin who opportunely directs his murderous skill into the channels of momentary popularity. Such achieved distinction would, from a utilitarian point of view, justify regarding the assassin's motive as a sound one, rather than the foolish or fantastic and erratic purpose it usually appears. Nor is this contingency based on a mere surmise. One need not revert to the turbulent days when Perinet Leclere and Maillard assassinated d'Armagnac and Marcel with impunity. Early in this century a distinguished Napoleonic officer was seriously wounded by an assassin, who appertained to the White or Bourbon faction, then (1815) in the ascendant. The prosecution was perfunctory, and the accused, whose guilt has been clearly established and admitted, declared "not guilty" on the ground that Lagarde's attitude towards the rabble had been such as to provoke the justifiable anger of the assassin!

If I can discern no scientific grounds for treating the regicide otherwise than as a murderer and regard the humanitarianism displayed towards him as a supposed "degenerate" by those whose views Regis endorses, as more than mistaken, nay, as positively mischievous, I can, on the other hand, see many reasons for considering undesirable that such justification were found. Our asylums are becoming from decade to decade more comfortable and it may be asserted that even to-day existence in them is not alone tolerable, but may be rendered even enjoyable to and by the "orderly" and "quiet" patient. Hold forth the prospect of such a life as the sole consequence of assassins' deeds and their number will multiply—to what extent, it were difficult to prophecy. Let none, therefore, console themselves with an anticipation that the fear of being made ridiculous, by being pronounced a lunatic,[11] would act as a more effective deterrant than the scaffold, as has been asserted. The ranks of those from whom may be recruited performers, content with the momentary sensation caused by the fact, and the being a center of legal process and public observation, for ever so brief a period, are legion as compared with those whence the self-immolating actors voluntarily step forth into publicity and after doing their so-called "duty," die by the Law's, or like Nobiling, Ortiz and Paris, by their own hands.

If ordinary criminals sham insanity to become transferred to an asylum, because escape from the latter is far easier than from jail, it may be readily conceived that an asylum commitment were an infliction possibly less seri-

9. Acquitted on the ground of insanity.

10. Witness the "infernal machine" of Cambone, St. Rejans and Limoleon, which destroyed many lives, but left Bonaparte untouched; Pieschi's amalgamate, and one of the same Napoleon's veteran marshals, leaving, however, Louis Philippe at whom it was aimed scatheless.

11. It were the most effective deterrant of the really insane alone, strange as this may sound.

ously regarded by the assassin, than those, who give him credit for uniformly possessing a fine sensibility, believe to be the case.

The remark of an English historian anent one of the Jacobite plots merits citation in this relation and with slight alterations may be endorsed as true in every sense and to this day. "The English regard assassination, and have during some ages regarded it, with a loathing peculiar to themselves. So English, indeed, is this sentiment that it cannot even now be called Irish, and that till a recent period, it was not Scotch. In Ireland to this day the villain who shoots at his enemy from behind a hedge is too often protected from justice by public sympathy. In Scotland plans of assassination were often, during the sixteenth and seventeenth centuries, successfully executed though known to great numbers of persons. The murders of Beaton, of Rizzio, of Darnley, of Murray, of Sharpe, are conspicuous instances. The royalists who murdered Lisle in Switzerland were Irishmen; the royalists who murdered Ascham at Madrid were Irishmen; the royalists who murdered Dorislaus at the Hague were Scotchmen. In England, as soon as such design ceases to be a secret, hidden in the recesses of one gloomy and ulcerated heart, the risk of detection and failure becomes extreme. Felton and Bellingham reposed trust in no human being; and they were therefore able to accomplish their evil purposes. But Babington's conspiracy against Elizabeth, Fawkes' conspiracy against James, Gerard's conspiracy against Cromwell, the Rye-house conspiracy, Despard's conspiracy, the Dato Street conspiracy, were all discovered, frustrated, and punished. In truth, such a conspiracy is here exposed to equal danger from the good and from the bad qualities of the conspirators. Scarcely any Englishman, not utterly destitute of conscience and honor, will engage in a plot for slaying an unsuspecting fellow-creature; and a wretch who has neither conscience nor honor is likely to think much on the danger which he incurs by being true to his associates, and on the rewards which he may obtain by betraying them. There are, it is true, *persons in whom religious or political fanaticism has destroyed all moral sensibility on one particular point, and yet has left that sensibility generally unimpaired.* Such a person was Digby. He had no scruple about blowing King, Lords and Commons into the air. Yet to his accomplices he was religiously and chivalrously faithful; nor could even the fear of the rack extort from him one word to their prejudice. But this union of depravity and heroism is very rare. The vast majority of men are either not vicious enough to be loyal and devoted members of treacherous and cruel confederacies; and, if a single member should want either the necessary vice or the necessary virtue, the whole confederacy is in danger."

Macaulay's statement, if reading strangely, is remarkably true. Small as were the populations of Scotland and Ireland, both furnished a quota of assassinations greatly in excess of that of England; and one of them has continued so to do to this day; while Scotland has with remarkable suddenness ceased to contribute to the list at all since the end of the eighteenth century.[12] The un-English character of assassination leads to the relative preponderance of the insane proportion in England, these not being restrained by the higher ties of their race. It is difficult to find a sane assassin of English blood in the most recent decades. Even the two conspiracies of this century were largely created by the Government itself as a trap; otherwise the sane conspirators have been of other races in a plurality of cases. The servant of the Marquis d'Antraigues, who murdered him and committed suicide, was French, so was Guiscard; most of Thistlewood's men are described as "colored," as was also one of the would-be assassins of Queen Victoria, Oxford (declared insane). Even in the insane series the racial element is manifest, if we are to judge by the names of McLean, McNaughton, Conners and O'Conner. Among the sane we may mention the probable "outre mer" origin of the Gerard and Despard ancestry. The English, Townsend, Frith, Bellingham, Arnold, Hadfield and Nicholson, were insane; the sane assassins, Barrett, Mrs. Justice, the Phoenix Park murderers, O'Donnell and Shannon were not English. Macaulay could have gone further and shown that England is also as far from furnishing assassins beyond her borders as she is from filling her own list. The assassination of Wallenstein is sometimes spoken of as performed by English mercenaries since no German could be found for the work. However, not one of the assassins was really English. Gordon was Scotch, while Devereaux and Butler were both Irish.

TABLE SHOWING CHRONOLOGICAL DISTRIBUTION OF 713 ASSASSINS, IN THE WIDER SENSE OF THE TERM.

		SUCCESS	FAILURES	TOTAL
Previous to Christian Era	M	127	28	155
	F	24	3	27
	T	151	31	182
Christian Era [illegible] A. D.	M	89	16	105
	F	22	2	24
	T	111	18	129
[illegible] A. D. [illegible] A. D.	M	[illegible]	31	[illegible]
	F	[illegible]	[illegible]	[illegible]
	T	[illegible]	[illegible]	[illegible]
[illegible] A. D. [illegible] A. D.	M	54	26	80
	F	7	3	10
	T	[illegible]	29	[illegible]
[illegible] A. D. [illegible]	M	79	[illegible]	88
	F	3	9	12
	T	[illegible]	[illegible]	[illegible]
	M	444	[illegible]	[illegible]
	F	65	14	[illegible]
	T	[illegible]	[illegible]	[illegible]

Whatever phase of human interest was the prominent feature in a given land or period of time, it became reflected in the motives and personalities of those committing such deeds. When history was largely a catalogue of dynastic changes, assassinations were committed with dynastic motives and were the prominent element of succession and usurpation-plots. The rare exceptions are those committed in obedience to the strongest of primitive human passions, as when Revenge nerved the Gaul to slay the cruel Carthaginian who had tyranically destroyed a beloved master. So was Sarus retributively avenged by his "follower of diminutive stature;" Berenice by her maids on the hired assassin Philammon; and Calippus transfixed by the same poniard he himself employed on Dion of Syracuse. Mortifying insults as frequently provoked such assaults: for example Ammon's treatment of Absalom's sister, Sicilian Agathocles abuse of Maenon and the Parthian Agathocles insult to the half-brother of his asassin Arsaces. Alexander the Great forgot not the title of bastard given him by Attalus, till a bold assassin, Hecataeus, had wiped out the insult in the taunter's blood. Jealousy was the next passion in order of frequency as motor. Artaxerxes II could not rest, till the subservient son of his satrap had poniarded his excellent and too fortunate general, Datames, in the latter's remote province. One of the few assassinations of a female by a male hand of these days, was that of Mania by her step-son Midias, mortified because a woman made a more successful provincial governor than he could expect to have become. Even where non-dynastic motives prevailed, magnicide was more frequently committed by the

12. To the best of my knowledge, Stuart, of Ardshield, committed the deed, which concluded Scotland's long list of political assassinations; this was shortly after the Pretender's incursion, and Stuart was executed therefor. Judging by the Kentucky mountaineer vendettas, taking place largely among those of Caledonian extraction, Scotch activity in this field has not really ceased, but rather changed its scene to a locality they have thus rendered reminiscent of the Highlands.

social equal than by an inferior. Thus one of the numerous assassinating (and assassinated) Berenices had Demetrius, the uncle of Antigonus Gonatus, publicly assassinated by a hireling because he had preferred the charms of her mother to her own. Such record is largely one of camarilla murders, often of a continuous chain of such; assassination following assassination. Rare is it to find acts corresponding in motives to those of the present day, except where a governmental liberty, corresponding to our own, was enjoyed by the republics of Greece, Rome, or where the spirit of these republics had been carried to Asiatic and African colonies. Sometimes it was the sacrilige of an Antiochus, which caused the fatal uprising against the desecrator, plundering a temple to pay his ransom to victorious Rome. Most frequently is was caused by acts of material oppression immediately appreciable to the sufferers, as when Leptinus killed the voracious tribute-gatherer Cneus Octavius,[13] who appeared, as the Roman plunderer often did, in the guise of an ambassador.

Such sudden outbreaks caused the death of Alexander, the son of Polysperchon; though it availed the asassinating citizens of Sicyon as little as did the assassination of the tyrant of another city avail his philosopher-assassin Chion, who was instantly massacred by the former's guards.

As government became more democratic, so did assassination from being the practiced art of sovereigns, nobles and their agents or hirelings, descend with other vices as well as privileges, to the general body of mankind. Where dynastic motives had furnished the pretext, it now became religion, next liberty, and when constitutional government became established and personal freedom secure, it became communistic, "international," nihilistic and to-day, when these and other "isms" have exhausted themselves, anarchistic—whatever that may be.[14]

The statement requires some explanation perhaps, that assassinations from patriotic—what may be considered, speaking relatively—altruistic motives, were of the greatest rarity in ancient times. The few extravagantly lauded and immortalized ones,[15] like that of Hipparchus were not of a purely patriotic origin, but derived an additional, perhaps the main impetus, from a special personal grievance; in the instance named, an insult to the sister of the assassin. Hence they appertain rather to the class of assassinations from motives of passion, so characteristic of that period. More frequently were assassins moved by a feeling of that narrower patriotism, really nativism, which manifests itself in hatred of the foreign and the foreigner. Like murder of the traveller by the savage of an unexplored land, this form has gradually receded with the advance of modern civilization; and when it occurs to-day, as the assassination of Lord Mayo and Chief Justice Norton did, in India and the Andaman Islands, is committed as much against the bodily representative of a system, regarded as oppressive, as against the individual. So the Japanese's assault[16] on the Czarewitch—now Czar, was due to what has been styled the most amiable of youthful indiscretions on one side, and the jealousy it provoked on the other. In older times, however, it was the not infrequent fate of the Governor imposed by a foreign conqueror, of the ambassador sent from a hostile king, or of the innovator on cherished customs. Such probably was the trouble with Lais, as it certainly was innovating attempts of a religious character, through which Winfrid Boniface, Adalbert of Prague and Gottschalk of Holstein perished by club, lance and battle-axe.

When regenticides became known by the name of that sectarian community ruled by the "Old Man of the Mountain," they celebrated their baptism by the assassination of Nizam, who was aged 93 years. That their first victim has to this day remained also the oldest on the extensive list, is one of the historical curiosities in which this subject is so rich. As the extremes of age gave no immunity, neither did the geographical extremes of the habitable world; that thinly populated and barren country, Iceland, in the Thirteenth Century, got rid of its autocrat, Sturluson, through Thorgildskarde and Gissur's successful assassination plot. Of distances covered by assassins tracking their prey, one is on record of a Hakemite accomplishing his purpose in Italy; a notable one is that of Lisle, one of the so-called regicides of Charles I; who was after many essays finally assassinated in Switzerland. Recently a Russian "agent," General Seliverskoff, was assassinated in Paris by Nihilists. But all these are out-ranked by the determined pursuit of Carey, who having turned government-witness in the "Phoenix Park Murder" trial, was killed by a member of the betrayed circle on the steamer conveying the "informer" over a distant sea to a land, where, under the government's protection, he might be supposed secure against the very fate which had been hovering over him from the day he left England. Historical parallels could be shown to exist between the Jacobite plotters and their plots concocted in France, which were carried out on the other side of the Channel, two centuries ago; and those, like the former, anti-English conspiracies recently organized in this land, to be exploited on the other side of the Atlantic.

With the kaleidascopic and rapidly succeeding social changes, political and other emancipations of mankind from former thralls generally, various extremist views have often come strangely into collision in the career of one and the same victim. King Humbert might well have asked how he could be expected to satisfy all demands securing his immunity at once. One day he was threatened by an ultramontane, on another he was shot by the representative of the very antithesis, the anarchist Bresci. The Italian king's experience was exactly repeated, but in the inverse order and without the fatal finale, in Bismarck's case. In 1861 he was pistolled by the communist Blind, in 1874 by the ultramontane Kullmann. In the record of his sovereign there is more consistent consecutiveness for the four assassins of William I show the progressive order: Nationalism, Becker; Socialism, Hödel and Nobiling; Anarchy, Reinsdorf.

Prophets basing predictions on the presumptive tendency of prosperity and governmental freedom to prevent regicide, might have felt assured in making favorable such after the Republic had passed an experimental half-century of prosperous growth without any grave tragedy to mar its record. But the forecast then naturally made of a continuance of that desirable state of affairs, has been negatived by events, which show, that no degree of national prosperity nor liberality in political institutions affords se-

13. Father of Caesar Augustus. It is noteworthy that a philosopher, Isocrates (not the more celebrated one) openly defended and praised the deed. For this he, with the assassin, was delivered up to the Romans as an accessory after the fact. Augustus, in whose career assassinations played the role of making him an orphan of his real father and heir of his adopting father, Julius Caesar, had himself narrow escapes from more than one assassin-plot; one Lepidus, Caepio, Egnatius, Murena and others suffering death on account of such.

14. For there is absolutely nothing obtainable in the way of information from the votaries of Anarchy. Otherwise a satisfactory reply to the question what right any one has when there is no right, what justification any person has to say thou shalt not rule, or shoot the ruler, any more than the ruler has to rule or indeed to listen to his interlocutor, or the latter to try the revolver or to impose his views on any one or at any one's expense, would be interesting.

16 Statues of the couple were numerous, and despots were exceedingly sensitive to even the naming of their originals. Thus one of the courtiers of Dionysius was put to death for merely replying, when asked what was the best metallic alloy "the bronze of which the statues of Harmodius and Aristogiton are made."

17. Another attack, that on Li Hung Chang, at Simonoseki, was more in the direction of the nativistic in its motive.

curity against regenticidal malice.[17] The list of murdered regents of the two great republcian powers exceeds that of the aggregated first-class monarchies of the world during the last forty years. These have to mourn three names; one really not of a regent, but of a consort; Alexander, Elizabeth and Humbert: the republics lost Lincoln, Garfield, Carnot and McKinley.

In view of the recent growth of the sources of grave danger—if not to republican government—to the peace of mind of the masses enjoying its ministrations, it becomes the duty of every good citizen to aid that government in suppressng the former and warding off the latter. Though the purposes of the political assassin—aside from the possible one of achieving notoriety—almost uniformly fail of accomplishment: yet his single act may cause millions a pang, the contemplation of which should make hobby-riders halt ere they attempt to lead astray and hamper preventive legislation. But more weighty than merely sentimental considerations are the sinister complications entailed by assassination when perpetrated at critical periods of a nation's career; and these justify preventive measures in another than the strictly legislative field. Since the outcrops of the "Degeneracy" Propaganda's sowing are largely aberrant, one-sided, and in part even altogether spurious and as such therefore confusing, misleading and hindering to the law-maker, it behooves those who have the prestige of their science at heart, to establish most sharply that boundary, which separates from its legitimate domain a Debatable Land where the weeds of Pseudo-[illegible] permitted to flourish. With the signs conspicuously warning of their true character, they thenceforth may no longer mislead the unsophisticated, the immature and the overtrustful.

17. Not all the following would be strictly termed [illegible] regenticides, but in order to make no invidious distinctions, I submit the entire list of assassinations occurring in the United States.

Mortal injuries inflicted on	By
[illegible] ization,	Several, Life Imprisonment.
Garfield, President,	Guiteau,* Insane and Executed.
Goebel, Governor,	Youtsey, Life Imprisonment.
[illegible]	[illegible]
Hennessey, Police-chief,	11 Italians, lynched.
[illegible]	[illegible]
McKinley, President,	[illegible]
Italian Merchant, Vicarious, sacrifice for King Humbert,	Sperandio, Suicide

Non-mortal injuries inflicted on	By
Frick, Superintendent, Homestead.	Berkman, Imprisonment, long term.
Dr. Gray, Superintendent, Utica Asylum.	Roslow, Declared Insane.
Randall, Sheriff	Preston, Declared Insane.
Seward, [illegible] Secretary of State.	Powell, Executed.
Secretary of War	Augusta Executed
General Commanding,	Harrold, Executed.

No injuries inflicted on	By
Blaine, Secretary of State,	McNamara, Declared Insane.
Cleveland, President,	[illegible] Declared Insane.
[illegible] President,	Allen, Declared Insane.
Field, Chief Justice,	[illegible] assaulting.
Hall, John, Clergyman,	[illegible] act.
Hayes, President,	[illegible] Declared Insane
Jackson, President,	[illegible] Declared Insane
Johnson, President,	Mrs. Neil, Declared Insane
Roustan, French Ambassador	[illegible]
Russell, Political Organizer	[illegible]
[illegible]	[illegible]
Sage, Capitalist,	[illegible]

The murders of Generals Thompson and Thomas by Chiefs Osceola and Jack, under pretext of a truce, in the Seminole and Modoc Wars, respectively, the [illegible] conspiracy against Washington and the [illegible] to kill the [illegible] are not included here.

Pneumothorax with Emphysema.—In *Medicine Moderne*. (August 11, 1901. No. 33.) Debove reports a case of pneumothorax occurring in a man of 27. He had had emphysema for years, but never showed any signs of tuberculosis. There was no fluid in the pleura, and he recovered rapidly. To thoroughly eliminate the question of tuberculosis, Debove tried the tuberculin test twice, without any reaction. The treatment consisted of oxygen inhalations, counterirritation and morphine. [M. O.]

Original Articles.

TUMOR OF THE BRAIN LOCALIZED CLINICALLY AND BY THE ROENTGEN RAYS.—WITH SOME OBSERVATIONS AND INVESTIGATIONS RELATING TO THE USE OF THE ROENTGEN RAYS IN THE DIAGNOSIS OF LESIONS OF THE BRAIN.

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REPORT OF THE CASE WITH REMARKS ON THE USE OF THE ROENTGEN RAYS IN DIAGNOSIS OF BRAIN LESIONS.

By DR. MILLS.

Although in the following case the tumor was localized by clinical study, the case is chiefly of importance because it is the second one in which the position of a brain tumor has been accurately determined by X-Ray investigation during the life of the patient.

The patient, a colored woman, aged 32 years, a laundress by occupation, was admitted to the Philadelphia Hospital, October 11, 1901. Her family history was good, and no certain history of syphillis was obtained, although the infection seemed probable from some of the patient's statements.

Some months previous to her admission to the hospital, but just when she could not accurately fix, she began to lose power in her right leg. About the same time, or just previous to the impairment in her right leg, she began to suffer with headache, which gradually became more frequent and persistent. She stated that she became temporarily blind during the paroxysms of severe headache. The headaches at first would sometimes last half a day, at others for several days. The loss of power in the right leg increased, and during the month previous to her admission the right arm also became paretic.

She was first examined by me on the [illegible] day after admission. She was at that time well nourished. She complained bitterly of headache and evidently suffered greatly. Her tongue was slightly coated and moist; her pulse was full, strong and regular. Examination of the chest and abdomen resulted negatively.

The right side of the face was paretic. Speech [illegible] a little slow, but all forms of aphasia were absent. Loss of power was marked both in the right leg and right arm, but more complete in the leg than in the arm. Knee jerk was [illegible] on the right and [illegible] on the left. Patellar clonus was present on the right and absent on the left. Ankle clonus was absent, as was also the Babinski reflex on both sides. No impairment of sensation was noted at the time of the first examination, but a careful examination for sensation was not then made. The right [illegible] shorter, and [illegible] and the right arm was [illegible] at the elbow.

The patient was examined on a number of occasions, and was twice brought into the amphitheatre and lectured upon by Dr. Mills. The conditions at the time of the last examination of the patient by Dr. Mills (about October 18, 1901) were as follows. The right side of the face was paretic; paralysis was marked in both leg and arm, but was more [illegible] in the leg. The only movement retained in the lower extremity was partial flexion of the thigh on the pelvis. Sensation to touch and pain was nearly lost in the right upper extremity; it was but slightly impaired in the right lower extremity. Impairment of muscular sense was also a marked feature. Astereognosis was present and became more and more positive as the case progressed to its termination. All forms of cutaneous sensibility and muscular sensibility were tested by the usual methods, with the result of showing

*Read before the College of Physicians of Philadelphia, Feb. 5, 1902.

Impairment which as time passed became more and more complete in the upper extremity. The so-called senses of locality, position, pressure, and spacing were found wanting. In the right lower extremity the quadriceps jerk and knee jerk were exaggerated, and patellar clonus was marked. The front tap phenomenon was present. Ankle clonus, however, was absent, this absence being unusual in cases in which patellar clonus and front tap are present. The muscle and tendon jerks in the upper extremity of the right side were increased; on the left side, both in the lower and upper extremities they were about normal.

On October 23, 1901, the patient's eyes were examined by Dr. G. E. de Schweinitz, who made the following report:

The external aspect of the eyes is normal; the visual acuity of each eye, without correction, equals 5/25. The pupils are round, equal in size, and their reactions are normal in all respects. There is no difference in the width of the palpebral fissures, the levators have full power, and the rotation of the eyeballs is unimpaired in all directions. Although there is a history of diplopia, it is not possible to demonstrate double vision by the usual methods, nor does any examination reveal paresis of any external ocular muscle. With the ophthalmoscope the following conditions are evident: Marked bilateral optic neuritis (choked disc), the swelling of the nerve heads approximating 3mm., their apices being reddish-white in color and gradually passing into a grayish tint. Upon the swollen papillae and in their immediate neighborhood are numerous flame-shaped, fresh hemorrhages. The arteries are about normal in size; the veins are very dark in color and exceedingly tortuous. In the macular region are areas of yellowish-white infiltration somewhat similar to lesions found in renal retinitis. Examination of the visual field reveals typical right homonymous hemianopsia, the dividing line passing around the fixing point and leaving it within the region of preserved vision. The preserved half fields are of normal size. (Figs. 1 and 2). It was not possible to obtain a satisfactory color field. The ocular examinations indicate the presence of a growth situated in an area posterior to the primary optic centre, where it can interfere with the usual pathway.

The subsequent history of this case up to the time of operation and death can be condensed into a few sentences. The patient's headache became more agonizing and she had few intervals of even partial relief. In consequence of her suffering she became depressed and emotional almost to the point of mental derangement. At times she exhibited some hebetude, but she did not at any time present the peculiar psychical symptoms which are present so often in prefrontal disease. Her mental powers were well preserved throughout, and aphasia never developed. Gradually her sight became more and more impaired, until she was almost totally blind in both eyes. As long as it was possible to test her vision the right lateral hemianopsia could be demonstrated. The paralysis of leg and arm, the paresis of the right side of the face, and the sensory changes including the astereognosis, remained much as described in preceding paragraphs. Impairment of sensation in the right leg increased somewhat, but was always moderate in degree, while in the right arm loss of sensation became more profound toward the last. All the deep reflexes remained considerably exaggerated in the extremities of the right side.

A tumor was diagnosticated from the general symptoms, and owing to the combination of motor paralysis with impairment of cutaneous sensation, astereognosis and hemianopsia, the diagnosis was made of a dense tumor of large size, probably in the main subcortical, situated chiefly in the parietal region, possibly invading the motor region, and extending to or compressing the posterior limb of the internal capsule and the optic radiations where they approach one another in the region of the basal ganglia. The diagnosis was confirmed by my colleague, Dr. W. G. Spiller, who saw the case with me in consultation on several occasions. I hesitated for some time about advising operation, because of my belief that the neoplasm was in large part at least subcortical, and yet knowing that enucleable

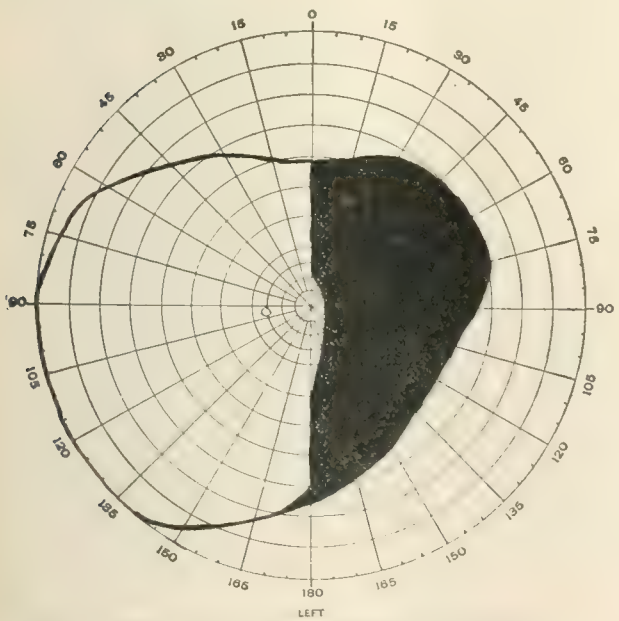


FIG. 1—Field showing right lateral hemianopsia.

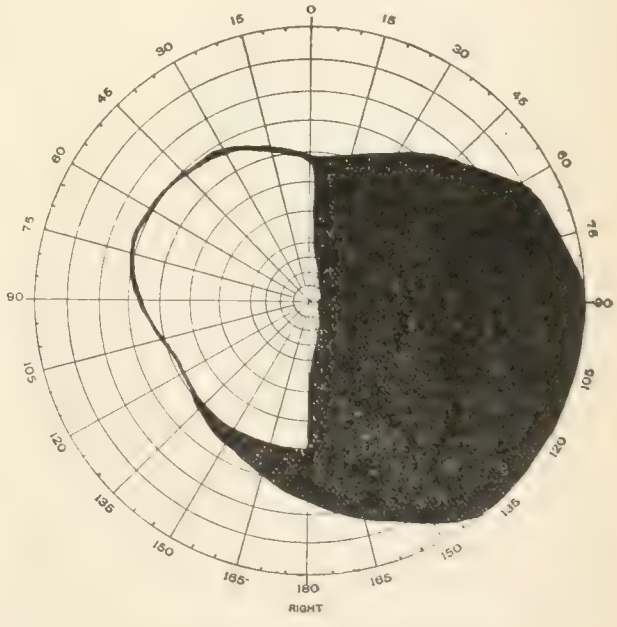


FIG. 2—Field showing right lateral hemianopsia.

encapsulated tumors of considerable size in this and other regions are operable, and believing that there was at least a chance of success in an otherwise hopeless case, I finally advised surgical procedure. To some extent I was influenced in this advice by the terrible sufferings of the patient, who became urgent to have the operation done.

About this time Dr. G. E. Pfahler, who has been doing much extremely valuable work with the X-rays at the Philadelphia Hospital, expressed a wish to corroborate the clinical localization of the growth by means of the Roentgen rays. I was glad to accede to this request, although my previous experience with the rays in attempted localization of tumors had not been successful. In 1900 I called in Professor Arthur W. Goodspeed of the University of Pennsylvania to assist in the localization of a suspected cerebellar tumor in the case of a child. The investigation was carried out with great care, but the skiagraph did not show any shadow indicating the presence of a tumor. On two occasions I have had efforts made to locate tumors in the pelvis by means of the X-rays—once by Professor Goodspeed, and in another instance at the Pennsylvania Hospital, in a case seen in consultation with Dr. A. V. Meigs. In the latter case a doubtful shadow was obtained, in the former the result was negative.

In one of these cases the tumor was subsequently partially removed by Dr. DeForest Williard. In both cases the patients died in a comparatively short time after the X-ray investigation, and in both cases tumors of large size were found post-mortem.

In the brain tumor case under discussion a shadow was obtained by Dr. Pfahler which seemed to exactly confirm the clinical localization of the tumor. A further discussion of the use of the X-rays in localizing tumors and other encephalic lesions, and a report by Dr. Pfahler of his experiments in this case, and other experiments suggested by me to be made on the cadaver will be given later.

The operation was performed December 11, 1901, by Dr. W. J. Hearn, assisted by Dr. J. Chalmers DaCosta. It was decided to do an osteoplastic operation, and as it was believed that the main mass of the tumor was in the subcortex of the parietal lobe, although it probably reached into the motor region, or injured the motor fibres subcortically, the operation was planned with the view of exposing the superior and inferior parietal convolutions and the motor region to a point one inch in front of the central fissure. The superior line of the flap was parallel with the mesal line of the skull, about half an inch (1.27 cm.) from it. From a point on the skull corresponding presumably to a point in the brain one inch (2.54 cm.) in front of the central fissure it reached backward for a distance of about three inches (7.62 cm.). The anterior and posterior sides of the flap were about the same length as its superior border, trending inward toward the base in the usual manner of an osteoplastic operation. Hemorrhage was not excessive, but considerable time was required to make the bony flap. When the dura was exposed it was found somewhat tense and bulging, with no visible pulsation of the brain. On turning back the dura a nodulated mass was found bulging into the opening, and exploration with the finger showed that on the surface of the brain at least this did not extend beyond the opening. In a few minutes this mass, about 1.8 inches (4.5 cm.) in its greatest diameter,

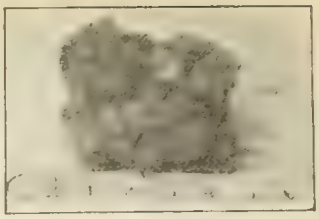


FIG. 3.—Portion of tumor removed at operation. The scale below shows the width of tumor.

was shelled out, (Fig. 3), and at first it was supposed that this was the entire tumor, but as will appear later, the tumor was broken off below the surface of the brain.

The operation was necessarily prolonged. The patient did well during its early stages, but by the time that the partial removal of the growth was effected she was in a critical condition, and although every effort was made to save her life by hypodermatic injection of strychnine and whiskey, injection of salt solution, and inhalation of oxygen, she died within two hours after the completion of the operation.

I am convinced by my observations in this and in other operations for the removal of brain tumor, that it is of the utmost importance that some speedier method of opening the skull and some method accompanied by less cranial concussion should be employed. Large openings are necessary, and the osteoplastic operation has many decided advantages, giving a large flap and also allowing the replacement of the bone, which usually retains its vitality in cases which survive the operation. If the dental engine and its necessary accessories could be so perfected as to make its use practicable for opening the skull, and if surgeons became skilful in its use for this purpose, I believe that lives that are now lost would sometimes be saved and cranial surgery, especially brain tumor operations, would have a much more hopeful outlook.

Dr. Hearn informs me that an instrument has been devised by Dr. Thomas Stellwagen, Jr., a student in the Jefferson Medical College, which will saw out an osteoplastic flap with great celerity and satisfactorily, thus doing away with the tedious chiselling and its accompanying concussion. The instrument has been used in a case in the Jefferson College clinic by Prof. J. Chalmers DaCosta with great satisfaction and success.

At the autopsy calcareous endocarditis, chronic interstitial nephritis and congestion of the lungs with emphysema were found. On dissecting back the scalp, through the opening made by the osteoplastic operation a shallow cavity was seen in the brain, occupying the anterior half of this opening in the skull and extending for about a quarter of an inch (.62 cm.) under the anterior ledge of bone. The calvarium and dura were removed and careful investigation of the appearances and conditions made. It was found that the centre of the upper border of the cavity in the brain corresponded to the summit of the central fissure of the opposite side. Below the cavity the lower portion of the central fissure was found in such a position as to indicate that the cavity from which the mass had been removed was so situated that its middle portion from above downward would correspond almost exactly to the central fissure. The vertical and the anteroposterior diameters of the cavity were the same, 1.8 inches (4.5 cm.). On examining the cavity it was found that the tumor had been broken off, and that a large portion of it remained in the subcortex. The accessible remaining portion was situ-

ated chiefly in the lower and posterior portion of the cavity. A photograph of the lateral aspect of the hemicerebrum showing the cavity, is seen in Fig. 4 No other

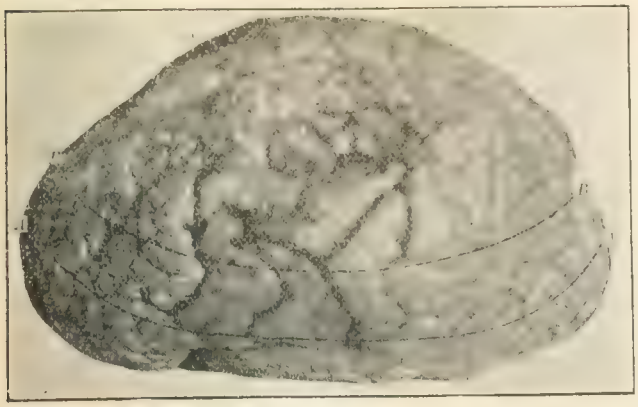


FIG. 4—Photograph of the lateral aspect of the left cerebral hemisphere showing the cavity, C, from which a portion of the tumor was removed; the portion removed is shown in FIG. 3 The line B B shows the level of the horizontal section of the brain shown in FIG. 5; the line AA the level of the horizontal section shown in FIG. 6.

gross lesions of the brain were found. The posterior portions of both eyeballs with optic nerves were removed and showed swelling and other evidences of choked disc. These specimens were placed in the hands of Dr. G. E. deSchweinitz for microscopical investigation.

The fragment of tumor, the brain and other specimens of the nervous system were transferred to Dr. W. G. Spiller, who reports that microscopical examination of the tumor shows it to be a fibrosarcoma.

After hardening the brain in formalin several horizontal sections of the brain were made at different levels, the first beginning below the lower margin of the cavity in the lateral aspect of the cerebrum, the others at short intervals, so that the lowest section just uncovered the knee of the internal capsule. The appearances presented by two of these sections, one made at the level represented by the line B B and the other by the line A A, (Fig. 4) are shown in the photographs, Figs.



FIG. 5—Photograph of a horizontal section of the brain made at the level B B in FIG. 4: T, tumor; F, precentral fissure; R, central fissure; P, intraparietal fissure.

5 and 6. It will be seen that the tumor was largely subcortical, reaching to but not invading the thalamus and internal capsule. Its position was such that it involved chiefly the white matter of the inferior and the superior parietal convolutions (subparietal and parietal of Wilder) and the middle portion of the postcentral convolution.

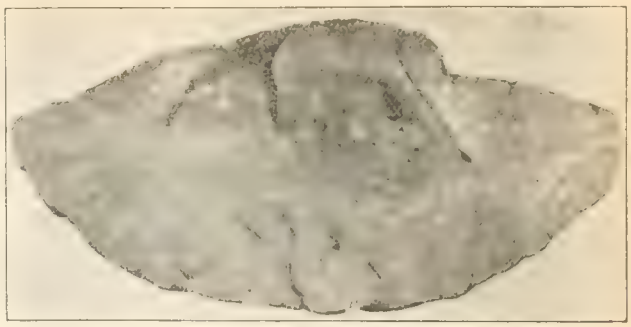


FIG. 6 Photograph of horizontal section of the brain made at 2.5 cm. below that represented in FIG. 5. This section represents about the lowest level of the tumor, which at this point has undergone cystic degeneration. T, tumor; C, head of the caudate nucleus; I, anterior limb of the internal capsule; F, precentral fissure; R, central fissure; P, intraparietal fissure.

The only case previous to the one reported in this contribution in which a brain tumor has been clearly localized by means of the X-rays in the living subject is one recorded by Church,[1] of Chicago, Church, with the assistance of Mr. W. H. Fuchs, of Chicago, experimented with the X-rays in a case in which a cerebellar tumor was suspected. Skiagrams of the tumor were obtained and are given in the paper containing the account of the observations. The patient, a boy fifteen years old, was exhibited to a class of physicians as a case of cerebellar tumor, the skiagrams being used at the same time to show the value of the Roentgen rays for diagnostic purposes. It was held by Church that the shadow showed a growth which could not be of a character homogeneous with that of the brain tissue. He also presumed that the tumor was highly vascular and that the blood extravasated into the tissues of the tumor gave the shadow. The boy subsequently died, and at the autopsy a highly vascular gliomatous tumor was found, the tumor being the seat of several old hemorrhages and also of a recent clot of considerable size. The skiagrams in this case showed a clearly distinguishable nodulated outline. The tumor was inoperable.

Some interesting points with regard to technique are given in this paper, and the skilful and varied experiments of Dr. Pfahler in our case showed the great importance of attention to special details in the work. Church records that Mr. Fuchs stated that it was important to make an exposure of proper duration, and that under-exposure or over-exposure produced an entirely different result. "An ordinary focussing tube of proper vacuum was employed at a distance of eighteen inches from the photographic plate on which the head rested. The exposure was three and a half minutes." The reader is referred to the report of Dr. Pfahler's experiments given below for details of the methods employed by him. It is interesting to note from the report of the autopsy on Church's case that the bones of the cranial vault were very thin and unusually translucent, as a similar thinness of the bones was present in our case.

Obici and Ballici[2] demonstrated by the X-rays the

1. American Journal of the Medical Sciences, Feb., 1899, n. s., v. 117.

2. Rivista di Patholog., Oct., 1897, cited by Church.

presence of tumor in the case of a boy who died of brain tumor, the experiments being performed post-mortem. They also experimented with tumors of different kinds placed in the brain of cadavers, and were able in some instances to obtain localizing shadows. Others, including Oppenheim[3] have made similar experiments. Oppenheim, in discussing the subject of brain tumors in his textbook, says that his attempts to use the X-rays for diagnostic purposes failed, although he was able to determine that a tumor placed within the cranium upon the brain was very distinctly noticed.

The tumor in the present case, according to the report of the microscopical examination furnished by Spiller, was a fibrosacroma. It can therefore be concluded that tumors of this class, and also as Church has suggested, calcereous masses tuberculomata, dense fibromatous tumors and thickly encapsulated abscesses can under favorable circumstances and with skilful technique be demonstrated by the X-rays.

Some of the observations made by Dr. Pfahler indicate the probability that the X-rays can be used to assist in the diagnosis of other lesions and conditions than tumors and encapsulated abscesses. It will be noted by a study of the skiagrams that the absence of tissue in some of the brains experimented upon was clearly defined. In one case, in which he made a careful X-ray examination, an aphasic presumably suffering from necrotic softening or an old cyst of Broca's convolution, the skiagram compared with the skiagrams of brains presumably normal, showed in the position of the suspected lesion a relative absence of shadow. This suggests the idea that in some cases in which the location of a lesion can be readily determined by clinical study but in which its nature is in doubt, the X-rays may be used to assist in the differentiation of the character of the lesion, and thus be of practical value in reaching a conclusion as to prognosis or as to the advisability of operation in a case in which surgical procedure is under consideration. If certain lesions are less dense that the brain substance and not homogeneous with it, the contrast in the skiagrams between the appearances exhibited by the normal and abnormal tissues should be of diagnostic value.

Subjoined is the report of Dr. Pfahler of his observations with the X-rays in the case here recorded, and also of other interesting X-ray investigations on the cadaver.

REPORT ON THE ROENTGEN-RAY INVESTIGATIONS.

By DR. PFAHLER.

It occurred to me that the case of Dr. Mills would be a suitable one in which to test the value of the X-rays in the diagnosis of brain tumors, and having obtained his consent and that of the patient, she was placed in the proper position and an exposure of four minutes made with a moderately hard vacuum. I placed the anode of the tube directly opposite to the area in which Dr. Mills had located the tumor and at a distance of eighteen inches from the plate, for the reason that at this distance the shadows in the upper side of the skull would be dissipated by the divergence of the rays, and yet good definitions of the structure on the opposite side of the skull would be obtained.

A negative was obtained which showed good detail of all the structures, namely, the scalp, the outer table of the skull, the diploe, and the inner table, the frontal sinuses, the ethmoidal, sphenoidal and mastoid cells, the coronal suture, the groove of the posterior meningeal artery, the outline of the base of the skull, and shadows corresponding to the depressions for the frontal convolutions. A large shadow lying between the coronal suture and the posterior meningeal artery corresponded to the area in which Dr. Mills had located the tumor. Plate I. Fig. 1.

For comparison a colored woman of the same age, an epileptic, was then selected and a similar exposure of her brain and skull made. This negative did not show the shadow of the tumor as seen in the first plate, but showed diffuse shadows throughout the cerebral portion. These can probably be accounted for by the thickness and density of her skull, which is indicated by the absence of all sutures and blood vessels, as well as the thickness of the outer table. The absence of these lines was not due to a poor negative, as shown by the fact that good definition was obtained of the base of the skull and mastoid cells. I then repeated the exposure upon the patient with the tumor and obtained the same shadows as before.

A second negative made from the epileptic showed no tumor. The matter was then presented to Dr. Mills and he agreed with me that the shadow obtained in the case of his patient was probably that of the tumor. Its definite outline in the upper portion seemed to indicate that it was superficial and therefore removable. A shadow of a tumor of the central or deeper portion of the brain would be more dissipated.

At the operation the upper portion of the tumor was removed, the part removed corresponding to the upper portion of the shadow. Autopsy showed a large remaining subcortical portion of the tumor, this corresponding to the remainder and less definite part of the shadow.

Dr. Mills then suggested that I make some experiments upon the cadaver. The first subject was a man 63 years old. I hoped to prove that a tumor could be shown in any of the usual locations. The usual incision for the removal of the scalp was made, and the left half of the cranial vault removed, leaving the right intact. Without disturbing the brain, carefully replacing the section of bone and the scalp, I made a negative to show the normal shadows of this particular skull. I then removed a section of brain from the central part of the motor area, corresponding in size and shape to a hardened cerebellar tumor, the specimen being from a case reported by Dr. Lloyd. I placed the tumor in the cavity made for it and replaced the section of bone, and sutured the scalp so as to preserve as nearly as possible the conditions that would be found in the living

3. Diseases of the Nervous System, tr. by Edw. Mayer, M. D., Phila. and London, 1900.



PLATE I. Fig. 1. Brain tumor shown in the living subject. [illegible] scalp, hairpins, outer table of skull, diploe, and inner table [illegible] sphenoidal and mastoid cells, and base of skull; also shadows [illegible] in the skull for the frontal convolutions. The shadow of the tumor [illegible] suture, and the posterior meningeal artery.

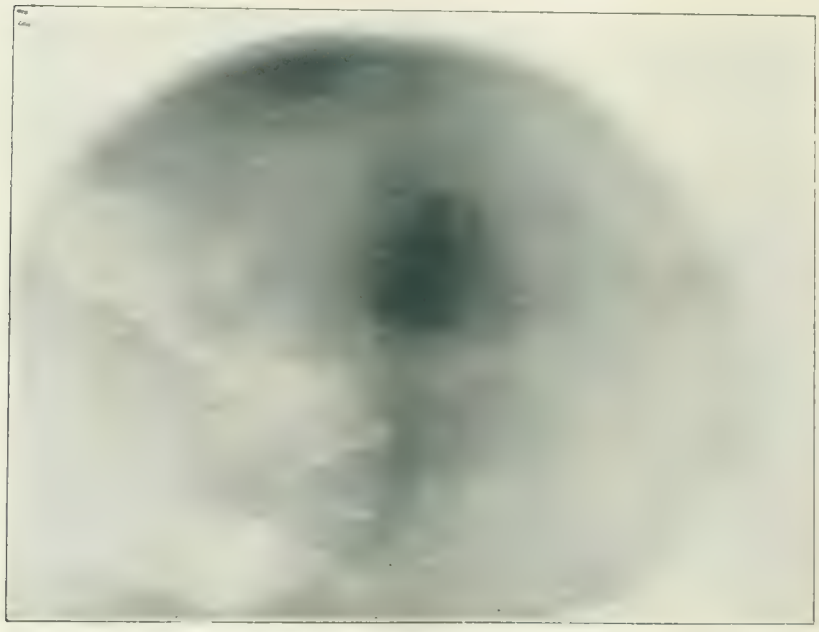


PLATE I. Fig. 2. Tumor inserted in the motor area of the [illegible]. In the [illegible] skiagram are shown the outline of the skull, auditory meatus, mastoid cells, [illegible] occipital sutures, and middle meningeal artery. The dense shadow of the tumor is seen [illegible] central tissue; the clear space about the tumor indicating the [illegible].



PLATE II. Fig. 1. Tumor implanted in the posterior portion of the cerebrum; the brain being hardened. Note the [illegible] tumor [illegible] skull and base of skull. Temporal and occipital [illegible] Dura [illegible] lying posterior to the normal bone. Natural size.

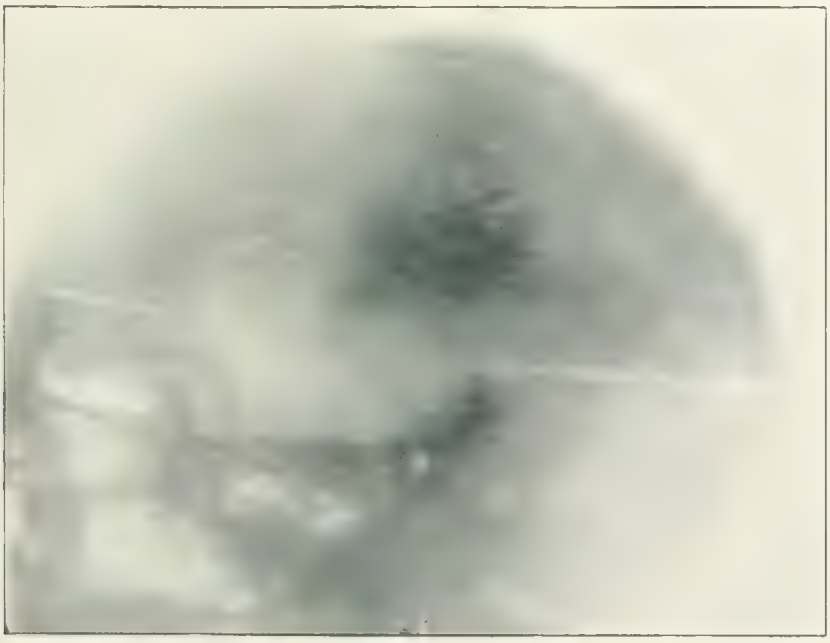


PLATE II. Fig. 2. Tumor placed in a brain hardened [illegible] in 10 per cent formalin solution. Vibratome shadow at the tumor as seen in the inferior view. The outlines of sections of the brain in the anterior and posterior portions of the cerebrum are also visible, these portions of the brain having been removed during hardening. Details of the skull [illegible] skylights.

subject. The negative made showed a very distinct shadow of the tumor. Plate I, Fig. 2.

The tumor was removed from this site and placed in the frontal region, having for its inferior boundary the first left frontal convolution and for its posterior the central fissure. The brain tissue was replaced in the first site and a negative made which showed the tumor but with a less dense shadow than in the first position. This was probably due to a more penetrating light. This plate showed the absence of brain tissue where it had not been cut to fit the tumor exactly.

The tumor was now placed in the posterior portion of the left hemisphere, the frontal section of the brain replaced, and the brain closed as before. This negative not only showed the tumor, but also the outline of the section of brain in the frontal region which had been replaced. Plate II, Fig. 1.

Dr. Mills and Dr. Spiller reminded me that a hardened tumor in a fresh brain might not be a fair test. To harden it the brain was placed in a ten per-cent formalin solution for fifteen hours. It was then returned to the skull and the tumor replaced in the motor area. A good shadow of the tumor was obtained, and the markings of each section of the brain tissue previously removed and replaced were shown. Plate II, Fig. 2.

My second subject was a white woman twenty-nine years old. In the series of experiments performed on this woman's case I hoped to prove that a cerebellar tumor could be located, and also that the different varieties of tumors could be photographed. As in the previous series my photographs were of the normal conditions present. I used all the free tumors obtainable. The first was a cerebellar sarcoma from a case studied by Dr. James Hendrie Lloyd, the specimen being preserved in the Pathological Museum of the Philadelphia Hospital.

The tumor was placed as nearly as possible in the same position in the cerebellum of the case experimented on as it was in Lloyd's case. A definite shadow was obtained. I then used an perithelioma which had been removed from a case of Dr. Mills. The tumor was photographed in the central part of the motor area. The next was an endothelioma loaned by Dr. Spiller. This was also placed in the motor area, and a shadow was obtained of only slightly greater density than that of the surrounding tissues, but the sections of the tumor itself were shown.

In another experiment a large spindle-celled sarcoma of the pineal gland was placed in the motor area and a shadow obtained.

In all of this series the plates were over-exposed though exposure was only four minutes. I then repeated the series upon the body of a man 54 years of age, timing them three minutes, with the result that all were under-exposed.

Still feeling that my results might be questioned because I had used a hardened tumor and a fresh brain, I used the following test and repeated it. Half of a fresh brain was taken and placed beside the half of a hardened brain and the two photographed with the tumor under the same light and upon the same plate. The hardened brain was a little larger than the fresh one. The negative showed more detail in the hardened brain, but the density of the shadow was little if any greater than that of the fresh one. The shadow of the tumor was more dense than either.

From the foregoing experiments the following conclusions may be drawn:

1. That fibrosarcomata, and probably other tumors, can be photographed in the living subject and their location and extent shown.
2. That various tumors can be photographed in their most common locations.
3. That other abnormalities and deficiencies in brain tissue itself can be photographed, which will probably be of value in the diagnosis of cysts, softening and hemorrhages.
4. That over-exposure of the third series and the under-exposure of the fourth show that good results will only follow the most careful technique and keen judgment as to the special conditions in each case.
5. That the shadows obtained in normal parts of the brains studied indicate that great care is necessary in the interpretation of any shadow obtained in the living subject.

THE TREATMENT OF PARALYTIC ATTACKS.

By PROFESSOR A PICK,
of Prague, Bohemia.
Authorized Translation by Max R. Dinkelspiel.

In discussing the symptomatology and diagnostic significance of paralytic attacks, I feel called upon to enter more thoroughly upon the consideration of the treatment of these attacks, not only because, on account of the frequency of paralysis, the indications for treatment should be recognized by every practicing physician, but because, as far as I can find, the whole regime as employed by me is nowhere specified as are some of its individual features.

As a guide for the treatment of paralytic attacks I may justly advance the paramount fact, that the patient generally succumbs to the effects and complications which occur sooner or later, and that it is these against which our therapeutic or rather prophylactic treatment should be directed. Yet one phase of the subject is to be considered first, namely the interruption of the attack; for occasionally it is observed that the attack is influenced by the irritation of a filled bladder, a filled rectum, or some other pathological irritation like an unobserved furuncle, and finally, by any slight febrile affection as in the attacks of eclampsia in children, all these in turn indicating the first step of treatment. I believe that we do not as yet possess any remedy against the attack itself, that is the cerebral phenomena giving rise to it; for as important as the claims of Lissauer and others may seem, regarding the pathological findings in cases of consecutive paralysis following the attacks, they do not however enlighten us regarding the phenomona that take place during the attack; at least they do not sufficiently enlighten us as to enable us to employ any rational method for combating the symptoms of the attacks. Therefore I do not consider the ergotin injections recommended by French authors, and in

the use of which I have never seen any result, as sufficiently established either theoretically or practically. This also applies to the application of ice, which however, in regard for the surroundings of the patient, may still be employed. In repeated epileptiform attacks chloral enemeta (2 to 3 grams) or ether inhalations may be employed in order to prevent injury, which on account of the decreased vitality of the patient may easily give rise to phlegmons and septic inflammation. The bed, unless it is already suitably arranged as in an institution, is to be cushioned or so arranged that the patient cannot injure himself during the convulsion. For the same reason the patient himself is also to be protected against injuries, and the suggilations which may arise from the continuous contact of the paralytic arm with a certain portion of the patient's own body. Precautions should also be taken against the occurrence of fissures of the lips and the margins of the nose by regular application of some ointment base; likewise care should be taken to keep the margins of the lids and the conjunctivae clean, by means of boric acid solutions, as hyperemia of these structures may easily lead to purulent inflammation on account of the disposition to infection.

In order to prevent the occasionally occurring acute bed sores, care should be taken that the posture of the patient is frequently changed, and that air cushions or water cushions are employed; furthermore of particular diagnositic value is the occurrence of the so-called subcutaneous decubitus described by Curschmann, which may occur without a solution of continuity in the epiderm, and which also may go on to slowly healing and extensive suppuration of the subcutaneous cellular tissue. Likewise the greatest caution is indicated in order to prevent hypostasis, devoting particular attention to the extremities in which pressure sores and blisters, which are very refractory to treatment, may occur, as may also projection of bones; a hand accidently left between the body and the bed, or the pressure of one extremity upon the other, may easily give rise to such complications. It need of course only be mentioned that the formation of folds in the bed-sheet and shirt of the patient is to be rigidly guarded against for the same reason. Of similar value is also the systematic cleansing of the whole body, especially about the genitalia and anus, this precaution serving the double purpose of cleanliness, and beneficial influence upon the increased temperature so frequently observed in paralytic attacks.

A second and still more important danger menaces the patient by reason of autoinfection from the various portions of the alimentary canal, and therefore we should see to it that all those portions of the tract that are amenable to disinfection should be attended to. As the mouth, and its adnexa, even in a healthy individual, are flourishing breeding-places for infectious organisms, this is all the more the case in the conditions under consideration, in which there is decomposition of the stagnated buccal secretions, that frequently are directly responsible for pneumonia. The care of the mouth is therefore one of the principal indications, and should be observed by systematic spongings of the oral cavity, and cleaning the teeth by means of a linen cloth and water, or better still, with permanganate of potash or some diluted mouth wash, including also the nose, as the latter is often also a focus of infection. The second procedure of disinfection is to be directed towards the gut, and should consist of high enemata of either pure water or a boric acid solution, repeated at regular intervals. I will also add that the attacks themselves have recently been considered to be due to autointoxication, which all the more indicates the recommended enemata; for investigations have also shown that during a paralytic attack there is increased decomposition in the intestines.

The administration of nourishment should receive particular attention, as mistakes in this direction have frequently been productive of the gravest dangers by reason of deglutition pneumonias. In order to overcome this danger the nutriments should consist entirely of fluids; but even here the dangers incident to swallowing are not entirely prevented. It is best under all circumstances to be convinced whether the patient can swallow at all, by first carefully giving him a few drops of clean water, remembering that the power of swallowing is sometimes independent of the degree of consciousness; sometimes swallowing may be prevented during slight unconsciousness or even consciousness on account of paralysis of the pharyngeal musculature, while in other cases deglutition may take place during sopor. If the latter is the case the administration of nutritive fluids should be conducted with the greatest precaution, and the matter is only to be entrusted to an attendant whose care and reliability are above reproach. If, on the other hand, the power of swallowing is so disturbed, that cough will occur upon the slightest administration of fluids, it will then be better entirely to refrain from giving fluids by way of the stomach. It is not advisable, at least for the beginning of the treatment, to administer nourishment by means of the pharyngeal sound, because aside from various other difficulties the danger of regurgitation in such cases is exceedingly great, and even the slightest amount of the nutritive fluid that gains access to the lungs is sufficient to produce a grave and quickly fatal pneumonia. It will therefore be necessary to nourish the patient by means of nutritive enemata, the composition of which may represent any of the recognized formulae; I consider it, however, of great importance for the quantity to be small, not over 100 grams of fluid; furthermore, that the enema should be bland, both of these being precautions which will facilitate the retention of the nutritive substances. I am thoroughly convinced that in these cases the addition of concentrated meat broths markedly influences the retention of the enemata.* But even more important than the nutritive enemata appear to me to be enemata of small quantities of water, which since I have employed them have been productive of the best results. No hard and fast rule can be drawn regarding the temperature of these injections, as in some cases the room temperature best agrees with the patient, while in other cases it appears as

*I take occasion to call attention here to the importance of osmosis in relation to nutritive enemata.

if cooler temperatures influence the retention of the enemata.

Believing that during the first few days it is not the inanition but principally the loss of water from which the pernicious influence upon the economy is to be feared, I have been accustomed during this time to combat the generally markedly increased elimination of water from the patient by small enemata of water administered every one or two hours, waiting until the second or third day to combine these injections with the nutritive enemata, and in such a manner that they follow each other alternately; in addition, each second day, an extensive cleansing of the gut should follow. It is often astonishing how favorably the enemata of water act upon the heart action and how they succeed in tiding the patient over the most critical period of the attack. Furthermore, I am of the opinion that this favorable action is also extended to the temperature of the patient, and I believe that in many cases that I have seen, in which the temperature has even risen over 40° C, the good results of the whole treatment were attributable to the procedures just described. Indeed, it is well known that in other diseases, like grave pneumonias, considerable importance is attached to the deprivation of blood and water from the organs, and that these conditions can be successfully combated by hypodermoclysis. I have found no occasion up to now to use other solutions than pure water, but it is nevertheless to be recommended, that the pure water be substituted for normal salt solution in order to increase its chances for absorption and osmosis; should the enemata not be retained, they can be supplanted by hypodermoclysis.

If the simple enemata of water are not retained, something which has hardly ever been experienced by me, it will then be better to refrain from all artificial feeding and wait until the third day. If the methods of administration per rectum, which should be repeatedly tried, prove persistently unsuccessful, and if the deglutition of fluids is still difficult, it will then be necessary to feed by means of the sound; but this procedure should be excluded as far as possible from the procedures of the practicing physician, because it is difficult, often harmful, and in spite of the most rigid precautions frequently has a pernicious influence upon the surroundings of the patient; indeed, the necessity for such a procedure, as is well known, has frequently been an indication for placing a patient in an insane asylum. In addition I will state, that these enemata of water have also proven themselves efficacious in other conditions, in which in consequence of refusal to take nourishment by the mentally diseased, inanition, and above all the danger of abnormal loss of fluid threatened the life of the patient; by these means forced feeding may be prevented and the administration of nutritive enemata postponed. A comparison of observations shows that even in cases of psychical disturbances an inspissation of the blood and the tissue fluids gives rise to apprehension. In conclusion it may be in order to remark that, with the suitable modifications, the same treatment is indicated, and may be used to advantage, in all other protracted comatose conditions.

A CASE OF CEREBRAL BULBAR PALSY, WITH A STUDY OF THE LOCALIZATION OF THE TONGUE AND LIP CENTERS.

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The question of the cortical localization of the tongue center is one of some interest on account of the rather divergent views regarding it and also because of its practical connection with the subject of cerebral bulbar paralysis. Paralysis of the tongue from diseases of a single cerebral hemisphere is not at all uncommon in my experience, thougn always associated with hemiplegia, but it is a condition difficult to explain and furnishes an interesting problem to the pathologist and physiologist.

The tongue is an organ most of whose movements are done symmetrically and, in so far, we would expect it to have, as it does, a bilateral representation in the cortex like the muscles of the throat and of respiration. It is, however, capable of asymmetrical movements and it undoubtedly has centers in the cortex which are unilaterally represented only; so that lesions of them, if extensive in one cerebral hemisphere, can cause very considerable paralysis.

Experimental Evidence.—The tongue has functionally two uses, that of assisting articulation and speech, and that of assisting mastication and deglutition. With the former the lip movements and the vocal cords are associated, hence we might suppose that the lip and tongue centers would be near each other and also near the center for the larynx. The latter function we might suppose would be associated with movements of the jaw and cheek in mastication. Thus we would expect to find two tongue areas, or at least, a wide extent of cortex excitation of which will call out lingual movements. These *a priori* considerations are borne out by physiological experiment. Thus, in the monkey (*macacus*), Fig. 1, on the area A are produced movements of adduction of the vocal cords. In the area B, movements of the cheek and tongue, the movements being more those associated with expressions of emotion and the tongue center being lower. In the area C movements of the

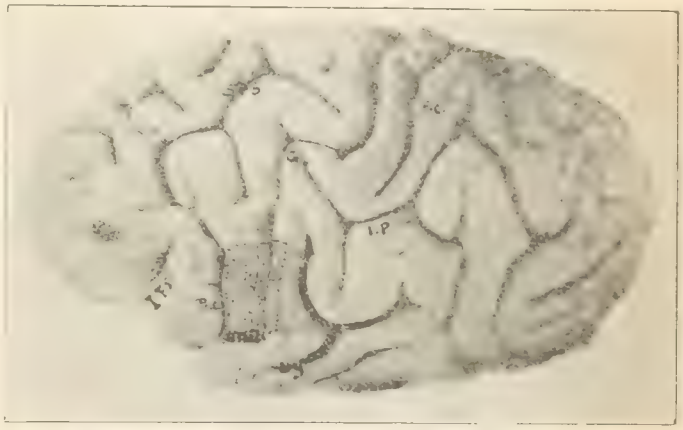


FIG. 1—Brain of Orang, showing face and tongue centers. The areas enclosed in the dotted lines behind G, fissure of Rolando when excited caused movements of the lips and angle of the mouth, the latter being higher. The area in front of the fissure of Rolando when excited caused movements of the tongue. In the lowest and darkest area caused opening of the mouth. From Phil. Trans., 1890. Beever and Horsley. G. Fissure of Rolando. Sy. Sylvian fissure.

tongue in association with mastication are produced (Ferrier, Schaefer, et. al., Schaefer's Text Book of Physiology, Vol. II, p. 741).

The experiments by Beevor and Horsley on the anthropoid ape (orang) showed that in this animal the tongue center is practically identical with the lip center and with centers for opening the jaw and closing the lips (masticatory movements of the jaw are not chronicled). On the whole, the lip and mouth movements are a little higher than those of the tongue.

In a recently published address by Sherrington and Greenbaum (*Brit. Med. Journal*, Dec. 28, 1901) it is stated that in anthropoid apes the tongue is the lowest of the centers and above it lies that of the mouth. They also state that in all the anthropoid apes 2, 9, gorilla, chimpanzee and orang, the post-central convolution is inexcitable, and that the motor area lies in the precentral convolution, the parts adjacent anteriorly, extending back into the Rolandic fissure, but not further. There is ample evidence to show that this is not the case in man in whom the post-central convolution has also motor functions. Hence in applying the observations upon apes to man we must extend the representation posteriorly. As regards the tongue and lips, this would be particularly true, for these organs are functionally much more highly developed and capable of much more delicate and complicated movements.

Experimental Evidence on the Human Brain.—In the *Archives Cliniques de Bordeaux*, for November, 1897, Dr. Lucien Lamacq published an article upon the cortical motor centers of the human brain as determined by the effects of faradic stimulation of the human cerebral hemispheres. In this he collects all the cases in which the brain has been stimulated during the course of surgical operations. He reports forty-one observations; in only one was there any note of a movement of the tongue produced by electric stimulation. This was the case of Dr. Keene's in which the tongue was observed to move on stimulation of the lower end of the post-central convolution.

Clinical and Pathological Observations.—Most of the writers on cortical localization or brain topography have assigned the center for movements of the tongue to the lower end of the anterior central convolution just behind the ascending branch of the fissure of Sylvius. This is the position ascribed to it by von Monokow in his article on diseases of the brain in Nothnagel's Special Pathology and by Brissaud in his Lectures on Nervous Diseases. This allocation is due largely, I think, to inferences drawn from experiments on monkeys.

But it must be admitted that the evidence of earlier clinical cases has been in favor of placing the tongue centre at the foot of the ascending frontal convolution.

The case of Barlowe in which a boy of ten years had first an attack of left facio-brachial hemiplegia and then later an attack of right facio-brachial hemiplegia with some bulbar paralysis is quoted in support of this view. On post mortem it was found in this case, that there was a softening involving the lower part of the ascending frontal and part of the third frontal on each side. The lesions were rather large, however, and the case itself can hardly be called conclusive.

Elder reports a case of a male, 60 years old, who suffered from paralysis of the right lower face. There was difficulty in moving the lips, tongue and muscles of articulation, the tongue, however, could be protruded. Autopsy showed a small blood clot at the level of and just within the lower ends of the ascending frontal and ascending parietal convolutions.

Bernheim reports a case with pronounced deviation of the tongue to the right. Autopsy revealed a sarcomatous blood cyst in the inferior part of the ascending frontal (*Med. Review*, p. 372, 1901).

Some of the modern writers both on anatomy and clinical medicine place the tongue center lower down and further back than is done by von Monokow and Brissaud.

Mills in his work, Diseases of the Nervous System, has a diagram in which he places the tongue center at the lowermost portion of the Rolandic operculum, a little posteriorly. It corresponds with the location of the lesion in the case here reported. He says that the movements are represented in this area from above downward in order for the eyelids, angle of the mouth, and movements of the lips and tongue.

Barker, in his work on the nervous system, has a diagram in which he assigns the centers of the face, mouth and tongue, from above downward, placing the tongue lowest and very nearly under the lower end of the fissure of Rolando.

My own case is as follows:

The patient was a German, 67 years old, a gardener by occupation. He was brought to the Bellevue Hospital with a history of having had an attack of left sided hemiplegia in the morning of the same day. On the day after admission and a week later, on examination, he was found paralyzed incompletely on the left side, the left arm being weak, the left leg less so. There was the usual slight paralysis of the lower portion of the left side of the face. There was distinct paralysis of the tongue and less of the lips. The patient was unable to protrude the tongue and could barely lift it; he could not retract it. It was practically immobile. He could, however, swallow liquids and solids. The lips were weakened and paralyzed so that he could not purse up the lips nor whistle, nor could he articulate sounds with any distinctness, but he could retract the angles of the mouth. He could cough and make articulate vocal sounds and there was no paralysis of the vocal cords.

He died three weeks after admission, the hemiplegia improved, but the condition of the tongue and lip palsy did not change.

Autopsy showed a focus of hemorrhagic encephalitis involving the cortical and subcortical tissue in the lower and posterior end of the posterior central and the adjacent inferior parietal lobule, as shown in the figures. It extended into the parietal operculum and deep in the upper lip of the fissure of Sylvius. It reached a depth about equal to that of the fissure and involved the white matter of the convolution.

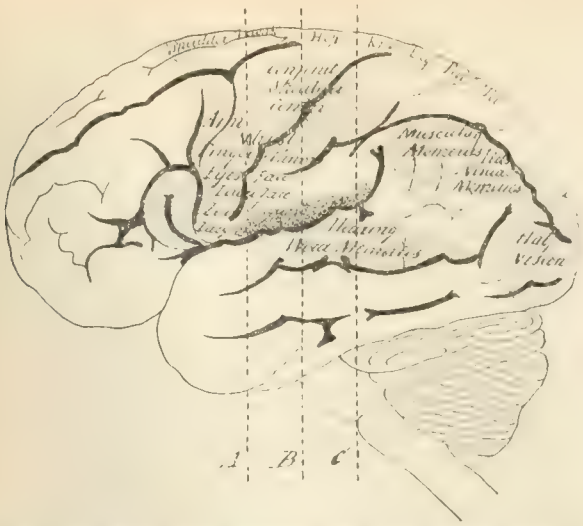


FIG. 2—Shaded Area showing Area under which Lesion lay. (This should represent the right hemisphere.)

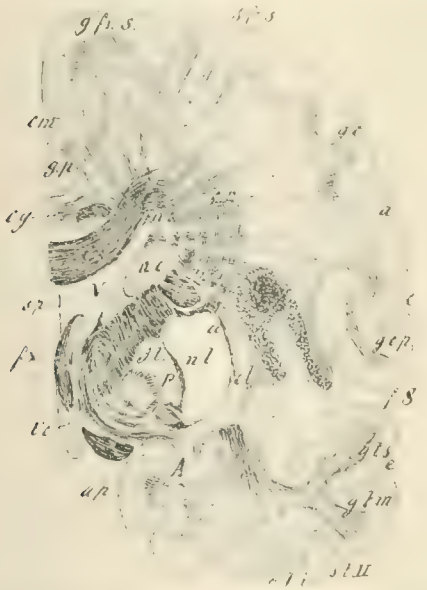


FIG. 3—Section through A, Showing Location of the Lesion. The darkest spot represents a solid clot of blood.

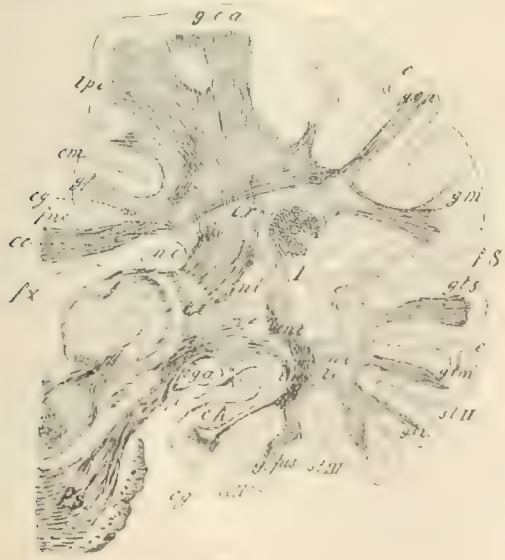


FIG. 4—Section through B.

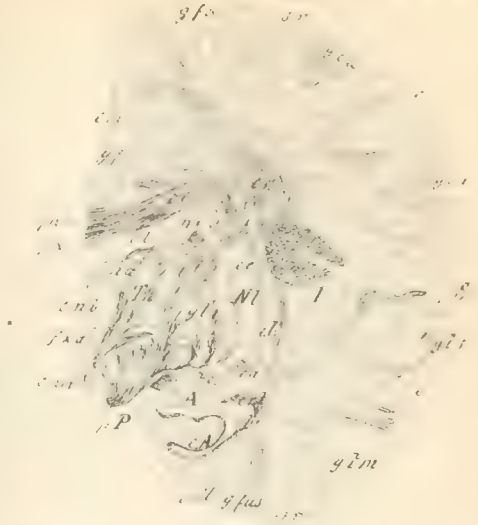


FIG. 5—Section through C.
Cuts for Figures 2, 3, 4 and 5 loaned by courtesy of *Medical Record*.

The diseased areas of the brain were confined to the limits indicated. The meninges were normal; the blood vessels at the base and the blood vessels in other parts than those near the focus of disease were also practically normal. There was no atheroma of the vessels at the base, nor any atheromatous patches anywhere. Sections through the basilar ganglia, pons and medulla showed no evidences of any lesion except minute very recent hemorrhages, dating much later than the original lesion.

As Oppenheim and Siemerling have questioned the occurrence of many cases of cerebral bulbar palsy and have intimated or shown that in some of those reported there were lesions in the medulla also, I quote the description of this part in my own made by Dr. M. G. Schlopp:

"The lesions in the medulla oblongata were confined to several small hemorrhages which must have occurred very shortly before death. (The patient lived three weeks.) There was here and there only a little round-cell infiltration, but no pigmentary deposit. A large number of the cells of the different cranial nerve nuclei throughout the medulla and the ganglion cells in the olivary bodies show pigmentary degeneration. The pigment had, in some cells, entirely replaced the chromatic substance, and in these cells the nucleolus had taken a position at the periphery of the cell-body, in some instances even partly protruding therefrom."

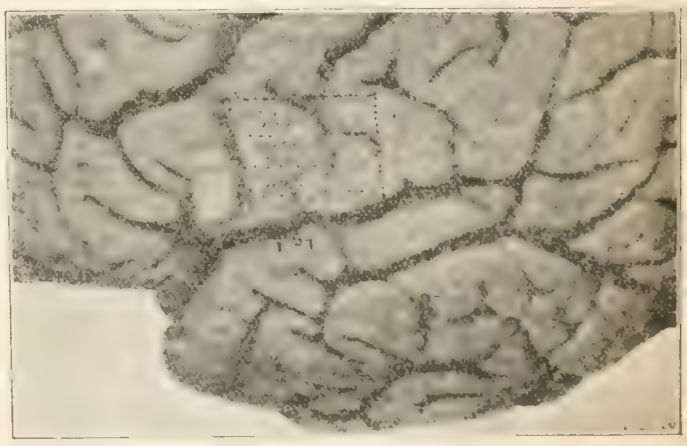


FIG. 6—Approximate face area in the human brain. F. R., fissure Rolando. F. Sy., Sylvian fissure.

My conclusion is that in the human brain the lip and tongue centers are closely connected and more or less identical. One group of centers for the tongue is in relation with the articulatory movements of the lips and another with the movements of mastication, opening and shutting the mouth and deglutition. The area for the excitation of movements of the tongue is a wide one, being associated probably in its lower parts with the articulatory movements and in the upper parts with the masticatory movements. The centers lie at the base of the pre and post-central convolutions.

The paralysis of the tongue and, to some extent, of the lips, from a one-sided cortical lesion occurs and may perhaps be explained by the fact that in many individuals the brain becomes accustomed to use only one center in controlling the movements of these parts. When this center is destroyed there is for a time a paralysis of the movements. When the center upon the other side becomes awakened to its capacity it takes up the movements and the paralysis disappears. This theory may explain also the very frequent occurrence of difficulty in deglutition, and often in articulation, in many cases of hemiplegia due to ordinary cerebral hemorrhages. That a permanent bulbar palsy can be caused by a cortical lesion of one hemisphere is doubtful and if it occurs, must be considered rather as an anomaly.

MYASTHENIA GRAVIS (ASTHENIC BULBAR PARALYSIS.)

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Although first described by Wilkes in 1877, this disease had but little attention paid to it until 1891, when Goldflam published a paper in which he collected all cases then recorded and added four new ones. A number of names have been given to this interesting affection. It has been called "Bulbar Palsy Without Discernable Anatomical Changes," "Asthenic Bulbar Paralysis," "General Profound Myasthenia," "Erb's Disease," "Hoppe-Goldflam Symptom Complex," and Jolly called it "Myasthenia Gravis Pseudo Paralytica," which name seems to have found general favor, for of late it is the one generally used. The disease was first described by Wilkes in 1877 (Guy's Hospital Reports, 1877) as "an unusual form of glosso-labio-laryngeal paralysis." He gave the details of two cases which presented symptoms of bulbar paralysis, in one of which a careful autopsy was made but which revealed no anatomical changes. In 1879 Erb (*Archiv f. Psychiatrie*, Bd. IX, 1879) reported three cases which he described as a "new syndrome, probably of bulbar origin." Apparently little or no notice was taken of these cases, for nothing more was added to the literature, until 1877, when Oppenheim (*Virchow's Archiv*, Bd. CVIII, 1877) reported a case with the details of the autopsy. In 1891 and 1892 Jolly (*Berlin. klin. Wochen.*, XXVIII, 1891); Hoppe (*Berlin. klin. Wochen.*, 1892) and Goldflam (*Neurolog. Centralblatt*, 1891) published papers on the disease, and that of the latter attracted general attention. Strumpel (*Deutsche Zeit. f. Nervenheilkunde*, Bd. VIII, 1896) collected twenty cases which had been reported and made a critical analysis of these. He suggested the name "Asthenic Bulbar Paralysis" as indicating the seat of the disease and the absence of anatomical changes. Since 1895 a number of cases have been recorded. It seems rather remarkable that there have not been more cases observed because the disease is probably a not very rare one. Campbell and Bramwell (*Brain*, part II, 1900) have made the most complete study of the disease so far published. They state that probably about seventy cases had been reported up to that time, and gave the details of sixty cases. One of these cases, however, is not a clear-cut example of the affection. This is case No. 60, which was added by one of the writers of the paper. A girl, aged 19, who, after an attack of scarlet fever three and a half years ago, became paralyzed all over. During the following year she gradually improved and recovered power excepting in the face, which felt stiff. About one year ago she gave birth to a child. During lactation the face became worse. On examination there was double facial paralysis, occasional diplopia and drooping of the eyelids towards evening. There was no affection of the soft palate, tongue, larynx or extremities. The condition was worse at the menstrual periods and in cold weather.

Careful search through literature since 1890 has brought to light thirteen additional cases.* Most of the cases reported have been in Austria and Germany. Fifteen, however, have been recorded in England, eight in America, eight in France and five in Italy. One of the cases—the second of those reported by Burr and McCarthy (*Am. Journal Med. Sciences*, January, 1901) is, in our opinion, not a genuine case of myasthenia gravis, and the authors themselves express some doubt about it. The patient had complete facial paralysis of the upper and lower type, great weakness of the extremities, and astereognosis; but there were not the periods of improvement after rest and exhaustion after use of the affected muscles, which are so characteristic of the disease; moreover, the patient made a complete recovery from which there has been no relapse after two years.

Essential Features.—The characteristic symptoms of the disease are weakness, beginning in the bulbar muscles, that is, in the tongue, lips, larynx and ocular muscles. Exhaustion after use of the muscles and partial recovery after rest are the most striking and typical symptoms of the disease. In the morning after rising the muscles are in the best condition. As the day advances they grow weaker and the paralysis becomes more or less complete. All of the

*Hunter, Lancet, Dec. 7, 1901
Mendel, Neurologisches Centralblatt, Feb. 1, 1901.
Leonard R. Guthrie, Lancet, Feb. 3, 1901.
Thos. Buzzard, British Med. Journal, March 3, 1900.
S. Brown, Medical Record, Nov. 24, 1900.
W. E. Paul, Boston Med. and Surg. Journal, Dec. 20, 1900.
E. Bramwell, Journal American Medical Association, 1901, page 1237.
J. R. Buist and E. G. Wood, Journal American Med. Assn., April 20, 1901.
L. Laqueur, Neurologisches Centralblatt Leip., July 1.
Patrick, Journal American Med. Assn., Jan. 4, 1902.
Burr and McCarthy (2 cases), Journal Am. Med. Sc., January, 1901.
Arthur J. Hall, Brain, part II, p. 337.

voluntary muscles may be involved; the arms and legs become exhausted and almost helpless after exercise, but after rest they may again be capable of use for a time. The affected muscles frequently, but not invariably, exhibit the so-called myasthenia reaction, which is described by Jolly, that is, prolonged faradic stimulation may exhaust the irritability of the muscles just as voluntary effort does; but galvanism does not seem to affect them in this way. Another typical feature of the disease is the tendency to fluctuate in the intensity of the symptoms from day to day or from week to week. Marked remissions may occur for months or even years, and then re-appear. There are no sensory disturbances, either subjective or objective. A certain proportion of cases seems to recover entirely, but death is the result in the majority. In no case has any structural change been discovered on post-mortem to account for the symptoms.

Etiology.—Both sexes are equally affected, and the average age for men as given by Campbell and Bramwell, in an analysis of fifty-eight cases, is thirty-five years, and for women twenty-four years. There seems to be no constant predisposing cause to the disease. Occasionally there seems to be a family tendency to neuroses. In the case reported by myself (*Journal Nervous and Mental Diseases*, 1899) two brothers and a son of the patient had nystagmus and other nervous phenomena. There have been no cases recorded in which more than one member of the family was affected. In quite a large number of cases the symptoms have followed upon some previous acute illness, such as influenza, typhoid fever or attacks of diarrhea. In some cases the symptoms have first made their appearance after confinement and after the first appearance of menstruation. The onset of the disease is generally gradual. At first the early symptoms are scarcely noticed and are regarded as nothing more than extraordinary weakness. Generally the first thing observed is some weakness in the ocular muscles and tendency to diplopia, weakness in the lips, difficulty in articulation or in mastication and swallowing. In other cases the early symptoms have been in the arms and legs after a great deal of physical work, like ironing or sawing wood.

Symptoms.—Ptosis is one of the most common symptoms. It may be either unilateral or bilateral, and may be constant or variable. Very often the ptosis only occurs during the latter part of the day and if the patient has been looking upward for a long time. The muscles of the back of the neck become fatigued readily, and often are so weak that the patient is unable to support the head. Weakness of the ocular muscles is a common symptom, and occasionally complete ophthalmoplegia externa is present. The degree of diplopia varies in these cases according to the amount of muscular paralysis. The pupils are seldom, if ever, affected, although in some cases they are unequal. Difficulty in mastication is a constant symptom. At times the trouble may be only slight and is observed only at the end of the meal, but in other cases the jaw becomes tired after chewing for a short time, and the patient is unable to close his jaws with enough force to masticate the food. The same is true of the other muscles of deglutition; swallowing becomes difficult and the patient is liable to choke after having made several attempts. Several cases have been recorded in which death has followed choking while the patient was attempting to swallow food. Articulation is also impaired. After talking for a time the utterance becomes indistinct and imperfect, and a feeling of fatigue and stiffness in the tongue is complained of and the movements of the tongue may be impaired; that is, while the patient can usually protrude the organ, he cannot hold it out for any length of time. The voice is often nasal as the result of weakness of the soft palate, and, if the palatal weakness is great, liquids may be regurgitated through the nose when the patient drinks. The impairment of speech is due principally to the muscles of the tongue, lips, soft palate and jaw, but in a few cases there has been paralysis of the laryngeal muscles.

The muscles of the trunk and limbs, as before stated, are involved. The neck muscles suffer most commonly. Sometimes the head has a tendency to fall forwards or backwards and usually requires support. The dorsal muscles are affected, and the muscles of the arms and legs very frequently show extreme weakness and exhaustion after exercise. If the patient walks for a short time his gait becomes unsteady, and he staggers or walks with a waddling gait. If the patient uses his arms for a long time, marked fatigue occurs in the muscles; even writing soon tires out the hand and fingers so that the letters become badly formed. The muscles of respiration may be affected, and after exertion, even to a very slight degree, marked dyspnea occurs. The facial muscles are frequently affected to a greater or less extent, and the paresis of these muscles gives rise to a peculiar mask-like expression. In some cases there is complete facial paralysis of the upper and lower type.

Various conditions affect the myasthenic condition of the patient. In several cases which have been reported the patient was worse in cold weather. Women are usually worse after the menstrual period, and several cases which have been recorded have come on after confinement. Any acute illness aggravates the symptoms, and emotional disturbances also cause the symptoms to be intensified. In many cases relapses occur which are inexplicable. Attention has already been called to the peculiar electrical reaction of the muscles. In a case in which this reaction is present, a tetanizing current applied to the muscles at first produces active contractions, but after a time the contraction becomes feebler until finally the muscles cease to respond After stopping the current for two or three minutes, good contractions are again produced. This phenomenon, which Jolly calls "the myasthenic reaction" is not obtained by the galvanic current. The myasthenic reaction is not always present; in fact, it occurs in but a small number of cases, and the readiness with which it may be obtained depends, to a great extent, upon the degree of fatigue in the muscles. Muscular atrophy is seldom observed, although in a number of cases it has been found in some of the muscles. No cases have been recorded in which there was atrophy of the tongue. There is absolutely no change in sensation. The pain sense is unimpaired and there is no loss of tactile

sensation. The reflexes are normal. The knee-jerks are present, but in many cases after repeated excitation of this phenomenon it becomes exhausted. In other cases, however, after repeated development of the knee-jerk there is no diminution in it. The Babinsky reflex has never been observed in this disease.

Morbid Anatomy.—In the majority of cases no lesion has been found post-mortem. A number of times the most careful examination has been made of the brain, medulla oblongata and spinal cord without the least abnormality being found. In a few cases slight lesions have been found in the medulla. In one case, that of Mayer (*Neurolog. Centralblatt*, 1894) a microscopic examination showed that the cells of the hypoglossal nucleus were normal, with the exception of a few which contained vacuoles, but that there was some degeneration of the intra-medullary portion of the anterior roots as well as of the hypoglossal root. In other cases in which some changes were found, there seems to be a question as to the absolute diagnosis, and in two cases in which some hemorrhages were found in the medulla, it was thought probable that these occurred at the time of death. It may then be stated that, as far as our present knowledge goes, the disease is one without anatomical lesion. Neither is it settled as to where the seat of lesion is. On this point there is marked difference of opinion among writers. Collins (*International Medical Magazine*, 1896) suggests that the condition is due to an affection of the sympathetic. Strumpell believes that the disease is located in the motor nervous system, including both the upper and lower motor neurons.

Pathology.—A number of theories have been advanced as to the pathology of the disease, but none are entirely acceptable or plausible. The most reasonable theory is that some toxine, developed in the system, attacks the motor neurons. It is entirely improbable that the muscles are affected, as suggested by Jolly, but it is more likely that the lower motor neurons are most involved. As to what is the character of the toxemia we are totally ignorant. There is one thing which is notable, and that is, the marked resemblance between extreme cases of neurasthenia and mild cases of myasthenia gravis. This thought leads us to suggest the possibility of the disease being nutritional and dependent on changes in the motor neurons, the result of malnutrition. There is evidently a similarity between the pathology of this disease and family periodic paralysis.

Diagnosis.—Well-marked cases are easily diagnosed. The striking feature of rapid exhaustion of the voluntary muscles on exertion and partial recovery after rest, the absence of atrophy and fibrillary tremors, the absence of sensory changes and the myasthenic reaction should make the case clear. The diseases most likely to be mistaken for myasthenia gravis are hysteria, bulbar paralysis, polioencephalitis and extreme neurasthenia. The presence of facial paralysis, true diplopia and the myasthenic reaction ought to exclude the question of hysteria. From bulbar paralysis the disease is distinguished by the ptosis, paralysis of the upper part of the face; paralysis of the neck muscles, the myasthenic reaction and the variation in the intensity of the symptoms. In bulbar paralysis the symptoms are progressive, involving in the early stages mainly the lip and facial muscles, and when the extremities are involved there are disorders of sensation.

Prognosis.—Nearly fifty per cent. of the cases which have been recorded ended fatally. The duration of life varied from fourteen days to fifteen years. Many cases improve in a remarkable degree and there are remissions in which there has been absence of symtoms for months and even years. It is difficult to say whether complete recovery occurs or not. A case which has apparently become entirely well may have return of symptoms. In the case reported by myself (*Journal of Nervous and Mental Diseases*, 1899) the patient has been entirely free from symptoms for the past six months. The only thing she complains of is, that when she has used her eyes for any length of time, especially in going about the streets and looking upwards, there is a tendency for the lids to droop. In one of Erb's cases the patient was in good health for four years after his symptoms had disappeared.

Treatment.—No treatment appears to be of any distinct avail. Strychnia has been used by many writers, but contrary to what would be expected, it is of little or no use. Potassium iodid and mercury are not beneficial. Faradism and galvanism are likely to do more harm than good, and cases in which these means have been used have grown worse. Galvanism to the spine has been recommended but has done no good. Arsenic has apparently been of service in some cases, but it is not likely that it has any specific action. The line of treatment which does most good is building up the general health and improving the whole nutrition. Careful avoidance of exposure to cold and carefully regulated exercise are of most importance. The diet should be very nutritious and easily digested, and the patient's powers of assimilation should be fortified as much as possible. In other words, the best results seem to follow a plan of treatment similar to what should be employed in a well-marked case of neurasthenia.

SCLERODERMA AND SCLERODACTYLIA.*

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In common with other trophoneuroses, scleroderma and sclerodactylia present many points of interest. The clinical conditions are known well enough, but there is still much mystery regarding the etiology and the pathogenesis of these conditions. There has been no lack of theories to explain the condition, but the one now most commonly adopted is that of Lewin and Heller, who in a valuable monograph, have concluded to define scleroderma as an angeio-thopio-neurosis. Almost every recent author including Cassirer has subscribed to this, whence it may be inferred that the disease is supposed to be due largely to an involvement of the blood vessels, a conclusion similar to

*Read before the N. Y. Neurological Society, Jan. 9th, 1900.

the one which Wiener and myself reached some time ago with reference to erythromelalgia. The first stage is characterized by a single dilatation of the blood vessels; in the second stage there is an inflammatory process, causing a proliferation of the connective tissue, and in the third stage there is sclerosis of the blood vessels, and cicatricial atrophy of the skin. The only difficulty of interpretation lies in proving whether or not the disease of the blood vessels is primary. Eulenburg, Mosler, Bruns, and the authors mentioned before, are of the opinion that this disease of the blood vessels is due to a disturbance of the vasomotor centres, and that it is therefore properly speaking of nervous origin. All are agreed that there is no absolute anatomical proof of this, but Eulenberg has stated, in very succint fashion, his reasons for considering the disease a nervous affection.

In the first stages the symptoms remind one strongly of local asphyxia, or of erythromelalgia. In two cases of mine the conditions of the fingers and toes were not unlike the appearance in the diseases just mentioned. The fact that the disease occurs in persons who give a history of previous nervous tendencies, of psychic conditions (one of my patients had passed through a condition of hypochondriacal depression) the occurrence of scleroderma with an atrophy of one half of the body, and above all the more or less segmental distribution of the skin changes, as was emphasized especially in a case of Bruns, have suggested the propriety of considering scleroderma an affection due to disease of the trophic centres in various parts of the nervous system. It will not do to make it a purely spinal affection, for in some of the cases the symptoms would point to bulbar or cerebral vasomotor and trophic centres.

There is no reason to dispute these theories, except to raise the question whether there may not be some other disturbance, functional or organic, in the system, or some toxic condition affecting these very centres. The same arguments might be advanced to prove the nerve origin of myxedema yet no one at this time questions that, whether there be nerve influences or not at work, this last disease is unquestionably due to deficient thyroid action.

Without claiming that there is any analogy between myxedema and scleroderma, there is a startling resemblance in the effects of treatment: In several of my cases the administration of thyroid gland has led to such marked improvement as fully to warrant a brief report.

Before detailing clinical histories, I wish however, to dilate for an instant upon the peculiar expression of the face in several of these patients suffering from scleroderma. Much has been made of the "mask like countenance", but I am struck still more forcibly by the pinched and attenuated nose, by the sunken in cheeks, and by the retraction of the upper lip in the more advanced stages of scleroderma. There is a typical "faces" of scleroderma which leads one to recognize the disease even in the earlier stages when the symptoms are still very slight. In patients with pronounced scleroderma and sclerodactylia the resemblance to ordinary neuritis and to syringomyelia is often pronounced enough. But of course an objective examination of sensation and of motion will help to make the differential diagnosis.

As far as the treatment of the disease is concerned, baths, massage, electricity, the iodides, and almost the entire gamut of the pharmacopoeia has been run, without much avail, though a number of writers report improvement after employment of various measures. So little seems to be known with regard to the effect of the thyroid gland in these conditions, that it seems well to dilate upon this therapeutic measure, for in several instances the success has been most marked and has followed so directly upon the administration of this drug, that there can be no question as to the effect it has upon the disappearance of the symptoms. I would not for an instant claim that it will be of service in all, or even in a majority of the cases, but it may be well to determine those cases that appear to be due to deficient thyroid action, for it is probable that the symptom group here considered may be due to a number of different causes. For the present it may be well to consider the following experiences in a thoroughly objective manner.

CASE 1.—Mrs. C., a widow lady, 54 years of age, was seen first on November 12, 1891. She had been married 3 years, her husband having died 12 years previously; has one child; has had nervous headaches in former years; has had no serious illness except pneumonia 12 years ago; has had vague joint pains at various times, but never had a distinct attack of acute arthritis; has menstruated regularly until 8 months ago, when menstruation ceased. Four years ago began to have feeling of numbness and stiffness in the legs and hands. This feeling increased until now hands feel very numb, she is unable to do any needle work, to fasten her clothes, to hold a glass of water or to do anything requiring much manual skill. She is much annoyed by dryness of the skin, and by a feeling as though the skin over the face were drawn "tight as a drum." Hands and feet have been shedding scales; face has become distinctly yellow since trouble began; she is very drowsy, sleeps a great deal; passes a fair quantity of urine; states that since taking the waters at Schwalbach feels easily fatigued and is troubled by constipation. The examination of the patient revealed no positive symptoms except a congenital smallness and ptosis of the left eye. The fundi are normal, the left one exhibiting a marked physiological excavation. The skin of the face is of a peculiar yellowish tint, with several circumscribed deposits of bright yellow pigment under and around the eyes; the skin is tightly drawn and the nose looks pinched; tongue is very much coated; the voice husky. The skin of both forearms tightly drawn, and exceedingly dry. The same is true of the lower extremities. The scales drop off in large quantities into the sleeves and stockings. The patient complains much of dizzy spells morning and afternoon, which are not unusual at her time of life. The patient was under observation for an entire year; was seen by several dermatologists, and everything conceivable was tried, including hot baths, galvanisation, iodides, ichthyol ointment and what not, without the slightest impression being made upon the trouble. In October, 1892, after consultation with Dr. Lustgarten, the attempt was made to influence the process by the use of thyroid gland daily. She was given from 3 to 5 grains three times daily. She experienced such marked benefit therefrom that she continued using it without consulting a physician. After a few months she returned to me complaining of palpitation; I was alarmed at her emaciation and ordered her to stop using the thyroid at once. This experience gave me the first clue to the anti-fat action of thyroid gland and led me to use it for that purpose before this especial action of the drug was generally known. The symptoms of scleroderma had, however, disappeared entirely; the patient's face had resumed its natural expression, the skin was soft and pliable, she

was again able to write and do the finest needlework, and if it had not been for the palpitation and for a feeling of weakness, she would have felt that she had been completely cured. About three months after stopping the thyroid gland the symptoms of scleroderma returned; the patient was advised to take two grains three times a day and to continue the use of it as long as she possible could. I saw nothing more of her for about 10 years, until I met her quite accidentally at the house of another patient a few weeks ago; she assured me that she was in perfect health. She has gained in weight, is entirely rid of her skin trouble, but has discovered that she must take small doses of thyroid almost continuously or else the symptoms of scleroderma would return. The noteworthy features of the case are the onset of scleroderma late in life at the climacteric period and their disappearance under and during the administration of the thyroid gland.

It would seem natural to suppose that the symptoms were in some way due to deficient thyroid action. Add to this the following case, in which the treatment also promises well.

CASE 2.—Miss A. D., was treated by me in August, 1896. I need not go into her condition at that time except to say that she was suffering from hysterical hypochrondriasis, and that she did not present a single symptom of her present trouble. She was brought to me again on November 20, 1901. She is now 24 years of age, has done work as a stenographer, but has had to abandon it. About four years ago noticed that the hands became blue and stiff, and the skin hard as leather; she said little about her face or about the change in the color of the skin all over the body. She has been troubled by the pains in all her joints, by a small ulcer over the elbow, by the apparent dislocation of the middle finger of the left hand. The family history is entirely negative. Both parents are healthy and so are six other children of the family. The patient was seen by a distinguished orthopedist a short time ago, who diagnosticated the condition as an arthritis deformans. The patient has the typical facies of scleroderma; the skin is drawn tight as a drum; the eyes can scarcely be closed; the nose is pinched and attenuated, the upper teeth are uncovered, owing to the retraction of the skin. There is marked dark brown pigmentation over the entire body, particularly in the axillae, over the abdomen and over thighs; the tenseness and hardening of skin are most pronounced over the hands, forearm, upper part of the chest and face; less so in lower extremities and over abdomen. There has been considerable joint pain, but no distinct history of an acute arthritis. The fingers are blue, club shaped, and practically ankylosed. The thyroid gland could not be felt. The patient was placed on the powdered thyroid gland at once. For the first two days she was given 2 grains twice daily; after that time she was to take 2 grains three times daily; also a warm full bath every other night. After 10 days a slight improvement could be noted. The skin over the face was more pliable; the skin could be drawn into slight folds on the forearms and the dorsal surface of hands. The dosage was not increased until December 16, when the patient was ordered 12 grains daily and was advised to begin exercising the fingers. On December 30th, as the patient seemed to tolerate the thyroid treatment, she was ordered to take 18 grains per day, 6 grains at each dose. After six weeks a very decided improvement was noted. The dosage will be diminished after the lapse of a number of weeks. Dr. Walter Brickner was kind enough to take an X-ray of the hands for the especial purpose of revealing the condition of the joint.



CASE II.



CASE II.

I am encouraged to believe that in this case also we shall be able to secure permanent good results by the prolonged administration of relatively small doses of thyroid gland: the doses which we are giving now will be abandoned for much smaller ones as soon as the patient will have shown more marked improvement.

To the same category belongs the following case:

CASE 3.—A schoolgirl, aged 13 years, was admitted to the Montefiore Home, September 1, 1901. Her mother died of tuberculosis five years ago. There are three other living children, one died after a scalding. Of her previous history nothing is to be noted except that she had frequent sore throats and an attack of "grippe" nearly every year. Her present illness is said to have begun some years ago with inflammation of the throat, grippe, fever, and swelling of the first interphalangeal joints of both hands. The hands felt cold and were blue; the joints were tender. She was compelled to remain in bed off and on at various times, with fever and pain in the joints. These have become gradually swollen and useless. Five or six months after the first joint trouble appeared, both ankles were involved, then the left knee, the hip and back, and later on all joints were painful on motion. The feet became swollen and were painful on motion. The feet began to walk around. Because of this condition the patient was in the German Hospital in February, March and April of 1901; and at Mt. Sinai Hospital, October, 1900. From each hospital she was discharged slightly improved, the pain being diminished after a period of rest. The brownish pigmentation of the skin has been developed since the onset of the illness. She has suffered much from frontal headaches and had some vomiting once; slight dyspnea and palpitation only on exertion; never troubled with micturition; no paresthesia. Of her present condition the following may be noted: She has a large waxen [illegible] scar over the right side of the face just below the angle of the jaw; skin darkly pigmented; buccal mucous membrane also; conjunctival faintly so. The skin, especially over the forearms and legs thickened, tense and brawny. Facial expression rather drawn, mask like. Mucous membranes pale, on face many blackheads and pustules. Head shows bulging forehead. Pupils equal; all reactions normal. Facial innervation is equal, but movements rather stiff. Pharyngeal reflex markedly diminished. Hypertrophy of right tonsil. Movements of lower jaw limited on both sides. Reflexes of upper extremities not exaggerated; myotatic irritability slow. Limitations of movements of elbow and fine crepitus of both hands; no deformity. Limitations of movements, crepitus and deformity of wrists. Linear atro-

phic whitish scars on upper extremities at elbow and over extensor surface of forearm and over right index finger. Deformity, ankylosis and crepitus at first phalangeal joints. Thyroid enlarged. Movements of both hips, knees and ankles limited, crepitus and anchylosis. Some deformity at the knees and ankles, pain on moving hips. Limitation of movements in great toes and on both sides. Knee jerks exaggerated somewhat. Achilles tendon reflexes normal. Spinal column shows rigidity of dorsal column, prominence of second, third and fourth dorsal vertebrae; double scoliosis. No tenderness along nerve trunk. No disturbance of pulsation, normal pes planus both sides. Extremities cool and cyanotic. The joint deformities are rather fusiform in shape and examination of some of them shows the ends of the bones to be thickened.

Urine 1013, acid, no albumin, no sugar. Eye examination by Dr. Koller. The veins and central arteries seem wider than in normal condition. Iris well defined and otherwise normal. In this case the thyroid treatment has not been satisfactory, the patient did not appear to tolerate the drug, but it is also questionable whether the treatment has been administered as patiently as in some other instances.

CASE 4.—A further case is one at the Mt. Sinai Hospital, that of a woman, aged 41, who was admitted September 27, 1901, and was discharged, at her own request, in improved condition, October 19, 1901. I cannot give the full history to-day, as the hospital records are at present not accessible. But the case which was also seen by Dr. Lustgarten was remarkable for the fact that scleroderma and sclerodactylia affected the lower extremities and in entirely symmetrical fashion; resembling in every way a distribution such as we are familiar with in connection with an affection of the spinal segments. The only symptom in the upper extremities was a contraction of the little finger of the right hand. The arches of both feet had completely disappeared, the meta-tarsal bones were attenuated, and the skin was absolutely immovable over the extensor surface of both feet. A white ulcer had formed over the dorsum of the left foot. The intense pigmentation, and the general distortion of the feet, are well illustrated in the accompanying photograph.



CASE IV

CASE 5.—Entirely different from the preceding cases is the following one, of a gentleman who developed the symptoms of a circumscribed scleroderma following an injury.

Mr. C. L was 39 years of age at the time of my first examination in April, 1899. He had been married 13 years and had 4 healthy children. He had been in good health, but had had nervous prostration in 1890, and was laid up for six weeks. Three years previous to this first visit he fell from a ladder, and fell with his hand upon the pin of a letter file. According to the patients statement the pin pierced the hand, so that it had to be forcibly withdrawn. He was unconscious from the shock, the hand was much swollen at the time, but he recovered under surgical treatment in a few weeks, and experienced no further trouble with the hand until 8 months later, when he noticed the discoloration and the general hardening of the skin over the dorsal aspect of the hand and forearm. He consulted several physicians, who merely told him that they had never seen anything like this condition. The arm grew weaker, and the patient found that the movement of the hand and of the forearm had been interferred with by the tightness of the skin. The conditions were very much aggravated by cold weather, and the patient noticed that on account of the drawn character of the skin he could not open or close the hand freely. With the exception of the skin changes there was no other objective symptom at the time of my first examination, except a slight diminution of sensation in the dorsal portion of the musculo-spiral distribution on the left hand and forearm. The X-ray taken at the time showed that there was no change in the bony structures. A slight improvement was effected by the use of the thyroid gland and the skin could be drawn into folds a little more easily over the hand; but after months of trial no permanent cure having been effected, the patient was advised to discontinue treatment, and to let well enough alone. I have been informed during the last few months that the condition is practically unaltered.

It is of some interest to note that the thyroid preparations were less effective in this case in which the scleroderma appears to be of neural origin.

Considering the marked changes which occur in the skin, the subcutaneous tissues, in the bones and joints, it does not appear altogether reasonable to attribute scleroderma solely to an affection of the vaso-motor and trophic centres in the brain and spinal cord; and if disease of these centres is the starting point of the complicated morbid process, the question arises whether there is not some deep seated disturbance in the general metabolism of the body which is responsible for disease of these centres, which maintains a distinctive process often throughout a long period of years. Some day we may discover the true cause of scleroderma as we have learned to know it, of myxedema and as we suspect it of acromegaly, which disease Strümpell has shown to be diametrically opposed to scleroderma. In the meantime I would urge a careful trial with thyroid gland in the treatment of scleroderma and sclerodactylia.

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HYPOCHONDRIA.

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In a special study of hypochondria, our first task must be to separate it from the affections to which it is related and with which it is not infrequently confounded. The general functional disorders of the nervous system are among the most difficult with which the practitioner has to deal, and while the advance which has been made in our knowledge of other nervous diseases has been very great, these disorders have not received either the attention or the study which their importance merits. As early as 1765, Robert Whyte[1] of Edinburgh, clearly distinguished and separated them into neurasthenia, hysteria and hypochondria. Since his day little or no advance has been made beyond the clinical differentiation so clearly indicated by him. It is true that our detailed knowledge of the symptoms of neurasthenia and hysteria has been greatly

1. Whyte, Robert: Observations on the Nature, Causes and Cure of those Disorders which have been commonly called Nervous, Hypochondriac or Hysteric. Edinburgh, 1765.

increased, and yet the broad outlines drawn by Whyte have been largely forgotten. Neurasthenia and hysteria are constantly confounded with hypochondria. Indeed, I know of no group of affections which are in practice more important and yet concerning which so little clearness of conception prevails. The truth of this assertion is at once realized when we consider the current loose and incorrect use of the term neurasthenia. Obviously this term should be strictly limited to the syndrome presented by chronic fatigue. As I have elsewhere indicated, the conception of neurasthenia is that of the fatigue neurosis and the term cannot be correctly applied to any other condition. We must separate neurasthenia from certain other morbid states, which, while they superficially resemble it, differ from it radically. Among these are first the various forms of hereditary neuropathy,—those states which are expressive of hereditary degeneracy and which manifest themselves in some cases, as constitutional chronic nervousness, in others as the insane diathesis and in others still as larvated or incompletely developed forms of various neuroses and psychoses. The various symptoms of nervous weakness and other nervous disturbances by which such affections are attended, bear no relation to true neurasthenia. They only superficially resemble the latter; they do not constitute well defined diseases, but are merely *neurasthenoid* states. The same is true of the nervous symptoms which are present in the prodromal periods of the various psychoses; they are neurasthenoid, never truly neurasthenic; it is a mistake, for instance, to say that a patient who passes into melancholia after a long prodromal period of nervousness has had a neurasthenia which has deepened into a melancholia. The patient has merely passed through a neurasthenoid stage; he has never been truly neurasthenic.

It is not difficult, as a rule, to distinguish between neurasthenia and the neurasthenoid states. In neurasthenia we have always the typical fatigue syndrome. There are present always the persistent diminution of nervous energy together with irritability, mental and physical, generalized fatigue sensations, local aches or pains, ready exhaustion of the special sense organs, atony of the digestive and circulatory systems and characteristic sleep disturbances. The functional changes are essentially quantitative in character. This is especially true of the nervous and psychic phenonema. Here qualitative changes are absolutely wanting. There are on the one hand no anesthesias or palsies nor on the other any hallucinations, illusions or delusions. Any nervous disorder which departs from this syndrome is not one of true neurasthenia, but of some spurious or symptomatic form. The neurasthenoid states all present symptoms which, when taken together with the clinical and family histories, render a differentiation from true neurasthenia readily possible.

Again, true neurasthenia must be sharply differentiated from those functional nervous disturbances which result from local disease, such as pelvic affections, diseases of the stomach or of other viscera. That various signs of nervous weakness should be present in such cases, is but natural, but these signs do not constitute the syndrome which constitutes true neurasthenia. They are symptoms of nervous weakness such as accompany other diseases, either local or general. They are seen, for instance, in phthisis, in chlorosis, in the various anemias, in the toxemias due to infection of metallic poisoning and in other grave disturbances of nutrition, but they form in such cases a very subsidiary and very unimportant group of the symptom complex. At most they constitute merely a *neurasthenia symptomatica*. Here again the diagnosis is to be made first by the absence of or departure from the typical fatigue syndrome and secondly by a careful and systematic internal examination. It is certainly a loose and highly objectionable use of terms to apply the word neurasthenia to such states or the adjective neurasthenic to the nervous symptoms which they present. Neurasthenia must always be separated on the one hand from the neurasthenoid states and on the other from neurasthenia symptomatica or spurious neurasthenia.

When we come to consider the second of the divisions made by Robert Whyte, namely that of hysteria, we come to an affection concerning which we to-day entertain clear and well-defined conceptions. The psychic and somatic signs which are symptomatic of this affection are now so well recognized and are so characteristic as to rarely admit of error. Throughout they point to involvement of the higher nervous centres, and although it cannot be maintained that the disturbance is limited to the [illegible] of the cortex, the fact of dominant cortical or psychic involvement is indisputable. It is neither necessary nor in place here to enter into a discussion of the peculiar sensory, motor, psychic and visceral disturbances presented by hysteria. Suffice it to say, first, that they are not the symptoms of chronic fatigue; and, secondly, that they cannot be referred to disturbances of nerve trunks nor to disturbances of the segments of the spinal cord. They have no relation, in other words, to nerve distribution or to spinal segmentation, but are in the main, as just stated, to be referred to the cortex. In contrast with neurasthenia, anesthesias, palsies and undoubted qualitative mental phenomena dominate the picture.

It is a remarkable fact that volumes and papers almost innumerable have appeared upon the subject of neurasthenia and hysteria while, on the other hand, the subject of hypochondria has received very scant attention. Our knowledge of neurasthenia and hysteria is now well advanced, and it is, to say the least, remarkable that the same claim cannot be made for hypochondria, and yet hypochondria is an affection which, while not as common as neurasthenia and hysteria, is notwithstanding one which is frequently met with by the general practitioner. Physicians very frequently confound it with neurasthenia and at times with melancholia. Not infrequently also cases of hypochondria are dubbed hysteria when not a single stigma of the latter affection exists. The symptomatology of hypochondria differs in essential features from that of the affections just mentioned. We are to carefully dif-

ferentiate it also from the various neurasthenoid states and neurasthenia symptomatica.

In order that we may form a clear conception as to the essential features of hypochondria, a few general considerations are necessary. There is present in the organism, in addition to the special sensations evoked by the various stimuli of the external world, a generalized sensation derived from the body. It has been termed, by the Germans, the "Gemeingefühl" and in technical literature is known as the "co-enesthesis." This generalized organic sense embraces as it were a total of all the somatic impressions. In the normal man, the various nutritive processes in the tissues and the functional changes of the various viscera do not impress themselves vividly upon the field of consciousness. Nevertheless, the sense of physical or organic well-being directly affects the psychic state of the individual;—it dominates as it were his mental tone. As long as the sum total of the organic impressions is normal, an average degree of well-being is experienced. In this condition the mental attitude is *objective*. When, however, the organic sense is disturbed so that a feeling of ill-being is produced, the mental attitude becomes *subjective* and the individual becomes introspective. In hypochondria this organic or somatic sense is always profoundly disturbed. This disturbance is, however, not accompanied, as in actual visceral or other physical disease, by discoverable lesions, and, should functional changes be present, these are so slight and unessential as to offer no explanation of the patient's condition. The patient experiences a sense of not being well, a sense sometimes slightly pronounced, but more frequently so vivid as to dominate for the time being his life and actions. He usually seeks for an explanation of his condition in disease of one or more organs. Most frequently he complains of manifold symptoms, vague and distressing.

Hypochondria should not be confounded with melancholia. Melancholia we now know to be an affection which is but a part of the symptom complex of a more extensive affection, melancholia-mania. The latter is a disease hereditary in character in which periods of emotional depression or exaltation extend over months of time and recur in successive waves during the life time of the individual. During the melancholic phase of such a wave, the picture is presented of intense psychic depression associated with ideas of sinfulness, spiritual ruin, or of moral unworthiness. There is the great agony of the lost soul, the hopelessness of a wasted past or the belief in some crime never to be atoned. In hypochondria, on the other hand, the patient's ideas relate solely to bodily conditions. It is the somatic state and somatic impressions with which he is concerned.

Not infrequently hypochondria is hereditary; at least nervousness, mental depression or other neuropathic factors may be noted. Hypochondria is more frequently met with among men than among women and is more common among those who are unmarried. It makes its appearance as a rule before middle life, being more frequent before forty than afterward.[2]

2. Birnbaum: Ueber eingebildete Krankheiten.

An underlying neuropathy is now and then revealed in the person of the patient. Thus he may be delicate and neurotic in appearance. As often, however, his physical development is fine; he is large of limb and great of stature and his appearance is a crass contradiction of the illness of which he complains.

The tendency to hypochondria is not infrequently noted in childhood. A child, for instance, betrays unusual fear of illness, or makes an excessive ado about trivial accidents, slight wounds or bruises. Very often such a child screams not at the moment an injury is received, but only some minutes later after it has had time to reflect that it has been hurt. As adult life is reached, such a person may become unduly mindful of his health; he is constantly afraid of catching cold, of acquiring serious disease of the chest or it may be of the bowels. It is quite a common experience for such patients to present themselves to a physician for examination while wearing an excessive amount of clothing. Layer after layer of underclothing, chest protectors, abdominal binders and what not have first to be removed before a physical examination can be made. As often, these patients are peculiar as regards the food they eat. Not infrequently they adopt a special dietary to which, however, they usually adhere for a limited period of time only. Thus, a patient may adopt an exclusive vegetable diet, or on the other hand a diet containing a disproportionate amount of meat. Most frequently it is a special dish or class of foods, which is affected or excluded. Thus, cereals, breakfast foods and special kinds of bread are the vogue, or it may be certain fruits or vegetables; at another time the same articles may be rigidly tabooed. Sometimes tea, coffee or alcoholic stimulants are rigidly excluded, only to be later again resumed. At other times water is taken in certain ways, or in fixed quantities at definite times. Very frequently, also, the patient affects the various table waters; first one and then another is lauded for its virtues.

It need hardly be pointed out that all causes which depress nervous nutrition, as well as all methods of unphysiological living, favor the evolution of hypochondria, *e. g.*, sedentary occupation, excessive or insufficient food, idleness, physical indulgence, the abuse of alcohol and tobacco and other nervous stimulants. Many cases occur among clerks, students and professional people who lead inactive lives. It occurs not infrequently among persons who are much in contact with disease, such as physicians and especially medical students. While it is common among those who lead quiet and unrestrictel lives, it now and then is met with among individuals who live out of doors, like farmers, laborers or other persons who make their living by manual work. Here the monotony of life, the daily sameness of existence, the absence of all stimulus of change, may be the active cause. Again, idleness, the want of occupation, the absence of a definite purpose in life, is a powerful factor in the production of hypochondria. The latter is common among the unoccupied wealthy and well-to-do. It is seen very frequently also in persons who, having led active lives up to a certain point of their existence and having accumulated means, suddenly abandon them

selves to a life of ease. A professional man or a business man, who has worked under pressure for many years and who suddenly abandons his calling, is in great danger of lapsing into hypochondria. The stimulus of work no longer determines his mental tone; slight disturbances of function, indigestion, constipation—the result of his lessened activity—furnish the ground-work of a nosophobia. Ere long a super-structure of imaginary ills is added and sooner or later he becomes the victim of a confirmed hypochondria.

Hand in hand with the excessive care and fear which the hypochondriac manifests, he may complain of various local symptoms. Thus, he complains of pressure about the head; his head feels as though there were an iron weight pressing upon the top or iron bands about the temples or the back of the head. He complains of pains in his limbs; the limbs ache, they burn or they are the seat of fine vibratory, trembling or numb sensations. He complains frequently of backache and of pain beneath the shoulder blades. He has fulness and pressure over the stomach; the abdomen is distended and flatulent. He has distressing sensations which he refers to the liver or to his kidneys. He complains of palpitation of the heart, of pulsating sensations in the epigastrium or in the abdomen, or of other vague sensations which he does not or cannot adequately describe.

An examination fails to reveal any physical signs of moment. Not infrequently the muscles are well developed and the muscular strength is fully up to normal. There is no change in the reflexes, in the pupillary reactions nor in any of the movements executed by the patient. There are very infrequently a coated tongue and some evidences of gastro-intestinal atony and catarrh, together with constipation; these symptoms may, however, be but slightly, if at all, marked. Not infrequently slight catarrh of the head and of the throat is noted and when a knowledge of such a catarrh is possessed by the patient, it becomes a fruitful source of hypochondriac ideas. The patient, for instance, may believe that he is developing consumption or other frightful and serious disease from which he will never recover. More frequently he founds upon slight gastric catarrh and constipation, a belief of serious disease of the stomach or bowels. Beyond the indigestion and constipation, no other visceral or somatic sign can, as a rule, be detected. Now and then a coldness of the hands and feet or slight lividity of the surface or other evidence of feebleness of the peripheral circulation is noticed.

True to his fear of being ill, the hypochondriac patient constantly observes his functions. Atonic indigestion and constipation offer him abundant opportunity. He may note carefully the character of the bowel movements, observing the most minute details with regard to the forms, size, color, etc., of the evacuations. Less frequently he observes the urine. Now and then, however, if it be phosphatic, it is in turn carefully studied and becomes a fruitful source of nosophobia, the patient not infrequently believing that he has spermatorrhea.

Very often hypochondriac patients keep careful records of their symptoms. It is a common experience to have them enter the physician's office, seat themselves and then draw forth little slips of paper on which they have noted a multiplicity of symptoms usually subjective, always trivial and unimportant and generally incapable of verification. In manner and bearing the hypochondriac suggests a person gravely oppressed by illness. He frequently presents the history of having visited physician after physician in the vain attempt of obtaining satisfaction as to his condition. The varying diagnoses that are formed from time to time are all carefully noted by him and all serve to convince him that he is really a very sick man. Not infrequently he delves into medical books, increases his nosophobia and subsequently displays a superficial knowledge of medical terms in speaking of his case. Later on he begins to make his own diagnoses, and then goes to this or that physician with his diagnosis fully prepared. Finding little satisfaction or obtaining little relief from physicians, he not infrequently begins to treat himself and he finds in the numerous quack and patent medicines so extensively advertised in this country, a rich field for the gratification of his nosophobia. Bottle after bottle is consumed, first of this and then of that nostrum. Pills, powders, liniments and salves follow in their turn and the mantle and closets of his rooms are not infrequently laden with empty or half-empty bottles and boxes. One of the features of marked hypochondria is that the patient is always taking medicine, of some kind or other; it may be a tonic, a laxative or some drug. His diagnoses vary from week to week or often from day to day. To-day he has disease of the stomach, to-morrow disease of the liver; upon another occasion it is disease of the kidneys or of all of these organs combined. Slight palpitation of the heart convinces him that he has fatal heart disease; a pulsating sensation in the epigastrium convinces him that he has an aneurysm.

It is noticeable that such patients frequently present an appearance of health, not at all in keeping with the symptoms of which they complain. Thus, a man who believes that he has serious disease of the stomach or liver, not infrequently has an excellent appetite and eats with evident comfort and enjoyment. He may show excellent judgment in the selection of his dishes and may even be an epicure in his tastes. He more frequently eats too much than too little; indeed, the quantity is not infrequently excessive.

Very often we find that the hypochondriac, among other things, has extreme views or extreme habits as regards physical exercise. He has read, perhaps, that physical exercise is necessary to health, and he now begins to devote himself to this method of treatment. One system of exercise after another is taken up and for a time he may exercise excessively. Long walks may be taken or fatiguing runs on the bicycle. Most frequently he is devoted to room exercises and he buys apparatus of various kinds, which after a few weeks of desultory use are allowed to become covered with dust. Extreme forms or odd forms of exercise, respiratory gymnastics, etc., are affected by him. At other times he takes grossly insufficient exercise, is fearful of the slightest exertion, may lie down for many hours

of the day or, believing himself to be ill, may actually go to bed.

Often he entertains absurd views in regard to ventilation, sleeping next to open windows, or on the other hand admitting an insufficient amount of air into his room. Equally absurd may be his habits as to bathing. Frequently he bathes excessively. Every form of douche, spray, shower, steam or hot-air bath is tried; or he bathes in cold, in hot water, daily insists upon his plunges, or, sad to relate, very frequently manifests an excessive fear of water and does not bathe at all. No procedure is too absurd, too inconvenient or too unpleasant for him to adopt. Any passing fad for the time being satisfies his longing for treatment. To-day it is some new form of exercise, but to-morrow it is bowel irrigation and he now becomes a disciple of the high enema.

The onset of hypochondria is, as we have indicated, extremely gradual and its course essentially chronic. Occasionally its evolution is hurried by some intercurrent illness, such as attacks of acute indigestion or perhaps acute febrile affections. As a rule it pursues a course extending over many years. It does not, however, usually pursue an even course. Its symptoms are at times more pronounced and at times less pronounced. Indeed, the latter may disappear altogether for a period, a true remission setting in which persists for months or years. Later the symptoms may recur and the patient may pass through another hypochondriacal period. In other cases again, a permanent recovery may take place, no recurrence ever being manifested. In many cases also the hypochondria fades with increasing years and ultimately disappears; especially is this the case with the hypochondria that has its inception in youth and early adult life.

In cases in which hypochondria is progressive, the bodily nutrition little by little begins to suffer. The patient grows thin, gray and sallow, and the skin and mucous membranes become dry. He no longer sweats readily. The bowel movements are dry. Constipation becomes more marked than ever, and often there are excessive discharges of mucus. His ideas are now exclusively concerned with himself. The condition of his liver and his bowels are the principal topic of his conversation. The taking of pills or the use of injections constitute an all-important business of his life. In such cases it need hardly be added, the hope of definitely and permanently influencing the patient's condition becomes progressively less and less.

While hypochondria usually presents itself in the generalized form above described, it not infrequently assumes a special form, that is, the clinical picture is dominated by a special set of symptoms. The two special forms most familiar to the practitioner are respectively the gastro-intestinal and the sexual form. In the gastro-intestinal form the patient complains of various vague and distressing sensations referred to the abdomen or to the digestive tract, and while there is usually present some atonic indigestion, perhaps also slight gastric catarrh and constipation, the statements of the patient as to his sufferings are out of all proportion to the symptoms. He observes himself most closely. A slightly coated tongue, or a fancied or unusual feature of the bowel movements alarm him, while slight indigestion may be accompanied by great sinking sensations and sudden fright. These patients are the ones who adopt extreme diets or curious rules as to eating, who exhaust the list of laxatives and who find great satisfaction in the use of injections, kneading of the abdomen, special exercises, etc., and who in their zeal for each newly discovered dietary, medicine or procedure, advocate and extoll the same among their friends and acquaintances. These cases are frequently wrongly classed as "nervous dyspepsia." Mentally they are as a rule extremely impressionable. One of these patients for a time under my observation, happened to hear that an acquaintance had been operated upon for appendicitis. He became greatly frightened, at once went to bed and sent for his physician. The fright induced a number of loose bowel movements which further confirmed him in the belief that he, too, had something serious the matter with him. It was with difficulty that he was persuaded to leave his bed and to go to his business, which, however, he finally did.

The sexual form of hypochondria is one of the most common forms met with, so common indeed, as not to merit a detailed description. Its victims frequently believe themselves to be impotent. Quite commonly they are young men who have never attempted the sexual act; not infrequently they are engaged to be married. As a rule when marriage takes place, they prove to be entirely competent. Every now and then, however, this is not the case, the fear, nervousness and especially the belief that impotence exists, lead to failure. The sexual organs are, it is unnecessary to say, perfectly normal to physical examination. Such cases are correctly classified as cases of "psychic" impotence. Sexual hypochondria is more common in early youth; and not infrequently the belief in sexual deficiency or impotence is based upon a previous masturbation, even when the latter has been slight and insignificant. Quite commonly the occurrence of seminal emissions forms the nucleus around which the hypochondria centers. This is equally the case whether the emissions are excessive or whether they are merely normal in their frequency.

We must carefully distinguish between the affection simple hypochondria as it is here pictured and the hypochondriacal stage observed in the developmental period of various psychoses. Simple hypochondria is a well defined neurosis in which the conduct, views and opinions of the patient are dominated by an all convincing sense of illness. True qualitative mental changes, are, however, absent. Different is it in the developmental period met with in some of the insanities. Here the patient may pass through a hypochondriacal period, as in paranoia and melancholia, but, in addition, specific mental changes sooner or later make their appearance. Hallucinations of sight and hearing, especially the latter, are striking features. The patient tells us of voices or of apparitions, and as the disease progresses, the special sense hallucinations form the foundations of delusions. At times also hallucinations exist which are referred to the viscera. They

are not interpreted, however, as indicating disease of the liver, indigestion, Bright's disease, spermatorrhea, etc., as in simple hypochondria, but in insanity they form the basis sooner or later of some grossly delusional belief, such as snakes in the stomach, loss of the viscera, absolute closure of the bowel, absence of the mouth, etc. Simple or true hypochondria is a well-defined affection and one which is not prodromal to any other. Its symptoms constitute a clinical whole, which frequently persists for years with little change; indeed, it may exist an entire life time.

FIBROMA OF THE UPPER DORSAL REGION OF THE SPINAL CORD. REMOVAL. DEATH AND AUTOPSY.

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The diagnosis of spinal tumors is not a matter of great difficulty to the physician, and their removal is comparatively easy to the surgeon when they can be accurately located. Yet successful operations are not common, for I can find only thirty-five cases thus far recorded, and in the majority of these cases, as in the one here reported—the operation was undertaken too late to save the patient's life. The successful cases have been those in which, after an early diagnosis, prompt operation has been undertaken. And if this fact is appreciated no unnecessary delay will be allowed.

In the following case the diagnosis was clear—as pain was a prominent symptom—and in combination with the symptom of progressive paraplegia made the location definite. The operation was delayed in order to try antisyphilitic treatment, and this I consider a mistake. The localization of the tumor was accurate as shown by the autopsy, but a congenital defect in the spine of one vertebra discovered at the autopsy led to the first operation being made an inch too low. The second operation was successful in the removal of a small encapsulated fibroma, but the relief of pressure on the cord was not sufficient to secure recovery as degenerative changes had occurred which were permanent.

Medical History.—Mrs. E. W., aged 35. Family and personal history good. Has been in good health until the present illness. No history of syphilis.

In January, 1899, she began to have paroxysms of sharp pain in the left side of the chest near the heart which were largely nocturnal and at first infrequent, but caused her considerable alarm. They were never brought on by exertion, were not attended by palpitation, but were much increased by pressure, or a touch even, over a region three inches in diameter to the right of the nipple. During the summer of 1899 these pains disappeared, but returned in September, and from that time until May, 1900, she was treated by various physicians for angina pectoris, for intercostal neuralgia, for hysteria. She was also put upon mercury and iodide of potassium on the possibility of the pain being syphilitic, though she presented no evidence of this disease. Nitro-glycerin which she took for this supposed angina, always intensified the pain soon after its administration. In May, 1900, she came under the care of Dr. Theodore C. Janeway, who found the following condition:

She was confined to her bed in an extremely nervous state and suffering from intense pain. Every few minutes her face would be drawn and she would cry out in a paroxysm of pain and she was sleeping little and eating little on account of the general reaction of the system to this continued pain. She also complained of a feeling of numbness and weakness in the left leg, though she was perfectly able to walk and was not ataxic. The knee jerk in the left leg was somewhat exaggerated and there was some tenderness to pressure along the left leg below the knee. Over the left side of the dorsal spine there was extreme sensitiveness from the first to the eighth dorsal spines, and the same sensitiveness was found over the fifth, sixth and seventh intercostal nerves at the angles of the ribs. Over the fifth intercostal space just to the left of the sternum was a point of exquisite tenderness, a touch upon which made here jump and cry with pain. In this same area there was some anesthesia of the skin. There was no affection of the arms, and the internal organs were normal. She was treated without much effect and was seen at intervals only during the summer of 1900, but her symptoms gradually increased so that at an examination on September 26th, when I saw her in consultation with Dr. Janeway, the following condition was found:

She was suffering very much from pain at the level of the fifth and sixth intercostal nerves and this pain had now extended to the right side, though it was much more severe upon the left. It was attended by a sensation of a band tightly drawn about the chest at this level, and any pressure upon the surface of the body in front or at the back within this area intensified the pain. There was also very marked tenderness over the dorsal region from the first to the seventh dorsal spines, and pressure there increased the pain in the chest. She complained also of numbness of the body and the legs below the level of the band and a condition of partial anesthesia was found upon the trunk and total anesthesia in the legs. Above the level of the anesthesia there was a band of hyperesthesia. Sensations of touch, temperature, and pain were equally affected. Her legs were quite powerless, there being a complete loss of voluntary motion in the left leg and considerable loss in the right leg, but no atrophy of the muscles. The knee jerks were much increased and ankle clonus was present in both feet. There was considerable edema of both legs and the circulation was impaired, the legs being cold and blue. For two weeks previous to this examination she had been obstinately constipated and had been unable to control the sphincters. She was much distressed by involuntary twitchings of the legs, which were usually attended by a sudden pain about the body at the level of the band. The paralysis had developed gradually during the summer.

In view of these facts, the diagnosis of tumor of the spinal cord was reached and the tumor was located at the level of the fifth dorsal segment of the cord. On October 14th she entered the Presbyterian Hospital and on the 22nd she was operated upon by Dr. McCosh.

Operation.—The operation was undertaken to remove the spines and arches of the second, third and fourth dorsal vertebrae. When this was done there was no pulsation seen in the dura and when the dura was divided an extremely edematous state of the pia was observed with one white plaque lying in it about one-quarter of an inch in diameter. After the serum had exuded from the meshes of the pia, the cord was seen apparently smaller and whiter than normal and without any pulsation. No tumor was found and no result was attained by the operation. The left posterior spinal root of the fifth nerve was divided. Three days later a second operation was undertaken, the wound being enlarged upward and the spines of the first dorsal, seventh and sixth cervical vertebrae removed, together with the arches of two of these vertebrae. When the dura was exposed in this region it was seen to pulsate freely at the upper level of the wound and to present a peculiar bluish appearance without pulsation at the lower level. When the dura was divided it was evident that a tumor one and one-eighth inches in length and about the size of the spinal cord, lay upon the cord. The tumor was oval, had a distinct capsule and was without much difficulty dissected up from the cord from above downward and was removed in mass. It was found to be a fibroma. The cord beneath it was much flattened and was reduced to about one-half its diameter under the tumor. The posterior spinal nerves were compressed and adhered to the tumor. It was noticed that no attempt had been made by nature to heal the wound of the first operation and in spite of great care between the time of entering into the hospital and the time of the second operation an extensive bed-sore had de-

veloped over the left hip. Fig. 1 shows the appearance of the tumor.



Figure 1.

Subsequent History.—During the week following the operation there was no change in the symptoms of the patient. The sensation of constriction about the chest remained as severe as ever, the twitchings of the legs continued and were very painful. They were quieted by bromides. During the second week after the operation the constricted feeling became less marked and the twitching of the legs gradually subsided. During the third week after the operation the bed-sores began to increase in intensity, the wound healed very slowly and there was no apparent return of sensation or of power in the legs, though she seemed able to locate sensation upon the trunk. There was no attempt at restoration of function of the bladder and rectum. During the fourth week after the operation she became weaker and had constant temperature, probably from the effect of the bed-sores. During the fifth week the bedsores extended rapidly, every effort to keep them clean failing, and her strength failed progressively. The spinal incision had entirely healed, but no return of power or of sensation had taken place. On December 3d, she died, the cause of death being septic infection from bed-sores.

The autopsy showed a softened condition of the cord opposite to the site of the tumor. This was opposite to the exit of the second dorsal nerve from the dura, and into the softened portion the fifth and fourth dorsal nerves could be traced. These nerves were markedly atrophied, especially on the left side. The lesion, therfore, involved the fourth and fifth dorsal segments.

Owing to a congenital defect in development of the spine of the third cervical vertebra, the count of the vertebrae had been erroneous and our incision had actually been one vertebra lower than we supposed, and the tumor lay under the arches of the second and first dorsal vertebrae. and not, as was thought at the operation, under the last cervical and first dorsal vertebrae.

Microscopic Examination of the spinal cord by the Marchi method demonstrated general degeneration of both gray and white matter at the second dorsal segment. There were ascending and descending degenerations in the entire length of the cord above and below this level.

Certain conclusions may be drawn from this case. *First*, there should be no delay in operating for a spinal tumor after the diagnosis is reached. In this case the patient was still able to walk on September 1st, and all the symptoms were sufficiently clear to warrant a diagnosis, but operation was delayed in order to try specific treatment. At that time there were no bedsores. They developed, however, before the operation. They went on in spite of it and caused a fatal termination. Had an early operation been undertaken, they might not have developed. Even had the tumor been a gumma, and it is to be remembered that gumma is a very rare form of spinal tumor, the operation would have been justified. An early operation might have prevented the condition of degeneration in the spinal cord which was present and prevented a recovery of power and sensation, in spite of the removal of the tumor. In view, then, of the infrequency of gumma, it seems best not to postpone an operation in such cases for the sake of trying specific treatment.

Secondly, the tumor was found about two inches higher than was anticipated. It lay under the first and second dorsal vertebræ, although the symptoms pointed to the fifth dorsal segment as the one primarily affected. In Reid's table, *Journal of Anatomy and Physiology*, 1889, which demonstrates the relation of the segments of the cord to the spinous processes of the vertebræ as the result of examinations in six cases, the fifth dorsal segment of the cord is located between the second and fourth dorsal vertebræ. This table guided us in the first operation when the tumor was not found. Bruns asserts that, if symptoms of a sensory nature point to any one dorsal segment of the cord being pressed upon by a tumor, the operation should expose the dorsal segment one or even two levels higher. According to Bruns' statement, therefore, instead of exposing the fifth dorsal segment of the cord, we should have exposed the fourth or third dorsal segment. This segment lies beneath the second dorsal and first dorsal vertebræ and it was here that the tumor was found at the second operation. Horsley recommends that the operation be performed from two to four inches above the level of the line of anesthesia. In this case the tumor lay six inches above the line of anesthesia. It is to be remembered that the posterior nerve roots run upward for a considerable distance on entering the spinal canal, before entering the spinal cord, and also that they turn up within the cord before ending in the posterior horns, hence pain may be caused by pressure at a level considerably higher than the level of the pain. In our case, as measured on the body, the level of the pain was about eight inches lower than the level of the tumor, hence the conclusion is warranted that in operating for spinal tumor a level of the cord should be exposed at least four inches higher than the level of the entrance of the spinal nerve in which pain is felt, and that in case no tumor is then found the wouud should be enlarged upward. Such a search at the second operation in our case revealed the tumor.

Pheno-phlegmasia Spongiosa and Cavernosa.—Paul Hamonic discusses this subject in the *Gazette Medicale de Paris*, (1901. Nos. 30, 31 and 33.) He has treated 16 such cases. The condition may be inflammatory or traumatic; or it may be dystrophic or plastic. In the former case rupture of the penile trabeculae follows, an effusion collects which becomes fibrinous and rarely purulent. Diabetes, gout, rheumatism, etc., predispose to it. In the plastic form the penile trabeculae are thickened, plastic exudation occurs, and the trabeculae become obliterated. This may eventually ossify. It is seen in syphilis. Old age predisposes to it, as do injury, gonorrhea, etc. When the spongy body is affected, the condition may occupy the spongy urethra, the bulbous urethra, or the glans penis. Pain, stiffness and deformity of the penis always exist, with difficult micturition. The condition grows progressively worse. The patient may keep well otherwise, or he may become hypochondriacal. Diagnosis is easy. Antisyphilitic treatment will effect a cure, when it is due to syphilis; otherwise no known treatment does any good. [M. O.]

THE SURGERY OF THE SPINE.*

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When, some months ago, I received an invitation to read a paper on this subject before the Rochester Academy of Medicine, I felt that there was nothing left for me to say after the paper that I read at the American Medical Association last June. But when I came to think the matter over more carefully ,I was convinced that perhaps a paper somewhat supplementary to the former one would not be amiss and would prove interesting to those who believe that sometimes it is well to stop amid the rush for operative results and review the work that has been done the world over with a view to readjusting our ideas and starting out again with a better conception of what we may hope to attain in the future.

When it is remembered that as late as 1891 and 1892 I was able to tabulate only 75 cases of Pott's disease and 103 of fracture of the spine that had been operated upon prior to that time and that the number of cases of tumor was so inconsiderable that it was hardly necessary to tabulate them, it will be readily realized that spinal surgery at that time was in its infancy. Review of the work done then was valuable only as it gave an idea of what we might expect to find in operating in this region, but was of little or no value as a means of arriving at the ultimate results to be expected.

Then the spine, or at least up to 1887, when the neurologist Gowers made the diagnosis and localized the tumor of the spine which was operated upon by Horsley with such a brilliant result, was a terra incognita to the surgeon. It was this operation and its results, together with the monograph issued by Thorburn, that stimulated investigations that resulted within a few years in giving us more cases to study and draw conclusions from than we had been able to get together in the whole preceding 300 years.

It is not to the surgeon, however, that all or even the major amount of credit belongs. His has been the mechanical part of the development. The neurologist has taken the lead in developing this operation and has become the important factor in determining the success of the undertaking.

Without spinal localization the surgeon would be completely at sea, blowing this way and that at the mercy of every changing wind like a rudderless boat. But the recognition of the fact that with the injury of the different segments of the spinal cord definite symptoms developed, the field was cleared and the surgeon was able to attack the involved areas with every confidence.

But here again we are confronted by the uncertainty that still shrouds nearly every field of our endeavor. The segment is located and the operation is carried out at the indicated spot, but the patient does not improve. Several reasons for this can be seen at a glance. The involved segment of the spine does not lie under the vertebra from which it derives its name, but takes its designation from the fact that the nerve belonging to that vertebra arises in that portion of the spinal cord. Hence there may be a very considerable intra-spinal area that must be explored by the operator before he can be perfectly certain that the lesion is discovered and overcome. So the surgeon must be prepared to examine a much greater area of the spine than that indicated by the neurologist. He must be sure that no callus, or tumor, or plastic exudation, or inflammatory thickening or tubercular deposit, or displaced bone from fracture or disease, or hemorrhage interferes with the transmission of the impulse from the centre to the periphery and *vice versa.* This throws increased responsibility upon the surgeon and emphasizes a point which should be thoroughly appreciated by all operators: *the removal of bone in operating upon the spine should not cease until it is perfectly evident, without possibility of error, that all compression has been removed from above and below the involved segment and the intravertebral course of the nerves arising from that segment.*

I feel that a number of the incomplete results we find recorded are due to not recognizing this fact. It is easy in operating upon the spine to make this error, the theca spreads out and fills the canal as the bone is removed, overlapping the arch of the vertebra below so that it is difficult to decide whether it is a normal filling up of the canal by a normal theca or whether there is still compression below. If one cannot be certain he had better take away another lamina or a complete arch, if necessary, to be perfectly confident that the canal is free.

Unfortunately we cannot give a perfect prognosis even in those cases in which the diagnois is perfectly clear. Slight trauma involving the medulla cause incurable conditions. Small intra-medullary hemorrhages may produce symptoms far beyond the hope of the surgeon's knife, for as yet no one has succeeded in cutting out portions of the medullary tissue without causing permanent and irremediable loss of function. Suggestions have been made that the nerve supply might be carried around the destroyed area by utilizing the posterior nerve roots, but no success has followed the experiment. It becomes therefore an impassible barrier to surgical progress when the cord has been definitely injured. It is the compression, and only the compression without injury to the cord, that can be benefited, and this may be taken as an axiom in the surgery of the spine.

Here then we reach the point where the knowledge of the neurologist is most available and we must depend upon him to determine whether a given case can be benefited or not by operative interference. I question whether this audience expects me to consider this question of spinal localization or whether it is wise for any one whose line of work does not constantly lead him to study the phases of spinal disease as seen by the specialist to attempt to draw any conclusions in this direction, and yet some symptoms are so definite and some points so well authenticated that they may be put down as tending in a general way to clear up this field so that almost any one can determine whether

*Read, by invitation, before the Surgical Section of the Rochester, New York, Academy of Medicine, May 8th, 1901

it is wise or not to consider the possibility of an operation.

In traumatisms it may be difficult to recognize any deformity or direct injury and the fact that there has been an involvement of the contents of the spinal canal may be manifested only by symptoms denoting an interference with the functions of the cord itself: as for instance paralysis of motion or sensation, or both, and the condition of the reflexes.

Keen says, "The spinal cord may be considered as made up of a series of horizontal segments placed one on top of another like a pile of checkers and one pair of nerves, right and left, arises from each segment. For example, the fifth cervical segment would be that segment of the spinal cord from which the fifth cervical nerve roots take their origin."

Starr (*Am. Jour. Med. Sciences*, 1886, p. 464) and Mills (*Therap. Gaz.*, 1889, p. 314) have given us the best tables of localization.

Briefly, we may recapitulate in this way: Involvement of the first spinal segment, corresponding in position with the spinous processes of the first vertebra, causes immediate death, while injury of the second and third segments causes paralysis of the sternocleido-mastoid, trapezius, scaleni and neck and diaphragm, and produces anesthesia of the back of the neck and head to the vertex (distribution of the occipitalis major, and minor, auricularis magnus, superficialis colli and supra-clavicular), it may possibly affect the hypochondrial reflex, which, however, is more often involved when the third and fourth cervical are injured than the first and second. This reflex consists of a sudden inspiration when a quick pressure is made beneath the lower border of the ribs. These two segments lie at the level of the body of the second and the spinous process of the first cervical vertebræ. The fourth cervical segment lies between the spinous processes of the second and third cervical vertebræ, and its injury causes paralysis of the diaphragm through the inhibition of the phrenic nerves (exploratory puncture of the cord between these vertebræ has resulted in instant death) and of the deltoid, biceps, coraco-brachialis, and also paralysis of the supinator longus, rhomboid and supra and infra spinatus muscles; the anesthesia extends over the neck, anterior surface of the shoulder and the outer arm (the area covered by the supraclavicular, circumflex, musculo-cutaneous or external cutaneous nerves). The pupillary reflex, that is, a dilatation of the pupil following an irritation of the neck, may be affected by an injury between the fourth cervical and second dorsal.

The fifth cervical segment lies about the level of the body of the fourth cervical and the spinous process of the third cervical and it gives, when injured, paralysis of the deltoid, of the muscles of the anterior humeral region (biceps, coraco-brachialis, and brachialis anticus), the supinator longus and brevis, the subscapularis, rhomboid, teres minor, clavicular portion of the pectoralis major and the serratus magnus. The anesthesia extends over the back of the shoulder and arm, and the outer side of the arm and forearm to the wrist. (Distribution of the suprascapular, circumflex, musculo-cutaneous, external cutaneous and radial nerves.) The reflexes are the scapular (fifth cervical to first dorsal): Irritation of the skin over the scapula produces contraction of the scapular muscles; and the supinator longus (fourth to fifth cervical): Tapping the tendon of the supinator longus produces flexion of the forearm.

Thorburn (Surgery of the Spine) made a careful and interesting study of the phenomena resulting from injury to this segment and he emphasized the posture assumed by the patient who has had this area injured. The elbow lies next to the body owing to the paralysis of the deltoid; and the paralysis of the brachialis anticus and the supinator longus causes the forearm and hand to lie prone on the chest. This characteristic attitude was perfectly illustrated in the case of A. L., admitted to my service in the New York Post-Graduate Hospital, July 27, 1898. Eight days previously, while diving in shallow water, he struck on his head and was immediately paralyzed. At the time of his admission to the hospital his arms were close to his thorax and both forearms were supinated and flexed, lying across his chest. He had complete paraplegia and anesthesia over the back of his shoulder and arm and the outer side of the arm and forearm to the wrist and over the whole of the body below the third rib. Priapism was present. He could extend his wrists slightly and flex his elbows. Vesico-rectal paralysis, cystitis and bedsores were also present. The areas supplied by the ulnar nerve however were still sensitive. The next day I took an X-ray, which confirmed the diagnosis of fracture—dislocation of the fifth cervical vertebra. This shows that the lesion was apparently below the segment, but it must have involved the fifth segment, in spite of its lower position. It was probably caused by the pressure of the cord against the body of the fourth vertebra by the displaced arch of the fifth, and it illustrates the necessity of removing plenty of bone in compression lesions of the spine. Laminectomy of the fourth, fifth and sixth cervical vertebræ was performed August 12th. The fifth arch was compressing the cord, which did not appear to be crushed. There was no hematoma and the dura was not opened. Pulsation returned as soon as the compression was removed. In a few days sensation began to return and he could use his arms considerably. He changed their position across his chest after a few days so that at times the forearm lay at right angles to his arm. The priapism disappeared and he seemed to be gaining rapidly. Very shortly after this, however, he gave unmistakable evidences of serious involvement of the kidney following undoubtedly an extension of the inflammation in the bladder upwards, and he died in uremic coma September 2th. September 1st he again became completely paralyzed, but as no autopsy was obtained I have been unable to ascertain the cause of this second paralysis. I suspect, however, that in some effort to change his position on the water bed he injured himself.

The sixth cervical segment is on a level with the body of the fifth and with the spinous process of the fourth cervical vertebra. Its motor control includes the biceps and brachialis anticus, subscapularis, clavicular portion of pectoralis major, serratus magnus and the triceps; the pronators of the forearm and the extensors of the wrist and fingers.

The area of sensation extends over the outer side and front part of the forearm and back of hand (radial distribution, musculo-cutaneous or external cutaneous and internal cutaneous). The reflexes are the *triceps*: (fifth to seventh cervical). Tapping elbow tendon (olecranon) produces extension of forearm; and posterior wrist (sixth to eighth cervical). Tapping tendons produces extension of hand.

Thorburn also calls attention to the difference in position below the fifth segment and involving the sixth. Here the deltoid not being paralyzed, it abducts the elbow, while the infra-spinatus rotates the humerus externally and the biceps, brachialis anticus and supinator longus flex and supinate the forearm so that the patient lies with both his arms in this characteristic position.

The seventh cervical segment controls the long head of the triceps, the extensors of the wrist and fingers, the pronators of the wrist, the flexors of the wrist, the subscapularis, the costal part of the pectoralis major, the serratus magnus, latissimus dorsi and the teres major. The area of loss of sensation includes the radial distribution in the hand and the median distribution in the palm, thumb, index and one-half the middle finger (musculo-cutaneous or external cutaneous, internal cutaneous, radial and median nerves). The reflexes are the anterior wrist (seventh to eighth cervical). Tapping anterior tendon causes flexion of hand; and palmar (seventh cervical to first dorsal) . Stroking palm causes closing of fingers.

The eighth cervical segment lies between the bodies of the sixth and seventh spinal vertebræ and about level with the spinous process of the sixth. Its muscular control includes the long head of the triceps, the flexors of the wrist and fingers, and the intrinsic hand muscles. The area of anesthesia includes the ulnar area of the hand, back and palm, and the inner border of the forearm (int. cutaneous, ulnar).

The first dorsal segment lies between the body of the seventh cervical and the spinous process of this same vertebra. Its muscular control extends over the extensors of the thumb, the intrinsic hand muscles and the thenar and hypothenar muscles. The sensitive area of this segment covers chiefly the inner side of the forearm and arm near the axilla. (Chiefly int. cutaneous and nerve of Wrisberg or lesser int. cutaneous.) The second dorsal segment is only sensory and that to but a limited degree. It supplies the inner side of the arm near and in the axilla (intercosto-humeral). It lies between the body of the first dorsal vertebra and the first dorsal spine.

From the second to the twelfth dorsal segments the muscular control is over the muscles of the back and the abdomen and the erectores spinæ.

The area of sensory control covers the skin of the chest and abdomen, in bands running downward, corresponding to the spinal nerves, and the upper gluteal region (intercostals and dorsal posterior nerves). The reflexes are the epigastric (fourth to seventh dorsal). Tickling the mammary region causes retraction of the epigastrium; and abdominal (seventh to eleventh dorsal). Stroking side of abdomen causes retraction of belly.

The positions of these segments are as follows:

3rd dorsal	seg	at	level	of	body	of	2nd dorsal	bet	1	and	2	spines			
4th	"	"	"	"	"	"	3rd		vert	and	2	dorsal	spine		
5th							4th								
6th	"	"	"	"	"	"	5th	"	"	"	4				
7th							6th				5				
8th							7th				6				
9th	"	"	"	"	"	"	8th	"	"	"	7	"			
10th							9th				8				
11th			"				9th				9				
12th		bet	bodies	of	10th	and	11th				10				

1st lumbar seg. oppo. body of 11th dorsal vert. and 7th dorsal spine.

The 2d, 3d and 4th lumbar segments are opposite the body of the 12th dorsal vertebra, while the second comes between the spines of the 11th and 12th dorsal and the other two are in front of the 12th dorsal spine.

The 5th lumbar and the 1st, 2d, 3d and 4th sacral are opposite the body of the 1st lumbar vertebra, while the 5th lumbar and 1st sacral are between the levels of the spinous processes of the 12th dorsal and 1st lumbar. The 2d, 3d, 4th and 5th sacral segments are at the level of the spinous process of the 1st lumbar.

Starr (*Am. Jour. Med. Sciences*, 1892, July, p. 15) has made a careful study of the anesthesias due to injury or disease of the lower spinal cord. He concludes that in the spinal cord the centres of control of the bladder and rectum are always affected together and must therefore be adjacent. Control over these is lost when the lower three sacral segments are affected and probably the centres which control them lie in the lowest two segments. Traumatism affecting these segments causes incontinence of urine and feces, while if they are higher up they cause retention. Park says the centres of control for bladder and rectum are in the lower lumbar segments. This is probably an error. (System of Surg., p. 88.) This much it is necessary for the surgeon to know in order to appreciate the locality of the lesion.

We come now to, first, a consideration of the question of what cases of spinal disease or injury can be benefited by surgical intervention, second, at what time should this intervention be undertaken, and finally, what is the prognosis in cases operated upon. These questions can best be discussed together rather than separately.

For the purposes of this paper I consider the subject of spinal surgery to relate only to those lesions that include the spinal column or spinal cord or both.

I leave out of consideration those cases of congenital cyst that form a not inconsiderable number of the operations upon the spine. They would fall properly if they compress the cord under the general topic of tumors and can be considered under that classification.

There is a congenital defect, however, that must receive consideration at our hands.

Spina-bifida: a congenital deformity due to a failure of the vertebra to close over some portion of the canal, allowing a hernia of the theca, or of the cord itself.

This lesion is frequently associated with other

congenital malformations. I have seen a case of lumbar spina-bifida associated with hare-lip, cleft palate, double club foot and club hands. It varies in degree and in location, appearing anywhere along the region of the spine. Hildebrand* of Göttingen reports a case in which all of the posterior structures were cleft, bone, dura, pia, cord and the overlying soft parts.

It may even be anterior, owing to the failure of the two osseous centres of the body of the vertebra to unite.

A spina bifida occulta is one in which the contents of the spinal canal do not protrude through the cleft. It is often difficult to make a diagnosis of this condition, but at times it is marked by a hairy growth over the region and examination usually reveals the bony gap.

Of 402 tumors collected from various sources Keen (Dennis' System of Surgery, p. 792) found 329 in the lumbo-sacral region. This differs from Park, who states that fifty per cent. are lumbar, twelve per cent. lumbo-sacral, seven per cent. sacral. It is usually, though not always, in the median line, and the size is exceedingly variable. It is not uncommonly associated with hydrocephalus. When these conditions are associated it is possible to appreciate the increase in cerebral tension when the spina bifida is compressed by noticing the condition of the fontanelles and *vice versa* compressing the skull will cause increased tension on the spinal protrusion. The tumor may be sessile or pedunculated.

Three types of this condition are noticed:

I. Meningocele, where the tumor contains only the meninges and spinal fluid. This tumor is usually absolutely translucent when examined by means of a light as in hydrocele.

II. Meningo-myelocele, where the cord also makes up a portion of the tumor. This is usually opaque in whole or in part. In the sacral region, where the cauda equina makes up a portion of the tumor, the nerve lines can usually be seen by the transmitted light, and unfortunately it has been abundantly demonstrated that the nerves of the different portions of the body below the tumor often end in the sac. These patients are of course hopelessly paralyzed.

III. Syringo-myelocele, where the cord itself is dilated with fluid.

The second is the more common type.

The coverings over a spina bifida vary materially. In some the skin is so thin and so transparent that the contents of the cyst can be readily determined without artificial aid. These cases ulcerate very rapidly, nearly always transude cerebro-spinal fluid and rapidly become septic, usually dying of meningitis within a very short time. In other cases the skin is thick and hard and offers a firm protection to the tumor.

Occasionally a spina bifida undergoes spontaneous cure.

(To be Continued.)

*Verhandlung der Deutschen Gesellschaft fuer Chir., XXII Congress, 1893.

THE SENSORY SEGMENTAL AREA OF THE UMBILICUS,

As Determined by a Case of Fracture of the Tenth Thoracic Vertebra, with Complete Compression of the Spinal Cord, and Without Knee-Jerks and Babinski Reflex.*

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Operations on the vertebral column, even when no fracture has occurred, have become quite frequent since the publication in 1888 of Gowers and Horsley's famous case of successful removal of a spinal tumor, and therefore reports of cases that add to our knowledge of segment diagnosis are desirable. According to the statement of Boettiger operation has been attempted in thirty-six cases of tumor of the spinal cord. He bases this statement on the statistics given by Putnam and Warren. It is probable that a few recent cases have been omitted in these figures.

Segment diagnosis depends chiefly on motor and sensory conditions, and on electrical reactions. Reflexes are of less importance in this diagnosis, as the same reflexes may be lost in complete lesions at different levels of the cord. Motor paralysis is especially valuable when the condition of the limbs is under consideration, but when the lesion is in the thoracic region of the cord, and the segment diagnosis is sought by the paralysis of the abdominal muscles, the diagnosis may be more difficult. The degree of partial paralysis of the abdominal muscles caused by spinal lesions may sometimes be difficult to determine when these muscles are flabby, as in a woman who has borne many children. It is believed that the motor supply of the abdominal muscles is derived from the ninth thoracic segment to the first lumbar segment (Boettiger), so that we may refer the paralysis of the abdominal muscles to these segments of the cord.

Sensory disturbances on the trunk and electrical reactions may be of great assistance in segment diagnosis, but a case that is valuable for this purpose must be one of complete destruction of the spinal cord at one region. As Bruns has pointed out, partial compression of the cord may cause faulty diagnosis, as the sensory nerve fibers compressed and causing the disturbed function may have entered the cord some distance below the seat of compression. Lesions at different levels also may cause confusion in diagnosis.

Boettiger has drawn attention to the value of the electrical reactions of the abdominal muscles in thoracic lesions. These reactions should be determined, if possible, when such lesions exist, because when degenerative change is obtained the level of the lesion may be diagnosticated, especially in connection with other signs.

A case of fracture of a vertebra with complete compression of the cord, followed by necropsy and careful examination, is of much value in spinal locali-

*Read before the Philadelphia Neurological Society, December 23, 1901.

zation, because fracture usually gives an area of anesthesia fairly sharply defined at its upper border. This is remarkable, as Sherrington has found that three posterior roots must be cut before complete cutaneous anesthesia can be obtained at any one part, and Bruns places the number at five. In compression of the thoracic cord from fracture of the vertebra we might *a priori* expect the area of anesthesia to shade off gradually at its upper border into the sensory region, but Walton has recently stated that the limitation of the anesthetic zone in such cases is sharp, and this sharp limitation was present in a case with necropsy recently observed by me, and which is reported in this paper, and also in another case of complete division of the cord. It is possible that compression of the spinal cord may cause a more sharply defined area of anesthesia than does compression of posterior roots.

The umbilicus is a very definite point in localization, and the determination of the spinal segment, with which it is in sensory relation, is of importance. Boettiger says it is still uncertain whether the umbilicus lies in the distribution of the ninth or tenth thoracic segment. Walton places it in the distribution of the eleventh thoracic segment, and Dejerine locates it in the distribution of the tenth thoracic segment.

The plates given by Henry Head, showing the distribution of the segmental areas from the first thoracic to the fourth sacral, were made after a study of the appearances presented by the cutaneous tenderness in visceral disease, of a study of the distribution of the eruptions in 62 cases of herpes zoster, and of the limits of analgesia in organic disease of the spinal cord and roots. Head states that he did not suppose that the areas figured by him were absolutely correct, but hoped that future investigations would show that their situation and extent bear a fairly close relation to the truth. The tenth thoracic segment, according to his investigations, represents the subumbilical area, and the upper border of this area, according to one of his plates, passes directly through the umbilicus and appears to be a little more curved downward on each side toward the umbilicus than is the upper border of the umbilical area as given by most authorities.

In a recent paper, Head and Campbell quote Thorburn: "The umbilicus probably lies, not as Head places it at the junction of the ninth and tenth dorsal fields, but certainly no higher than the lowest part of the tenth", but Head still adheres to his opinion expressed in 1893 that the umbilicus lies between the ninth and tenth thoracic areas.

Ralf Wichmann states that the umbilicus lies in the area of the tenth thoracic zone. He quotes Paterson as placing it between the tenth and eleventh thoracic areas; and Kocher as placing it at the lower border of the tenth thoracic segment. In Wichmann's plate the umbilicus is represented as lying in the center, from above downward, of the tenth thoracic zone, and the upper border of this zone is represented more nearly horizontal than it is by Head.

W. Seiffer says that the umbilicus is generally regarded as situated within the tenth thoracic segment, although Head believes it lies between the ninth and tenth segments. To be on the safe side in his scheme of the segmental sensory distribution, Seiffer draws a line from the umbilicus a little downward and then upward and around the trunk, and calls this the umbilical line, and regards it as indicating the tenth thoracic segment. Should further study, he says, show that Head is right, the umbilical line is to be regarded as the border between the ninth and tenth segments. Posteriorly this umbilical line is represented in Seiffer's figure 15 as nearly horizontal.

My case reported in this paper is in confirmation of Head's views, but I have not found the slight concavity in the umbilical line on each side of the umbilicus which Head represents.

My case, as well as others, fully confirms Seiffer's statement that the sensory segmental areas on the trunk are not paralled to the ribs and have no relation to the intercostal spaces, but are in bands whose borders are not fully horizontal.

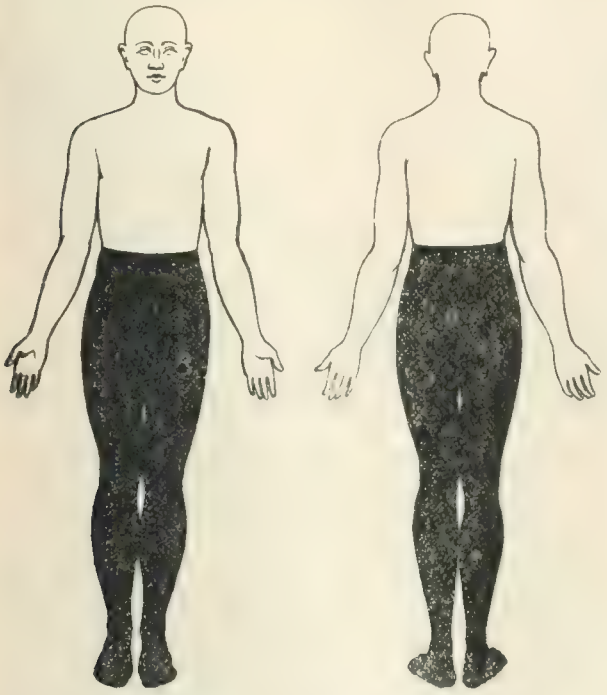
During the past summer I had the opportunity to study a case of fracture of the tenth thoracic vertebra with complete compression of the cord, and to determine the region of the spinal cord destroyed. The case is of value in regard to the segmental zone in which the umbilicus lies, because neither the spinal cord nor roots were implicated at the ninth thoracic segment, whereas the tenth thoracic segment of the cord was much softened. It was therefore a very valuable case for determining exactly in which sensory distribution the umbilicus lies, and was confirmative of Head's opinion that the umbilicus lies between the ninth and tenth thoracic areas.

G. P., a colored man, was admitted to the nervous wards of the Philadelphia Hospital, in my service, June 27, 1901. He stated that about three weeks previously he had fallen a distance of 30 feet and had been picked up and carried to the Jefferson Hospital. He was unconscious after the accident for several days. When he regained consciousness he was unable to move his lower limbs, and had only a little power in his left upper limb. The right upper limb he could move freely. He had pain in his back and in the left shoulder. At first he could hold his urine and pass it when he wished, but at the time he came under my observation he had no power over the bladder and did not know when the urine escaped. Immediately after the accident he had had control over the bowels, but he had lost this control and did not know when his bowels acted.

At the time of my first examination, July 1, 1901, he was completely paralyzed in the lower limbs. He was unable to move a muscle in these limbs even with the greatest exertion. These limbs were flaccid, and no contractures had developed. The knee-jerk on each side was entirely lost and attempts to produce a knee-jerk caused much pain in his back. The Achilles jerk was lost on each side. The Babinski reflex was not obtained on either side. Irritation of the sole of the foot produced no movement of the toes. The cremasteric reflex was not obtained and priapism was not observed.

The dynamometer, lower scale, in the right hand, registered 10; in the left hand *nil*. He moved the right upper limb freely, and there was very little impairment of motion in this limb. Resistance to passive movement in the right upper limb was normal. He raised the left upper limb at the shoulder and bent it at the elbow fairly well, but was unable to straighten the fingers of the left hand. He was able to make a fist with either hand, and the flexor power in each hand was normal. It was difficult to open the fingers of the left hand. The weakness in the upper

extremity was probably the result of muscular injury, as he had been fastened to the bed while he was in a condition of motor excitement after the accident.



FIGS. 1 and 2.—Thedark portion represents the anesthetic area. This area was defined by a line passing directly through the umbilicus, and was a little higher on the right side than on the left.

Sensation for pain and touch was completely abolished over the lower limbs and trunk as high as a horizontal line passing directly through the umbilicus. Above this line sensation for pain and touch was sharply felt. The line dividing the anesthetic area from the sensitive area was a sharp one, but was not absolutely horizontal on the right side, as over the right hip it was one inch above a horizontal line through the umbilicus, but on the left side the line seemed absolutely horizontal. In the middle of the back this line of anesthesia extended about ½ inch above tne level of the umbilicus.

The urine contained pus cells and albumin in considerable quantity. The temperature was irregular and reached as high as 104°.

A diagnosis of complete interruption of the spinal cord in the lower thoracic region, probably at the tenth or eleventh segment, from fracture of the vertebral column was made, but, as the condition had existed three weeks and the symptoms of complete compression had persisted without alteration, operation was not considered advisable. The wisdom of this decision was shown by the necropsy. The man died July 14, 1901.

The necropsy was made by Dr. Simon Flexner, and I am indebted to him for his notes. A scar, the remains of an old injury, 4.8 cm. in diameter was found over the spine of the eleventh thoracic vertebra and extended also over the tenth and twelfth thoracic vertebrae. The spinous process of the 10th thoracic vertebra was driven downward against the process of the 11th thoracic vertebra. The interval between the 10th and 11th spinous processes was increased. Beginning 5 millimeters from the superior surface of the spine of the tenth thoracic vertebra was an irregular fracture line extending laterally on each side and passing through the corresponding laminae. The right lamina was prominent and showed the chief injury. The fracture on this side extended downward and forward through the entire diameter of the lamina. The tissues about the lamina were edematous and slightly hemorrhagic. On the left side the tissues were involved to a slighter extent, but the remains of hemorrhage were found in the fascia and spinal muscles.

The fracture extended through the upper portion of the body of the tenth thoracic vertebra so that the two portions of the vertebra moved freely on one another, and the upper fragment was displaced. The spinal cord was completely compressed at the line of fracture and was softened for a distance of 4 cm. above this line. The dura below the line of fracture was much more injected than that above.

By microscopic examination I found the spinal cord much disintegrated in the lumbar and sacral regions, and here round-cell infiltration was observed within the cord, meninges, and anterior and posterior spinal roots. The spinal roots were much degenerated and congested. Blood pigment and swollen axones were found in the sections. The cord contained much amorphous tissue and fatty granular cells, the latter being especially well shown by the Marchi stain. The nerve cell bodies of the anterior horns did not appear to be normal, but they could not be studied by the Nissl method, and the degree of alteration was not therefore accurately determined. Above the area of compression the degeneration in sections from the upper thoracic region was confined to the posterior columns, especially to the columns of Goll, and was slight in those of Burdach; and to Gowers' tracts, the direct cerebellar tracts and the region along the anterior fissure on each side.

In this case the upper border of the anesthetic area passed directly through the umbilicus as represented in Figs. 1 and 2, and was nearly horizontal.

The absence of the Babinski reflex, notwithstanding the implication of the central motor tracts, is probably to be explained by the softening of the cord below the area of compression, and the case shows that where the spinal cord is disorganized in the lumbar and sacral regions, the Babinski reflex may be absent, even though the central motor tracts are diseased.

Much has been written on the loss of the deep reflexes as a result of complete or nearly complete transverse lesion above the lumbar region. My case was one of fracture of the tenth thoracic vertebra with loss of the tendon reflexes, and the fracture was therefore above the area of the cord through which the reflex arc for the patellar reflex passes. The explanation for the absence of the patellar reflex was readily found at the necropsy. The cord below the seat of fracture was softened from a cutting-off of the blood supply and inflammatory changes. A case of transverse lesion of the spinal cord with lost tendon reflexes can be of little value in determining the cause of this loss unless the lumbar region is studied microscopically, and it may be necessary to examine the nerves.

I conclude from a study of this case: 1. That Head is probably correct in placing the umbilicus between the ninth and tenth thoracic sensory areas.

2. That the Babinski reflex may be absent in cases of lesion of the lumbar and sacral regions of the cord, though the clinical symptoms may indicate merely that the cord is compressed above the lumbar region. The absence of the Babinski reflex in such cases may possibly be a valuable sign of disorganization of the lumbar and sacral regions.

3. That while loss of the patellar reflexes may occur from transverse lesions of the cord above the lumbar region, the cause of this loss in a certain number of cases is to be found in lesions of the area through which the reflex arc passes.

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REMARKS ON THE TREATMENT OF SYPHILIS OF THE NERVOUS SYSTEM.

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In an article entitled the "Neurologist's Art," I have tried to show that in order to treat successfully any disease of the nervous system it is necessary to have in mind a clear idea of the pathological process that one aims to influence and to overcome. This is absolutely essential in the treatment of syphilis of the nervous system. Neglect of this principle is responsible for some of the unsatisfactory results attending the treatment of syphilitc nervous diseases. The lack of an adequate antisyphilitic is responsible for the remainder.

I shall use these two last statements as a text upon which to base some remarks on the treatment of syphilis of the nervous system.

There are certain diseases of the nervous system that occur with such preponderating frequency in persons who have had syphilis that the conclusion is forced upon us that syphilis must be concerned in their causation. Such diseases are locomotor ataxia or tabes, and general paresis. The belief that syphilis is the most important etiological factor in these diseases is founded in pure assumption based upon statistics, but these statistics are so unequivocal that no other inference can be drawn from them, and neurologits the world over, with few exceptions, are of the opinion that syphilis is the most important etiological factor. There is nothing in the mode of onset, manifestations, course, outcome or morbid anatomy of tabes and general paresis that even suggests syphilis, and we should have remained ignorant of the etiological role which it plays were it not that patients with these diseases admit the previous existence of syphilis, give a history of its symptoms, or still show indications of its previous existence. Familiar as he may be with every variety and form of syphilitic disease, the pathologist cannot find anything the least characteristic of syphilitic disease in the tissues of the victims of these two diseases. As a matter of fact they are syphilitic diseases in the narrow sense of the term only. They are syphilitic insomuch as they would not develop (or the majority of them, at least) if the individual had not been infected with the luetic virus. The lesions of these diseases are not caused directly by the syphilitic virus, but by some toxic agency which has had its origin in the strife that has gone on between the recuperative capacity of the system and the syphilitic virus that is endeavoring to overcome it. It is one of the by-products of the struggle. A city may become infested with anarchy that threatens to destroy it, to maim its usefulness or to leave a scar upon its fair name. An army corps is sent to wipe it out. In the conflict incendiarism may result. It was not on the program. It was an accident. The occurrence of tabes and general paresis in the wake of syphilis may be considered a parallel, save that these diseases manifest themselves in many instances a long time after the specific infection. An effort has been made to express this "beyond" action of the syphilitic virus by the term parasyphilitic.

The successful treatment of syphilitic diseases of the nervous system demands the recognition of those that are syphilitic and those that are parasyphilitic. As the latter are due not to the syphilitic virus iself but to some toxic matter whose index of morbidity is great, especially for some constituents of the nervous system, it naturally follows that they are in no way amenable to treatment that has been found empirically to be beneficial in true syphilitic disease, to wit, the administration of mercury and the salts of iodine.

True syphilitic diseases are characterized by their development during the period of activity or life history of the syphilitic virus, and by the occurrence of inflammatory, exudative, or productive conditions peculiar to the existence and activity of this virus. Parasyphilitic diseases occur after the syphilitic poison has ceased to exist as such, or at least after it has lost the power to cause characteristic pathological reaction in tissues. The lesion of parasyphilitic diseases consists of a primary decay which may be, and frequently is, comparable in every respect to that produced by other causes. Syphilitic and parasyphilitic diseases are sometimes spoken of as the exudative and degenerative forms of syphilitic diseases, respectively; but this may easily lead to confusion, as degenerative conditions of nerve tissue may and often do occur sequentially to exudative syphilitic states. Parasyphilitic nervous diseases are degenerative *ab initio*. They are not preceded by exudative or proliferative states, nor, as I have said, are the lesions characteristic macroscopically or microscopically of a luetic process.

My first thesis is therefore: Parasyphilitic diseases are never benefited by (what is generally understood as) antisyphilitic treatment. I assume from my experience that this is not widely accepted by the general practitioner, for I rarely or ever have had cases of parasyphilitic disease referred to me that had not been treated in a most vigorous manner with antisyphilitics. This is particularly true of practitioners at different health resorts in this country who from their large experience with syphilitic diseases may properly be called syphilologists, and who, so far as I can learn, put patients with tabes, general paresis, parasyphilitic headache and neurasthenia (these constituting the chief parasyphilitic diseases) upon full antisyphilitic treatment, as a routine practice.

I would not be understood to say that I do not give mercury and iodide of potassium in the treatment of tabes and general paresis. I give them but never as antisyphilitics in dose or amount. I give them in tonic or alterative doses as I would in disease of the parenchyma of any organ charac-

terized by a progressive decay and consequent formation of connective tissue.

Still another modification of a too literal rendering of the above thesis must be made. In some cases of tabes and general paresis (1) the symptoms occur within a short time after the original infection, 4 to 8 years, (2) a patient who develops symptoms of these diseases has never had proper antisyphilitic treatment, and (3) syphilitic pseudo-tabes and syphilitic pseudo-paresis, *i. e.*, cases in which there are atypical symptoms of tabes and general paresis due not to degenerative lesion in the spinal cord and brain, but to exudative lesion, multiple cerebro-spinal foci. These are the cases in which genuine antisyphilitic treatment should be instituted. It should, however, even in these be carried out with great watchfulness, and in conjunction with vigorous tonifying treatment.

Syphilographers, with a few illustrious exceptions, maintain that we have in mercury and the salt of iodine an adequate treatment for syphilis. They ask us to believe that the cases of syphilis that do not go on to complete recovery after such treatment are exceptional. For example, Taylor, *N. Y. Medical Journal*, April 8, 1899, says: "If an energetic and thorough treatment such as that I have sketched be followed for two years or two and one-half years, the patient will be cured. The completeness of the cure is shown by freedom from all syphilitic manifestations, by the ability to procreate healthy children, and by the enjoyment of permanent good health." It is quite impossible to reconcile such a statement with my own experience. Not only have I seen cases of syphilitic disease of the brain and spinal cord develop while the patient was still under the "energetic and thorough" treatment spoken of above, but quite one-half of all my cases of genuine syphilitic disease of the nervous system give a history of having been through this kind of treatment, some of them under the care of well-known specialists. From an examination of the literature I infer that my experience coincides with that of other neurologists and general practitioners. Therefore, in my book on "The Treatment of Nervous Diseases," I say, speaking of the influence of antisyphilitic treatment: "Once the individual has become infected with syphilis there is no treatment that will absolutely assure him that the nervous system (the blood-vessels, the parenchyma, or the coverings) may not become diseased as the result of the action of the syphilitic poison." I am of the same mind now. It is unnecessary to dwell further upon this matter to show how at variance my position is with that of the syphilographer who teaches the ready and complete curability of syphilis. My belief is that syphilis is frequently never cured, despite the most orthodox treatment.

The most important measure to prevent implication of the nervous system is thorough and prolonged administration of mercury and iodide of potassium. Although this is by no means an adequate treatment, it is the best we have, and it suffices to cure in a large proportion of the cases. There has been much discussion as to when antisyphilitic treatment should be begun. This question rarely presents itself to the neurologist, but I am convinced that antisyphilitic treatment should be begun at the earliest possible moment if the nervous system is to be spared. This does not mean that antisyphilitic treatment should be begun the day the initial lesion is discovered, unless one can then convince himself of the real nature of such lesion. Syphilologists say that it is useless to begin treatment at this time because the system is not yet infected and because antisyphilitic medication gives no immunity to the cells which must battle with the syphilitic virus as soon as the poison is absorbed into the system. In the same breath many of them say one of the most cogent reasons for delaying antisyphilitic medication is that we may not obscure the diagnostic worth of the secondary manifestations. Then we are asked to believe that there is no discrepancy in these two statements. If antisyphilitic medication has no virus to act upon, how can it in any way prevent the appearance of secondary manifestations? The time to begin antisyphilitic medication is when the diagnosis is made. Unfortunately, it is often necessary to wait for more pathognomonic manifestations of syphilis than the initial lesions, especially as the hard chancre is by no means the only avenue through which the virus is taken into the system.

It is impossible to convince us after the teachings of generations that the initial lesion is not oftentimes pathognomonic. How little hesitation do we have in putting a patient through a most rigorous antisyphilitic treatment when he comes to us with symptoms which we believe, but which we can in nowise prove, are indicative of visceral or vascular syphilis? Then compare such procedure with the abhorrence and studied protestation which some writers on the subject of syphilis manifest against putting a patient under antisyphilitic treatment who has demonstrable but not absolutely pathognomonic lesions of syphilis, until they can be corroborated by the appearance of manifestations which even the laity might recognize as syphilitic.

The mode of administering mercury and the iodides to overcome syphilitic disease of the nervous system is mentioned merely to state personal preference. The writer has had no considerable experience with mercuriol, mercurol or any of the modifications of mercury, so that the common salts of mercury and of iodine will be spoken of. The preferable mode of administering mercury in my experience is by inunction; then hypodermatically. I rarely give it by the mouth or by inhalation. No definite rules concerning the dose of mercury can be laid down that will apply to every case of syphilis of the nervous system. For one patient it may be a drachm of blue ointment rubbed in every day, continued for from three to six weeks, for another it may be a half-ounce administered for the same time. The dose is the quantity that the patient can take without manifesting untoward toxic effects.

The patient should never realize the profound acute or chronic effects of mercurial poisoning. It is not necessary to cause active ptyalism in order to get the beneficial effects of the drug. There are milder symptoms than these of mercurial intoxication, and the appearance of them should be interpreted as a signal that the patient has had for the time being all the mercury that can safely be given.

As a rule the requisite degree of mercurialization can be brought about in from four to eight weeks, and then the treatment should be entirely interrupted while measures devoted to the tonification of the system are adopted, or to the absorption of pathological products such as by the administration of iodide of potassium.

Nearly as important as the administration of mercury in the treatment of exudative syphilis of the nervous system is the adoption of measures for the maintenance of nutrition and the general tone of the patient. The most assiduous care should be taken to building up the patient's general nutrition.

When it is urgent that the patient be brought under the influence of mercury quickly, the drug should be used hypodermatically. The preferable salts for such use are the bichloride and the tannate. I use the former generally, the hypodermic tablets of Sharp and Doehm or a solution made up with ten times as much sodium chloride as bichloride. The injection is made into the muscles of the hip, not into the subcutaneous fat. Therefore in a fat person it is necessary to have a long needle. I rarely am embarassed using mercury in this manner by pain and cellulitis. The injections are given every second day, the dose in the beginning being 1-20 gr., which is rapidly increased up to the point of tolerance. Although considerable pain usually follows an injection, patients are willing and able to bear it when they contrast the conveniences of this method over the inunctions. Another favorite method is that suggested by Bloxam: 10 minims of a solution of sal alembroth containing 1-3 of the grain of the salt, is injected through a platinum iridium needle. The injections are given every fifth day. The advantages of the hypodermic method consist in its cleanliness and accuracy. It is, however, unquestionably less reliable than the method of inunction.

It is oftentimes advantageous to administer iodide of potassium contemporaneously with mercury, providing that the two together do not too seriously depreciate the patient's nutrition and vitality. If they do, the mercury should be given first in exudative syphilitic nervous disease, while the iodide should invariably be given preference when the lesion of the nervous system is of the nature of a granuloma. It is impossible to state in grains the dose of iodide of potassium for a given individual with gummatous formation. For one patient the dose may be fifty grains, for another it may be 500. A safe rule is to begin with a comparatively small dose, say 20 grains, three times daily and increase from five to ten grains each day depending upon the urgency of the symptoms.

It should be borne in mind that in some cases in which the smaller doses, such as thirty grains three times a day, do not have any effect, a dose of one hundred grains or more three times a day is quickly followed by beneficial results.

The duration of antisyphilitic treatment given to overcome disease of the nervous system or its coverings will depend largely upon the readiness with which it responds to treatment. It is needless to say that it should be kept up until the symptoms of such involvement have disappeared or until the activity of the disease had become permanently quiescent. The treatment should then be continued in a milder degree for several months and the patient should be advised to take a cure of two months' duration every year for the remainder of his life.

The feature of the treatment of syphilis of the nervous system that is not sufficiently emphasized by many of us is the general treatment of the patient, the treatment that is entirely apart from the administration of antisyphilitics. Briefly it may be said to be that which is appropriate for a patient suffering from a depressed type of neurasthenia. Physical and mental exhaustion and anything approaching excess are to be avoided. An easy life out of doors, with sufficient exercise to invigorate, but not to fatigue, indulgence in sport and occupation that divert the mind and keep him from brooding over his misfortune and his ailment, and from anticipating dire results, have the same usefulness here that they have in neurasthenia.

The same may be said of mild rest cures, hydriatic measures, the necessity for overfeeding, and the like. One word of warning concerning hydriatic procedures must be interpolated. In many cases of focal disease of the nervous system due to syphilis there is coexistent diffuse arterial involvement. This should always be carefully estimated and taken into consideration before prescribing any water treatment.

The special treatment applicable to each case will depend upon the intensity and the seat of the lesion. In other words, after the administration of the antisyphilitic medication and the use of measures to maintain the nutrition or to increase it, the treatment consists of individualization and the adoption of measures to counteract individual symptoms in different cases.

A CASE OE CEREBELLAR TUMOR.*

By JAMES HENDRIE LLOYD, M. D.,
of Philadelphia.
Formerly Neurologist to the Philadelphia Hospital;
and T. PERCEVAL GERSON, M. D.,
of Lansdowne
Formerly Resident Physician to the Philadelphia Hospital.

F. E., white, male, aged 21 years, native of Philadelphia, for a time occupation that of a sailor. Admitted to the nervous department of the Philadelphia Hospital, February 23, 1898, in a semi-stuporous condition.

Family history: negative.

Personal history: At his birth labor was prolonged and very difficult, the head being subjected to considerable pressure, although no instruments were used. In childhood he had measles and whooping cough and at 10 months, probably from an infection thought to have been acquired at the breast of a wet nurse, he developed upon the skin a scattered papulo-pustular erruption. He was never afterward seriously ill until the appearance of his present malady. In 1893, at the age of 16 years, he was admitted as a student to the Pennsylvania Nautical Schoolship, "Saratoga," having passed, it is said, a creditable entrance examination. He made but one cruise, lasting 7 months and was discharged, it is thought, for stupidity and insubordination. The tobacco and alcohol habit, which he contracted while aboard ship, was continued afterward in excess. He contracted gonorrhea, but there is no history of syphilis. It was noticed by his family and friends that he became unexplainably irritable, reticent and melancholy, complained

*From the forthcoming volume of the Philadelphia Hospital Reports. The literary work on this case was done entirely by Dr. Gerson.

frequently of headache, had very little energy, and would sleep for hours at a time, these symptoms probably all pointing to the incipient stage of the pathological growth found later. There was never obtainable a history of traumatism.

History of present illness: It was in August, 1897, that it was first noticed that the patient suffered from intense headache. Instead of his customary brightness he became dull mentally, would lean over for hours holding his forehead and occiput in his hands; became extremely melancholy, and in the following December his eyes began to assume an expressionless stare. His sight gradually failed and his hearing became impaired and later also failed. Taste and smell were never known to have been affected. Appetite until two weeks preceding admission had been good, bowels regular. After admission he developed incontinence of urine and feces. For some time preceding admission it had been noticed that he was disinterested, practically entirely, with his surroundings, would walk along with bowed head, globes of eyes directed upward, his movements being uncertain and frequently leading him to stumble into objects. Early in the course of his disease he seemed unwilling to converse because of a sluggish mentality; later it was seen that this was due undoubtedly to his absolute loss of hearing. At no time did he have true delusions, hallucinations or convulsive seizures, or palsies. After January, 1898, he developed an even more profound condition of stupidity. He, however, would occasionally blurt out his wants. Shortly before his admission to Blockley he received treatment at the Pennsylvania Hospital; a note from that Hospital gives the result of the eye examination, which is appended below.

Physical examination: Patient shows considerable emaciation. Decubitus on the right side with knees flexed and thighs drawn up on abdomen. Chin resting on chest, and hands clasped on occiput and forehead, seemingly because of pain. The patient usually is quiet, sleeping a great deal. The skin is dry and harsh. The eye lids move involuntarily, but the patient does not wince when an object is rapidly passed to and fro in front of the eyes. The tongue is coated over the mid-dorsum with a heavy yellow fur; breath foul. The patient is utterly oblivious of sound (even when a metal vessel is forcibly beaten in close proximity to either ear,) occasionally he cries out in a plaintive manner his wants, his sentences invariably showing cerebral incoordination. When touched he asks what is wanted or makes the statement that he is awake, etc. Many times during the day or night he makes complaint of the pain in his head. No scars or other signs of trauma on the head were ever discoverable. The patient can scarcely stand. Even when he is supported on either side, there is marked tendency to pitch forward. He takes preferably liquid food, but has not perfect control over deglutition, choking invariably on either liquid or solid foods. He has had to be watched, as on a number of occasions he fell from bed.

Examination of eyes made by Dr. Harlan: "O. D. V. 15/40; pupil responsive; disc swollen 4D. Veins much engorged, remains of old hemorrhage. O. S. 15/70. same as O. D. except fresh hemorrhage above disc. Subjective examination impossible on account of violent headache. Only history obtainable is headache, now improved, vision and hearing having been impaired for two months." Pennsylvania Hospital (Case diagnosed as intracranial tumor).

Eye examination: by Dr. Charles A. Oliver. Pupils are dilated ad maximum. Irides irresponsive to light. Pupils vary in accordance with movements of the eyeballs. Marked choked discs, dense. Retinal arteries reduced to threads and corresponding veins extremely small, the swelling not being very high, but the nerve tissue being compact. No fixation of eyes upon any object moved into ordinary visual field. February 24, 1898.

Ear examination: March 7, 1898. by Dr. George Morley Marshall. "Membranes were found intact, freely movable. There is no inflammation. No evidence of aural complication.

Chest is spare, expansion symmetrical. The bony landmarks and the surface hollowings consequent upon emaciation are prominent. Costal angle about 80°. Lungs are normal.

Liver dullness normal in extent.

Splenic dullness not distinguishable.

Heart: Apex beat neither visible nor palpable. No murmurs; action slow and regular.

Abdomen examination negative. Numerous small white pits or scars were observed, the same as on chest and extremities. Prepuce of penis shows a few small white scars.

Reflexes: Patellar jerks have the peculiarity of changing in intensity, being either normal or minus or plus or differing on the two sides, at different times. Patellar clonus and toe jerk absent. Ankle clonus very faintly present on left side, but readily elicited on the right. The patient moves limbs about apparently at will. Plantar reflexes sluggish. Sensation to the prick of a needle is considerably delayed in the extremities; before response sometimes as many as five seconds elapsing. It is somewhat more acute on the neck and face. While in the wards the patient had two or three spells of vomiting, one of which was distinctly projectile in character, the contents of the stomach being forcibly emitted to some distance from the patient. A comprehensive study of the pain and temperature sense was of course impracticable because of the man's mental state. The treatment consisted of potass. iodidi, gr. XXX during the day, bismuth and salol during the diarrhea which appeared, and a diet composed of milk, eggs, toast and broths.

The headache never seemed to increase in severity; if anything it decreased, as the patient complained less than upon admission. He became gradually weaker and more anemic, and there was difficulty in feeding him owing to his choking. Toward the end the respirations assumed the Cheyne-Stokes type, the pulse became very rapid (156). temperature from the normal or subnormal range which it had mostly been since admission, rose to 102 2/5, 103 4/5, etc. The patient died 5 P. M. on April 3d, 1898.

Necropsy, made by Dr. Lloyd and Dr. Bowman. Body of a tall male, much emaciated, having several bed sores over the sacrum. There is tattooing upon the flexor surface of the left forearm. On opening the abdominal cavity the walls were noted to be thin, muscular, of dark color. Intestines contracted. Usual amount of peritoneal fluid present. The appendix was very long, the distal end being curled upon itself. The sigmoid flexure was long and distended with gas.

The thoracic cavity. Pleurae showed no adhesions. Diaphragm extended to 4th interspace on both sides. Pericardium contained about four ounces of a yellowish fluid, and was normal.

Heart, 250 grm. Right auricle distended with clots, extending into the great vessels. Mitral orifice admitted 3 fingers, valves normal. Right auricle distended with clotted blood. Left auricle contained some clotted blood. Left ventricle was empty. Tricuspid orifice admitted two fingers, valves slightly thickened, showing areas of reddening. Along the free margin of the valves there was marked reddening; no vegetations. Arch of aorta was apparently normal. Heart muscle was pale and flabby; wall of left ventricle ½ inch thick.

Lungs. Left, 510 grm. Crepitant; the lower portion of lower lobe congested, slightly edematous. Right, 780 grm. External surface of lower lobe presents an area 2 inches in diameter, dark red in color, at its center is a depressed suppurating area ½ inch deep. The lung crepitates throughout. Beneath the suppurating area referred to were other smaller similar areas.

Spleen. Normal, weight 110 grm

Supra-renal capsules normal.

Left kidney, 170 grm; large, capsule stripped fairly well, when cut dark red in color, cortex slightly narrowed. There was considerable fat in the pelvis.

Right kidney, 140 grm. External surface bore a small white nodule, calcareous. Kidney is smaller than its fellow, otherwise normal.

Ureters and bladder normal.

Liver 1750 grm.; slightly enlarged; cuts with slight resistance; firm, otherwise normal.

Gall bladder was normal.

Brain, weight 1390 grm. A very large tumor was found lying upon the vermiform process of the cerebellum immediately beneath the tentorium. By careful dissection this tumor was easily shelled out of its bed. It was found to have only the slightest connection with the brain substance. In other words it was encapsulated, and had sprung entirely from the membranes. By pressure downward it had flattened and entirely destroyed the appearance of the quadrigeminal bodies and the vermis of the cerebellum, but the aqueduct of Sylvius was pervious, and the anterior medullary velum was unbroken. The tumor was nodular,



A Case of Cerebellar Tumor.

especially its anterior superior aspect, where one large nodule, the size of a grape, had made pressure into the left cerebral hemisphere. The tumor was very vascular, and was six centimeters wide in its greatest transverse diameter, six and a half centimeters long in its antero-posterior diameter, and four and a half centimeters in its vertical diameter. On section it presented the appearance of a sarcoma. Its most striking characteristic, next to its size, was its comparative freedom from connections with the surrounding brain substance. There was no infiltration of sarcomatous tissue in the neighborhood. The ventricles of the brain were much distended. There were very large Pacchionian bodies along the course of the longitudinal fissure deeply imbedded in the vault of the cranium.

Pyloric Stenosis without Retention.—Soupault reported nine cases of stenosis of the pylorus in which there was no alimentary retention. (*Bulletins et Mémoires de la Société Médicale des Hopitaux de Paris*, July 18, 1901. No. 25.) In the cases reported operation confirmed the diagnosis. But Soupault has seen many more similar cases, many of them with symptoms exactly like those cases of pyloric stenosis with gastric stasis. The treatment of this form of pyloric stenosis is the same, too; first medical, then gastro-enterostomy. There is neither gastric retention nor dilatation. There are, however, pain, vomiting and the regurgitation of acid and flatus. Soupault believes that early surgical treatment is authorized when there are symptoms of a pyloric lesion. Especially will early operation prevent the development of cancer. Then follow the case-histories of the nine patients with stenosis of the pylorus without retention, cured by gastro-enterostomy in every case. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended February 1, 1902.

SMALLPOX—United States.

			Cases	Deaths
ARKANSAS	[illegible]	Jan. [illegible]	[illegible]	
CALIFORNIA	[illegible] Angeles	Jan. [illegible]	[illegible]	1
	[illegible]	Jan. 12-19.	[illegible]	
DISTRICT OF COLUMBIA:	[illegible]	[illegible]	[illegible]	
ILLINOIS	[illegible]	Jan. [illegible]	..1	
	[illegible]	[illegible]	[illegible]	
	[illegible]	Jan. 18-2[illegible]	..1	
	Freeport. . . .	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	
INDIANA:	[illegible]	[illegible]	1	
IOWA:	Clinton.	[illegible]	[illegible]	
KENTUCKY:	[illegible]	[illegible]	[illegible]	
MAINE	[illegible]	[illegible]	[illegible]	1
MASSACHUSETTS	[illegible]	Jan. 18-[illegible]	..4	5
	[illegible] ridge. .	[illegible]	[illegible]	1
	[illegible]	[illegible]	..1	
	[illegible]	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	
	[illegible]	Jan. 11-[illegible]	..1	1
	[illegible]	[illegible]	[illegible]	
MICHIGAN	[illegible]	Jan. 18-[illegible]	[illegible]	
MINNESOTA	[illegible] is. .	[illegible]	[illegible]	
MISSOURI	[illegible]	[illegible]	[illegible]	
NEBRASKA	[illegible]	[illegible]	.54	
NEW HAMPSHIRE	Nashua.	[illegible]	[illegible]	
NEW JERSEY	[illegible]	[illegible]	[illegible]	
	[illegible] City.	[illegible]	13	1
	[illegible]	[illegible]	[illegible]	3
NEW YORK	Binghamton.	Jan. [illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	10
OHIO	[illegible]	Jan. 17-2[illegible]	17	
	[illegible]	Jan. 18-25	[illegible]	
	[illegible]	Jan. 18-25	[illegible]	
	Youngstown .	[illegible]	[illegible]	4
PENNSYLVANIA:	[illegible]	[illegible]	[illegible]	
	Norristown .	Jan. 18-25.	[illegible]	
	[illegible]	[illegible]	[illegible]	19
	Pittsburg. . .	Jan. 18-25	[illegible]	
	[illegible]	[illegible]	[illegible]	
	[illegible]	Jan. 15-22.	[illegible]	1
RHODE ISLAND:	[illegible] idence. .	Jan. 18-25. .	[illegible]	
TENNESSEE:	Memphis. . .	[illegible]	[illegible]	
VERMONT:	Burling[illegible]	[illegible]	...31	
WASHINGTON:	Aberdeen. . .	Jan. 18, prevalent.		
	[illegible]	[illegible]	[illegible]	
	Hoquiam. .	[illegible]	[illegible]	
	[illegible]	[illegible]	[illegible]	
WISCONSIN	[illegible]	[illegible]	[illegible]	
	Fond du Lac.	Jan [illegible]	[illegible]	
	Milwaukee.	[illegible]	[illegible]	

SMALLPOX—Foreign.

AUSTRIA:	[illegible]	[illegible]	[illegible]	
CANADA:	[illegible]	[illegible]	..1	
	[illegible] ...	Jan. 11-27. .	[illegible]	
COLOMBIA	[illegible] .	Jan. 1-12. .	[illegible]	
FRANCE	Marseilles.	Dec. 1-31. . .	[illegible]	1
	[illegible]	[illegible]	[illegible]	
	Paris	Jan. 4-11. .	[illegible]	
	St. [illegible]	[illegible]	[illegible]	
GREAT BRITAIN	[illegible]	Jan. 10-17. .	[illegible]	
	[illegible]	[illegible]	[illegible]	
	[illegible]	Jan. 4-11. . .	[illegible]	38
	[illegible]	[illegible]	[illegible]	
	Tyne.	Jan. 4-11. . .	[illegible]	
GREECE	Athens.	Jan. 4-11. .	[illegible]	
INDIA	[illegible]	Dec. 17-24. .	[illegible]	
	[illegible]	Dec. 15-22. .	14	
ITALY	[illegible]	Jan. 4-11. . .	[illegible]	
	[illegible]	[illegible]	[illegible]	
RUSSIA	[illegible]	[illegible]	[illegible]	
	St. Petersburg.	Dec. 28-Jan.	[illegible]	

YELLOW FEVER.

MEXICO	[illegible]	[illegible]	[illegible]	

CHOLERA

STRAITS SETTLEMENTS	[illegible]	[illegible]	[illegible]	

PLAGUE

INDIA	[illegible]	[illegible]	[illegible]	

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See Advertising Page 8.

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Osteitis Deformans.—We call the attention of our readers to the interesting case of osteitis deformans reported by Professor J. C. Wilson, which we are afforded the pleasure of publishing in the present number. The disease was first described by Sir James Paget in 1877, since which time there have been ninety-nine cases reported, including thirty-three in which the diagnosis was more or less doubtful. Dr. Wilson's case is the eleventh reported on this continent. The comparative rarity of the condition, the obscurity of its etiology, and its interesting pathology, as well as the great chronicity of its course, all go to make such a thorough contribution as this of Dr. Wilson's, in which the diagnosis is unquestioned, one of unusual importance. Dr. Wilson pays full credit to the extremely valuable contribution of Packard, Steele, and Kirkbride of this city, which appeared in 1901. These writers called attention to the association of osteitis deformans and malignant disease as less close than is generally believed. Of sixty-six cases collected by them three had cancer and five suffered from sarcoma, and there were two instances of non-malignant tumors. In his historical consideration of the subject Dr. Wilson tells us that the term osteitis deformans was used by Czerny in 1873; Schmidt, 1874, and Volkmann, 1874, in describing curvature of the bones of the lower extremities; it remained for Sir James Paget to designate as osteitis deformans the special entity embodying the classical symptoms of the pathological state which he described. The manifestations of the disease are chiefly ob ective. The affection is of insidious onset, sometimes involving bu a single bone, or a limited number of bones, but gradually tending to symmetrical involvement of the skeleton. It is very slowly progressive, exerts but little influence on the general health, and is not a direct cause of death. As a result of similar deformities of the skeleton these patients present a remarkable resemblance to each other. The face is irregularly egg-shaped or triangular, and the head is carried well forward with the chin resting on the breast. The occurrence of cervico-dorsal kyphosis is observed constantly; general changes in the trunk and limbs are characteristic; and we refer the reader to the text of Dr. Wilson's paper for a thorough description of these abnormalities. The differential diagnosis is a most interesting one and lies between osteomalacia, leontiasis ossea, rickets, acromegaly, and finally, pseudo-hypertrophic pulmonary osteoarthropathy.

Septic Infection and Insurance Policies.—In the present issue will be found an interesting discussion of this subject by Dr. Kemper, who apparently contracted erysipelas during the performance of professional work. He had an accident policy in an insurance company; but the company decided that he had no valid claim for indemnity, because it considered erysipelas a disease and not septic poisoning.

The policy was "an accident policy" and covered "'septic poisoning' accidentally incurred while performing professional duties." It did not cover disability from "diseases of any kind," which were expressly excepted from the operation thereof. Such disability is presumably covered by "health policies" of the company.

In his investigation of the practice of other accident insurance companies, Dr. Kemper found that various conditions affected the liability of these companies. It was contended that the septic poisoning must occur through accidental wounds, inflicted at the time of inoculation, and that infection of previously existing sores or partially healed wounds did not entitle to indemnity; that sepsis due purely to the carelessness of the physician, who "opens abscesses or dresses purulent or septic cases without taking any adequate precautions to protect his open wounds is not a cause for indemnity;" that the condition must be an "infection of a wound, caused by external and accidental violence, by any poisonous substance;" or that the liability of the company depended upon whether the physician accidentally wounded himself while engaged in his regular occupation and by reason of such wounding and simultaneously therewith had been inoculated with septic poison.

In this, as in many other, discussions, the disagreement and dissatisfaction have arisen from the

two great sources of human error: inaccuracy of language and ignorance of fact.

The insurance company should write its policies in the clearest and most accurate terms, with such professional aid as will insure their conditions being framed in accordance with medical science. On the other hand, the physician should accept no policy which does not clearly show that it gives him the protection which he desires and for which he pays.

To contend at this time in the world's history that erysipelas, "simple" or otherwise, is a disease and not an infection, is as preposterous as to talk of "idiopathic" tetanus, or to call a brain abscess, due to a septic scalp wound, or a septic pneumonia, due to an infected needle-prick of the finger, a disease and not a case of septic poisoning.

Whether erysipelas, obtained by infection, due to rubbing a previously inflamed ear with a hand soiled with pus, is included in the terms of a certain policy is a question for the court, not the **Philadelphia Medical Journal**, to determine. The monetary protection of physicians from the peculiar risks of their occupation is, however, a proper subject for discussion in these columns.

Erysipelas is known to be due to infection by the erysipelas coccus, which is similar to, if not identical with, a coccus often found in purulent conditions requiring surgical interference. The well-known relation of erysipelas to puerperal sepsis and similar pathological states proves that it should be included under the term "septic poisoning." Therefore, if a physician or surgeon contract erysipelas, as the result of his professional work, the case is properly called one of septic poisoning. Whether this septic poisoning, or infection, occur through an open sore, a partially healed wound, an abrasion, an insignificant and perhaps unknown fissure under or about the finger nail, or a wound, inflicted by the surgeon himself or an assistant, makes no difference in symptoms, risk to life, or financial loss. The septic poisoning so occurring is accidental, if the surgeon did not deliberately cause it or have it caused by another. It is the inadvertence or the unintentional character of the occurrence which makes the septic poisoning accidental. It might be claimed that the examination of a specimen or the making of an autopsy was not a professional duty, and that therefore a doctor infected under such circumstances had no claim for indemnity under his accidental policy. Such distinctions, though they may enable insurance companies to avoid payment of a few claims, will in the end tend to discourage medical men from investing in policies, which do not meet the requirements of their professional life.

From the standpoint of the physician, no accident policy is acceptable, that does not protect him from septic poisoning, acquired under the ordinary conditions of his professional work.

A "Ripper" Bill for the Asylums.—The scheme to concentrate all the administrative control over the insane hospitals in New York State in the hands of a central commission, will doubtless not be affected in the slightest degree by anything that we may say about it. The bill may even have become a law at this writing; or if not, it soon will. But such legislation is of interest to all citizens for reasons that are cogently expressed elsewhere in this issue of this Journal. The outside world has lately been led to look to New York for righteous politics, and we in Pennsylvania especially have been reminded that we are politically an unregenerate race. It is true that we devised "ripper" bills for some of our cities—but even in our extremest politics we have not yet devised such bills for our asylums. It has remained for the Empire State to do that. Here indeed is the danger to us all; for so contagious is a bad example in politics, that the fear is that legislators in other states may be so impressed with the desirability of this kind of legislation, that they will speedily seek to imitate it; and thus right here in Pennsylvania we may yet have to protest against "ripper" bills for our insane hospitals. When we consider that this state was the original habitat of such legislation, the danger is seen to be not unreal.

By this law the State of New York removes all Boards of Managers from these hospitals, and hands these institutions over to a Commission appointed and housed in Albany. Such a commission will control the destinies of many thousands of insane patients; will appoint a small army of employees in far-distant parts of the state; and will have the expenditure of millions of dollars. It will practically be an appanage of the governor, who can at his option control its policies, its appointments and its expenditures.

In a word, this bill unifies the state hospitals and makes of them a political engine of great power. The public can draw its own conclusions as to the motives which have inspired this legislation, and as to the results which will flow from it.

A Correction and an Explanation.—Our esteemed contemporary, the *Boston Medical and Surgical Journal*, has taken the occasion of a recent addition to our columns to pay its respects to the general subject of abstracting medical literature. The editor of that excellent publication doubts the value of the plan inaugurated in America some years ago by the **Philadelphia Medical Journal**, but not, as he mistakenly supposes, original with this Journal, be-

cause it was borrowed at the time from the *Münchener medicinische Wochenschrift*, in which journal it is still continued. His principal objection to this plan is that it fails to cover the whole of medical literature. Unquestionably this is a valid objection. However, it is an objection which can be urged against any plan other than that of the late lamented *Index Medicus*, and even the *Index Medicus* was guilty of an occasional omission. Surely he would not have us believe that the admirable *Centralblätter* of the Germans make even a pretense of covering the field as thoroughly as the **Philadelphia Medical Journal** has done in the period during which it has existed. We think if our editorial friend will take the trouble to compare the value of the articles published in the twenty or thirty prominent publications regularly abstracted by us, with the value of the articles in some thousand other practically unknown journals of local circulation, he will be astonished to find how rarely anything of imporance or novelty escapes the former group, and with what comparative infrequency anything really worth preserving is printed in the latter. He is mistaken if he thinks the **Philadelphia Medical Journal** has given up its usual method of abstracting. What it has attempted is the publication of critical summaries upon the most recent subjects of importance in medicine and surgery, with the hope that later other features of even more value to the profession may be added to this department.

The **Philadelphia Medical Journal** is unchanged and uncurtailed.

The Epidemic of Measles in Alaska.—In a civilized community, when an individual has escaped one of the eruptive diseases during his childhood and becomes infected in adult life, the disease is likely to be much more severe than the same disease in a child. It can be readily seen that in an isolated tribe of savages or semi-civilized people, among whom a given eruptive disease is unknown, all the individuals will reach adult life without the immunity conferred by an attack of the disease. If the acute infectious disease in question is introduced in this unprotected tribe, one would expect to find it of severe type, attended by more than the usual number of cases of complications and by a high mortality. Dunlop Moore, of the United States Marine-Hospital Service, has been in a position to study an epidemic of measles, which occurred among the natives of Alaska, during the year 1900. His report, in which he alludes to the possibility of such a newly imported disease producing the extinction of a previously isolated aboriginal race, is published in *Public Health Reports*. The newspapers all over the country have referred to the extensive mortality among the natives of Alaska during the summer of 1900. Moore is satisfied that this mortality was wholly due to measles and the ordinary pulmonary complications and sequelæ of that disease. According to Captain McGregor, of the steam whaler *Karluk*, there were many deaths in the early part of 1900 at a Russian trading post on Holy Cross Bay in the gulf of Anadir. From this point the contagion was conveyed by dog sleds to the Siberian coast, whence infected natives were carried on whaling vessels to the main land of Alaska, as well as to the inhabited islands in the northern part of Behring Sea. In June, 1900, Siberian natives suffering from measles were seen on at least two vessels in the Behring Sea, and, later in the same month, the disease made its appearance at several native settlements in northwestern Alaska. From this point it spread throughout the coast villages of Alaska and to the settlements on the Yukon and Kuskokwin rivers. By the time of the closure of navigation of the season of 1900, measles had spread well up to the Canadian frontier. A missionary on the Kuskokwin river is responsible for the statement that by the middle of August the entire native population in his region was infected with the disease, the death-rate from which was not less than 33 per cent. The disease was introduced into the Aleutian Islands by a steamer which arrived on July 26, and the first native to contract the disease appears to have sickened on August 14, showing a maximum incubation period of 19 days. Within a month 10 per cent. of the native inhabitants had died, and later reports show that the number of deaths from measles or its complications reached nearly 40 per cent. of the population. The rule of universal susceptibility presented very few exceptions, and in every exceptional case the failure to contract the disease could apparently be attributed to immunity due to a previous attack contracted either in the United States or in an epidemic which is reported to have passed through the Islands in 1848. The disease was also carried to the Pribilof Islands. The available reports seem to indicate that in the affected settlements less than 2 per cent. of the native population failed to contract the disease. Scarcely less than 30 per cent., as an average, succumbed to the disease; a mortality approximating 50 per cent. seems to have been not uncommon; and at one or two points it reached 90 per cent.

American Surgery as it Appears to an Englishman.—Any one desiring to know an Englishman's idea of our American hospitals will be interested in reading Dr. G. F. Ferguson's description of some American hospitals, delivered before the Gloucestershire

Branch of the British Medical Association (*British Med. Journal*, January 25, 1902), of which association he is the President. On the whole his remarks are extremely complimentary. He was very much pleased with the courteous treatment he received wherever he went, even where his connection with the British Medical Association was unknown, as it was during his visit to Philadelphia. That which impressed itself most upon his mind was the painstaking care with which the American surgeon carries out his asepsis. He refers frequently to the absence of antiseptic solutions during the progress of an operation and the frequent use of rubber gloves by the operator. He was pleased to observe in the American hospitals the absence of the "radiant polypharmacy of the great American manufacturing chemists," which he says is much more in evidence in Britain than in America. He describes what he saw in each city which he visited and does not confine his remarks entirely to surgery, but touches on other things which interested him, such as the signs to be seen in street cars forbidding spitting upon the floor. He seems to have been impressed with the expensive interior furnishings of many of the American hospitals and the great facilities for sterilization and ventilation. He says that "the Americans are careful, painstaking, and successful rather than quick and showy surgeons," and that "they are really the premier aseptists of the world." He closes his remarks with advice to Englishmen to visit America and see the American surgeon at work in the American hospital.

We can but be pleased in reading so eulogistic an article by an Englishman holding such a prominent position in his profession.

The Lock-and-Key Quarantine Against Smallpox.—We have always maintained in these columns that there is something as archaic and ineffectual in a lock-and-key quarantine against smallpox as there is in a shot-gun quarantine against yellow fever. The latter we see and laugh at in some of our southern states, and the former we see and endure right here in Philadelphia. A few weeks ago a smallpox patient in the pre-eruptive stage was admitted into the wards of a large general hospital in this city. In twenty-four hours the eruption made its appearance, was promptly recognized, and the patient sent to the Municipal Hospital. But the ward was at once declared "in quarantine," and consequently all the patients in it, most of whom happened to be convalescent and ready for discharge, were obliged to linger and loaf away two weeks at the hospital's expense. During this time no new patients were admitted. Such a procedure is quite ridiculous. A good fumigation and a liberal application of vaccine virus, are the rational means at our disposal with which to combat smallpox. The lock and key are no better than the shot-gun.

The city authorities of Philadelphia deserve some credit for taking this matter in hand for investigation and action. The public needs education on this whole subject of quarantine; and the profession needs some, too. Many of our ideas on the subject are the evidences of prejudice and ignorance, rather than of scientific knowledge about the propagation of the infectious diseases. The lock-and-key quarantine is one of the most grotesque of all.

The Harvard Medical School.—Mr. Rockefeller's gift of $1,000,000 to Harvard, conditioned on an additional $500,000 being raised by other donors, follows close on Mr. Morgan's gift of an equal sum. This is princely munificence, and it is of a kind which not only the recipient but also the whole medical profession may be grateful for. Medical education in this country has not been endowed as fully as some other departments of learning, and this probably because our medical colleges have been regarded too much as mere technical schools which are in the nature of private business enterprises. It is one of the most encouraging signs of the times that the "university idea" is being made more and more to include the medical schools. This idea should be carefully fostered. Its realization not only redounds to the benefit of medical education and to the development of a fuller undergraduate life for the medical student, but it also invites to a larger endowment of our medical schools. It were much to be wished that every great university should have its well-equipped medical school and that every prosperous medical college should be allied with some great university. The association is of mutual benefit.

A Doctor in Search of a Sensation.—The motives which inspire men to advertise themselves are usually the same, but their methods are full of variety. The latest instance is that of the physician who offers himself as a sacrifice on the altar of science. He invites some medical college to experiment with him, to cut him up, or to inject St. Louis antitoxin under his skin. But his nerve is evidently not so great as his effrontery, for he knows full well that no medical school will knock that chip off his shoulder. It is as though some brave soul were to say: "Here I am; come and assassinate me." Perhaps he is a member of some secret society of anti-vivisectionists, and merely wishes to "bluff" the scientists and show that they have not the courage of their convictions. If he wants a real dying sensa-

tion we advise him to go over Niagara Falls in a barrel. Then no one will be hurt but himself.

Imitation is said to be the sincerest flattery; but we maintain that it is a greater compliment when one medical journal takes another medical journal's editorials, and publishes them bodily without giving due credit for them. We are always glad to have our editorials reproduced, just as we are glad sometimes to reproduce those of our contemporaries; but we think that literary honesty has come to stay in this world, and that the day has gone by in letters, when "they should take who have the power, and they should keep who can."

Current Comment.

THE LUNACY BILL IN NEW YORK.

This bill is ostensibly designed to centralize responsibility and economize the public money. It provides that the local board of managers of the State Hospitals for the Insane be abolished, and that these hospitals be placed under the immediate jurisdiction of the State Commission in Lunacy.

* * * * *

The care of the insane in our State Hospitals at the present time is the best that has ever been attained. The results of enlightened hygienic and medical treatment in the amelioration and care of mental disease are better than were ever known before. There has been no complaint, from those who are competent to judge, regarding the present system, and from no point of view is there any just reason for the change advocated, while every aspect of the bill stamps it as a bad measure.

* * * * * * * *

The political pressure which this bill makes it possible to bring to bear upon the superintendents will so handicap them in applying the latest-approved methods in caring for the inmates that the steady progress which has characterized the treatment during the past ten years will be converted into an equally rapid retrograde movement. The medical profession should stand solidly against any such legislation.—*The N. Y. State Journal of Medicine.*

THE ANACHRONISM OF THE CORONER'S INQUEST.

The fact that we inherited the coronership from our "mother country" is no reason why we should retain it, since it has been abused until it has been perverted to a mere money-making machine. The true remedy is its absolute abolition. This view has been held by some of our ablest lawyers and physicans these many years, but the people, though they have had to pay for costly and unneccessary inquests, have been so apathetic that they could not be roused to take the slightest interest in the matter. It has taken almost an earthquake, the recent terrible disaster in Park avenue, to call their attention to the facts that not only are the coroners useless, but that by their blustering interference they actually obstruct the investigation of serious accidents. At last public sentiment seems to be against retaining an officer whose actions are not only obstructive, but at times grotesque, and whose censures and recommendations are valueless for any future legal proceedings. The verdict of a coroner's jury is effective only as a provoker of mirth.—*Dr. H. R. Purdy in The N. Y. Medical Journal.*

BECQUEREL RAYS AND BACTERIA.

The radiation resembling the Röntgen rays in its properties, which is continuously emitted from certain substances has already been noticed several times in these columns. Its discoverer, M. Henri Becquerel, has already found that it is so injurious to the human skin that those substances that emit it powerfully must be enclosed in a leaden tube if they are to be carried about the person. Now it appears that it is also fatal to bacteria. Says the *Revue Scientifique* (January 11) "The bactericidal properties of sunlight have been known since they were demonstrated by Downes and Blunt in 1877. It is also well known that these properties are not shared equally by all parts of the spectrum, but that they belong specially to the blue, violet, and ultra-violet rays. The researches of Becquerel and Curie have shown that the radiations emitted by a radium apparatus (Becquerel rays) do not form a homogeneous whole, but that they are divided into two groups—those that pass easily through different media and those that can do so only with difficulty. The solar radiations and the Becquerel rays have thus a certain degree of similarity from the physical point of view. It therefore becomes allowable to ask whether the two groups of Becquerel rays, like the two solar groups, are also differentiated by their bactericidal properties. This question has been answered by E. Aschkinass and W. Caspari. The experiments of these investigators, which are described in the November number of the *Annalen der Physik*, show that the Becquerel rays have very pronounced bactericidal properties, and that these properties belong to the second group of radiations, that is to say to those that are easily absorbed by the media that they traverse. The rays therefore resemble those of the sun not only in their physical properties but also in their action on microorganisms."

—Translation made for *The Literary Digest.*

AN AQUEOUS PLACEBO.

A famous French physician of the Second Empire is said to have given the following prescription to a hypochondriac patient who worried him:

	Grams.
Aqua fontis	100
Illa repetita	40
Eadem stillata	12
Hydrogeni protoxyd.	0.32
Nil aliud	1.25

One drop thrice daily. This elixir, it is said, cured a large number of neurotics about the Court and in Parisian society. But it got the doctor into trouble at last through the indiscretion of a pharmacist. A *grande dame de par le monde*, as Brantôme would have called her, who had taken it for years with blind faith and unfailing success and recommended it to her friends as an infallible remedy for most human ailments, in an evil hour allowed herself to give way to the curiosity which proved the ruin of Eve. Consumed with eagerness to know the secret of the composition of the wonderful panacea, she submitted the document containing the mysterious formula to all the initiated whom she came across. At last she found one who revealed the fatal secret. What explanation the physician attempted is not recorded but there can be little doubt that the outraged lady explained her attitude in language more picturesque than polite.

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Reviews.

Atlas and Principles of Bacteriology and Text-Book of Special Bacteriologic Diagnosis. By Prof. Dr. K. B. Lehmann, Director of the Hygienic Institute in Würzburg and R. O. Neumann, Dr. Phil. and Med. Assistant in the Hygienic Institute in Würzburg. Authorized Translation From the Second Enlarged and Revised German Edition. Edited by George H. Weaver, M. D., Assistant Professor of Pathology, Rush Medical College, Chicago. W. B. Saunders and Comp., Philadelphia. Price for both volumes, $7.

The American bacteriologist who is unfamiliar with the German tongue will surely welcome the English transla-

tion of this standard work which has already been translated into several of the European languages. The work consists of 2 separate parts. Part 1 comprises a most beautifully executed atlas of the more important bacteria, their morphology and cultural characteristics being accurately represented. Part II contains the text, also illustrated. Both parts represent a happy union of science and art which fills one with admiration. The scientific precision with which the artistic work was done renders the illustrations far superior to photographs, while in the text the authors succeeded in condensing all the essentials of general and special bacteriology without taking up very much space. Indeed, the text is remarkably free from padding or useless verbosity, and may well serve as a pattern for some of our American authors. Bacteriology is fast outgrowing its narrow quarters among the medical sciences and is becoming a branch of botany, the pathogenic bacteria, or medical bacteriology, bearing the same relation to the latter as does materia medica. This being the case, there is no longer any reason why the medical bacteriologist should allow himself all sorts of liberties in the description of bacteria, disregarding, as he often does, the rules and principles of botany. It is owing to such liberties that the descriptions of numerous bacteria by various observers are hardly worth the paper they are printed on and are carried along as "dead stock." A description, to serve its legitimate purpose, must be full enough to permit of accurate identification. An incomplete description, on the other hand, only leads to confusion and tends to multiply unnecessarily "varieties" and "species.' The almost endless task of redescribing many of the incompletely described bacteria has been attempted by the authors with a success which greatly enhances the value of the book.

The following passage is worth quoting: "In every species of bacterium which is closely studied, there are found closely related forms that not rarely represent to the unprejudiced unbroken links to the other species. I will recall only the discoveries which have been made regarding the streptococci, the colon group, the diphtheria organisms, and the relatives of the cause of tuberculosis which so long stood almost entirely isolated. With this condition of things I have sought to apply to bacteria, with the greatest possible care, the principles which have been found satisfactory with the pleomorphic phanerogams, with which I worked for years. With the principal varieties, which were completely described, we have grouped related varieties without assigning to the latter the rank of varieties. . . We certainly believe it belongs to the future to convert varieties of bacteria into others, in a manner scarcely to be imagined to-day. The forms of the micrococcus pyogenes are convertible into each other; the Bacterium pyocyaneum and Bacterium fluorescens can, indeed, almost certainly be converted into each other; and similar statements regarding typhus and coli, diphtheria and pseudo-diphtheria, etc., are always still looked upon with scepticism, but the possibility, yes, even the probability, can scarcely be contested any more.

In spite of all the things which make a rational division and classification of bacteria more than ever difficult, we take the stand that it is absolutely essential to strive after it and that also for medical men the division of bacteria into pathogenic and non-pathogenic, as is still done in text books, has failed absolutely. We can understand and know the pathogenic varieties only if we study simultaneously the non-pathogenic, from which the former have once originated and still always originate.

The doctrine of the absolute constancy of bacteria which for ten years was almost a dogma is now scarcely at all seriously advocated."

We shall wait for a Darwin to undertake the task of bringing order into the chaos of bacterial classification, and we would suggest to him to take up the study of the "Variations of Bacteria under Cultivation." If Evolution is true in all other forms of organic life, there is certainly no reason why it should not be equally true with regards to bacteria.

The medical bacteriologist cannot restrict himself to the several pathogenic organisms for the simple reason that in identifying a new organism he must look through the entire list of saprophytes of which it may be only a related variety. Failing to do this, he will introduce a new "species" and render the chaos still more chaotic. Now, with Lehmann and Neumann's book in our possession, identication of new organisms can be done with comparative ease, owing to the excellent descriptions, comprehensive classification and numerous tables and keys, the latter being quitè ingenious.

The translation has been faithfully made, but owing no doubt to the well-known difficulty of translating German, it is in places somewhat lagging in English. As an example, we will refer to the expression "the relatives of the cause of tuberculosis which so long stood almost entirely isolated." Such instances could be easily multiplied. There is no reason why a scientific translation should not be rendered in good English, and we would suggest that in the future editions, which will no doubt follow, the text should be carefully reviewed and corrected.

In conclusion, we desire to call the attention of teachers to this book as the one most appropriate for the use of advanced medical students. [A. R.]

Human Physiology. Prepared with special reference to Students of Medicine, by Joseph Howard Raymond, A. M., M. D., Professor of Physiology and Hygiene in the Long Island College Hospital, and Director of Physiology in Hoagland Labortory, New York City. Second Edition, Entirely Rewritten and Greatly Enlyarged. Handsome octavo volume of 668 pages, 443 illustrations, 12 of them in colors, and 4 full-page lithographic plates. Philadelphia and London, W. B. Saunders & Company, 1901. Cloth, $3.50 net.

After a number of years the very popular elementary physiology of Professor Raymond has reappeared entirely rewritten, enlarged and in a new form. These changes in the scope and character of the work have been necessitated by the vast additions to our knowledge of all physiological processes in recent years. The long experience which Professor Raymond has had as a teacher and writer has enabled him to select in an agreeable and assimilable form the essential facts of physiology. Among the subjects which have received special consideration and which have in recent years been thoroughly recast by the progress of experimental physiology, may be mentioned deglutition as interpreted by the experiments of Meltzer and Falk and by Cannon by means of the Röntgen rays; the more recent views as to the nature of fat digestion and the mechanism by which the products are absorbed; the origin of uric acid and its relation to tissue nucleins and purin bases of ingested foods, internal secretion, thyroid treatment, etc.

The behavior of the larynx in voice production, as shown by the photographic results of Professor French, are fully discussed and illustrated. Throughout the book there are many evidences that the author has endeavored to introduce the more important results of competent investigators. The illustrations, though not new or original, are very good and serve to elucidate the text. [A. P. B.]

Digest of Criticism of the United States Pharmacopoeia; Seventh Decennial Revision (1890). Published by the Committee of Revision of the Pharmacopoeia of the United States of America (1900-1910). Part III. Philadelphia, 1901.

This Digest contains the criticisms of the Pharmacopoeia (the seventh decennial revision of 1890) and is the third part which has been issued. The first part contained criticisms to July 1, 1896; and Part II abstracts of accessible literature to January 1st, 1898. Part III is designed to record criticisms found up to May 15th, 1901. The late Dr. Charles Rice conceived the idea of gathering together all available criticism in one volume. Shortly before his death, in May of last year, he requested Professor Henry Kraemer, of Philadelphia, to take charge of the preparation of the present volume. The work was done under the direction of the latter by Florence Yaple of Philadelphia. This part contains numerous criticisms on the British Pharmacopoeia of 1898 and the Fourth Edition of the German Pharmacopoeia. This book may be obtained by persons interested in the work of revision by sending six cents for postage to Dr. Remington, the chairman of the Revision Committee. [T. L. C.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

University of Pennsylvania.—It has just been announced that Dr. George E. De Schweinitz, professor of ophthalmology at Jefferson Medical College, has been appointed professor of ophthalmology in the Medical Department of the University of Pennsylvania, his lectures to begin next fall.

Jefferson Hospital.—In the early spring ground will be broken for the new Jefferson Hospital, which will occupy almost the entire square, embracing the site of the present hospital on Sansom street, extending to Tenth street, and down Tenth street to the Jefferson Medical College building. The main building, seven stories high, will front on Tenth street, and behind this will be the Da Costa Memorial Clinical Laboratory, three stories high. Behind the laboratory, fronting on Sansom street, where the present hospital stands, will be the nurses' home and the maternity department. While the present hospital accommodates 125 patients, the new structure will afford ample space for more than twice that number.

Society Meetings Next Week.—The following sections of the College of Physicians, Philadelphia, will hold meetings next week, at 8.15 P. M.: Tuesday evening, February 18, Section on Ophthalmology; Wednesday evening, February 19, Section on Otology; and Thursday evening, February 20, Section on Gynecology.

Contagious Diseases in Philadelphia.—The Board of Health returns for the week ending February 8th show 110 new cases of smallpox with 20 deaths, and 254 new cases of typhoid fever with 13 deaths. 82 of the latter were reported from West Philadelphia. This shows a decided increase in both smallpox and typhoid, while diphtheria and scarlet fever show a decrease of about one-quarter their former number. City Councils have passed a resolution authorizing the Director of the Department of Public Safety to pay extra compensation to such persons as he might designate, for expert or other services rendered in the work of preventing an epidemic of smallpox in the city of Philadelphia. $90,000 has already been appropriated, while the Councils finance committee recommends the additional appropriation of $225,000. It was stated that this smallpox outbreak may cost the city of Philadelphia about half a million dollars. The commission appointed to consider the advisability of discontinuing the system of quarantine in case of smallpox met February 10. It was decided to reduce the length of the period of quarantine. As soon as a case of smallpox has been hurried to the Municipal Hospital, every inmate of the house has been vaccinated and the house has been thoroughly disinfected, the quarantine will be raised.

Northwestern University Medical School, Chicago.—At the opening of the new amphitheatre in Mercy Hospital, Chicago, February 12, Dr. John B. Deaver, of Philadelphia, delivered an address before the Chicago Medical Society. The new amphitheatre, which cost $25,000, was built at the expense of the Northwestern University Medical School. Dr. Deaver also gave a surgical clinic in the new amphitheatre.

Smallpox in Pennsylvania.—In Pittsburg the Municipal Hospital contains only six cases of smallpox, but in the boroughs and townships adjacent to that city twenty-five cases have been reported within the last few weeks. Most of the victims are negroes. Vaccination is general and little dread is entertained of the disease. Other cases are reported in and near Mahanoy City, where an emergency hospital is being constructed. The latest news from Plymouth reports the slaughter of over 60 cats, while it is expected that some 2000 dogs and cats will be killed during the week. It is supposed that these domestic animals have caused this widespread epidemic.

Bucks County Medical Society.—The winter meeting of the Bucks County Medical Society was held at Newtown, February 5. A number of interesting papers were read.

Philadelphia County Medical Society.—At the meeting of the North Branch of the Philadelphia County Medical Society, to be held February 20, Mr. J. W. Hill, the engineer in charge of the filtration of Philadelphia's water, will speak upon the results of a year's experience in Philadelphia. The Director of Public Works and Drs. J. M. Anders and Henry Leffman will take part in the discussion.

NEW YORK.

The Cure of Consumptives.—The report of the committee appointed by the New York Academy of Medicine at the request of the Charities Department concerning the isolation of the consumptive patients in the city hospitals has been completed. The committee, Drs. Henry P. Loomis, Edward G. Janeway and Alfred Meyer, recommended that Blackwell's Island be used only for the care of advanced cases of consumption, and that the buildings inspected by them on the island be adapted for the care of such patients. In addition to the 120 patients removed a week ago to the newly arranged quarters on the Island, there are consumptive wards in the almshouse and the Metropolitan Hospital. The patients removed were taken from Bellevue, the City Hospital and the Metropolitan Hospital. There is room for about eighty more patients in the new building. The committee recommends that the Island hospital be reserved for advanced cases. It has been stated that there are now 25,000 consumptives in New York, many of them too poor to afford treatment, and there is great need, according to experts, for an institution where those only slightly affected can be treated. It is thought that such an institution will probably be the outcome of the present movement.

The Extraordinarily Cosmopolitan Character of New York.—The foreign born population includes 1,229,158 from Europe, of whom 275,102 are from Ireland, 322,343 from Germany, 145,433 from Italy and 155,201 from Russia. There are 6077 Chinese, 311 Japanese, 1401 Turks and 1175 other Asiatics, 32,873 Poles, 31,516 Hungarians, 15,055 Bohemians, 10,499 Roumanians, 1491 Spaniards, 14,755 French, 1221 Belgians, 2608 Dutch, 28,320 Swedes, 5261 Danes, 21,924 Canadians and 71,427 Austrians. It is no wonder that the city is difficult to govern, to give satisfaction to so many different people of different races, religions and customs.

Smallpox in New York.—Though smallpox seems prevalent all over the world, New York City has comparatively few cases, there being at present but 90 smallpox cases on North Brother Island. Citizens are being vaccinated and revaccinated in great numbers. All patients admitted to Bellevue Hospital must be vaccinated before admission. It is reported that a student in the Medical Department of the University of New York contracted the disease at a clinic which he attended two weeks ago. The entire faculty and students have been vaccinated since. A case of smallpox of the most virulent form has broken out in the Rockland county jail at New City. There are at present 100 prisoners in the jail, which is quarantined.

Death of Dr. Munde.—Dr. Paul F. Munde, the well-known gynecologist, died of heart disease February 7, at his home in New York City. He was born in Dresden, Saxony, September 7, 1846. When three years old, his parents came to this country, settling in Florence, Mass. In 1866 he graduated at the Harvard Medical School and served later through the Franco-Prussian War, in the Bavarian Army. In 1874 Dr. Munde became editor of the *American Journal of Obstetrics*, which position he held until 1893. He was one of the founders of the American Gynecological Society, of which he was vice-president in 1884 and president in 1898. From 1886 to 1888 he was president of the New York Obstetrical Society, and in 1887 was elected vice-president of the British Gynecological Society. In 1897 Dr. Munde received the degree of LL. D. from Darmouth. He was a member of the German Gynecological Society, corresponding member of the Obstetrical Societies of Philadelphia, Leipsic, and Edinburgh, a member of the Medical Society of New York, and Fellow of the New York Academy of Medicine. He was probably the best known of American gynecologists, and was always regarded as a wise and conservative operator.

NEW ENGLAND.

Pneumonia in Groton, Mass.—An epidemic of pneumonia has broken out in the boys' school at Groton. One boy was taken ill with the disease complicated with meningitis, and died within 24 hours. Three others were taken suddenly ill in the latter part of last week, and one of them the President's son, is in a critical

condition. It is reported that he had double pneumonia, but is improving rapidly. The rest of the boys have been sent home. Epidemic pneumonia has occurred in this part of Massachusetts during the last three winters.

Medford Detention Hospital Burned.—The Medford Detention Hospital was destroyed by fire February 2, involving a total loss of about $5000. The four cases of smallpox in the hospital at the time escaped without injury. They were all convalescent. They were removed to the city pumping station nearby. All the firemen who were at the scene of the fire were disinfected before being allowed to go home.

Smallpox in Boston.—Boston at present has 150 cases of smallpox, a slight increase in the number of cases reported being noted during the last week. The disease, however, is not nearly so prevalent as it was a few months ago. Since last summer about 500 cases have occurred with only 75 deaths. An attempt was made last week by those not believing in vaccination to have the law ordering compulsory vaccination repealed. This, however, was not done. The number of cases reported for the week ending February 8 was only 54, with seven deaths. Chelsea, where but three cases were found, has spent over $2000 in caring for the patients, vaccination, disinfection, etc. During the time in which the three patients were under treatment, 1771 people were vaccinated, and 328 houses were fumigated. More cases have been reported in Malden, Brookline, Revere and Lynn. New cases have appeared in Woonsocket, R. I., and Newfields, N. H. A case has appeared in the county jail at Worcester, where 280 prisoners are confined. The jail is quarantined.

Scarlet Fever in Jail.—What was supposed at first to be a case of smallpox was recently pronounced scarlet fever by the health officer at Newburyport. The patient, a prisoner in the Newburyport jail, has been isolated, and the jail will be disinfected at once.

A Physician with Smallpox.—Dr. Emmanuel Pfeiffer, the leader in the fight against vaccination, has contracted smallpox. In spite of the fact that he had not been vaccinated, and in order to prove that he was immune to smallpox, Dr. Pfeiffer, as a physician, was allowed to visit the smallpox patients in the isolation hospital on Gallups Island. On his return, two weeks ago, he announced that he had been constantly exposed, that he had not been vaccinated for 65 years, and that he had no fear of contracting smallpox. He was found a few days ago suffering with a severe attack of confluent smallpox in a house at Bedford, without medical attendance. There seems little hope for his recovery.

Greenwich Isolation Hospital.—R. M. Bruce has purchased a 15-acre plot from the Putnam Cemetery Association on which an isolation hospital for the treatment of patients with contagious diseases will soon be erected. This is in the prettiest part of Greenwich, Conn.

SOUTHERN STATES.

A Discussion on Tuberculosis in Baltimore.—At a public meeting held in Baltimore January 28, under the combined auspices of the Maryland Public Health Association, the Medical and Chirurgical Faculty of Johns Hopkins University, and the Laennec Society, Dr. V. Y. Bowditch, of Boston, physician to the Massachusetts State Sanatorium for Consumptives at Rutland, and medical director of the Sharon Sanatorium, was the guest of honor. Dr. William Osler, president of the Laennec Society, an organization exclusively for the study of consumption, stated that the city of Baltimore was doing absolutely nothing for the care of its tubercular patients. He proposed that all cases be reported to the Health Department, which should send agents for a careful inspection of the premises. Dr. Bowditch outlined the good results achieved in both of the Massachusetts institutions with which he was connected. The patients who return home cured or improved teach the rules of hygiene, learned by experience, in their homes and often to whole communities. Dr. John S. Fulton, secretary of the State Board of Health, said that as consumption especially attacked the poor, municipal aid in treating it correctly was all the more necessary.

A Resolution granting permission to Dr. Eugene Wasdin and Dr. H. D. Goddings U. S. M. H. S. to accept the decorations of Saints Maurizio and Lazzaro tendered them by the Italian Government, was passed in the Senate, January 16, and in the House, January 27.

A Permanent Census Bureau.—The bill which has passed the House of Representatives, creating a permanent Census Bureau, provides work in the section of Vital Statistics to keep the skilled clerks busy from July 1, 1902, until the latter part of 1908, when preparations for the 13th census begin. In addition to the annual report upon births and deaths, the division of vital statistics is to prepare a special report upon the deaf and dumb, another upon the insane and feeble-minded, another upon criminals and juvenile delinquents, and still another upon pauperism and benevolence, these reports to appear each year until completed.

Scarlet Fever in Maryland.—A number of cases of malignant scarlet fever were reported last week in Hampstead, Carroll county. One death has already occurred. More serious is the epidemic in Morgantown, W. Va., where 30 children are already affected. Churches, Sunday schools and the public schools have been closed..

The Improvement of Market Milk.—Under the plan proposed by the Agricultural Department, Washington, D. C., a milk commission could be formed in any city or town, by a few responsible disinterested persons; and this commission should issue a statement briefly mentioning the conditions necessary upon a farm where sanitary milk is produced. Special certificates would then be issued to dairymen who conduct their dairies in the prescribed manner, and the names of these dairymen could be published from time to time in the daily papers. Thus people would easily know if they are getting milk from a dairy that is approved by the commission, and there need be no fear that the milk is produced or handled in an unsanitary manner.

Smallpox in Wilmington, Del.—While Wilmington has but a few cases of smallpox, some new cases are being reported daily, and the Board of Health fears an epidemic in the city.

The Medical Inspection of Schools.—The Board of Education and the Commissioners for the District of Columbia have presented to the District Committee in Congress a bill providing for a daily medical inspection of schools. This measure has been strongly endorsed by the various Citizen's Associations of the District and will undoubtedly be presented for the consideration of Congress.

Army Surgeons in Demand.—There are now 63 vacancies in the medical department of the army, the largest number in the history of the corps. The next examination will be held in Washington, D. C., April 7. About half the present number of army doctors are maintained in the Philippines.

A Bill for a Tuberculosis Hospital.—Senator Brewington has introduced in the Maryland Senate a bill for the establishment of a State commission on the subject of a hospital for tuberculosis patients. The Commission is to consist of three physicians and two laymen, who are to serve without pay. The sum of $6000 is, however, appropriated by the bill for the expenses of the members of the committee and to pay for the collection of such information and statistics as may be necessary.

Smallpox in Arkansas.—L. P. Gibson, acting assistant surgeon, U. S. M. H. S., under the date of January 20, reports the presence of 17 cases, with one death, in the city of Little Rock. There are also a number of cases in Pulaski County, in the vicinity of the city.

Reciprocity in Medicine.—State Senator Wilson has introduced a bill in the Maryland Legislature to allow practitioners of medicine in the District of Columbia to practise in Maryland without a special examination before the State Board, these in Maryland to be allowed to do the same in the District. This is designed to prevent considerable inconvenience to physicians and their patients living near the boundary.

Dr. Rixey Confirmed—February 5, the Senate confirmed the nomination of Presley M. Rixey, United States Navy, to be chief of the Bureau of Medicine and Surgery in the navy, with the rank of Rear Admiral.

Baltimore Municipal Hospital Bill.—The Baltimore delegation on February 4 adopted the amendment to the Broening Municipal Hospital bill, which leaves the matter of selecting a site subject to the approval or disapproval of the City Council, whose action shall be final. The bill was

reported in this shape in the House and was given its first reading. The bill, as it now stands, practically leaves the whole matter to the City Council, and is looked upon as a victory for the Mayor. This was passed February 6.

Physicians Want a New Law.—The physicians of Howard county, Md., are desirous of having the State Legislature pass a law providing for a health officer in each election district in the county, and have asked the assistance of the County Commissioners in obtaining the passage of the new law.

More Human Bodies Wanted.—Washington medical institutions find the supply of human bodies for dissection inadequate, and a bill is now before Congress "for the promotion of anatomical science and to prevent the desecration of graves." The Health Department has submitted a favorable report to the District Commissioners and it will be submitted to the Senate Committee.

Emergency Hospital in Annapolis.—A meeting was held February 9, at which it was decided to construct an emergency hospital at Annapolis. The number of accident cases which have lately occurred make it necessary that a local hospital be established.

Erysipelas in Marlboro, Md.—A malignant form of erysipelas has broken out in upper Marlboro. A number of cases have already occurred, mainly in elderly people. Dr. John S. Fulton, of the State Board of Health, has been requested to visit the locality and to arrange a quarantine.

MISCELLANY.

12,122 Cases of Smallpox.—Reports received by the Marine Hospital Service for the past week show that there are now 12,122 cases of smallpox in the United States, as compared with 4,359, at the same period in 1901. The number of deaths from smallpox for the week was 290, as compared with 55 for the same week of last year.

Health in the Philippines.—Lieut. Col. B. F. Pope, chief surgeon of the Division of the Philippines has sent a report to Surgeon General Sternberg, concerning the health of the soldiers for the month ending December 15th. The total number of deaths was 77, the same as for the preceding month. 11 soldiers died of wounds, and 15 were drowned. There were 2437 cases of sickness, a percentage of 6.21, since the strength of the command was 39,040. There was a decrease in the number of cases of typhoid and malaria and an increase in intestinal and gastric diseases. Col. Pope states that the date of incidence of the bubonic plague, which had reappeared, is about three weeks earlier than in the two previous seasons, and the large proportion of plague rats, nearly 2 per cent. of the total number collected, render many cases of plague probable before next November. He considers this early reappearance most unfavorable, when the fact that the weather has continued wet and cold is considered.

A Leprosy Cure Which Failed.—Reports have come from Honolulu of experiments with the Venezuelan plant tuatua, some of which were sent there some time ago by the United States Government. The results at Honolulu were not satisfactory. The plant is alleged to have cured leprosy in Tahiti.

Desert Climate for Consumptives.—R. M. Phelps summarizes the main features of this form of climatic treatment as living on unirrigated ground, in a tent, outside the limits of any city. He is an enthusiastic advocate of tenting, with rest and exercise. Changes are common to all dry climates, most serious in the two or three winter months. Some complaints arise from patients who are taking the "desert" treatment, of dampness, of no effect from the climate, of catching cold, and of homesickness. The remedies for the latter are occupation to fill up the time, the presence of one's family, home life, and means enough to avoid financial worry. The majority cannot command all these elements.—*Northwestern Lancet.*

National Home for Lepers.—The bill introduced in Congress by Senator Platt, of New York, for the establishment of a national home for lepers contains very stringent regulations concerning those afflicted with the malady. It provides that the lepers of Hawaii and the Philippines and also of Cuba shall be admitted to the institution. It sets aside a square mile of public land for a national leper home, and appropriates $50,000 for proper buildings. The bill also holds State Boards of Health responsible for the enforcement of regulations for the isolation of cases of leprosy which are not sent to the national home. These provide that the leper shall not reside in a public boarding house or hotel, or eat at a public restaurant; his clothes are not to be washed at a public laundry; he must use and wash his own eating utensils, sleep alone, unless married, and refrain from kissing any other member of his family. The bill prohibits the entrance into the United States of immigrants from countries where leprosy exists, unless accompanied by certificates showing them to be free from the malady. The president is to appoint a commissioner of leprosy to have charge of all matters pertaining to the enforcement of the law. This bill has been referred to the Committee on Public Health and Quarantine. A petition in the Kanaka language, signed by the 378 lepers belonging to the leper colony of Molokai, in the Hawaiian Islands, has been presented to the Senate by Mr. Foraker. It is a protest against the bill. The lepers say that they prefer to remain under the control of the territorial government.

The Height of the Tallest Men.—Turner, the naturalist, declared that he once saw, upon the coast of Brazil, a race of gigantic savages, one of whom was 12 feet in height. M. Thevet, of France, in his description of America, published at Paris in 1575, asserted that he saw and measured the skeleton of a South American which was 11 feet 2 inches in length. The Chinese are said to claim that in the last century there were men in their country who measured 15 feet in height. Josephus mentioned the case of a Jew who was 10 feet 2 inches in height. Pliny tells of an Arabian giant, Gabara, 9 feet 9 inches, the tallest man in the days of Claudius. John Middletown, born at Hale, Lancashire, in the time of James I., was 9 feet 3 inches in height, his hand was 17 inches long and 8½ inches broad, says Dr. Platt in his "*History of Staffordshire.*" The Irish giant, Murphy, contemporary with O'Brien, was 8 feet 10 inches. A skeleton in the Museum of Trinity College, Dublin, is 8 feet 6 inches in height, and that of Charles Byrne, in the Museum of the College of Surgeons, London, is 8 feet 4 inches. The tallest living man is Chang-tu-Sing, the Chinese giant. His height is 7 feet 3 inches.—*Medical Examiner and Practitioner.*

The Density of Population in foreign countries has recently been computed. Great Britain takes the lead with 132 inhabitants per square kilometer, which is equal to 0.3861 square mile; then come Japan, 114.4; Italy, 106.6; the German Empire, 104.2; Austria, 87; Hungary, 59.6; France, 72.2; Spain, 35.9; the United States, 8.4; and Russia, 5.9.

Obituary.—Dr. S. Seabury Jones, at New York City, January 21, aged 55 years.—Dr. Ora S. Pease, at Old Town, Me., January 18, aged 55 years.—Dr. William Hannibal McClure, at Westminster, S. C., January 19, aged 52 years.—Dr. Benjamin D. Blackstone, at Martinsville, Ind., January 23, aged 77 years.—Dr. Edmund R. Hebrank, at Adamsburg, Pa., January 23, aged 48 years.—Dr. George H. Stone, at Albany, N. Y., January 23, aged 28 years.—Dr. Joseph Morris, at Columbus Grove, Ohio, January 24, aged 63 years.—Dr. Benjamin Franklin Pope, at DuQuoin, Ill., January 24, aged 76 years.—Dr. William R. Wells, at Petaluma, Cal., January 24, aged 88 years.—Dr. Nathan M. Babad, at Los Angeles, Cal., January 21, aged 29 years.—Dr. John Wesley Martin, at Brookhaven, Miss., January 25, aged 81 years.—Dr. D. M. Anderson, at Brownwood, Texas, January 23, aged 71 years.—Dr. Howard B. Martin, at Pasadena, Cal., February 3, aged 39 years.—Dr. J. S. Jennings, at Baraboo, Wis., February 3, aged 71 years.—Dr. Samuel S. Engle, at Ephrata, Pa., February 3, aged 69 years.—Dr. Joseph Wilkins, at Baltimore, Md., February 5, aged 79 years.—Dr. Walton Saunders, at San Francisco, Cal., February 2.—Dr. E. H. Plank, at Christiana, Pa., February 6, aged 50 years.—Dr. Adam Trau, at Philadelphia, Pa., February 7, aged 62 years.—Dr. Edwin Wollaston Pyle, at Jersey City, N. J., February 7, aged 53 years.—Dr. W. Murray Weidman, at Reading, Pa., February 8, aged 66 years.—Dr. T. S. Traxoll, at Lilly, Pa., February 8.—Dr. Henry Corson, at Forest City, Pa., February 6, aged 108 years.—Dr. Martin L. Herr, at Lancaster, Pa., February 8, aged 63 years.—Dr. Paul F. Munde, at New York City, February 7, aged 56 years.—Dr. J. A. Baird, at Dunlo, Pa., February 10, aged 52 years.

GREAT BRITAIN, ETC.

The Astley Cooper Prize.—According to the will of the late Sir Astley Cooper, $1500 will be given for the best essay on the "Pathology of Carcinoma and the Distribution and Frequency of the Secondary Deposits, Corresponding to the Various Primary Growths," written by a physician alone. The essay, in English, addressed to the Physicians and Surgeons, Guy's Hospital, London, must be sent in before January 1, 1904. Each essay should be signed with a motto, and a sealed envelope should accompany it bearing the motto outside and the name and address of the writer inside. Further details can be obtained from Dr. Newton Pitt, Guy's Hospital, London.

Mercer's Hospital, Dublin.—The new children's ward of the Mercer's Hospital was formally opened January 11. A reception was held and a number of speeches were made.

Smallpox in England.—The epidemic of smallpox at present shows no signs of abatement in London, as many as 71 cases being reported in one day. Epidemics have also appeared in Sittingbourne, Maidstone, Glasgow, Canterbury, Barrow and other isolated towns. Bristol, Salford and Dublin are taking every possible precaution to prevent the spread of the disease. Insurance companies are very busy insuring against smallpox, as many as 600 policies being taken out in one day. The Warren Line steamer *Kansas*, which reached Liverpool from Boston, February 5, landed 14 cases of smallpox. The cases are equally divided among cattlemen and crew. The London County Council on January 28 made an order for the notification of chickenpox on account of the prevalence of smallpox. Liverpool reports but 15 cases of smallpox, all of which are doing well.

New Medical Officer of the London School Board.—Dr. James Kerr, a graduate of Cambridge University, former medical officer of the Bradford School Board in charge of something like 40,000 children, has been appointed medical superintendent of the London School Board out of 148 candidates, taking the place of Dr. W. R. Smith, who recently resigned.

Juvenile Smoking in the Isle of Man.—A bill is soon to be introduced in the Manx Legislature providing that those who sell tobacco to minors under 18 shall be liable to a fine not exceeding $50 or to imprisonment not exceeding one month, or to both while minors under 18 found smoking are subject to a fine not exceeding $10, to imprisonment not exceeding a week, or to whipping.

The Inoculation of Cancer.—From Calcutta comes the news that Dr. Rost, of the Indian Medical Service, of the successful cultivation of cancer microorganisms, has just published in the *Indian Medical Gazette* an account with a culture of which a guinea pig has been inoculated.

Notes.—Dr. Symes Thompson, lecturing at Gresham College, cited the case of a woman who had had smallpox seven times, and died in the last attack.—People live long in the Fen district. In the town of Whittlesey, Cambridgeshire, out of 100 deaths last year, half were over fifty years of age. As many as twenty-three exceeded seventy-five years of age, their average being eighty-two. The district is remarkable for its longevity.—In 1841 Ireland's population was 251 to the square mile, now it is 144 only. In Gloucestershire 850 parents have refused to have their children vaccinated, and have not taken out exemption papers.

Obituary.—Dr. Metcalfe Johnson, a graduate of Guy's Hospital, surgeon-major in the Militia Medical Department, died in Lancaster January 18, aged 79 years.—Dr. John Manley died January 21, in West Bromwich, in the 77th year of his age.—Dr. Edmund Gwynn, a graduate of St. Andrews in 1862, late medical officer of health of Hampstead, died January 27, while traveling in Egypt.—The death of Dr. David Ramsey, a graduate of the University of Glasgow, occurred at Raunds, January 6.—Dr. Walter Lawrence, a graduate of Marischal College, Fleet Surgeon, R. N., retired, died January 18, at his residence in Aberdeen.—Dr. R. O. McIntyre died recently in Killiney, Ireland, aged 86. He graduated in medicine in 1842 at Dublin University, but retired from the practice of medicine ten years ago.—Dr. Alexander McDonald, a graduate of the University of Edinburgh, died at his home in Kirkoswald, Cumberland, January 6, aged 54.—Surgeon General William Nash, died January 19, of pneumonia, aged 62 years. He entered the Army in 1873, and, before his retirement, held the appointment of Principal Medical Officer at Netley.

CONTINENTAL EUROPE.

The French Regulations in Epidemics.—The declaration of each case of epidemic disease must be insisted upon, and disinfection must at once be resorted to. First of all, see that the water supply is uncontaminated. Statistical reports must be made regularly. Keep the statistics of tuberculosis separately. Keep the statistics of alcoholism separately. Syphilitic diseases are to have a separate chapter also. Hygiene must be taught in schools. Notify the families of patients discharged from hospitals, when they are discharged not cured.

Medical Students' Congress at Liege, Belgium.—A congress organized by the association of medical students of Belgium was held at Liege on January 26. The following questions were discussed: A special diploma for specialists, compulsory elementary clinical teaching of all special branches, uniformity of medical students in Belgian universities, and a resolution in favor of the free practice of medicine for practitioners in different countries.

German Universities.—From the statistics recently published in Germany, the total number of medical students in the 20 universities of Germany shows a decrease of 600 over the figures of last year. Berlin and Munich, both of which have over 1999 medical students, show a falling off of over 50 each, as do Leipsic and Wurzburg, the next largest in size. Several of the small universities show a slight increase, such as Bonn, Breslau, Freiburg, Giessen, Heidelberg and Rostock. The other smaller universities show a decrease in the number of medical students.

Illness of Professor Duclaux.—Professor Duclaux, director of the Pasteur Institute, Paris, had an attack of hemiplegia two weeks ago. While lecturing he became dizzy, hastily sat down, and feeling himself growing worse, wrote on a piece of paper the word "hemiplegia." He then became unconscious and was taken home. After lying in a critical condition for a number of days, he is now improving.

Another Example of Siamese Twins.—The Hindoo twins, Radica and Dordica, united in a manner similar to the Siamese twins, who have been exhibited throughout the world, were separated by operation, February 9, in Paris, at the clinic of Prof. Doyen. The operation lasted 20 minutes and was seemingly successful. The operation was undertaken because one of the twins, who are as yet infants, had shown great weakness following severe stomatitis. Both children are said to be tubercular.

Great Infant Mortality.—Medical reports state that there is an alarming death-rate among infants throughout Russia. In many places 40 per cent., 50 per cent., and even more, of the children die in their first year. This great mortality is attributed mainly to ignorance and neglect. The mothers work in the fields while their little ones are left alone. In one Government the mortality of infants among Christians is said to be 242.1 per 1000, while the death-rate among children of Mohammedan parents is 140.4 per 1000. The Mohammedan law compels the mother to nurse her child.

Funerals in Paris.—Paris undertakers are lamenting the decrease in the deaths in Paris during 1901, when 1500 less people died than in 1900, and the tendency to cheap funerals has caused them great losses. In Paris the cheapest funeral costs $2.75, but as much as $60,000 has been spent in being buried. That of the late Emperor of Brazil cost $16,000, while the bill for the funeral expenses of the late Mr. Mackey amounted to $40,000. This included lodging the bier in the vault of St. Augustin church for 6 weeks in a special chapel, with torches burning and Sisters in attendance day and night, and the fitting up of another chapel on the steamer *La Touraine* on which the body was brought to America.—*London Daily Mail.*

Obituary.—On January 19, Dr. Edward Cramer, professor of hygiene in the University of Heidelberg, died suddenly in Aachen, aged 56 years.—Dr. G. Garibaldi, professor of surgical anatomy and operative surgery, died recently in Genoa.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

January 25, 1902.

1. Notes on a Visit to some American Hospitals. G. B. FERGUSON.
2. The Operative Treatment of Lymphangiectasis of Filarial Origin. J. MAITLAND.
3. Observations on Human Filariasis in Trinidad, W. I. G. A. VINCENT.
4. On the Causal Relationship Between Ground-itch, or "Pani-ghao" and the Presence of the Larvæ of the Ankylostoma Duodenale in the Soil. CHARLES A. BENTLEY.
5. Malarial Fevers in St. Lucia, W. I. ST. GEORGE GRAY AND GEORGE C. LOW.
6. Leprosy and Congenital Symmetrical Keratodermia. GEORGE PERNET.
7. Blackwater Fever. R. U. MOFFAT.
8. Notes on Filaria Demarquali. GEORGE C. LOW.
9. The Suctorial Bulb in "Culex". G. TREVER COLLINGWOOD.
10. Notes on Lightning-Stroke in South Africa. J. G. BERNE.
11. Inoculation in the Incubation Stage of Plague. ALICE M. CORTHORN.
12. The Treatment of Dysentery by Rectal Injections. CECIL. F. LILLIE.

1.—Treated Editorially.

2.—In view of the fact that excision of localized lymphangiectases of filarial origin have been condemned, Maitland reports three cases each terminating satisfactorily. The objections that have been raised against operations for the removal of lymphatic varices and lymphadenoceles are that only a portion of the diseased tissue is removed and obstruction to the circulation still exists. That the operation is frequently followed by lymphorrhagia and lymphatic fistulæ; and that such operative procedures are extremely liable to be followed by septic infection or erysipelas. Practically these objections do not hold. The patients are relieved of the pain and fever accompanying these conditions and lymphatic fistulæ has never occurred in the experience of the author. Maitland has occasionally seen suppuration follow these operations when a large number of ligatures had been employed, but he has never seen or heard of a single fatality. The chief object of these operations is not to restore the circulation of lymph but to relieve the patient from the constantly recurring attacks of pain and constitutional disturbance. One should also endeavor if possible to find and remove the parasites themselves. [F. T. S.]

3.—Out of 500 cases taken indiscriminately from among hospital patients in Trinidad, Vincent found that 5% were infected with filaria and 6.6% with elephantoid disease. The greatest incident was found in the white population. In *Culex fatigans*, the final stage of metamorphosis of the filaria embryos was reached between the sixteenth and the nineteenth days. In *Culex tæniatus*, the conditions essential to complete metamorphosis were absent or else the insect is not a suitable host for filaria. *Anopheles albimanus* is an efficient host for filaria; but, as none of the insects lived beyond the twelfth day after feeding, it is not possible to say definitely when the final stage of metamorphosis is reached. The author believes, however, that the completion of metamorphosis occurs soon after the twelfth day. Concerning the prophylaxis of this condition, the only safe guard is the habitual use of mosquito nets, for, while it is possible to rid a locality of *Anopheles*, it is much more difficult to exterminate *Culices*, which breed readily in any collection of water. [J. M. S.]

4.—Rently describes a disease known as "water-itch or sore feet of coolies" which is common in the tea plantations of India and which is probably prevalent on the sugar plantations of the West Indies. The disease is also known as ground itch, pani-ghao, waterpox and water sores. It is an affection of the skin, confined entirely to the lower extremities and presenting lesions consisting of a primary erythema, followed by a vesicular eruption which frequently becomes pustular and which, in severe cases, may result in obstinate ulceration or in gangrene. The disease is seen between the months of May and October, inclusive, and, while people of all classes are liable to contract it, Europeans are rarely infected. It is most frequently found in those coolies who are employed in hoeing tea. These laborers have their feet constantly in contact with the soil, while a continuous shower of moist earth falls upon their feet and ankles from the hoe. The first symptom is an intense itching and burning which is followed by the appearance of a faint papular eruption, or a slight erythema. About the second day the eruption becomes vesicular and, if early treatment is adopted, the vesicles dry up in two or three days. More frequently the vesicles become pustules, which, unless they are opened early, may extend, producing large bullæ. The author believes that the disease is due to the entrance of the larvae of ankylostoma duodenale into the skin of the feet of the coolies who work in a portion of the tea garden in which the soil is contaminated by human fecal matter. [J. M. S.]

5.—Out of 230 patients who applied for treatment at the district dispensary of Saint Lucia during the months of January, February and March, 1901, Gray and Low found malarial parasites in the blood of 137. Although children under two years of age are very susceptible to malaria, no parasites were found in the blood of many. In those children who were infected with malarial parasites, definite symptoms of malarial fever were present. The large majority of cases of malarial fever in Saint Lucia are of the malignant or estivo-autumnal type. Anopheles mosquitoes were found in the neighborhood of the dwelling houses in which malarial patients were found in all cases when sought for. *Anopheles albipes* is the common anopheles of Saint Lucia. The prevention of malaria in the town of Castries resolves itself into a system of better drainage and sanitary improvement. [J. M. S.]

6.—Pernet believes that the case referred to by Gilbert White in his "Natural History of Selborne" is not one of leprosy, but one of symmetrical keratodermia. [J. M. S.]

7.—Moffet criticizes the article of Kleine on blackwater fever, which appeared in the *British Medical Journal*, of September 14,1901. He believes that blackwater fever is due to a chill acting at a certain stage in the development of the parasite in a patient predisposed by acute or chronic malarial infection. From this premise he reaches the conclusion that a malarial patient, especially one who has been much exposed to infection, should go to bed as soon as he feels the first symptom of a malarial attack and stay there until his temperature has returned to normal, and then remain there 24 hours longer. He does not believe that quinine is the cause of the hemoglobinuria. [J. M. S.]

8.—Low contributes a paper on Filaria Demarquali. The author has not been able to determine the intermediate hosts necessary for the development of the embryos to a point from which they will continue to grow when introduced into man. He is satisfied however that some blood-sucking insect must act as the intermediate host. [J. M. S.]

9.—Collingwood describes the esophageal or suctorial bulb in culex. [J. M. S.]

10.—Thunderstorms are very frequent and violent in South Africa from November to April, the more mountainous the country, the more frequent and severe the lightning. The frequence with which men and animals have been struck by lightning is notable. Berne describes a smell like dilute sulphuric acid, which is always present when lightning is at all severe. He describes the sensa-

tions experienced by a number of men who received non-fatal electric shocks during thunder storms. [J. M. S.]

11.—In 1899 there were 147 attacks of plague among the police force of Poona with 109 deaths. In 1900 the entire force was inoculated with Haffkine's prophylactic. Before the completion of the operations 7 cases with 6 deaths occurred among the non-inoculated and 7 cases with 2 deaths among the inoculated. Of the latter cases, 2 at least were inoculated at a very early stage of incubation if not when actually suffering from the disease. [J. M. S.]

12.—Lillie advocates the use of rectal injections in the treatment of dysentery. [J. M. S.]

LANCET.

January 25, 1902.

1. A Presidential Address on the Progress of Surgical Methods. T. B. GRIMSDALE.
2. An Opening Address on the Art of Clinical Medicine and its Technique. WILLIAM EWART.
3. A Further Note Concerning the Frontal or Supra-orbital Reflex. WALKER OVEREND.
4. A Case of Recent Traumatic Perineal Dislocation of the Right Hip, etc. HUGH M. RIGBY.
5. A Case of Pulmonary Regurgitation. EDMUND CAUTLEY
6. Combined Fetal and Maternal Dropsy. H. VALDEMAR MUNSTER.

1.—F. B. Grimsdale, in discussing the progress of surgical methods, divides it into three periods, the septic, the antiseptic, and the aseptic, and illustrates each in a very clear and entertaining way. In closing he presents charts representing antiseptic and aseptic operations and showing the great advantage the latter has over the former. He is an advocate of the "permanganate and oxalic acid method" of preparing the hands. [J. H. G.]

3.—Overend contributes a further note concerning the frontal or supra-orbital reflex. He mentions that he first described this reflex in 1896 under the name of "frontal," and, as far back as 1899, he demonstrated it to medical friends. His further observations have taught him that all the branches of the ophthalmic nerve are concerned in this reflex, namely the supra-orbital, cutaneous and periosteal, and lachrymal, trochlear, infratrochlear, and nasal branches. He has already called attention to the fact that in chorea and in supra-orbital neuralgia the reflex may be produced by tapping the head as far back as the parietal eminence. A similar distribution is also seen in hysteria. In chloroform narcosis and in facial paralysis the reflex is absent. It is with difficulty obtained in paralysis agitans. He suggests the term "ophthalmic reflex" and emphasizes that the signal is a true reflex and obtainable from both the skin and the periosteum supplied by that nerve." [F. J. K.]

4.—Hugh M. Rigby describes a case of recent perineal luxation of the hip in which death suddenly occurred under chloroform anesthesia just as the dislocation was reduced. The case is particularly interesting because Rigby was able to do an immediate dissection in the region of the dislocation, an advantage that is rarely given the surgeon. An extensive effusion of blood was found beneath the great gluteal muscle. The greatest damage to the tissue was seen in the quadratis femoris and obturator externus. The diagnosis of perineal luxation which was confirmed by post-mortem examination was made on the following symptoms: Extreme flexion, abduction, and the head of the bone in the perineum. Some lengthening was also present. This, however, is of doubtful value because of the difficulty of making comparative measurements of the two limbs. The post-mortem examination revealed nothing which would account for the death. [J. H. G.]

5.—Cautley reports a very interesting case of pulmonary regurgitation which occurred in a girl 15 years of age who was admitted into the Metropolitan Hospital on May 7, 1901, and discharged on May 23; readmitted on August 13, and death occurred on October 10, 1901. This patient had had rheumatic fever and diphtheria. When admitted to the hospital on the first occasion the patient complained of headache, vomiting and general debility. There was no edema of the extremities or clubbing of the fingers. The impulse of the heart could not be localized. At the aortic area, the heart sounds were clear and ringing. At the pulmonary area, the first sound appeared clean and was followed by a diastolic murmur which was transmitted downwards and could be heard in the third and fourth left intercostal spaces close to the sternum. It appeared loudest in the fourth interspace. At the apex there was a systolic murmur which was conducted outward and was audible in the axilla and faintly behind. The liver was not enlarged: the urine appeared normal. When readmitted to the hospital she complained of pain in the right knee joint and of minute red spots on the legs. Her temperature was 101.6°. The pulse rate was 108. The cardiac impulse was found in the sixth interspace in the nipple line. To the right of the sternum from two to three inches there was diffused pulsation. Epigastric pulsation was also marked. The first sound at the apex had a rumbling character. At the aortic area and in the second left intercostal space, both sounds were clear and ringing. The diastolic murmur increased in intensity on expiration and when in the upright posture. A short while after moist rales developed in the bases of both lungs. No cough was present. The diastolic murmur became louder and was heard at the base and down both sides of the sternum. The temperature was subfebrile until the twenty-sixth, when it rose to 103.4° F. The fever disappeared again on September 5, at which time the patient vomited four pints of blood which caused partial collapse. On October 7, the heart was more dilated, and at the apex there was a systolic and a diastolic murmur and a marked diastolic thrill could be felt over the left border of the sternum. In the pulmonic area the diastolic murmur was very much louder. Death occurred on October 10, 1901, after vomiting a pint of blood. The post-mortem examination revealed a number of infarcts in the right and left lung. The heart weighed 11 ozs. The walls of the right auricles and right ventricle were much hypertrophied. The pulmonary valve was thickened and puckered and on two of the valve segments there were large warty vegetations. The right ventricle was dilated and beginning red atrophy of the liver was present. The author states that the case presented many difficulties from a clinical point of view and it was not determined whether this case was one of rheumatic origin or one of infective endocarditis. [F. J. K.]

6.—Munster reports a case of combined fetal and maternal dropsy. On November 26, 1901, the patient, a married woman 31 years of age, was due to be confined. On October 8, general edema of the lower limbs was brought to the notice of the author, and he thought that the case was perhaps one of hydramnios with secondary pressure symptoms, for the abdomen was enormously distended, measuring 40 inches in circumference. Albumin was found in the urine. Rest in bed was advised and on the 9th he detected the fetal heart sounds in the usual area. They number about 132 per minute. Labor set in October 12 at 7.30 A. M. The subsequent course of labor showed that this case was not one of hydramnios. The labor was very difficult. It was necessary deeply to narcotize the patient with chloroform and to apply forceps. A dead fetus was abstracted. The body of the fetus was dropsical. Examination of the child's body showed that the edema was quite general. The peritoneal cavity contained a large quantity of fluid and the thorax was also full of fluid. The mother made an uneventful recovery. The albuminuria disappeared in a few days, and with it the dropsy. The author regards the case "as one of primary dropsy of the ovum and secondary dropsy of the mother, caused in her case by pressure of the enlarged uterus upon her kidneys and abdominal blood vessels." [F. J. K.]

MEDICAL NEWS.

February 8, 1902. (Vol. 89, No. 6.)

1. The Surgical Treatment of Ascites Due to Cirrhosis of the Liver. GEORGE EMERSON BREWER
2. On the Etiology of Cirrhosis of the Liver. JAMES K. CROOK.
3. On the Treatment of the Alcoholic Cirrhosis of the Liver. GEORGE M. CONVERSE.
4. On the Diagnosis of Cirrhosis of the Liver. J. C. WILSON.
5. Cirrhosis of the Liver as Seen in Children. W. C. HOLLOPETER.

6. Intestinal Obstruction Due to Gallstones. LEWIS STEPHEN PILCHER.

7. Percussion of the Lower Border of the Liver. ALBERT ABRAMS.

8. Tumor of the Liver. GEORGE RYERSON FOWLER.

1.—George E. Brewer reports a number of cases of this condition operated upon and also gives a very interesting table of the statistics. On looking over this table it will be seen that six cases at least have been cured of ascites by stitching the omentum to the anterior abdominal wall and had remained well for a period of two years or more; six others have been relieved of this symptom for from two to six months, but have died, either without a return of the ascites or have been under observation long enough to demonstrate that the cure is permanent. A case of hemorrhage from the alimentray canal was promptly cured by the above operation. 38 cases recovered from the operation and when we consider that in the majority of instances these patients were in the last stages of an incurable disease and would have died within a few weeks, it seems to the author that if these cases were taken earlier there would have been more encouraging results. [T. M. T.]

2.—James K. Crook gives the three distinct primary varieties of the disease: (1) Venous or atrophic cirrhosis; (2) hypertrophic cirrhosis; (3) biliary cirrhosis. The first is by far the most common. It is the form of the disease always implied when no farther distinguishing designation is used. The causes are predisposing and determining, of which the latter are by far the most important, the predisposing influences being merely those which facilitate the operation of the actual exciting causes. The predisposition is said by Giovanni to consist in an excessive morbidity of the lymph corpuscles which enter into the structure of the gland. Age and sex are important among the predisposing causes. From 35 to 40 show the largest number of deaths from cirrhosis, next from 25 to 35 years and from 45 to 55 years. It has been shown that foreign born persons are vastly more liable to liver complaints than the natives. The Irish race seems to furnish the largest proportion and Germans are the next. The most important exciting or determining cause is the habitual imbibition of alcoholic stimulants. The most dangerous practice consists in the alcoholic ingestion of beverages when the stomach is comparatively empty. Syphilis, malaria, infectious diseases, overeating, certain mineral poisons are influences which are important in the causation of cirrhosis. The second variety, described by Hanot, has attracted very little attention. In this affection the liver is uniformly enlarged and smooth, moderately granular on the surface and indurated. It differs from hypertrophic liver, however, in the tendency of the liver to remain enlarged. The greater proportion of cases occur in early middle life. The third variety, biliary cirrhosis, consists fundamentally in a primary affection of the biliary reticulum, more especially in an angiocholitis or a peri-angiocholitis of the bile ducts of small and medium caliber. It is most frequently found in young males of from 20 to 25 and is in many instances due to alcoholism, but this is not always the cause. [T. M. T.]

3.—George M. Converse, in the **treatment of alcoholic cirrhosis of the liver**, advises the withdrawal of alcohol with easily digested diet. Milk is advised and must be given exclusively. In one case in which it was given five days the number of microbes contained in the feces was 70 times smaller than before it was used. The reasons ascribed are (1) Facile digestion of milk; (2) the almost complete absorption; (3) the feeble nutritive power of the residue; (4) the chemical reactions occurring during its stay in the stomach. The quantity should not be more than three to four litres daily. It is better not to start with this quantity at first, but begin with a litre and gradually increase a half litre a day. Give it at intervals from form 3½ to 2 hours. When a change is necessary and desirable, eggs and vegetables can be substituted, meat being returned to last. It is sometimes necessary at the beginning of the treatment to give a laxative. The patient should be at rest, open air, moderate hydrotherapy and lead as careful a life as his financial situation and occupation will permit. When ascites appear, tapping should be resorted to and the usual purgative and diuretics. Hale White says that the average duration of life of a patient with ascites is about six weeks. [T. M. T.]

5.—J. C. Wilson, in the **diagnosis of cirrhosis**, sums up his article as follows: (1) The term cirrhosis is an unfortunate one. It has been applied to conditions wholly unlike etiologically, anatomically and clinically, which have, however, in common an overgrowth of the connective tissue of the liver; (2) the term chronic interstitial hepatitis is to be preferred: (3) alcohol is by far the most common cause of interstitial hepatitis alike in the cases in which the liver is of normal size or slightly enlarged, in the atrophic form and in the hypertrophic form; (4) the symptoms of this condition are in many cases ill-defined and not rarely the liver is not changed in size or contour. The clinical diagnosis in a large proportion of the cases is, therefore, impossible; (5) in the presence of definite symptoms and of the signs of enlargement or diminution of the liver, that is to say, in terminal conditions, the diagnosis is commonly a simple matter. [T. M. T.]

6.—W. C. Hollopeter reports two cases of the condition and briefly says that **cirrhosis of the liver in infants and adolescents** is not so frequent as physicians infer; that cirrhosis in children can generally be relegated either to the syphilitic or alcoholic type, with a very small percentage as sequelae of the infectious diseases. The premonitory symptoms are disguised by a long train of gastro-intestinal irritations that render an early diagnosis uncertain. [T. M. T.]

7.—Lewis S. R. Pilcher reports a case of **intestinal obstruction due to gall stones.** He thinks that in such cases the final determining factor in the obstruction is not so much the bulk of the gall-stone as it is the secondary development of conditions at some point of the bowel wall in the downward course of the calculus which lessens the contractile propulsive power of the bowel wall. Such local paresis readily favors angulation and the progressive development of the symptoms of complete obstruction rapidly follows. The diagnosis must be often obscure and uncertain. Most of the symptoms that attend the condition of gall-stone intestinal obstruction are at least suggestive rather than positive. The greatest number of cases are in women over 50 years. The obstruction is in the small intestine and retroperistalsis is easily induced, provoking copious vomiting that becomes fecal. No sign of shock or early collapse and not excessive tympany develops. In 50 per cent. a spontaneous moving on of the calculus is ultimately effected and recovery ensues without surgical interference. He advises exploratory incision for positive diagnosis. [T. M. T.]

8.—Albert Abrams, in his article on **percussion of the lower border of the liver** emphasizes: (1) The patient must be cautioned to take no inspiration before contracting the abdominal muscles, for by so doing the liver will be dislocated downward; (2) in practicing percussion, the finger receiving the percussion blow must be firmly embedded in the abdominal wall; otherwise the blow will not be directly transmitted to the liver. [T M. T.]

9.—George R. Fowler states that **tumors of the liver** occurring as primary growths are very uncommon. They may spring from the epithelial structure, adenomata and carcinomata representing this type, or from the connective tissue, as represented by fibro-neuromata and sarcomata. Secondary carcinoma follows a primary growth in the stomach in about 25% of the cases. [T. M. T.]

MEDICAL RECORD.

February 8, 1902.

1. The Diagnosis of Pericarditis. ARTHUR R. EDWARDS.
2. Dengue: A Study of Its Mode of Propagation and Pathology. HARRIS GRAHAM.
3. Treatment of Vessels from Yellow-Fever Ports. EDMOND SOUCHON.
4. Nephrectomy—A Clinical Study of Four Cases. LOUIS J. LADINSKI.

1.—A. R. Edwards discusses the **diagnosis of pericarditis.** He deals with inspection, palpation, percussion, and auscultation. The latter method reveals the chief and most reliable diagnostic sign, the **pericardial friction** due to attri-

tion of the inflamed serous pericardial surfaces. The evidences of cardiac incompetence are due to mechanical pressure hindering the diastole, especially of the auricles, inflammatory or degenerative myocardial alteration or coincident cardiac disease, etc. They are hepatic and renal stasis, ascites, edema, cyanosis, dyspnea, and cerebral anemia giving rise to syncope. The changes in the pulse are described as well as the results of lung compression. The etiological diagnosis is important since pericarditis is almost invariably secondary. Infective diseases should be mentioned first, and pericarditis by extension from adjacent organs, as well as the appearance of this condition late in the various cachexias. The differential diagnosis rests upon the friction, the dulness, or both. The pericardial rub is practically pathognomonic of pericarditis. The dulness of pericardial exudation is discussed at length as well as its differential diagnosis. So also is the character of the exudate. Under the various subdivisions of this paper will be found the most important points indicated by various authorities for the recognition of pericarditis. [T. L. C.]

2.—Harris Graham contributes a paper on the mode of propagation, and the pathology of dengue. These studies were carried on in Byrouth, Syria, which offers peculiar advantages for studies of this kind. Denque is very prevalent and the city terribly infested with mosquitoes, among which only certain forms of the culex are found. Most of all villages on the mountain side contain a certain number of mosquitoes which are also only the culex, some of the villages in the dryer part have none. Graham conducted his studies with the aim of determining whether the culex could carry dengue from person to person. His paper is a most important contribution to this subject. He found that the disease did not appear when persons under observation were not bitten by infected mosquitoes, but that it did appear invariably when they were so bitten. He became convinced that the mosquito was the means of carrying the disease, and this lead him to a careful examination of the blood in over one hundred cases; in all of these he found ameboid organisms in the red blood cells. They closely resembled the plasmodium of malaria, differing from this however in the cycle of production, or formation, in the human blood in that this of dengue takes much longer. The changes in the life phase come more slowly and are more difficult to follow. Eight cuts accompany the article illustrating the different periods in the cycle of development of the organism which are described minutely. Flaggellate bodies were also encountered. The constant presence in the red blood cell of the hematozoon during the fever, its resemblence to the parasite of Texas cattle-fever, its likeness in manner of growth and mode of propagation by the mosquito to the malarial parasite, all lead the author to believe that in this parasite he has discovered the cause of dengue. It is interesting that the culex should be found capable of carrying disease in man. Certain forms carry the protozoa of birds, but the author knows of no disease they carry in man unless the form of mosquito which has been found to convey yellow fever be a real culex and not a genus stegomyia by itself. [T. L. C.]

3.—Edmond Souchon contributes a reply to the article of Reed and Carroll in the *Medical Record* of October 26, 1901 entitled: "The Prevention of Yellow Fever." He admits that mosquitoes may transmit the disease but takes exception to several of the conclusions which these authors reach under the heading of "Measures Directed Against the Importation of Yellow Fever into the United States. A large number of cases are reported from the literature to bar out his contentions. In conclusion he quotes Drs Reed and Carroll's appeal: "A most important part will have been accomplished if we can persuade the sanitary authorities of our sister republic Mexico and of the Central and South American States to join us in the adoption of more enlightened methods for the suppression of this widely prevalent epidemic". Souchon agrees fully with this. He urges that these ports should destroy all possible causes of yellow fever and that they should disinfect thoroughly before departure all vessels going to ports liable to yellow fever or going to northern ports which may transmit it to Southern territory and we will then be save enough to alter our quarantine regulation. [T. L. C.]

4.—L. J. Ladinski contributes a clinical study of four cases of nephrectomy which illustrate the four chief varieties: (1) calculus and pyonephritis, (2) tuberculosis, (3) new growth, and (4) suppuration. He describes the methods of examination of the kidney for disease requiring surgical treatment and presents full clinical notes of the four cases mentioned. [T. L. C.]

THE NEW YORK MEDICAL JOURNAL.

February 8, 1902. (Vol. LXXV, No. 6.)

1. Age of First Menstruation on the North American Continent. GEORGE J. ENGELMANN.
2. The President's Address. MANNING SIMONS.
3. Closure of the Abdominal Incision with Remarks Upon the Cause and Prevention of Ventral Hernia. I. S. STONE.
4. Gastrostomy and Retrograde Dilatation in Impermeable Benign Traumatic Stricture of the Esophagus and Internal Esophagotomy by the Abbe-Saw-string Method. HUGH M. TAYLOR.
5. What Shall We Do With the Consumptive? ANTONIO FANONI.
6. The Management of the Tendency of the Upper Fragment to Tilt Forward in Fractures of the Upper Third of the Femur. A Question of Priority. NEWTON M. SHAFFER.

1.—Will be abstracted when concluded.

3.—I. S. Stone, in his article on closure of the abdominal incision, says the following procedure should be carried out: (1) Remove all excess of peritoneal flap. Also remove all those pieces of muscle or fat as these bits of tissue may become necrotic; (2) bring peritoneum muscle fascia etc. together to meet similar tissues of the opposite side without space between layers for collection of serum or blood, and yet without strangulation. The sutures to be placed in such manner as to make pressure as much upon the fascia or tissue in the centre of the circle made by the suture as at the peritoneal or skin surfaces. The interrupted sutures will answer these requirements in nearly every instance the exception being its non-hemostatic power and also its inability to bring like surfaces together accurately. [T. M. T.]

4.—Hugh M. Taylor gives Mayo's summary of the treatment of this type of esophageal strictures as follows: (1) Systematic stretching should be commenced in from two to four weeks after the swallowing of a caustic substance; (2) should the traumatism be severe immediate gastrostomy will lessen infection and necessitate subsequent stretching as before; (3) non-dilatable strictures in the vicinity of the cricoid cartilage should be divided by external esophagotomy; (4) stricture above the arch of the aorta may be safely cut by a combined internal and external esophagotomy; (5) dense therapic strictures are best dilated by Osophper's method and if necessary divided by Abbe's string saw; (6) impassable strictures should be treated by retrograde dilatation; (7) a dilated stricture should be sounded occasionally for years if not for life. The author lays great stress on the fact that operative intervention is too often delayed until the patient is in no condition to stand it. [T. M. T.]

5.—Antonio Fanoni in his article on what shall we do with the consumptive, recommends: (1) Marriages of consumptives should be avoided; (2) children of consumptives should be brought up so as to strengthen their systems against the invasion of the tubercle bacillus; (3) the public should be educated to realize the fact that consumption is curable in its initial stages; (4) when mixed infection has not yet taken place; (5) an early diagnosis is the secret of cure. Let us drop the word "cold" as a term for a little cough and a subnormal temperature and the word "malaria" for cough accompanied by chills and let us examine the patient carefully in each case. When questioning the patient it must be borne in mind that the consumptive, fearing to hear the word "consumption," of-

ten tries to disguise his symptoms, and that it is in such cases that the skilful physician proves his ability; (5) every case of pulmonary tuberculosis should be reported to the local health authorities so soon as the diagnosis is made; (6) every consumptive should be isolated until cured or until the disease terminates fatally. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 6, 1902.

1. The Proposed Boston Academy of Medicine. J. G. MUMFORD.
2. A Plan for the Municipal Control of Tuberculosis in Boston. AGNES C. VICTOR.
3. Six Cases of Operation for Cleft Palate. C. A. PORTER.
4. The Treatment of Congenital Cleft Palate by Mechanical Appliances. GEORGE A. RAYMOND.
5. Rabies; Report of Cases. CHARLES J. PATTON.

1.—The paper treats upon the **Proposed Boston Academy of Medicine,** with reference to the practical reorganization of smaller and older organizations. [M. R. D.]

2.—Agnes C. Victor, in discussing **a plan for the municipal control of tuberculosis in Boston,** advovates the following in a résumé of the article: "(1)) Laying exclusive or even predominant emphasis on the contagiousness of tuberculosis is an error of fact as well as of judgment; (2) such a course is creating a condition of panic which works infinite harm and does nothing toward eradicating the disease; (3) the course dictated by exact research is a recognition of the fact that the problem is dual; that tuberculosis is a diseased condition due to the growth of a vegetable parasite (the bacillus tuberculosis) upon a part of the body in a condition of lowered vitality; that this parasite when discharged from the patient affected is of low vitality, and tends to die, especially when exposed to sunlight, to dryness and to temperature below 28° C. and above 40°C.; that the extermination of this plant by attacking it outside the living body is impossible, because its strong entrenchment is in the bodies of the people in a condition of lowered vitality; that the virulence of the plant is maintained and increased by passing it through the bodies of such people, and that while such people exist the virulence of the plant can never be destroyed; that the great sources in the community of such lowered vitality are (a) insufficient food, (b) insufficient air and light, (c) overwork, (d) worry. From this it follows: (4) That the fundamental factor in the existence and increase of tuberculosis is the health of the mass of the people; and (5) that the community which does not vigorously attack the removable causes that lower this mass health, passively supports a city laboratory for the manufacture and maintenance of virulent cultures of the tubercle bacillus; (6) the only definite decrease in tuberculosis statistics yet recorded is (a) the cures effected in patients who adopt some modification of the open-air life, with superfeeding and freedom from overwork and worry; (b) the improvement in certain New England statistics during late years, the only changed factor of general extent being the almost universal use of the bicycle and other recreations tending to increase outdoor life, especially among women, and (c) the decreasing statistics of tuberculosis in German villages where tuberculosis sanatoria are established, the lives of the villagers, consciously and unconsciously, imitating the example of the sanatoria; (7) In view of the conditions outlined above, and as Boston has now appropriated money and is standing ready to take municipal action looking towards the control of tuberculosis, the writer would suggest that: an unpaid municipal tuberculosis committee of men and women fitted to view the subject broadly be appointed. Sub-committees on air and light in tenements and dwellings; in other buildings, as workshops, factories, schools, etc.; on cooking and savory serving of food on a large enough scale to give the poorest a chance to be well nourished; on employment, to put the vast army of unemployed or precariously employed in connection with the equally vast field of undone work; on dust and noise, which decrease the available air and light in even the wealthiest and wisest households; on nursing and disinfection, etc.; (8) a model sanatorium should be erected in each section of the city, as a living example of the method of living which cures. To these sanatoria selected cases should be sent for short periods, to learn by actual experience; returning to their homes they will themselves be teachers to ever new and widening groups; (9) finally, but of least importance for the eradication of the disease, a distinctly charitable hospital is needed to care for the really destitute and desolate. [M. R. D.]

3.—C. A. Porter reports six cases of operation upon **cleft palates.** He has followed the methods employed by his father, Dr. C. B. Porter, with the exceptions that he has not used plates, has operated on younger cases and has had the child firmly held in bed after the operation by means of a swathe. He also occludes the nostrils with cotton so as to force mouth-breathing, and thus prevents maceration of the palate. The technique of the operation as performed by him is described, with special reference to sutures, which the author believes are **almost always** tied too tightly. He lays considerable stress upon the after treatment, which he considers as a rule too much neglected, with consequent harmful effect upon subsequent speech. [M. R. D.]

4.—George A. Raymond discusses the mechanism that is concerned in articulation, and claims that surgical operations for cleft palate do not produce physiological results. By means of **mechanical appliances,** as described by the author, the latter claims to have obtained excellent results, even at any age. Several illustrative cases are reported. [M. R. D.]

5.—Charles J. Patton reports several cases of rabies, and appends illustrations of microscopical specimens, showing the normal and pathological dorsal root ganglion (rabid tubercle). [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 8, 1902.

1. Autotoxemia as a Factor in the Neuroses. GEORGE F. BUTLER.
2. The Use of Tuberculin. CHARLES DENISON.
3. The Importance of Heredity as a Cause of Insanity. ARTHUR McGUNGAN.
4. Incipient Amyotrophic Lateral Sclerosis with Recovery, etc. LEO. M. CRAFTS.
5. Alexia from Cyst caused by Bullet Wound. Operation —Death. G. W. McCASKEY.
6. The Economic Limitaions of the Visual Acuity in Various Trades and Professions. H. V. WUERDMANN.
7. What Amount of Visual Defect should Disqualify in Railroad Service? FRANK ALLPORT.
8. The Problem of Heredity. JAMES G. KIERNAN.
9. Note on Gauging Vesical Capacity. G. FRANK LYDSTON.
10. Primary Sarcoma of the Esophagus and Stomach. WM. TRAVIS HOWARD.
11. The Organization of the Medical Profession.

1.—Butler discusses autotoxemia as a factor in the neuroses. The author mentions that the doctrine of autointoxication is a very old one. Many diseases believed to be due to morbid states of the blood, are now properly classified as being separate pathological entities. Rheumatism was at one time regarded as an autotoxemic state. The same applies to obesity and allied conditions. The principle of blood letting was based upon the autointoxication doctrine and its aim was to remove the materias morbi and replace blood by water so as to carry on the circulation. He mentions that fatigue produces autotoxemia in two ways. "First, by the direct products of nerve wasted, and second, by the fatigue of the organs of sanguifaction and elimination from overwork after loss of inhibitions, from central nerve tire." He also states that disturbance of the thermic balance consequent to nerve shock or allied conditions may produce autointoxication, whenever there is an interference with the eliminating powers of the system, the phenomena of autointoxication make their appearance. Diseases of the kidneys, liver, skin and lungs are capable of producing autointoxication. He remarks that the symptoms of autointoxication are often those of profound systemic depression. The author then

discusses at length many conditions dependent upon autotoxemia and discusses the important symptoms. [F. J. K.]

2.—Denison outlines **the uses of tuberculin.** He divides the uses of tuberculin into two groups. First, for diagnostic purposes, and second, for immunizing purposes. He mentions that the diagnostic effect has thus far constituted the chief use of tuberculin. "The method of manufacture is to concentrate the glycerine culture fluid at ordinary boiling temperature down to one-tenth its original bulk, after which it is filtered through porcelain. It thus contains various substances, namely, combination of toxins and proteids capable of producing intense reaction in living tubercular tissue. It includes 50 per cent. glycerine-beef, extract-beef, peptones, and salts, and small quantites of the specific tubercle bacilli proteids which are liberated during the growth of the culture and during the process of the boiling and concentration of the fluid." He contends that the diagnosis and immunity effects of tuberculin are eminently associated. The dose for diagnostic purposes varies with different experimentors. Some prefer to inject very small initial doses at intervals of two or three days, and others think that a single large dose similar to the plan persued by veterinarians is preferable. "In the latter instance the danger lies in getting too severe a reaction for the case in hand. The author selects the middle course between the above extremes. He holds the initial dose for a child to a susceptible young woman at from 1 milligram of the glycerin extract of tuberculin up to five or six milligrams for an adult. On each succeeding day nearly double the previous day's dose should be given. The morning hours he thinks are most desirable for the test injections, for the reason that the sudden rise of temperature may be missed during sleep, when the injections are given in the evening. The reactionary rise of temperature manifests itself in about four hours if the tuberculous lesion is centrally located in the lungs. When located in other organs or in joints it may not appear until at a much later time. When the lesion is encapsulated the response may be very slow and may not manifest itself until the following day. He points out the very important fact that the temperature curve is not the only indication of the reaction. The reaction is also accompanied by constiutional or systemic sensations much like those that occur with the oncoming of an attack of influenza. Even the lung tissue may be slightly affected by the reaction and this he emphasizes is a most helpful diagnostic indication to be obtained from this test. The signs upon auscultation can sometimes detect changes in the lesion which are due to the infiltration of leukocytes around the tuberculous area and congestion of the affected tissue,—this produces a higher pitched breath sign than normal. The author mentions the various preparations of tuberculin and believes that "it is apparent that the study of the tuberculins during the ten or more years since Koch put out his first product has been fruitful in the evolution of a remedy which approaches perfection." In his own practice he has used the various forms of tuberculins in a large number of cases. In this article there is included a table of the results of this specific treatment. He summarizes the results as follows: "Of the 57 patients treated with crude tuberculin, eight to ten years ago, 17 or 30 per cent. are now known to be living; of 94 patients treated with the purified forms of tuberculin (tuberculocidin, antiphthisin and tuberculinum purificatum) from four to seven years ago, 30 or 32 per cent. are living in good condition; while of the 45 watery extract cases, 28 or 62 per cent. are living in apparent immunity." [F. J. K.]

3.—See **Philadelphia Medical Journal,** June 15, 1901. Page 1145.

4.—See **Philadelphia Medical Journal,** June 15, 1901. Page 1145.

5.—G. W. McCaskey reports an interesting case of **gunshot wound of the brain in which alexia was the principal localizing symptom.** The patient was a woman, 31 years of age. The bullet entered the skull 4½ inches to the left of the sagittal suture and ½ inch in front of the binauricular line. The wound was received seven years before the patient came under the care of McCaskey. For four weeks after the injury the patient was unconscious and delirious and for two months was confined to bed. After getting out of bed she was unable to walk for four months. The use of the leg, however, partly returned. Since the injury she has had more or less speech disturbance. A few months before coming under McCaskey's care she developed an abscess of the right ear which was relieved by a spontaneous discharge of pus. Recently all the symptoms began to grow worse, the patient suffering from severe headaches, marked increase of speech disturbance, and some increase of paretic weakness of the right side. Upon examination it was found that the patient could walk, but limped badly. The right foot was much weaker than the left; the right knee jerk was grossly exaggerated, as were also the elbow and jaw jerks. Sensation over the right side was greatly impaired. Vision was normal in both eyes. The patient showed some slowness of cerebration. The disturbance of speech was most interesting. There was a certain degree of partial agraphia. Alexia was marked. Diagnosis of destructive lesion of the angular gyrus was made. The condition was thought to be either a cyst or an abscess. Upon operation the bullet was found with a small spiculum of bone attached to it at the point indicated. A cyst about 1¼ inches in diameter was evacuated. The cavity was drained but the patient died subsequently of what was supposed to be hemorrhage. [J. H. G.]

6.—See **Philadelphia Medical Journal,** June 15, 1901. Page 1140.

7.—See **Philadelphia Medical Journal,** June 15, 1901. Page 1140.

8.—Kiernan presents an interesting article on the problem of heredity. He discusses the subject at length from various standpoints that "the problem of heredity has been aproached from the standpoint of preconceived notions. The forces underlying it have been estimated entirely from the standpoints of times when embryology and biology were unknown. Furthermore, certain forces have been regarded as malign or benign *per se* when circumstances made them so. The tests of malignity or benignity have also been based on preconceived notions. Decrease or increase of births has been estimated entirely from a fallacious view-point." [F. J. K.]

9.—G. Frank Lydston discusses the question of **gauging vesical capacity,** referring first to the inaccuracy of the methods usually employed. The usual method of injecting fluid by means of a catheter is apt to produce irritation of the urethra and contraction of the bladder, thus giving an incorrect idea of the capacity of this organ. Hydrostatic pressure is objectionable because the sudden flow of fluid into the bladder will also produce contraction. There is no routine method of measuring the bladder capacity. In cases of a purely nervous type in which the frequent micturition occurs during the day and not at night an idea of the bladder capacity may be obtained by instructing the patient to drink moderately of pure water during the evening and then to measure the amount passed at the first micturition during the night. Cases in which frequent micturition takes place at night cannot be gauged in this way. Reference is made to the use of sedatives and antispasmodics before employing mechanical means to gauge the bladder capacity. [J. H. G.]

10.—Wm. T. Howard discusses the question of **primary sarcoma of the esophagus and stomach** and reports a case of the former condition. After reviewing the literature the following conclusions are reached regarding sarcoma of the esophagus:

"Analysis of the twelve recorded cases of sarcoma of the esophagus shows the following: 1. The disease is more common in males than in females, and at the period of life during which carcinoma most frequently occurs. It may, however, unlike carcinoma, occur in early life—between 4 and 25 years. 2. Nine of the twelve cases in-

volved the lower half of the organ. 3. While the tumors usually nearly surround the lumen, in three cases they formed pedunculated or polypoid masses projecting into the lumen. 4. Symptoms of esophageal obstruction occurred in eleven of twelve cases. 5. There was perforation with involvement of the respiratory organs in four cases. 6. All the varieties of sarcoma except angiosarcoma have been found, the round cell variety standing first in frequency—one-fourth of the cases. 7. Metastases occur rather frequently (five out of twelve cases), and in two cases were widespread. 8. The clinical diagnosis of esophageal sarcoma has not been made and there are no certain and constant diagnostic points between sarcoma and carcinoma of this organ, the clinical symptoms being necessarily very much the same and dependent upon the same conditions—obstruction and cachexia in the two diseases. 9. As pointed out by both Livingood and Stark, sarcoma runs a more rapid course, and a fatal issue is to be looked for earlier than in carcinoma. The greater size of the sarcomatous growths is probably responsible for this. 10. The differences in the character, distribution, and period, of the pain in the two affections described by Stark, are not mentioned by other observers. It would prove a matter of considerable importance if his experience is confirmed."

After a lengthy discussion of sarcoma of the stomach the following conclusions are reached:

"1. Gastric sarcoma is more common than is generally supposed, at least 61 cases being recorded. Careful routine microscopic examination of all gastric tumors met with at autopsy and operation will probably show a marked increase in the occurrence of these tumors. 2. The two sexes are affected in about equal proportions, as against five males to four females for carcinoma; 37.7 per cent. of the cases occurred below the fortieth year, and 11.44 per cent. (7 cases) below the twentieth year. 3. The pyloric end was involved in only 26.23 per cent. of the cases, as against 60 per cent. for carcinoma (Welch), and caused stenosis in only 8.19 per cent. of the entire number of cases. Diffuse growths occurred in 21.31 per cent., while the cardia was involved in only 4.9 per cent. The posterior wall and great curvature are commonly involved. 4. Gastric sarcoma may reach a large size, that of a child's or man's head, and may project as large masses into the lumen of the stomach or into the peritoneal cavity, extending below the umbilicus—13.1 per cent. Such tumors have been mistaken for tumors of the spleen, omentum and ovaries, and may be pedunculated and readily removed. 5. Gastric sarcomata commonly start in the submucosa or muscularis and are less apt to ulcerate and cause hemorrhage than carcinomata. 6. All the histologic varieties of sarcoma have been found in the stomach. 7. While most of the cases in which the duration of the illness was mentioned ran an acute course, the average duration of life is probably from nine to ten months, while in one case it was three and in another five years. 8. Metastasis is not as frequent as in carcinoma, but may be widespread. The liver was invaded in only seven cases —11.47 per cent.—in striking contrast to gastric carcinoma, which, according to Welch's statistics, invaded this organ in 30 per cent. of cases. 9. There are no distinctive clinical symptoms or physical signs of sarcoma of the stomach, but a positive diagnosis has been made in three cases from microscopic examination of material obtained from the stomach. 10. In cases of large tumors connected with the stomach, especially when they project to or below the umbilicus, a diagnosis of sarcoma of the stomach is warranted. A tumor of the stomach in an individual under 20 years of age is almost certainly sarcoma. In our series 37.7 per cent. of the cases were under 19, while in Osler's 150 cases of carcinoma of the stomach only 1.3 per cent. were under this age. 11. Operation should be as successful in sarcoma as in carcinoma of the stomach." [L. H. G.]

AMERICAN MEDICINE.

February 8, 1902.

1. Nature of Typhoid Fever. EUGENE WASDIN.
2. Tuberculosis of the Eye. ALLEN T. HAIGHT.
3. Malarial Iritis; Report of a Case. SIDNEY D. JACOBSON.
4. Phlegmon and Fistula of the Lower Jaw, etc. THOMAS H. MANLEY.
5. Peripheral Anesthesia Paralysis, etc. A. H. LEVINGS.
6. Black Vomit in Inflammation and Injury of the Peritoneum. JOHN H. LANDIS.
7. The Aspect of Disease as Seen in Arctic Alaska. ERNEST W. KELSEY.

1.—Eugene Wasdin discusses the **nature of typhoid fever.** He calls attention to the fact that the disease **can no longer be considered primarily one of the intestinal tract.** The author, realizing that the presence in the tissue of the Eberth bacillus gives rise to no positive chemotaxis and that its symbiosis with other organisms increases its power of entering the blood current, examined carefully the chest of each typhoid patient under his treatment in order **to determine the presence in the lungs of a primary colony.** He states that he has been able in every case at the first examination to locate readily an area of the lung corresponding to such colonizations. He has usually been able to detect a **condition of subacute bronchitis** with diminished breathing in the affected area which may extend throughout the entire lobe, lobes or lungs. Auscultation will always reveal an impaired vesicular breathing—a paresis. The various clinical pictures which the examination of the chest affords are described. On examining the sputum a few pneumococci are found with pole-stained rods, and when they are abundant in the sputum the lung area is then more clearly a consolidation of lobar pneumonia. These cases are usually known as the **"pneumotyphoid."** Wasdin sums up his belief of the nature of enteric fever by drawing in apposition the clinical facts of the disease. First, to show that from the constant presence of the bacillus in the blood before it is present in the intestinal contents, its presence in the stools only at the end of the first week in small numbers, their rapid increase to their maximum by the end of the second week and the presence of the **"diazo reaction"** at this time most frequently, there must be a **colonial development** of the organism **other than in the intestinal canal;** and second from the non-presence of the organism in the blood current until after the advent of toxic symptoms together with a constant presence of more or less marked signs of such colonial development in the lungs and the expectoration of members of such colonies, this disease is essentially one of the **respiratory tract** primarily, the well-known symptoms of the second and third week being mainly secondary. The treatment should be directed to destroying these localized colonies. In view of the method of infection which this theory carries with it, Wasdin states that it would be better to filter the street sprinkling supply and allow the drinking of hydrant water. [T. L. C.]

2.—A. T. Haight gives a résumé of the literature of **tuberculosis of the eye** and reports four cases. He is satisfied from his own observation that at least 75% of all cases of tuberculosis of the eye are due either to **infection from other parts** of the body or from **direct injury** to the eye. In primary tuberculosis of this organ early diagnosis and operation will rob death of many of its victims. [T. L. C.]

3.—S. D. Jacobson reports a case of **malarial iritis.** The interesting points in the case are that the patient never lived in a malarial district except for one month; the incubation period from the time she was bitten to the time that she became ill was less than four weeks; there were no other signs of malarial infection to suggest an examination of the blood; dilatation of the pupil with atropin was accomplished with difficulty, and finally prompt relief followed the use of quinin. [T. L. C.]

4.—T. H. Manley reports five cases of **phlegmon** and **fistula of the lower jaw** following the eruption of the wisdom teeth, with fracture of the bone or fractures of the teeth, and infection after extraction. **Perforative endosteitis** of the lower jaw is consequent upon **caries of the crown,** incomplete extraction, or late eruption of the third molar.

Perforative osteitis from a dead fang occurs through the least vascular surface of the mandible by way of the dental canal. This is followed by an abscess which becomes a chronic, unsightly fistula. [T. L. C.]

5.—A. H. Levings reports three cases of **peripheral anesthesia paralysis.** A number of dissections and experimental examinations on the cadaver made by the author demonstrated that forcible extension of an arm upward over the head produced severe compression of the upper cord of the brachial plexus which teaches the lesson that during operative procedure the arm should never be forcibly abducted or extended and maintained in those positions for any considerable time. [T. L. C.]

6.—J. H. Landis reports six cases of **black vomit in inflammation and injury of the peritoneum.** The vomiting was not preceded by nausea and the diaphragm and abdominal muscles were not apparently brought into play during its expulsion. The patient does not seem to be aware that vomiting is imminent. [T. L. C.]

THE JOURNAL OF EXPERIMENTAL MEDICINE.

(*October, 1901.* Vol. v, No. 6.)

1. Alloxuric Excretion in a case of Leukopenia.
   ROBERT HUTCHINSON and J. J. R. MACLEOD.
2. Studies on the Morphology of the Ganglion cells in the Rabbit. 1. The Normal Nerve Cells. 2. Changes in the Nerve Cells in Rabies.
   FREDERICK RANDOLPH BAILEY.
3. The Acid Intoxication of Diabetes in its Relation to Prognosis. C. A. HERTER.
4. Notes upon Agglutinations obtained by Intraperitoneal Insertion of Celloidin Capsules containing Bacilli and upon a Mode of Preparing Such Capsules.
   JOHN McCRAE.
5. Some Experimental data on the Significance of Concentration and of Multiplicity of Area in Hypodermic Injections. S. J. MELTZER.
6. Observation on a Case of Cyclic Albuminuria.
   LAFAYETTE B. MENDEL and DONALD R. HOOKER.

1.—See editorial, **Philadelphia Medical Journal,** Vol. IX, No. 2, p. 46.

2.—Bailey has studied **the changes in the cell bodies of the neurons produced by the fixed virus of rabies.** The first portion of the paper is devoted to a study of the normal morphology of the nerve cells of the rabbit. After an historical review of the histological studies of the nerve cells, which includes the classification of Nissl, the author describes the results of his personal observations on the nerve cells of the rabbit. He adopted, in his investigations, the staining method of Nissl as modified by Held. Only the most important of the results can be noted here. In the multipolar cells of the medulla and the cord, Bailey has been unable to confirm the claims of a double microchemical staining reaction for the nucleolus. He has not been able to demonstrate a distinct embedding mass or coagulum in which the granules of the Nissl bodies lie embedded, although it is not improbable that such a mass may exist. He has found the acidophile reticulum extending into all the dendrits, however small, although sometimes is is reduced to a single fibril. In the neurit or axon, on the other hand, the anastomosing character of the reticulum is lost and the fibrils become parallel and are continuous with the fine parallel fibrillae that compose the axis cylinder. He accepts Held's view that this reticulum is made up of rows of staining granules which support the basophile granules. When examining living cells in warm saline solution of neutral reaction without methylene blue or with a small amount of that dye he could find nothing corresponding to Nissl bodies. When the methelene blue in the neutral normal saline solution was increased to 0.1% or 1%, chromophilic bodies were found. In warm normal saline solution approximating the alkalinity of the blood, with or without methylene blue, no Nissl bodies were found. When the saline solution was of acid reaction Nissl bodies were found. These observations tend to confirm Held's view that the chromophilic bodies represent the precipitation of a substance or substances previously held in suspension or in solution in the protoplasm of the living cell. An attempt to stain the cytoreticulum of the fresh cell with erythrosin failed. He believes that the strands of the acidophile mesh are formed before the chromophilic bodies and that the latter are the result of a precipitation of fine granules which are caught in and upon the meshes of the reticulum. Rabbits, in which the fixed virus of rabies was injected beneath the dura mater of the brain after trephining, were killed at varying periods after the operation; in 3 days presenting no symptoms; in 4 days, on the first signs of symptoms; and in 5 days, presenting partial paralysis. Other rabbits died, one in 6 days, one in 7 days, one in 8 days and 2 in 9 days after the operation. Study of the nervous systems of these animals showed varying changes in the normal anatomy of the nerve cells, which were most marked in the tissues of those that had been allowed to live until they succumbed to the disease. The lesions included congestion of the cord and the medulla, hemorrhage into the gray matter, and infiltration of the walls of the vessels with leukocytes. The cells of the anterior horn of the gray matter showed either (1) complete or almost complete chromatolysis; (2) a considerable amount of chromatic substance which was deposited in a characteristic manner. In the cells of the first group the nucleus may be irregular in outline with an increased amount of acidophile element, or it may be entirely absent. The cell body shows no evidence of cytoreticulum but is not shrunken. The dendrites, on the other hand, are reduced in diameter and often taper to a point, a shorter distance from the cell body. In the cells of the second group the nucleus is perfectly rounded, but the nuclear network is absent and there is an increase of the acidophile element. The cell body presents an imperfect cytoreticulum. The chromatic element is deposited in dense, thin rods, straight, wavy, or in irregular masses full of vacuoles. In the spinal ganglia the cells are all affected: the nucleus is shrunken and crenated and is often eccentric and the acidophile element is increased; the basophile element of the cell body is reduced; the cytoreticulum is indistinguishable and vacuoles are frequent. The cells of Purkinje are reduced in number and show a loss of chromatic substance. The nucleus is often irregular and crenated and eccentric. The main dendrit and its branches are wavy and knobbed. The changes in the cells of the cerebrum are not so marked, although the degenerative changes exist. The mitral cells of the olfactory lobe are decreased in number and present the same degenerative changes in the nucleus and in the cell body. The cells of the basal ganglia show the changes described in the anterior cells of the gray matter of the spinal cord. [J. M. S.]

3.—Herter contributes a paper on **the relation of the intoxication of diabetes to prognosis.** He first describes the methods of detecting the presence of acids in the urine; the method of Herter and Wakeman is recommended as the most accurate for the amount of labor involved. The determination of the N of ammonia is a useful procedure for clinical purposes, since it is probably true that a considerable excretion of organic acid is always attended by an increased excretion of ammonia. As much organic acid as corresponds to 10 gm. of oxybutyric acid may be excreted in 24 hours without causing an increased excretion of ammonia. We cannot, therefore, rely on the ammonia output to detect moderate quantities of organic acid. When organic acids are removed in considerable amount without increasing the excretion of ammonia the acid takes out other alkalies. In cases of diabetic coma the urine always contains a large excess of organic acids and the nitrogen of ammonia is usually increased to 18 to 25% of the total nitrogen. Crotonic acid can regularly be obtained from the urines of patients in diabetic coma. The condition of diabetic coma is preceded by a period of days, weeks or months, in which there is a large excretion of

B-oxybutyric acid and in which the nitrogen of ammonia is largely increased. Patients' whose urines show or have shown a large excretion of organic acids are in danger of developing diabetic coma, but the nitrogen of ammonia may temporarily rise as high as 16% and yet coma may be delayed for a long time. The persistent excretion of more than 25 gr. of B-oxybutyric acid indicates impending coma. A patient passing 30 gm. of B-oxybutyric acid in 24 hours may still have enough energy and strength to be about all day and perform considerable muscular work. A patient who has been excreting very little organic acid and has gained weight may, within a few months, show the presence of considerable quantities of organic acid and die in typical diabetic coma. When the urine contains little or no organic acid there is no immediate prospect of diabetic coma, but such patients are probably liable to the majority of other dangers that threaten diabetic patients. When the urine regularly contains more than 200 gm. of sugar per day there is usually considerable organic acid in the urine and large amounts of acid indicative of coma, are invariably accompanied by considerable or great glycosuria. Sometimes there is much sugar and little or no acid in the urine and sometimes there is considerable acid and little sugar. These facts render it desirable to examine the urine of diabetic patients at least once a month with reference to the amount of acid excreted, or the element of acid intoxication must be clearly separated from the element of glycosuria in the study of the progress of a case. The withdrawal of carbohydrate food frequently leads to a considerable reduction in the quantity of organic acids excreted. The reason for this is not yet clear. [J. M. S.]

4.—McCrae describes a method of preparing **celloidin capsules** which, when filled with bacilli and placed in the peritoneal cavity of an animal, allow dialysis. He finds that the normal tissues, unstimulated, do not possess the power of causing agglutination; they do not require to be stimulated by the presence of bacterial bodies, but will produce their share of the agglutinins when acted upon by bacillary products. Agglutination will follow the insertion of capsuled bacilli into the peritoneal cavity; it gradually increases in degree and, on the removal of the capsule containing the bacilli, begins to disappear. Varieties of bacilli related closely in morphology and cultural reaction do not as a rule produce sera that interagglutinate. [J. M. S.]

5.—Meltzer has experimented on the **significance of concentration and of multiplicity of area in hypodermic injections.** His work has been attended by uniform results that demonstrate that bulk is nothing, but that concentration is everything. The doses being equal, the more concentrated the poison, the stronger the result. In other words, the osmotic pressure is the most important factor in the process of absorption. The effect of a subcutaneous injection depends to a considerable degree upon the concentration of the injected solutions and is materially influenced by a greater distribution of the injected quantity over several areas. [J. M. S.]

6.—Mendel and Hooker have studied a case of **cyclic albuminuria** which occurred in an apparently healthy young man. The typical course of proteid excretion from hour to hour under various conditions was reviewed and its independence of the changes in diet or muscular work shown. No relationship between the volume of urine eliminated and the quantity of proteid excreted was found. The specific effect of the horizontal posture in dispelling the albuminuria was the most interesting feature observed. [J. M. S.]

VRATCH.

December 8, 1901. (Vol. XXII, No. 49.)

1. On the Treatment of Exudative Pleuritis by the Method of Prof. Levaschoff. P. I. TANFILIEFF.
2. Graphic Methods of Determination of the Fluctuations of Blood-Pressure in Man. I. M. LEVASCHOFF.
3. On the Question of the Role of the Spleen in Infectious Diseases. A. A. KUDRIAVTSEFF.
4. On Primary Acute Osteomyelitis of the Spinal Column. F. K. VEBER.
5. Myoma of the Round Uterine Ligament Developed Extraperitoneally. I. M. LJOFF.
6. On the Morbidity Among the Students of the St. Petersburg Mining Institute. D. P. NIKOLSKI.
7. The Treatment of Inflammatory Trachoma with Ichtargan. V. PH. GORTALOFF.
8. The Present Status of the Koumiss-Cure and Its Imperative Need in View of the Fight Against Tuberculosis. N. A. ZOLOTAVIN.

1.—Will be abstracted when concluded.

2.—Levaschoff presents an extensive review of the **methods employed in the determination of blood-pressure** and shows a number of tracings obtained with several instruments both in health and disease. He also described **a modification of Franc's apparatus** which he found simple, convenient and accurate. It consists of a system of levers attached to a support for the wrist. The undulations of the pulse are registered on a kymograph. The article is replete with illustrations which are essential to a proper understanding of the text, and should therefore be consulted in the original. [A. R.]

3.—Kudriavtseff discusses briefly the unsettled question of **the function of the spleen** and describes a few preliminary experiments undertaken with a view of determining **the role of the spleen in infection of the organism.** In these experiments animals (rabbits) received intravenous injections of 0.5 to 0.75 c.c. of a bouillon culture of **cholera bacillus.** The white blood corpuscles were counted before and after the injection and the general condition noted. At the expiration of 1 to 6 hours or longer the animals were killed, and the spleen removed for microscopical examination. It was found that as infection advanced **the Malpighian bodies increased in size and their boundary lines became less and less distinct,** becoming barely perceptible in some cases during the period of increased activity of the spleen. The conclusion is drawn that there is no specific action of the spleen on the microorganisms. The role of the spleen during infection is the same as in health, the only change being an increased production of white blood corpuscles under the stimulus of **bacterial toxines.** However, inasmuch as other hemapoietic organs, such as the lymphatic glands and the bone-marrow, can take the place of the spleen, the organism may fight against infection even without the aid of the latter. The author calls attention to the relation of the **spleen** to the **liver.** The white blood cells elaborated in the former at once enter the latter through the splenic and portal veins. There they engage in the constantly waging war with the various intestinal bacteria. During infection, a still greater demand for leukocytes is made by the liver and supplied by the spleen. [A. R.]

4.—Will be abstracted when concluded.

5.—Ljvoff reports a case of **myoma of the round uterine ligament** occurring in a married woman, 23 years old, between the first and second pregnancy, within a period of 3 years. The tumor increased during each pregnancy until it assumed the size of a child's head. It was situated in the right inguinal region along the inguinal canal. It was not connected with the uterus and was situated extraperitoneally. The tumor was removed, and the patient, at the time pregnant, made an eventful recovery, being delivered at term. [A. R.]

6.—Nikolski calls attention to the statistics of the St. Petersburg Mining Institute for 1899-1900, showing **the high rate of morbidity among the students** (about 52.5%). The highest morbidity is during the spring months, when the students, in preparing for examinations, are under a nervous and physical strain; the lowest during September and January, the months following vacations. Of the various affections gastro-intestinal disturbances furnish the highest percentage (27.4), next comes disease of the respiratory organs (20.9%). [A. R.]

7.—Gortaloff has been using successfully **ichtargan in the treatment of trachoma.** He employs a 1% solution applied by means of a small cotton swab. The application is followed by increased suppuration and congestion, which, however, soon subside, leaving the affected parts in a much better condition. The beneficial effects are ascribed by the

author to the ichthyol and silver entering into the composition of ichtargan. Three illustrative cases are briefly described. [A. R.]

8.—Will be abstracted when concluded.

LA PRESSE MEDICALE.

November 23, 1901. (No. 94).

1. Pelvic Arthritis of Puerperal Origin. P. A. LOP.
2. Persodine in the Anorexia of Tuberculosis. ALFRED MARTINET.

1.—Lop reports a case of **sacro-iliac arthritis** in a primipara, following the birth of a very large child, seen for the first time 56 days after confinement. There was distinct inflammation of the sacro-iliac and sacro-coccygeal articulations. Rest in bed, with the application of a plaster cast, was followed by recovery. The affection results from strain upon the articulations during labor, and is rarely purulent. The first symptom is pain when the patient first attempts to get up. Pressure upon the external iliac fossa or the trochanter, the patient lying on her side, will cause articular pain. Symptoms increase upon walking, and deep vaginismus may be present. Finally abnormal mobility is noted in the joint itself. The prognosis is unfavorable. Long rest in good position, and hygiene, are necessary. [M. O.]

2.—In the **anorexia of tuberculosis** without fever, much advantage has been derived from the use of **persodine**, especially in the early stages of the disease. It should only be employed in stable alkaline solution, taken upon the empty stomach once daily, an hour before dinner. [M. O.]

November 27, 1901. (No. 95).

1. The Teaching of Obstetrics in Paris. PROFESSOR BUDIN.
2. How to Extract a Broken Needle From the Finger. P. DEFOSSES.

1.—Budin states that the first **professor of obstetrics** appointed in Paris, in 1795, was Leroy, with Baudelocque as associate. Pelletan, Désormeaux, Moreau, Pajot, and Tarnier followed. Clinical teaching was only begun in 1823, P. Dubois being the first clinical professor, in 1834. A second clinical professorship was established in 1889. Only in 1891 was it required that students attend at least two labor cases, and spend one month in charge of such cases. In 1898 this service was increased to three months. Two courses of lectures are given in the medical school, and a course of demonstrations upon the mannikin. Beside the two clinics directed by Pinard and Budin, there are three other obstetrical services in the hospitals of Paris, which students may attend. Professor Budin's course embraces a daily visit to the wards with the students, clinical lectures twice weekly, theoretical lectures daily, the attendance of each student for at least 24 hours, attendance upon the labor cases in turn, with observation of the patients as long as they remain in the hospital, and one or two weeks attendance upon infected cases. Besides, careful attention is given the new-born infants, a gynecological clinic is held once a week, and great stress is laid upon the laboratory examination of pathological specimens. [M.O.]

2.—When a **fragment of a needle** is broken off and remains **in the finger**, the surgeon must keep the finger aseptic, must apply a rubber ligature twice about the upper end of the finger to prevent hemorrhage, and must inject cocaine to prevent pain. An incision is then made and the fragment removed. The procedure is well illustrated by diagrams. [M. O.]

November 30, 1901. (No. 96).

1. Tuberculous Cervical Adenolipomatosis. MARCEL LABBE.
2. The Cortical Localization of Topographical Memory. TOUCHE.
3. Intermittent Albuminuria in Scarlatinal Nephritis. P. LONDE.
4. Membranous Conjunctivitis and Corneal Complications. F. TERRIEN.

1.—Labbé reports a case of **cervical adenolipomatosis** of tubercular origin, in a girl of 18, whose mother died of phthisis. She has had bronchitis every winter, blepharitis, keratitis, eczema, and chilblains. The first enlarged cervical gland was noted at eight years. Lately the entire submaxillary tissue has become infiltrated, all the separate enlarged glands being palpable. The hemoglobin was 75, erythrocytes numbered 4,800,000, leukocytes 7250. A photograph shows the swelling of the neck plainly. As a rule the condition begins much later in life. Besides, this girl, while not stout, showed a tendency to obesity. This affection is much more common in men than in women. It seems that adenolipomatosis follows adenitis, an accumulation of fatty tissue occurring about the enlarged glands. She was undoubtedly tubercular; her lymphatic temperament probably favored the lodging of the bacilli in the cervical glands; and the tendency to obesity helped the deposition of fat. Labbé is using sodium cacodylate in the treatment. [M. O.]

2.—Touche reports the histories of two cases in whom the **topographical memory centres were destroyed**, alone. The autopsies showed lesions of the left hemispheres, on the inferior surface of the temporo-occipital lobe. Though the entire left visual zone be destroyed, the memory of colors and forms remains, but even partial destruction of the fusiform lobule may abolish topographical memory. From a case reported by Marie and Ferrand, it is shown that the loss of the faculty of directing is compatible with the preservation of part of the visual field, due to a lesion of the inferior surface of the temporo-occipital lobe. Six other case-histories follow, from which Touche concludes that the **directing centle and the topographical memory center seem** to be **identical in position**, in the anterior part of the left visual zone, probably at the level of the fusiform lobule. [M. O.]

3.—Londe reports the case of a boy of 14, who showed signs of uremia during **scarlet fever.** Three months later **intermittent albuminuria** appeared, gradually growing less, and finally disappearing. Londe believes that the **sympathetic nervous system is** always the **cause of intermittent albuminuria.** Such albuminuria may precede, accompany, or follow a nephritis, or may occur without a nephritis at all. [M. O.]

4.—**Membranous conjunctivitis,** while generally diphtheritic, may be due to gonococci, the Weeks' bacillus, and a few other micro-organisms. It may be superficial or interstitial. The diagnosis and treatment are given in full. Among the corneal complications of membranous conjunctivitis are corneal ulcer, secondary keratitis, hypopyon keratitis, and even panophthalmia. The description, diagnosis, and treatment of these conditions follows in detail. [M. O.]

December 4, 1901. (No. 97).

1. Myocardial Lesions in Uremia. PIERRE MERKLEN and M. RABE.
2. The Argyll-Robertson Pupillary Reaction. J. NAGEOTTE.

1. Merklen and Rabé describe a **subacute interstitial myocarditis** which they found post mortem in three cases of uremia, the case-histories of which follow in detail. In the first case, a man of 36, chronic interstitial nephritis existed, complicated with acute parenchymatous nephritis. There was thrombosis of the left auricle. In the second case, a man of 51, chronic hypertrophic myocarditis, arteriosclerosis, and chronic cyanotic nephritis with an acute attack of parenchymatous nephritis were found. Cheyne-Stokes respiration preceded death. The third case, a woman of 36, presented latest chronic interstitial nephritis, with acute parenchymatous nephritis. Death occurred by hematemesis. All three cases gave the symptoms of uremia. The myocardium showed diffuse hypergenesis of the connective tissue. Probably inflammatory edema occurred as a result of uremia. [M. O.]

2.—Normally both pupils react to light equally, a reflex action. But the reaction to accommodation is an associated movement, not a reflex movement. In 1869 **Argyll-Robertson** discovered that the **reflex reaction to light was lost in tabes**, while the pupils still reacted normally to accommodation. This loss is permanent, not transitory, and is independent of any intoxication or any lesion of the eye the optic nerve, or the branches of the third cranial nerve. Nageotte advises two methods of obtaining the Argyll-Robertson pupillary reaction by uncovering one eye at a time, in the light, or by moving a light near one eye at a time, in the dark. This reaction may exist in one or both eyes. It signifies a syphilitic lesion of the central nervous system. [M. O.]

Special Article.

THE PROPOSED CHANGE IN THE ADMINISTRATION OF HOSPITALS FOR THE INSANE IN THE STATE OF NEW YORK.

It may be said, of course, that a journal outside of the State has no standing to discuss the lunacy legislation of New York. Still the question of the care of the insane is one involving many principles which have a wide bearing, and is not confined to the limitations of one State. What we may now say will be in the nature of a discussion of points that may be helpful.

Whatever may be done by the State of New York in the care of its insane is certainly likely to be studied and observed beyond the borders of that state. In 1836, the State Lunatic Asylum at Utica was organized under a law drawn up by the Hon. John C. Spencer, a distinguished jurist. The principles formulated in the original Act contemplated a supervision of the asylums by a Board of Managers appointed in its vicinity, probably because they could more conveniently convene, and would have a knowledge of the operations of the institution. For thirty years this law was engrafted upon all the succeeding state institutions, namely—the hospitals at Willard, Poughkeepsie, Buffalo, Ogdensburg and Binghampton. It was the supposition that under this law a large number of public-spirited citizens residing in the localities were willing to give their time without compensation to the management of the institutions. They had much to do in creating a sentiment favorable to a high standard of medical and economic administration, and promoting the humane care of the insane. Of course there were differences in administration, and not an absolute uniformity, so that where the excellences of any one appeared prominent, they could be discussed and adopted elsewhere.

A sensitive feeling in regard to the humane administration of these institutions, and allegations in regard to maladministration in some quarters, led to the creation of a Commission in Lunacy, composed of one person clothed with extraordinary visitorial powers, but who did not possess any power of administration. In this respect an attempt was made to follow closely the principles controlling the operations of the Lunacy Commissioners of Great Britain, whose wisdom and recommendations for half a century have had all the mandatory force of law. About the year 1890, a modification of the law pertaining to the Lunacy Commission was brought about, which aimed to reverse or change the principles and practices of the original law governing asylums, so far that it removed certain powers possessed by the Board of Managers, and conferred them upon a triumvirate appointed by the governor. From time to time, by additional legislation, there had been a gradual absorption of all powers and duties of Boards of Managers of the now existing fourteen state asylums until they had been shorn of all powers except appointing medical superintendents and had become in name and in fact mere figure-heads. Several individual members of Boards of Managers had resigned, as there seemed to be little honor in filling a negative office. An attempt absolutely to unify the administration of all hospitals succeeded. This legislation, of course, changed the whole theory of administration. The original law contemplating a visitorial board has now been changed to constitute not only a board clothed with extraordinary, visitorial powers, but a board of estimation and appropriation, making altogether a bureau o large dimensions located in the state capitol at Albany.

It is not for us to enter upon a discussion of the allegations made about the friction between the Lunacy Commissioners, the Managers of State Hospitals and officers; neither are we disposed to express any opinion about the per capita rate of medical service, and whether all the contentions about the New York system were with or without foundation. The medical press has been full of information about these contentions.

On the inauguration of Mr. Odell as Governor, he set out to bring about many useful reforms in the methods of taxation, and to reduce alleged extravagances in various departments of the public service. He has had the loyal support of a compact political organization. During the last summer he made a personal inspection of the hospitals of the state. How thoroughly this was done, of course, we do not know, but it is said that a stop of several hours was made at certain places where months or years might have been required to understand fully the situation of affairs. At all events, there came during the first year of his administration a message to the legislature urging changes, which have now been accomplished, namely—the abolishment of all State Boards of Managers for the insane, and the conferring of all their administrative powers upon three members composing a Lunacy Commission. He also recommended that boards of visitors be created who shall visit asylums, and yet have no administrative powers, but to report what may occur in them to the Governor, and to the State Commissioners in Lunacy. The present status of the bill is that it has passed the legislature, and is in the hands of the Governor awaiting his approval.

During the consideration of these changes at the present session of the legislature the bill has been moved with extraordinary haste, backed by great strength, and has been very generally discussed throughout the state and in the press. Protests against changing methods of administering the insane hospitals have come from clergymen, headed by Bishops Potter and Andrews, Rev. Dr. Huntingdon of Grace Church, Rev. Mr. Rainsford and Rev. Mr. Parkhurst and many others, and also by the Board of State Charities, by the State Charities Aid Association, through its president, George F. Canfield, by Mr. Charles Osborne, late member of the State Lunacy Commission, and Mr. Abram S. Hewitt, charging that the contemplated change would destroy all individual interests in the state asylums, and would substitute for it a board of state officials with a central location in the capitol building at Albany. The change has been declared to be a sad de-

parture from the principles of all humanitarians, and the only comfort that has remained to them is the reflection and hope that it will not be of long duration. It has been the reasonable criticism of all citizens who observe public affairs that the tendency of political organizations has been to the aggrandizement of power for the purpose of furthering their own interests. The apprehension has been that it would remove from the interest of the charities the sympathy of a large number of charitably disposed citizens, through whose instrumentality alone any work of humanity can ever be proposed or carried on. It is idle to suppose that a body of public functionaries could have any other expectation of approval of their acts except the curtailment of expenditures of the public charities in order that they might come before their citizens with a claim of economical administration, and this has seemed to be the basis of appeals for votes during the legislative discussion of this question.

There is still a graver danger in the minds of some; that a governor—not necessarily the present one—may seek to promote the interests of his organization by the appointment to office of men to whom he may be under obligation, and particularly there may be a temptation to use the great fund of five million dollars which is now raised in the State of New York for lunacy purposes; and that judging by experience this department of the government will inevitably drift into politics, and that men hereafter appointed as commissioners, medical superintendents, physicians, stewards, and so down through the thousands of employees, may be expected in some way to promote the interests of the organization giving them office. It is only another instance, it seems to many observers of a levelling tendency, or degeneration, from a higher to a lower plane.

During the discussion we have not observed any criticism made of the present Lunacy Commissioners, or of their desire to aggregate to themselves more powers, so that we cannot speak with any certainty of their position in regard to the changes that have been going on. What would we here in Pennsylvania say to the proposition to confer upon a Commission the disposal of the enormous charitable appropriations that are made by our legislature for hospitals and other benevolent institutions, with an office located at Harrisburg?

In this connection is another proposition in the State of New York to confer upon a single paid commissioner the powers and duties now possessed by the State Board of Charities. This officer is to be salaried, with a bureau of clerks to look after the general charities of the State of New York, and to possess supervisory powers, such as those now possessed by Boards of Trustees and Managers. What is stated above refers simply to a new departure in the lunacy history of New York State, and is but one of the evolutions that have been going on since the year 1836. The last word has not been spoken and the last change has not yet taken place.

Original Articles.

A CASE OF OSTEITIS DEFORMANS.

By J. C. WILSON, M. D.,
of Philadelphia.
Professor of the Practice of Medicine, Jefferson Medical College.

Since the publication in 1877 by Sir James Paget[1] of 5 cases of osteitis deformans, a previously undescribed disease, a large number of instances of this malady have been reported. Paget himself in 1890[2] had seen 23 cases of the disease. Packard, Steele and Kirkbride[3] were able to collect references to 99 cases reported as osteitis deformans. A critical study of these cases led them to conclude that 4 were certainly instances of some other condition, 29 were doubtful, the facts given being not sufficiently definite to warrant the statement that they were typical cases of osteitis deformans. The remaining 66 they regarded as instances of the disease described by Paget in 1876.

According to Elting[4] more cases of osteitis deformans have been reported from Great Britain than from any other country. This observer attributes this preponderance of cases to the interest aroused by the writings of Paget upon the subject. The next greater number of cases has been reported from France, where an especial interest was aroused by the observations of Richard,[5] Thibierge,[6] Joncheray[7] and others. A limited number of cases have been reported from Austria, Germany and Italy.

In North America up to the present time there have been reported 10 cases of osteitis deformans by the following observers: Macphedran,[8] Toronto, 1885; Gibney,[9] New York, 1890; Mackensie,[10] Toronto, 1891; Taylor,[11] New York, 1892, 2 cases; Herwirsch,[12] Philadelphia, 1896; Watson,[13] Baltimore, 1898; Packard, Steele and Kirkbride,[14] Philadelphia, 1901; Atkinson,[15] Baltimore, 1901; Elting,[16] Albany, 1901. To this list I am able to add the following case from my service in the Jefferson Medical College Hospital:

CLINICAL NOTES BY DR. KALTEYER.

C. F., 63 years old, widower, a butcher, a native of the U. S. Admitted November 6, 1901, suffering from edema of the legs, feet, arms, hands, scrotum, penis and face, and great difficulty of walking on account of deformity of the lower extremities.

Family History. Father's death due to apoplexy—he had suffered from two previous attacks, followed by hemiplegia. Mother died suddenly; nature of illness unknown. Several of his relatives on the mother's side died very suddenly. One of the patient's brothers died of pneumonia and another of rheumatic fever. The patient's second wife suffered from cancer of the uterus, which caused her death about four years ago.

Previous Personal History. The patient passed through attacks of varioloid, measles, mumps and diphtheria in childhood. Dyspeptic symptoms consisting chiefly of pain referred to the epigastric region after taking food, belching and at times nausea and vomiting have troubled the patient off and on throughout his life. His appetite, however, has always been good. When 23 years of age he suffered six months from a subacute disease of the right eye which resulted in partial loss of sight. At the age of 33 he was wounded by a pistol shot, the bullet penetrating the posterior wall of the chest just below the spine of the right scapula. It is still in his body, but does not give him any discomfort. He has had two illnesses of a severe nature during his life, one when 44 years of age, the chief symptom



Fig. 1.—Showing changes in the face and long bones and the characteristic deformity of the chest and abdomen.

of which was pain in the chest of a stabbing character, apparently pleuritic. This illness lasted for some weeks. The second serious illness occurred at the age of 51, when he was confined to his bed for four weeks. Its onset was marked by acute pain in the right side of the chest, which persisted for some time. He had two attacks of gonorrhea, the first when he was 42 years of age, the second a year later. His occupation has always made great demands upon his physical energy. Though working very hard he has in the main enjoyed good health. Until a few years ago he indulged freely in alcohol and tobacco. Has been annoyed by hemorrhoids during the past 15 years, but they were never distressing. An inguinal hernia which he attributes to heavy lifting developed in the left side about 10 years ago. He has never worn a truss. About 16 years ago



Fig. 2.—Showing cervico-dorsal kyphosis.

outward bowing of the legs first attracted his attention. This deformity did not interfere with the usual activities of his occupation. He attributes the change in the shape of his legs in part at least to heavy lifting. About 4 years later the right femur was fractured. Union was complete after several weeks and he resumed his occupation. He attributes the deformity of the right lower extremity to this injury. In this he is evidently not correct, as the present deformity is also conspicuous in the tibia and fibula of the right leg, as well as in the femur, and the deformity of the left leg and thigh is almost identical with that of the opposite side. About 4 or 5 years ago the curving of the forearms was first observed. His attention was directed to this bowing by his friends. This deformity did not interfere with his daily labor. The present skeletal deformities which consist chiefly of curving and thickening of the long bones, gradually appeared and became progressively more pronounced. About 2 years ago he wore a cap of the size 6⅞. Recently he has found it necessary to wear a cap somewhat larger, 7¼. When 30 years of age his health was excellent. He weighed at that time 180 pounds, and his height was 5 feet 7 inches. At the present time his height



Fig. 3.—Showing curvatures in the bones of the lower extremities.

is 4 feet 11 inches and his weight is 131 pounds. Though bedridden, deformed and practically helpless, his disposition is very cheerful. He has been in very poor health for the last 6 years, suffering from a winter cough and recurrent edema of the lower extremities. For the past 2 years he has suffered from paroxysmal dyspnea, palpitation of the heart upon exertion, and increased frequency of micturition. The development of the skeletal deformities was not accompanied by pain nor has pain referred to the bones been a symptom at any time during the progress of the case.

Present Condition. The patient has great difficulty in standing even with assistance on account of the deformities of the legs. When in the erect posture the head is thrown forward. There is marked cervico-dorsal kyphosis with slight lateral curvature, the concavity in the dorsal region being toward the left. There is also slight rotary deformity of the spine involving the lower dorsal and lumbar vertebrae. The shape of the face is irregularly triangular with the base directed upward. The face is long, the chin pointed and prominent. The superior aspect of the head is flat and on account of the prominence of the frontal and parietal eminences somewhat square-shaped. The surface

of the temporal and parietal bones is irregular. The measurements are as follows:

Bitemporal diameter	13½ cm.
Biaural diameter	15½ cm.
Fronto-occipital diameter	20½ cm.
Occipito-mental diameter	23½ cm.
Biparietal diameter	14¼ cm.
Diameter through angle to jaw	12 cm.
Greatest circumference of the head	58½ cm.
Arc of vault meatus to meatus	39 cm.
Distance from glabella to inion	20 cm.

The hair is scanty and gray and the arteries in the temporal region are tortuous and sclerotic.

The eyes were examined by Dr. Sweet with the following results: O. D.—Pupil 6.5 mm.; it does not react to light or accommodation. The optic disc is partially atrophic. Disseminated retino-choroiditis is present. O.S.—Pupil 3.5 mm.; reacts normally to light and accommodation. The optic disc is partially atrophic. A disseminated retino-choroiditis is also present, but not so marked as in the right eye. The field of vision in each eye is concentrically contracted on account of the atrophy.

The teeth are carious, the tongue is clean and moist. The neck is short and the skin covering it is loose and wrinkled. The head, neck and upper extremities are emaciated. There is a good deal of abdominal fat and the thighs and legs are slightly edematous. The sternocleido-mastoid muscles stand out prominently. Arterial pulsation is seen on both sides of the neck; it is more pronounced on the right than on the left side. The suprasternal fossa and the supraclavicular spaces are deep.

The thorax is asymmetrical and irregularly barrel-shaped. The base of the chest on the right side posteriorly is bulged out. This lack of symmetry appears to be due to the curvature of the spine, its rotary deformity, to the thickening of the ribs and sternum and to the deformity of the clavicles. The anterior surface of the chest is flat. At the lower portion of the sternum there is a shallow funnel-shaped depression. The ensiform cartilage is bent sharply forward. The chest at the level of the second costal cartilage is 90.3 cm. The clavicles are thickened, especially at their sternal ends, and their surfaces are wavy, nodular and very irregular. Arterial pulsation is visible above and below the clavicles, particularly on the right side. Signs of massive hypertrophy of the heart exist. There is a diffuse heaving impulse visible over the greater portion of the chest to the left of the median line and extending laterally as far as the mid-axillary line. The point of maximum intensity of this forcible impulse is just to the left of the mid-clavicular line in the fifth intercostal space. On palpation there is perceived just above the apex in the fourth intercostal space a presystolic thrill which is limited in extent. Auscultation reveals a loud systolic murmur over the entire precordial area. The point of maximum intensity of this murmur is just above the apex. It is well transmitted in the direction of the axilla and is audible posteriorly at the angle of the left scapula. A rough systolic murmur is also audible at and above the second right intercostal space. This murmur is transmitted into the vessels of the neck. The second aortic sound is indistinct and has a murmurish quality. It is transmitted down the sternum over the lower portion of which a faint diastolic murmur can be clearly heard. The second pulmonic sound is accentuated. The axillary, cervical and radial arteries exhibit forcible pulsation. The brachial artery pulsation has a locomotor character. All the superficial arteries show sclerotic changes. The radials are unyielding, firm and atheromatous.

The abdomen is soft and moderately distended. Its lateral diameter is greater than the distance from the ensiform cartilage to the symphisis pubis. Its shape is irregularly oval and it is characterized by a deep, transverse furrow at the level of the umbilicus. The spleen is not enlarged and the extent of liver flatness in the mid-clavicular line is normal. There is a complete, oblique inguinal hernia on the left side. In addition to the deformities of the skull, clavicles and bones of the thorax already described there are marked deformities in the long bones of the extremities. The humerus is thickened and enlarged. Its surface is irregular and it is markedly curved, the concavity presenting toward the flexor surface. The ulna and radius show the greatest deformity. Their surfaces are very irregular and the shafts are thickened and strongly bent and twisted. The styloid process of the ulna is very prominent. The hands are large but their osseous structures appear to be normal. The scapula is enlarged and roughened, the changes being particularly marked in the spine. The changes in the pelvis are less marked than in the long bones. The femur shows the same enlargement and irregularity observed in the bones of the upper extremity. It is strongly curved, the concavity presenting backwards and inwards. At the junction of the middle and lower third of the right femur there is an old callus. The tibia and fibula are bent outward and forward. The foregoing skeletal changes are present to an equal degree on both sides of the body.

The tissues about the knees and ankles are somewhat thickened, but there are no distinct arthropathies. The feet, like the hands, are large, but not deformed. The superficial and deep reflexes are normal; no clonus. There are no signs of involvement of the central or peripheral nervous system.

The following urine examinations were made:

	Nov. 7.	Nov. 8.	Nov. 12.	Dec. 7.
Color	Amber	Amber	Light yellow	Amber
Transparency	Clear	Clear	Turbid	Clear
Sp. Gr.	1016	1020	1020	[illegible]
Reaction	Acid	Acid	Acid	Acid
Albumin	½ moist layer	Trace	Trace	Trace
Sugar	Not present	Not present	Not present	Not present
Urea	1.4%	1.4%	1.2%	1.1%
Crystals	Calcium oxalate	Calcium oxalate	Calcium oxalate	Calc. oxalate

Amorphous urates, granular and hyaline casts, leukocytes and a few red blood cells were present in all the specimens examined.

Blood Examination. The following blood examinations were made:

Nov. 7, 1901.	
Leukocytes	2,500 per cu. mm.
Erythrocytes	2,843,740 per cu. mm
Color index	.98
Hemoglobin	55%
Dec. 11, 1901.	
Erythrocytes	4,950,000 per cu.mm.
Leukocytes	5,800 per cu. mm.
Color index	.707
Hemoglobin	70%
Differential Count of Leukocytes.	
Polymorphonuclear leukocytes	68%
Small lymphocytes	22%
Large lymphocytes	9%
Eosinophiles	1%

Osteitis deformans has recently been especially studied in America by Watson of Baltimore, 1898; Elting of Albany, 1900, and Packard, Steele and Kirkbride, Philadelphia, 1901. The elaborate researches of the three last observers into the literature of the subject since the first publication by Paget constitute a very complete résumé to which the student is referred. The term osteitis deformans was used by Czerny in 1873, Schmidt, 1874, and Volkmann, 1874, in describing curvature of the bones of the lower extremities. It remained for Paget to use the term osteitis deformans to designate the substantive affection under consideration.

Pathological reports have been published in connection with a number of the cases, especially by von Recklinghausen, Stilling, Paget, Butlin and Packard, Steele and Kirkbride. Elting, after a careful review of the contributions to the pathology of the subject, concludes that the most important factors concerned in the production of the deformity of the bone are, first, a hypertrophy of the bone and, second, a relative softening which accompanies the onset and appears to be only temporary, being followed usually by induration. In the case reported by Packard, Steele and Kirkbride there was a large giant-celled sarcoma springing from the frontal bone to the left of the median line. The calvarium was



Fig. 4.—Skiagram showing deformity of [illegible] and humerus.



Fig. 5.—Skiagram showing deformity of radius and ulna.



Fig. 6.—Skiagram [illegible] tibia.

uniformly increased in thickness, the diploe apparently absent except in the frontal and occipital regions. The base of the skull appeared large and gross, all of its concavities being deepened except the sella turcica. A microscopical examination of the skull showed the distinction between the diploe and outer and inner tables to be entirely lost, a thin and irregular plate of compact bone to underlie the periosteum, the bone elsewhere being honeycombed by absorption spaces, giving it a porous structure. These interspaces were filled by connective tissue reticulum, round cells with large nuclei, polynuclear leukocytes and a few giant cells. The clavicle was cut with a saw with greater ease than the long bones. Decalcification was complete in twelve hours —a very short time compared with normal bone, which requires three or four days for decalcification in the solution used. A part of the shaft normally consisting of compact bone tissue with regular Haversian systems was found to consist of a finely porous structure in which areas of unaffected bone alternate with spaces evidently the result of bone absorption. These spaces were filled with a fibrous tissue reticulum.

"The reticulated structure runs almost to the periosteum, and a thin shell immediately under it is the only representative of the compact substance.

In the interspaces are numerous groups of giant cells with many nuclei. These cells lie in the edges of the unaffected bone, and are apparently engaged in its absorption.

Running through these interspaces and through the bone itself are masses of closely packed cells, resembling osteoblasts, with a fibrous matrix. This is evidently an attempt at the formation of new bone, but in no place is it calcified. The dividing line between the unabsorbed and new bone is sharp, and there is every indication that the processes are distinct from one another."

According to these observers the sections examined showed the following changes:

"1. Absorption of the healthy bone.

"2. Formation of new bone coincident, but in no way connected, with the absorption process.

"3. The failure of calcification in this new bone.

"4. The destruction of the regular structure of the bone and the addition of new uncalcified bony tissue."

According to Kehtoen-Riesman[17] who refer to the studies of Recklinghausen and Stilling, "the disease begins with the absorption by means of Howship's lacunæ and Volkmann's canals, and the bone may become very spongy, porous and even cystic. Simultaneously there occurs growth by apposition from the periosteum and medulla; but the osteoid tissue often remains uncalcified for a long time so that deformities develop." The marrow undergoes fibrous changes. As a result of the softening which accompanies the inflammatory process the affected bone becomes deformed, the normal curves being increased and after a time new curvatures developed. The skull is remarkably increased in thickness, the forehead becomes large and prominent and the face appears small. The clavicles are curved and thickened, the humerus is commonly less altered than the other long bones, but the radius and ulna are strongly curved. The femurs curve outward and the tibias outward and forward. In consequence of the bending of the bones of the lower extremity and the spinal curvature the height of the patient is usually diminished by several inches. The attitude of the head is striking. The chin falls upon the chest and the head is advanced in a peculiar manner. Elting states that chemical analysis shows that the phosphorus is but slightly diminished in the affected bones. The organic matter is somewhat increased, the inorganic slightly decreased. There appears to be some relation between osteitis deformans and the development of carcinoma or sarcoma. The analysis of the reported cases made by Packard, Steele and Kirkbride from this point of view shows that of 66 cases 3 had cancer and of 67 cases 5 suffered from sarcoma and there were two instances of non-malignant tumors. These observers regard the association between osteitis deformans and malignant disease as less close than some statements in the text-books would indicate. In well-developed cases many of the bones of the skeleton are involved; in some of the cases only a limited number. An analysis of the reported cases has shown that the bones are involved in the following order of frequency: The skull, tibiæ, femurs, spine, pelvis, clavicle, ribs, radii and ulnæ. There can be no doubt that pressure and the action of gravity play an important part in the production of the deformities characteristic of the disease. The implication of the long bones of the upper extremities is in some part due, especially in the early course of the process to muscular action. When the disease is well-established, there is general atrophy of the muscles.

The etiology of osteitis deformans is involved in obscurity.

Predisposing Influences.—Both sexes are liable to the disease. Of the reported cases about twice as many occurred in males as in females. Age is more important. The first symptoms have commonly shown themselves after the fortieth year. The onset of the disease in one instance occurred about the age of twenty-one. As the disease is chronic and progressive and in most instances unattended by subjective symptoms, the cases have usually come under observation at a period more or less remote from the time of onset. In the majority of instances the first symptoms have been observed in middle rather than in advanced life. The influence of heredity is uncertain. In three instances, however, cases have occurred in two members of the same family. Occupation is altogether without influence in predisposing to the disease.

Association with Other Diseases.—It has been assumed that there is some causal relation between lesions of the nervous system and osteitis deformans. No constant relationship has, however, been established and in the greater number of the reported cases there has been an entire absence of phenomena indicating nervous or visceral disease. Arthritis deformans has in a few instances co-existed with osteitis deformans. This association appears to have been a coincidence and there is no reason to believe that there is any causal relationship or interdependence between the two affections.

The exciting cause of the disease remains wholly unknown.

Symptomatology.—The manifestations of osteitis

deformans are chiefly objective. The onset is insidious, sometimes involving a single bone or a limited number of bones, but in the course of time showing a tendency to symmetrical involvement of the skeleton. The disease is slowly progressive and requires a number of years varying from five to fifteen, to attain its maximum development. It has little influence upon the general health and is not a direct cause of death. Individuals suffering from this disease present as the result of definite skeletal deformities a remarkable resemblance to each other. The face is irregularly egg-shaped or triangular, the base being at the forehead and the apex at the chin. The head is carried forward with the chin sunk upon the breast. There is cervico-dorsal kyphosis, flattening of the thorax at the upper part, spreading at its base, the abdomen is diamond-shaped and shows a deep transverse sulcus, the hips are increased in width and the lower extremities markedly curved outward and forward, while owing to the decrease in height amounting in some instances to several inches, the arms appear unusually long and ape-like.

Pain in the bones is noted in the early course of many of the cases. In some instances it has been intense. In others it has occurred chiefly at night or after fatigue. As the disease progresses the pains have become less severe. In a large proportion of the cases pain has not been observed. The absence of pain may be explained by the very insidious development of the disease. Packard, Steele and Kirkbride from a careful study of the literature conclude that but little importance is to be attached to pain as a symptom of this disease. Other observers, as Joncheray, distinguish two varieties of osteitis deformans, first a painful, and second a painless variety. In the former which is the more common the osseous lesions are more rapidly developed, while in the latter they develop more slowly.

General muscular atrophy is characteristic of the advanced disease. This is doubtless in many instances to some extent due to senile changes in the muscles. There appears, however, to be a definite relationship between the osseous deformities and the muscular atrophy.

Diagnosis.—The direct diagnosis in well-developed cases is unattended by difficulty. The changes in the shape of the head and in the long bones, the diminution in stature, the kyphosis and the peculiar deformities of the thorax and abdomen make up a definite clinical picture not seen in other maladies. The absence of causally related visceral disease and in most instances the absence of the manifestations of lesions of the nervous system and the unimpaired general health are to be noted. The differential diagnosis involves the consideration of the following diseases:

1. *Osteomalacia.* In this affection there is gradual softening and subsequent bending of the bones in which spontaneous fractures frequently occur. There is a feeling of weakness in the lower extremities so that the patient walks with difficulty and requires support. There seems to be some relationship between osteomalacia and osteitis deformans, the essential distinction consisting in the fact that in the latter there is a tendency to the irregular and eccentric formation of new bone.

2. *Leontiasis ossea.* In this rare affection there is hyperostosis of the bones of the skull and face. Osteophites develop upon the lower jaw and at the margins of the orbits and upon the outer and inner table of the skull. In the latter situation they may cause symptoms of meningitis or tumor. The narrowing of the canals of exit for the cranial nerves may give rise to blindness, deafness, anosmia and peripheral derangements of sensation and loss of motion.

3. *Rickets.* This disease of early life presents changes in the bone and other associated symptoms that are characteristic. The bending of the ribs, enlargement of the wrists, squareness of the forehead, open fontanelles are derangements of early developmental processes, not modifications of mature structures. The deformities produced by rickets bear only a superficial resemblance to those caused by osteitis deformans.

4. *Acromegaly.* The thick, heavy lips, protruding under-jaw and broad deformed face and the enlargement of the head in its antero-posterior diameter bear no resemblance to the cranial and facial changes in osteitis deformans. In acromegaly the bones of the hands and feet and in some instances the epiphyses of the long bones are involved, while in osteitis deformans the changes in the long bones mainly involve the diaphysis, and the bones of the feet commonly escape.

5. *Pseudo-hypertrophic Pulmonary Osteoarthropathy*—a disease characterized by enlargement and deformity of the fingers, hands, wrists, feet and ankles, occurring in patients suffering from certain chronic pulmonary affections. This deforming affection of the osseous system bears only a remote resemblance to osteitis deformans. The absence of changes in the cranium, the escape of the shafts of the long bones and the constant presence of intra-thoracic lesions constitute points of radical difference.

The prognosis of osteitis deformans is favorable as regards prolongation of life, but absolutely hopeless in the present state of knowledge as regards cure. The disease is essentially chronic and progressive. It does not tend to the fatal issue, which usually results from some intercurrent affection.

Treatment has been without avail. Bowlby[19] states that in some instances improvement has followed the use of potassium iodide and of thyroid extract and believes that these drugs deserve a further trial. He does not state the therapeutic indications for their employment.

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A NEW AND IMPROVED METHOD OF CLOSING VESICO-VAGINAL FISTULAE, WITH REPORT OF A CASE.

By A. LAPTHORN SMITH, M. D., M. R. C. S., England,

of Montreal

Fellow of the American and British Gynecological Societies; Professor of Clinical Gynecology in Bishop's University, Montreal; Professor of Surgical Diseases of Women in the University of Vermont, Burlington; Surgeon-in-chief of the Samaritan Hospital for Women; Surgeon to the Western General Hospital; Gynecologist to the Montreal Dispensary; Consulting Gynecologist to the Women's Hospital, Montreal.

Mrs. H. E., aged 35, to whom I was called by Dr. Virolle, came under my care on the 4th of June, 1901. Her physician informed me that she had had a very severe confinement six weeks before, the child weighing fourteen pounds and having such a large head that he had to use instruments, although she had had four other children naturally. After her delivery he found that she had a large vesico-vaginal fistula, but, wisely I think, he waited until she had quite recovered and gained a little strength before calling me in consultation.

On examination I found a tear of the bladder, vagina and cervix uteri, extending from immediately back of the sphincter vesicæ on the patient's right, transversely downward and backward through the os uteri on the patient's left, and measuring nearly two inches in length. The flow of urine over the raw surface had incrusted it with phosphates and somewhat thickened it. It looked as though the tear was due to the left blade of the forceps having caught the bladder and cervix under the arch of the pubis and cut it there. With the old method this would have been quite a formidable fistula to close, and the chances of failure would have been considerable, but by following the method, which will now be described, and which I have already employed several times with good success, there was not only not the slightest difficulty in closing it, but the result was most satisfactory, not a drop of urine coming through afterwards.

Operation.—First, after careful disinfection of the vagina, the latter was incised across in front of the cervix and the bladder pushed off the uterus in the same way as in the first step in vaginal hysterectomy, only it was not quite so easy on account of the tear in the bladder having become joined to the tear in the uterus, and the tissues being thickened. The laceration in the uterus which extended up to the internal os, was denuded and closed by Emmet's method, with chromicized cat gut.

Second. The vagina was separated easily from the bladder with the finger everywhere except where the two torn edges had become united at the fistula. With the finger between the vagina and bladder it was quite easy with a few cuts with the scissors to separate them from one end of the fistula to the other. As this cut gave a raw edge there was no necessity of cutting away a single particle of either bladder or vagina.

Third. The long tear in the bladder was now caught with a catgut stitch at either end only taking in the muscular wall and my assistant holding them on the stretch, it was only the work of a minute or two to bring the muscular wall together with an over and over fine chromicized catgut suture going back fully an eighth of an inch on each side, but taking great care never once to penetrate the cavity of the bladder or even to touch the mucous membrane. When this was finished there was a strong ridge on the site of the tear nearly a quarter of an inch wide, which was tested with sterilized milk injected into the bladder by a fountain four feet high, giving quite a pressure, and not a drop came through.

Fourth. The slit in the vagina was closed with interrupted silk worm gut passed through the vagina then through the muscular wall of the bladder but half an inch to the right of the tear in the bladder and then through the other side of the vagina, thus displacing the bladder half an inch to the patient's left, so that the line of suturing in the two membranes was no longer in the same place as the line of the tear was. By this means the line of suture of the bladder was backed up or strengthened in front by half an inch of solid vagina instead of a line of sutures, and should any pressure be accidently brought to bear upon the sutures in the bladder, it would have to overcome a valve instead of a hole, and the harder it pressed, the tighter did the valve close. It was fortunate that this was so, for the *catheter à demeure* which I left in the bladder became clogged by a clot of blood and some eight or nine ounces accumulated in the bladder before Dr. Virolle's attention was called to the fact that no urine was coming away, when he immediately removed the catheter, cleaned and reintroduced it, after which there was no further difficulty. The catheter was left in for five days, after which the patient passed her water naturally three or four times a day and has had no trouble since. I only saw her once after her operation, when I went with her doctor on the tenth day to remove the stitches, after which she went about her household duties as well as ever, so Dr. Virolle tells me.

There are two or three points on which I wish to lay especial stress. One is that by adopting my method you avoid leaving any stitches in the bladder mucous membrane where they are liable to become the nuclei of most troublesome calculi, as I have seen in a case of one of my colleagues. Any stitching of the mucous membrane is quite unnecessary because the edges are brought together by the drawing together of the muscular layer immediately underneath it.

Second, instead of depending upon the union of a narrow edge about a thirty-secondth of an inch thick we obtain a thick ridge, fully an eighth of an inch thick in the bladder alone, to say nothing of the thickness of the vagina in front of it.

Third. The great importance of leaving in a *catheter à demeure* which should be used in every case in which anything has been done to the bladder wall, as it removes all tension and places the bladder at complete rest as long as it remains in. There is no longer any need of a woman dragging out a wretched existence with her clothing continually wet, as I have known the wife of an old medical friend to have done, having remained in her room from the age of twenty, when her child was born, till fifty, when she died, when we have at our disposal such an easy and certain method of closing the very worst vesico-vaginal fistulæ.

WHAT CONSTITUTES "SEPTIC POISONING" IN ACCIDENT POLICIES?*

By G. W. H. KEMPER, M. D.,
of Muncie, Ind.

During the past few years a number of our Acciden Insurance Companies have been pleased to add to their policies a special clause designed to insure physicians and surgeons against septic poisoning. My attention having been drawn to this subject recently in a somewhat practical way, I desire to present some of the facts I have gleaned.

On February 20th, 1899, I took out an accident policy—No. 3329,—in the New York Casualty Company, of New York City, for $5000. On February 20th, 1900, and again in 1901, I renewed it—paying each time one year in advance.

The following extract from my policy, section 60, contains the clause relative to septic poisoning: "This insurance does not extend to or cover injuries received by the insured while employed or engaged in any of the occupations classified by the Company in this policy as *not insurable.* * * * * * (Except in the case of physicians, surgeons and dentists who have paid twelve months premium in advance, then the policy covers "*septic poisoning*" accidentally incurred while performing professional duties and during the period covered by such advance payment."

On May 3, 1901, I assisted my son in amputating the thigh of a girl suffering from sarcoma of the knee-joint. After the operation was completed, I took the amputated limb out of doors, and made several incisions into the diseased structures—the knee-joint being in a foul condition—in order to observe the extent of the disease. For some months prior to this event I had been troubled with a slight eczematous eruption at the top of my right ear, and at the close, while washing my hands, to relieve the itching, I accidentally rubbed my affected ear. On May 7th, four days after the operation, a swelling began on my right ear, and developed on the following day a case of erysipelas which extended over my face and scalp. I was confined to my bed and room for three weeks. During the second week, two small abscesses formed in the upper lid of my right eye, and a third one beneath my left eye—all necessitating lancing. After restoration to health, I sent a report of my condition to the company, and received the following reply:

"Your policy does not cover diseases of any kind. On the contrary, diseases are expressly excepted from the operation thereof. This Company, we may say, does issue policies covering the disease from which you were suffering, and we regret for your sake, that you had not one of these policies as you would then be entitled to have made a claim for indemnity against this Company."

(Signed) FRED. G. ANDERSON, Sec'y.

Dr. Hugh A. Cowing, of Muncie, who holds the same kind of a policy wrote to the Company inquiring whether his policy applied to diseases arising from "septic poisoning" and received the following statement in reply:

"We beg to acknowledge receipt of your favor of 3d inst. The policy held by you in this Company does cover septic poisoning in the case of physicians who paid twelve months premium at one time in advance, but after consultation with our Medical Director, we fail to reconcile a case of simple erysipelas being a case of septic poisoning. The proofs we have before us in regard to Dr. Kemper's alleged injury state positively that he was suffering from erysipelas, and we have also corroborative proof, showing this to be the fact. Erysipelas is a disease, and as the policy expressly excepts from the operation, diseases of any kind, we consider that the company is not liable for the claim."

(Signed) FRED. G. ANDERSON, Sec'y.

It will be observed that Mr. Anderson, the Secretary of the Casualty Company, states in his letter to me, "that my policy does not cover diseases of any kind," and yet, in the same letter, that his company "does issue policies covering the disease from which you were suffering, and we regret for your sake that you had not one of these policies". I suppose from this, that the Company issues two kinds of policies—one excluding, and the other including erysipelas as a result of septic poisoning.

The Traveler's, of Hartford, Conn., has a policy that is more definite in its contract. It has a clause attached to the policies of physicians and surgeons, which reads as follows: "Clause h. does not limit or affect indemnity for injuries otherwise covered by this contract, where the death, dismemberment, loss of sight or disability, is caused by septic poisoning through accidental wounds inflicted at the time of inoculation".

Mr. O. J. Simpson, of Lima, Ohio, a special agent of the Traveler's, writes me: "The Traveler's contracts all cover septic poisoning without this clause being attached, but the clause is added and usually attached to physicians and surgeons contracts to emphasize the fact that they are covered against this specific hazard which is greater in their case than ordinary individuals".

The Standard Life and Accident Insurance Company of Detroit, Mich., attaches a supplementary agreement to policies of physicians and surgeons, covering septic poisoning, which provides that if the insured

"Shall accidentally wound himself while engaged in his regular occupation and by reason of such wounding and simultaneously therewith, shall be inoculated with septic poison, that this Company shall be liable under said policy, anything as to such poisoning in the policy, to the contrary notwithstanding, but in all other respects, the several conditions, provisions and exceptions, set forth in or upon said policy shall remain in full force and virtue."

Dr. C. W. Hitchcock, Chief Surgeon of the Standard Life and Accident, writes me as follows:

"We do not intend to cover those cases of sepsis which are so frequent, and which are purely due to the physician's own carelessness where he has a wound or other abrasion on his hand or finger and carelessly opens abscesses or dresses purulent or septic cases without taking any adequate precautions to protect his open wounds. Although the surgeon is the last one who ought to have such wounds unprotected, it is surprising how often cases of this kind

*Read at the eighth annual meeting of the Association of "Big Four" Railway Surgeons, held at Cleveland, Ohio, Oct. 17, 1901.

*Since writing the above I have received a letter from the Casualty Company in which they inform me that in May, 1900, they began to issue a form of policy which purposes to insure against accidents, illness and disease, and that it includes erysipelas.

The disposition of my case led me to secure further information, upon which I based my final communications from several of the leading Accident Insurance Companies, a digest of which I will publish.

of sepsis arise and we have worded our septic clause as we do because such sepsis is not purely accidental, but is the natural result of the physicians own carelessness, and for this the Accident Company surely should not suffer. I think our septic clause is a fair one and that it concisely expresses just what it is intended to cover."

Dr. Edward K. Root, Associate Medical Director of the Aetna Life Insurance Company, of Hartford, Conn., sends me "a rider," which is attached to policies covering septic poisoning, which reads as follows: "The insurance under Accident policies issued by the Aetna Life Insurance Company of Hartford, Conn., extends to all wounds accidentally inflicted, which at the same time become inoculated with septic poison."

He adds: "I may say that we construe septic poisoning as the infection of a wound, caused by external and accidental violence, by any poisonous substance. We do not consider ourselves liable for the infection of a sore, ulcer, or pimple that is in existence prior to the date of accident. But any wound caused by external, accidental violence which becomes infected by poisonous matter, and thus delays healing, or causes death, the Company pays for.."

The Fidelity and Casualty Company, of New York attaches to their policy covering septic poisoning, the following clause:

"This policy, subject otherwise to all its terms and conditions, covers blood poisoning sustained by physicians or surgeons (dentists, undertakers or embalmers, as the case may be) resulting from septic matter introduced into the system through wounds suffered in professional operations."

Mr. A. W. Parsons, Examiner of Claims for this company, adds: "We find it impossible to give a definition more plainly than is contained in the policy itself or just what is or is not covered under the phrase "septic poisoning".

It will be observed that the Traveler's, the Standard Life and Accident, the Aetna, and the Fidelity and Casualtly Companies all stipulate that their liability only extends to cases in which the operator inflicts a wound upon himself, and this becomes the avenue of infection.

The Casualty Company, in which I am insured does not stipulate that infection must be received through a recent wound. It carries a very liberal construction of septic poisoning, and implies that it covers any and all forms of "septic poisoning accidentally incurred". For this reason I felt that I was justly entitled to the stipulated indemnity.

The company claimed that I simply suffered from erysipelas, that it did not arise from infection, and did not come under the definition of "septic poisoning". They claim in short, as stated, that erysipelas is a disease and not a product of sepsis, and therefore rejected my claim.

I feel that I should not allow Dr. Hitchcock's statement to pass unchallenged, when he asserts that the physician is careless who contracts infection through an abrasion or wound on his hand or finger. It is no uncommon thing for a surgeon to become infected through so simple an avenue as a hang-nail upon his finger. A surgeon who is aware of a sore upon his finger should, undoubtedly, guard against danger in operating upon diseased structures, but he may have a broken surface of the skin and not be aware of it. A very minute wound often becomes infected. A surgeon, in cleaning his hands with a nail brush may cause a slight break of the cuticle, which will become a gateway for infection. It is an awkward matter for a surgeon to cut his hand with a knife, or pick his finger with a needle in operating, and yet at times it seems to be unavoidable. Practically, the surgeon who cuts himself with a knife, or pricks himself with a needle, is as careless as the surgeon who neglects to protect a broken surface. Neither should be censured in harsh terms. Between the two accidents there is but slight difference—really none as to results, and yet insurance companies pay for the one accident, and refuse to pay for the other!

In summing up, I think we may declare the following propositions:

1. That the surgeon who is insured and receives a disabling wound unfitting him for practicing his profession, is entitled to an indemnity whether he contracts septic poisoning or not.

2. A surgeon, while operating, may become infected through an old injury, or a new wound. The effects are the same in either instance. There is no valid reason why a policy should not indemnify alike in both cases.

3. If a surgeon cannot recover indemnity from an infection received through a sore, or an abrasion, then he gains nothing from a clause or rider attached to his general policy. In other words, the term "septic poisoning" in an accident policy is simply an aid to secure policy holders!

THE PROGRESS OF KNOWLEDGE CONCERNING VENOM AND ANTIVENENE. A SYNOPTICAL REVIEW OF THE LITERATURE OF THE PAST FIFTEEN YEARS.

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Since the publication of the great monograph of Mitchell and Reichert, which contained a thorough review of the literature to the time of its publication (*Publications of the Smithsonian Institute*, 1886,) a large number of researches especially devoted to the physiological action of venoms and the phenomena of immunity, have been added to the literature so that it has grown to considerable proportions. While in many of the papers, literature bearing directly upon the phase of the subject to which they devote themselves has been collected, I know of no attempt having been made to collect the whole of the recent literature in an available and useful form.

The "General Considerations" with which Mitchell and Reichert leave us are as follows:

(1). Venoms bear in some respects a strong resemblance to the saliva of other vertebrates.

(2). The active principles of venom are contained in the liquid parts only.

(3). Venoms may be dried and preserved indefinitely in this condition with but very slight impairment of their toxicity. In solution in glycerine they will probably keep for any length of time.

(4). There probably exist in all venoms representatives of two classes of proteids, globulins and

peptones, which constitute their toxic elements; the former may be represented by one or more distinct principles.

(5) When venom is taken into the stomach in the intervals of digestion, enough may be absorbed to produce death, especially in the case of those venoms which contain a larger proportion of the more dialyzable peptone; but during active digestion the venom undergoes alterations and is rendered harmless.

(6.) Potassic permanganate, ferric chloride in the form of liquor or tincture and tincture of iodine seem to be the most active and promising of the generally available local antidotes.

(7). Venom exerts a powerful local effect upon living tissues and induces more rapid necrotic changes than any known organic substance. It causes edema, swelling, attended with darkening of the parts by infiltration of incoagulable blood, breaking down of the tissues, putrefaction and sloughing.

(8). It renders the blood incoagulable.

(9). When brought in contact with a vascular tissue of a warm-blooded animal, it produces such a change in the capillary blood vessels that their walls are unable to resist the normal blood-pressure, thus allowing the blood-corpuscles to escape into the tissues. These lesions are, however, not analogous to those of inflammation, since in the latter process it is principally the white corpuscles which emigrate from the blood vessels and the blood is highly coagulable, while here the blood exudes *en masse* and coagulates with difficulty if at all.

Free access of air (probably of oxygen) appears to lessen the virulent effects.

Cutting off the blood supply to a part, for instance, by ligation of the vessels of the mesentery, destroys the blood-pressure and in consequence the hemorrhages are so slight as scarcely to be seen by the naked eye, though the venom was freely applied.

Finally, the colloid, softened, diffluent condition of the red corpuscles must inevitably facilitate extravasations. It is impossible to have seen numerous cases of venom poisoning without noting a variety of symptoms often abrupt and unexpected. These often are due, as Dr. Mitchell long since pointed out, to accidental hemorrhages into brain, kidney and heart tissue. They explain much that might be otherwise inscrutable and serve sometimes to give a marked individuality to cases which survive long.

(10). Among the most remarkable effects of venom is that upon the red corpuscles. These bodies undergo substantial modification, i. e., they lose their biconcave shape, become spherical and softened and fuse together into irregular masses acting like soft elastic colloid material. This jelly-like condition of the corpuscles is no doubt doubly important; in connection with the extravasation of the blood, and its probable interference with the normal respiratory functions of the blood cells.

(11). The direct action of venom upon the nervous system, save as concerns the paralysis of the respiratory centers, is of but little importance.

(12). The alterations in the pulse-rate are dependent chiefly upon two antagonistic factors which are active at the same time, the one tending to increase the rate, the other to diminish it. The former is found in the increased activity of the accelerator centers, and the other in a direct action upon the heart. When we have the action of the accelerator centers removed by isolation of the heart from any centric influence, we almost invariably find a diminution of the heart beats. Occasionally after this operation the pulsations are increased, but this alteration is attended, as in the case of the diminution of the pulse, by feebler heart beats and accordingly is but a manifestation in another way of a depressed condition of the heart.

(13). The variations in arterial pressure are due chiefly to three causes, depression of the vaso-motor centers, depression of the heart, and irritation and consequent constriction or blocking up of the capillaries. It seems not improbable that all of these are consentaneously active, and it, therefore, follows that such alterations are dependent upon the relative degree of power exerted by any one of these factors. Our results indicate that a profound primary fall of arterial pressure is chiefly due to depression of the vaso-motor centers and is in part cardiac, that the subsequent recovery is capillary, while the final fall is cardiac. The initial fall does not continue, because the constriction of the capillaries is, for a time at least, capable of compensating for the depressed action of the central organ of circulation.

(14). The respirations are primarily increased and secondarily diminished. Here again we have two antagonistic factors at work together, one tending to increase, the other to diminish the rate. The former is an irritation of the peripheries of the vagi nerves, and the latter a depression of the respiratory centers; whether we have an increase followed by a decrease, or a decrease from the first, will depend upon the relative intensity of the action of the venom on these two parts. When the action of the venom is sufficient to profoundly depress the centers, the excitation of the peripheries may prove futile.

(15). Death in venom poisoning may occur through paralysis of the respiratory centers, paralysis of the heart, hemorrhages into the medulla, or possibly through the inability of the profoundly altered red blood corpuscles to perform their functions. There can be no question, however, that the respiratory centers are the parts of the system most vulnerable to venom and that death is commonly due to their paralysis. "A comparative study of the actions of the globulins and peptones indicates that the globulins produce swelling and blackening of the parts by infiltration of incoagulable blood; they are the more potent in producing ecchymoses, in destroying the coagulability of the blood, in modifying the red corpuscles and in the production of molecular changes in the capillary walls; their action on the accelerator centers of the heart is more notable than that of the peptones, hence they are more active in causing the increased pulse-rate; they exert, too, a more marked action upon the vaso-motor centers in producing the primary fall of pressure and are the greater depressants of the

heart; they also act more powerfully upon the respiratory centres to paralyze them.

The peptones are more active in the production of edema, and in the breaking down of the tissues, in the production of putrefaction and sloughing, they have little power to produce ecchymoses; to prevent coagulation or modify the walls of the blood capillaries, they have less tendency to accelerate the pulse; they tend to increase the blood pressure by irritating the capillaries, and are the principal factors in exciting the peripheries of the vagi nerves in the production of the increased respiration rate."

This is a most excellent synopsis of what had been discovered covering the chemistry and physiology of venoms in 1886.

The collection of literature which follows contains papers relating chiefly to the experimental side of the subject. Those dealing with the symptomatology of snake-bite as seen in individual cases, and the results attending certain methods of treatment, have been omitted because the majority of them contain nothing not already well-known, because the evidence of the efficiency of any treatment based upon a single case is too inadequate to be valuable, and because their number would make the writing too long to be useful.

The important papers, therefore, deal with the chemical and physiological aspects of the subject and of these I hope not many have escaped me.

The abstracts were originally collected as memoranda of facts bearing upon immunity, immunization to venom, and the properties and utility of antevenene. To these were subsequently added the remaining literature that I could secure. The papers are given in chronological order as illustrative of the evolution of the subject.

I presume that the particular line of inevestigation, which I had under way at the time of writing, will involuntarily lead to a somewhat unequal synopsis of the papers, the points dwelt upon in the abstracts being those which most interested me in the writings. However, I have tried by rewriting the whole manuscript to overcome this error and present the abstracts in a generally useful form.

R. N. Wolfenden (*Journal of Physiology*, 1886, VII, p. 327), after a careful chemical study of the venoms obtainable, concludes that the "peptone" of Mitchell and Reichert is probably an albumose. His paper concludes as follows:

(1). The toxicity (of venom) is not due to any bacillus, bacterium or living organism.

(2). It is not due to any alkaloid.

(3). It is not due to any hypothetical cobric acid.

(4). It is wholly and solely due to the proteid constituents of the venom.

(5). These proteid constituents are:

(1). Globulin—which is always present, and probably kills by interference with the respiratory mechanism (asphyxia) and without paralysis—causing local inflammation but not of great intensity (cobra venom compared with daboia venom).

(2). An albumin—resembling acid albumin which is precipitated, along with the globulin, by saturation and which is in some degree dialyzable. This proteid probably acts on the respiratory apparatus chiefly like globulin, but less intensely.

(3). An albumin—which is precipitated by Na_2SO_4 out of the magnesic filtrate, and which is serum albumin. This is also toxic, and produces a kind of ascending paralysis with fatal termination by suppression of the respiratory function from probable paralysis of the muscles concerned in respiration.

(4). Traces of some specimens of the hemi-albumose and questionable traces of peptone. I regard these as accidental and probably due to the length of time the poison has been kept.

F. W. Mills. Snake Venom from a Chemico-Physiological Point of View. *Jour. of Com. Medicine and Surgery*, Phila., Jan., 1887, VIII, 38. This paper contains a brief account of the chemistry and physiology of venoms without any original experimental work or personal observations.

The contribution of Sewall (*Jour. of Physiology*, 1887. VIII, p. 203) is of the greatest importance as containing what were probably the earliest experiments upon immunization to venom.

Sewall worked with venoms obtained from the Crotalophorus tergeminus and used pigeons as experiment animals. He found that upon birds the venom exerted a paralytic action, and that death did not occur so rapidly as the work of others seemed to indicate. He succeeded in producing immunity by "prophylactic injections" of venom, estimating the resisting power of the immune birds until they became able to resist 10 times the minimum fatal dose. He also observed that the immunity gradually declined in the absence of fresh injections of the venom.

Kaufmann also recognized that immunity to vipers' venom could be secured by repeated sublethal injections and mentions the fact upon page 136 of his work upon "The Vipers of France."

Rudek's book "Ueber und gegen das Gift der Schlange und Fliege," Berlin, 1887, 8°, was not accessible to me, so that I do not know how considerable an amount of space is devoted to the study of the venoms. The title suggests that it is an important contribution.

A. E. Feokistow (Imperial Academy of St. Petersburg, 1888—see abstract in the *Lancet*, Aug. 18th, 1888; see also "Eine vorläufige Mittheilung über die Wirkung des Schlangengiftes auf den thierischen Organismus," *St. Petersburg*, 1888. Reprinted from the *Memoirs imp. d. sc de St. Petersburg*. 70. XXXVI.) performed about 300 experiments with the venoms of various poisonous snakes, finding no essential physiological difference between them. He fixed the minimal fatal dose of the venom with difficulty so that he was unable satisfactorily to estimate the value of antidotes which he tried. The source of error is pointed out as depending upon the fact that the venoms do not always contain the same quantity of water, and not infrequently contain albumin and other indifferent substances. In order that the toxicity of the venoms employed should be as nearly as possible the same, he used only venoms secured three days after the serpent had been fed.

S. A. Waddell. "Are Venomous Snakes Autotoxic?—An Inquiry into the Effect of Serpent Venom upon the Serpents Themselves" (*Scientific Memoirs by Medical Officers of the Army in India*, 1889. Pub. IV, p. 47) after reviewing the conflicting reports which the literature contains upon this subject, and performing several series of careful experiments, found that cobras were immune to cobra venom injected into them, in large doses, with a hypodermic syringe; that cobra venom was fatal to certain green tree vipers, and that cobra venom was fatal to the greater number of non-venomous serpents and to frogs and other cold-blooded animals. He surmises that the immunity of the snakes to their own venom depends upon the frequent absorption of venom that has been swallowed by the serpents themselves, or upon its absorption in small quantities through slight injuries to the mucous membrane of the mouth. Accepting the statements of Mitchell and Reichert, and Wolfenden, that every venom contains several principles, he suggests that one venomous serpent is immune or susceptible to the venoms of other serpents only in as far as there is a correspondence in the composition of their venoms.

In a letter published in the *Revue Scientifique*, 1890, XLV, p. 180, Kaufmann speaks of the rapid multiplication of bacteria that are introduced into the tissues at the moment of the bite. This seems to be the first mention of the fact that venom lessens local immunity to bacterial invasion. After discussing the enormous depression of the nervous system, with primary acceleration and subsequent depression and reduction of the cardiac activity succeeding invenimation, and the hemorrhagic extravasations that occur in the alimentary tube and parenchymatous organs, Kaufmann points out that permanganate of potassium and chromic acid are the two chemical antidotes to the poison, and recommends that they be used in a 1% solution to be injected into the wound and as a wash. He recognizes two substances in the venom and points out that it is the irritative substance only that is destroyed by these reagents, the other being attenuated by them. For general treatment he recommends ammonium and alcohol.

(To be continued.)

THE SURGERY OF THE SPINE

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(Continued from page 293.)

Keen says that "if possible to avoid it, no operation should be undertaken under two or three months after birth, but the parts should be protected either with cotton smeared with vaseline or by a rubber or other splint held in place by a bandage, both protecting it and producing somewhat of a pressure, if the skin will allow it. Sometimes collodion with or without iodoform may be painted over the sac, with a view to shrinking it. In case the skin is excessively thin or the tumor very large, or there is evidence of extensive multiple defects of development, especially paralysis of the lower extremities and of the sphincters, no other than this palliative method or that by injection is permissible. If at the end of two or three months the patient is improving, we should wait still longer until the improvement has at least come to a standstill. Spontaneous cure may take place, and we should always give nature, who, if a successful surgeon is the best in these cases, a chance to see what she can do. Failing a cure at this time or earlier, if the patient is getting worse, the question of radical cure is to be decided." The vast majority of these children die very early, before any treatment can be safely instituted, and frequently none can ever be employed other than the palliative.

Only two methods of radical treatment are now in vogue, that by injection, Morton's method, and excision. Morton's solution consists of ten grains of iodine, thirty grains of iodide of potassium, and one fluid ounce of glycerine. After thorough aseptic preparation a drachm or two of the fluid is withdrawn from the sac by means of a needle and syringe, the puncture being made well to one side of the median line in order not to injure the cord in case it is contained in the tumor. The needle is not withdrawn, but the syringe is detached, washed thoroughly in hot sterile water to get rid of the fluid, and then from one-half to a drachm of the solution is injected. This is repeated in from one week to ten days, after the slight reaction caused by the injection has quieted down.

The Clinical Society of London reported 71 cases treated by this method with 35 recoveries, 27 deaths, 5 without improvement, and 4 with some improvement. Thirty-eight per cent. mortality. Morton himself reported 65 cases with 55 recoveries and 10 deaths, and Powers found 15 more with 4 deaths, mortality 26.66. I cannot say that personally I favor this method. In my early days in surgery this method was practically the only one in vogue and my impressions have never been favorable. I have seen it applied, because it was so simple, to cases in which spontaneous cure was almost certain, and in more than one instance I can remember that death from meningitis or sloughing of the sac and too rapid escape of cerebro-spinal fluid occurred.

I am free to confess that I have very little confidence in inflammatory adhesions acting for a radical cure any more efficiently in this condition than they ever did in hernia.

The excision is now more widely employed by surgeons generally and the results are improving as we learn to select the cases in which we may hope for a successful result.

Thus it is useless to undertake the operation in a case with multiple congenital defects, or with complete paralysis below the seat of the tumor due to the lack of nervous distribution below that point; or with a marked degeneration of the cord itself, or a hydrocephalus or a sloughing of the skin over the sac so that it will be impossible to render it aseptic or secure proper cutaneous flaps. It is likewise out of the question in those cases, occasionally met with, in which the bony cleft is so large that it will obviously be impossible to

close it by any osteo-plastic operation within the endurance of the patient.

Spinal Hemorrhage.

This is of two kinds, hemato-myelia and hemato-rachis. The former is a hemorrhage into the spinal cord itself, while the latter is a hemorrhage into the spinal canal and may be extra or sub-dural.

Gowers claims that hemato-myelia is exceedingly rare and never surgical, while Thorburn, on the other hand, insists that it is exceedingly common in the cervical regions following traumatisms unaccompanied by lesions of the spine itself. He considers that it may be destructive or compressing. The former is beyond surgical interference and causes permanent disability, while in the latter condition the symptoms may gradually subside. A destroying lesion would produce all the symptoms of destruction of the cord by traumatism, complete loss of reflexes, paraplegia and anesthesia, below the area supplied by the destroyed segment of the cord. It is more than probable that Gowers is correct and that a hemorrhage into the spinal cord itself is invariably destructive and irremediable by any surgical means at our disposal at the present time. In hemato-rachis the conditions are somewhat different. If sub-dural or sub-arachnoid, particularly the latter, and very abundant, it may so completely destroy the cord by the time the diagnosis is made and the operation performed that no improvement in the condition can possibly result. The hemorrhage may extend from one end of the spine to the other and Browning has suggested needle puncture to make a diagnosis, while Mills proposes in order to drain the canal, to make a laminectomy at two different points. The diagnosis can only be made by the history of the injury, bending, blow or stab, and by the rapidity of the development of the symptoms. Naturally operation would only be undertaken in those cases in which there was a disabling lesion.

Keen reports the only case on record in which this operation has been performed so far as I have been able to ascertain, and it is worthy of reproduction here. The case was under the care of Dr. Edward Martin and Dr. Charles S. Potts. Injury was caused by the patient's rolling down a steep embankment when drunk. When admitted to the hospital he had only minor wounds and no other symptoms except his alcoholism. Within a few hours he felt well enough to want to go home, but six hours later paresis of the legs was noticed which within another hour had increased to complete paraplegia, the anesthesia being on a level with the anterior superior iliac spines. There was also for a time suppression of urine. Sixteen hours later the paralysis had increased so that the abdominal and intercostal muscles were involved, the patient breathing with the diaphragm alone, and the line of the anesthesia had now crept upward until the lowest point in front was on a level with the nipples, from which point it curved up toward the axillæ. The superficial reflexes were absent. The knee jerks and the pupillary skin-reflex were not tested. There was no pain except a slight girdle-pain, and no deformity in the cervical region, though Dr. Martin thought he detected a boggy feeling there which indicated possible fracture. Within another hour the anesthesia had crept still further upward and the ulnar areas of both hands, but not of the forearms, were anesthetic. There was also noticed some marked weakness in the muscles of the forearm (both flexors and extensors), but owing to the man's condition it was impossible to examine each muscle. Above the level of the complete anesthesia was a space about an inch broad which was paresthetic. Drs. Martin and Potts made the diagnosis of hemorrhage, the blood having first sunk down to the level at which the paralysis first appeared, and then as the spinal canal filled up with blood, the anesthesia rose higher and higher. The highest point of the spine involved was diagnosticated to be at the sixth cervical segment. Dr. Martin made a laminectomy and found the third and fourth cervical laminæ fractured with continuous bleeding. On enlarging the opening in the canal farther down, a clot was found opposite the fifth and sixth cervical vertebræ. Death twelve hours after the operation, with no amelioration of the symptoms, but there was no involvement of additional areas of sensation or motion. The autopsy showed extra-dural clots in the spinal canal, reaching down some distance into the dorsal region. In the fourth cervical region there was also a hemorrhage into the gray matter of the cord. While this case was not successful it details the symptoms of the progressive pressure on the cord as it affected segment after segment, and it stands out as a guide for further cases.

I have recently had a similar case.

Man, aged 50. Family history negative; personal history ditto. Sent to me by Dr. Geo. H. Williams, of Fishkill-on-Hudson, with diagnosis of probable haemato-rachis. Admitted to the Post-Graduate Hospital, December 12, 1900. On March 14, 1900, fell from a wagon to the ground, a distance of 3½ feet, striking on the middle of back, head striking a stone. Was able to pick himself up and walked about, experiencing no discomfort until two hours later. At this time had chilly sensations and began to have shooting pains running down legs from about the level of the anterior superior spines of the ilia. Soon afterward the lower extremities became cold and numb and he lost all sensation and power of motion. Paraplegia finally became complete and anesthesia extended to within one inch of umbilicus. Retention of urine and incontinence of feces began the night after the injury. Incontinence of urine began in May. Incontinence of feces continued until three weeks before admission to hospital. Two weeks after injury passed a large amount of bloody urine by catheter, but never had any further signs of hematuria. Small bedsore over sacrum, which healed in June.

During the last week in June began to have twitching in legs and thighs, which continued to increase until feet had to be tied to bed to keep the legs and thighs from being forcibly contracted. These contractions were set up by the slightest touch, the adductors and hamstrings being chiefly involved. In July began to have sensations in right thigh and this continued to improve until it was present in both thighs but not to a normal degree. Right lower extremity was more nearly normal than left. Anesthesia and paraplegia at time of admission corresponded to involvement of lower lumbar segments. Reflexes exaggerated.

Operation, December 15, 1900. This was undertaken, although his symptoms pointed to an ascending myelitis, in the hope that a removal of the compression would arrest its development.

Incision made from last dorsal to fifth lumbar vertebra. Spinous processes of first, second, third and fourth lumbar spines detached at their bases and turned back to the left, with posterior and left lateral ligaments intact, forming a flap. Haminæ of first, second, third and fourth lumbar vertbrae removed and cord exposed. Constricting point at second lumbar vertebra on left side, as if there had been a rotary dislocation of second lumbar vertebra upon the

first. Evidences of an old organized blood clot were present, extending both upward and downward. The laminae of twelfth dorsal therefore removed and the cord cleared of all compression.

While removing the laminæ of the fourth lumbar vertebra the dura was accidentally opened and a considerable amount of ceribro-spinal fluid escaped. The cord seemed to be normal. The opening in the dura as closed with fine silk and the flap, including the spines was turned bach and sutured in position. The forcible involuntary contractures ceased immediately after the operation and improvement was rapid for about ten days, when he again began to give evidences of an ascending degeneration of the cord. This continued until he died from the exhaustion some three months later. If this operation could have been done earlier, as Dr. Williams had advised, here is little doubt that this patient would have recovered.

A rapidly progressing upward paralysis involving higher segments in rapid succession (only a few hours intervening) and with a history of even a slight traumatism may very profitably be subjected to laminectomy. The lesion may not be discovered, but the spinal canal can be kept free and serious compression of the cord averted. A second and higher laminectomy could readily be performed where the patient's condition would admit of it, or it may be done later if necessary.

Fractures of the Spine.

In fracture of the spine we must consider the region of the spine involved before attempting a prognosis. The recoveries from operative interference in the cervical region have been very few; the mortality is much greater than in such interference in other regions. The functional results are by no means so satisfactory as when the lower dorsal or lumbar regions are injured. Thus Starr has made the statement that in cases involving injury of the 1st, 2d and 3d cervical vertebra death has resulted so early that it has been impossible to make a proper study of the anesthetic and motor areas involved, and Park in his System of Surgery says, in his table of Paralyses and Reflexes due to Spinal Surgery, opposite the 1st nerve simply "death from pressure of odontoid," and opposite the 2d and 3d, "death from paralysis of the diaphragm." Below this point, however, we have many observations that give us definite data for diagnosis. An indirect fracture, i. e., one with bending of the spine accompanied by fracture-dislocation of one or more vertebræ and with the symptoms of complete separation or degeneration of the cord, as evidenced by the rapid appearance of bed-sores, not due to the direct pressure, and to the complete paraplegia and anesthesia, including the paresis of the rectum and of the bladder and with obliteration of the reflexes, would naturally contraindicate operative interference. There can be no hope of restoring function to a destroyed spinal cord. The injury has been sufficient to pulpify the cord and that area of softening is usually of considerable extent and produces complete obliteration of all nervous control below the segment affected.

Experiments on animals and even on patients themselves have invariably failed to show any method of establishing communication around a destroyed segment of the spinal cord.

In the other class of cases, however, in which the patient has recovered sufficiently from the immediate shock, when the cord shows that it has not been completely destroyed by the recovery of more or less of the sensation or motion or exaggeration of one or several reflexes, by the continued healthy condition of the skin, even though atrophy be present, operative interference may result in great benefit to the patient.

Fracture dislocations of the vertebra nearly always produce more or less injury to the cord. Chipault does not believe in the generally accepted idea that the spine in these cases springs forward so as to bruise and destroy the cord, and then immediately on the removal of the force producing the lesion, springs back again into, or nearly into, place. Thorburn, however, believes this cause to be exceedingly common and much more so in the cervical region than elsewhere.

Naturally such an injury to the cord in addition to producing degeneration of the involved segment is rapidly followed by inflammatory softening, so that we frequently find, as these cases recover from the immediate shock of the injury, that we have an increasing paraplegia and anesthesia. The bodies of the vertebræ are more frequently fractured than the arches, and, naturally, when this occurs the cord may be destroyed by the displaced fragments of the body, but fractures of the spinous processes or of the arches do occur without any injury to the cord itself. In this latter set of cases no treatment may be necessary other than the rest in bed, and possibly the application of a plaster jacket or other spinal assistant, but it should be remembered that occasionally where the arches are fractured without injury to the cord the paraplegia may begin at a later date and may be due to inflammatory exudation or to the formation of callus on the inner side of the lamina, as in the case I reported in a former paper.

It is important that we should in all cases of fracture of the spine that may come to operative treatment, observe the difference between the effects of total and partial injuries of the cord as shown by the reflexes.

Bastian, Bowlby, Thorburn, and Herter have studied these phenomena. Their conclusions may be briefly stated, that in complete transverse destructive lesions of the cord there will invariably be complete paraplegia below the level of the injury, complete anesthesia below the level of the distribution of the injured nerves, and complete and permanent obliteration of the knee-jerk and deep reflexes of both sides, but if the transverse lesion of the cord is only partial, the paralysis and anesthesia will be incomplete, while the deep reflexes may remain normal or be exaggerated; the bladder and rectum follow the same general rule as the deep reflexes. Keen says that if immediately after the accident the knee-jerk on both sides is absent and remains so, operation is contraindicated. In this connection he reports a case of Schede's, one of Hammond and Phelps', and one of his own. In this last case, one of dorso-lumbar dislocation, the knee-jerk had been absent for eighteen months, but returned within a week after the operation. Had this rule been followed in these cases, the patient would undoubtedly have remained permanently paralyzed, while in every instance they regained more or less complete function. A case of my own recently reported also

has recovered when the knee-jerks were absent at the time of the injury.

This, then, cannot be taken as an absolute rule, and I feel inclined to differ with Keen in the conclusion that the obliteration of the deep reflexes is an absolute contraindication to operation. It is important for us to decide whether the lesion is a complete degeneration of the cord or whether it is a simple compression of that organ. In the former case it is useless to operate; in the latter it becomes necessary to consider at what time the operation can best be performed.

In a former paper I said that if operation is undertaken at once there is danger of interference where a spontaneous cure would result if the patient were left alone, or where a complete destruction of the cord renders operative interference useless. If, however, operation be delayed too long, and a compression be allowed to continue, a degeneration may result which would be as serious as though the functions of the cord had been destroyed by the original injury. Lauenstein said that if, after a lapse of six or ten weeks, there is incontinence of urine with cystitis or incontinence of feces, and especially if there has also developed a spreading of bed-sores, but little is to be hoped from the efforts of Nature. Horsley insisted that operation should be undertaken early, and this is my own opinion, provided the symptoms present indicate interference with the functions of the cord. In other cases I should wait until the shock following the injury has been overcome, watching the patient's condition carefully, however, and at the slightest indication pointing to an extension of the interference with the action of the spinal cord, whether that interference be due to hemorrhage or to compression from depression, callus or to the exudation of lymph, I should operate at once.

Chipault says, in this connection, that in all traumatisms of the cord there are three serious lesions: 1. A zone consisting of that portion of the cord which is directly destroyed, which may be of greater or less extent, and which undergoes complete necrosis following the destruction of the nervous elements; this degeneration is complete. 2. A zone above and below the former, in which the nervous elements are injured but not absolutely destroyed. Within two or three days the nerve cells are increased in size and their protoplasm becomes granular, the cylinder axes form a sort of chaplet, the myelin is broken into segments. This beginning of degeneration close to the injured part can be determined by noting the involvement of the motor and sensory centers immediately above the site of the injury. If the cause of compression is removed, both cylinder axes and myelin may undergo a certain amount of regeneration by the ninth day. If the cause of the compression persists or the injury is sufficiently grave, the destruction of the cord of this zone is permanent and is followed by sclerosis. 3. Secondary degeneration sets in at a very early date; this is due not to the direct injury but probably to the separation of the nervous elements from the trophic centers. The degeneration extends above and below the site of the lesion, and begins as early as the fourth day, and continuing to extend for many months it follows the general trend of the Wallerian degeneration; from the site of the lesion downward the motor fibers degenerate and the sensory proceed in the reverse direction. The early date at which these lesions have been recognized, especially by animal experimentation, as well as by clinical experience, shows that, if intervention is undertaken at all, with any hope of amelioration, the earlier it is done the better.

This is an important fact to bear in mind in all cases of compression of the cord. While it is true that in tumors, callus or inflammatory lesions operation may be successful even after months or even years have elapsed, this success has undoubtedly been due to the fact that the compression has been gradual and that the compressing area has not been of sufficient size seriously to interfere with the nutrition of the cord itself, even though it has inhibited to a greater or less degree, its proper action. This fact has been well demonstrated by three of the cases I have operated upon. On was a callus following a fracture of a lamina of one of the lumbar vertebræ, operated upon with marked success fourteen months after the injury, the second was a case of gun-shot wound involving three vertebræ in the mid-dorsal region with callus and adhesive bands compressing the cord, when the operation, although performed four years after the injury, resulted in marked improvement though not absolute cure, and the third, a case of hydatids with a gradually increasing pressure paraplegia which had begun some years before. In this case the recovery was practically perfect. As a general rule, however, it may be stated, that the more complete the paraplegia and the longer its duration, the poorer the prognosis with regard to the return of function.

The general results of fractures of the spine treated without operation should also be taken into account in dealing with these cases.

Gurlt reported 217 deaths out of 270 fractures, or over 80 per cent.; while Burrill, from the tables of the Boston City Hospital, cited 82 cases with 64 deaths, or 79 per cent., and of the 22 per cent. of recoveries, only 11 per cent. were satisfactory, the other 11 per cent. being completely disabled. These statistics also show that in the fatal cases the greater number of deaths occurred within a few days. It is, therefore, evident that if we operate immediately after the injury we will have failures that should not be charged against the operation itself, and if possible we should wait before operating until the question can be settled whether the patient will overcome the shock or succumb directly to the effects of the injury.

There is another objection to immediate operation. In so-called concussion of the spine, there may be a certain amount of anesthesia and paralysis. The recovery, however, will be complete, or at least so nearly so that no appreciable lesion can be made out. Immediate operations in these cases would be unnecessary, as they would have recovered spontaneously had they been left alone for a sufficient length of time. It is impossible, too, in the first few hours, to determine with any degree of certainty, how severe the injury really is, nor can we absolutely localize the injury to the cord. In my opinion, therefore, we should wait until this period of shock has passed and until it is evident

that there will be no spontaneous recovery complete enough to render life bearable. If after this period has passed, the patient still continues to improve, no operative interference should be considered, but as soon as the symptoms begin to show retrograde phenomena or seem to have reached the end of the improvement, operation should be undertaken.

In those cases in which no improvement follows the recovery from the shock, and vet the suspicion remains that a complete crush of the cord has not occurred, we should operate immediately. After making the diagnosis the cases may be classified as follows:

1. Those that evidently have complete destruction of the cord; they should not be operated on. 2. Those in which, following the recovery from the shock, it is evident that the lesion of the cord has not been completely destructive and yet no improvement is noted. Operation here should be done as soon as these facts are determined. 3. Those in which the lesion of the cord is incomplete and the symptoms of compression are extending as evidenced by increasing paralysis and the enlarged area of anesthesia. Here operation should be undertaken immediately, as there is a hemorrhage, an inflammatory thickening, or some acute process present that threatens the destruction of the cord unless it is controlled. 4. Those in which improvement is noted at first but is arrested later. Operation in these should be done as soon as it is settled that the improvement has ceased. 5. Those who made a full recovery or almost so under the usual conservative methods, where the paraplegia or other symptoms develop at a later date. This is probably due to compression from callus, and the operation should not be delayed any longer than is essential to establish the fact that there has been a loss of function.

In our former paper we tabulated 103 cases of traumatic injuries to the spine, and divided them into two series, the pre-antiseptic and the antiseptic. In the former the deaths were 63 per cent.; in the latter 50 per cent. We have now been able to tabulate 227 cases in 185 of which all of the facts in regard to the result are known. This includes the 103 cases formerly tabulated. Of this number 59 died within a few days, and therefore the death may be said to have been hastened by the operation itself; 32 died at a later period, and usually from complications not resulting from the operative interference—91 deaths, therefore, in all, or 49.18 per cent., which corresponds very closely to my former statistics. Of course, this includes the cases dating back to the pre-antiseptic era, but it is hardly worth while at the present time to eliminate them from our statistics. If only those dying within the first few days are counted against the operative statistics the percentage is only 31.89. With these statistics before us there can be no doubt about the advisability of operative procedure, as compared with the conservative treatment. These figures could be still further improved by throwing out the pre-antiseptic cases.

(To be concluded.)

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended February 7, 1902:

SMALLPOX—United States.

			Cases.	Deaths.
CALIFORNIA.	Los Angeles.	Jan. 18-25	7	
	San Francisco	Jan. 18-25.	14	
ILLINOIS:	Belleville.	Jan. 25-Feb. 1.	1	
	Chicago.	Jan. 25-Feb 1.		
	Danville.	Jan. 25-Feb 1.		
	Galesburg	Jan. 25-Feb. 1.		
INDIANA.	Crawfordsville.	Jan. 18-Feb. 1	14	
IOWA.	Clinton.	Jan. 26-Feb. 2	9	
KENTUCKY.	Covington.	Jan. 26-Feb. 2	6	
LOUISIANA.	New Orleans.	Jan. 25-Feb. 1.	4	1
MASSACHUSETTS	Boston.	Jan. 25-Feb 1	47	11
	Brookline.	Jan. 18-25.	1	
	Cambridge.	Jan. 25-Feb. 1.	1	
	Chicopee.	Jan. 18-25	1	
	Malden.	Jan. 25-Feb 1	1	
	New Bedford.	Jan. 25-Feb. 1	1	
	Somerville.	Jan. 25-Feb 1		
	Waltham.	Jan. 25-Feb. 1.	1	
	Woburn.	Jan. 25-Feb 1		1
MICHIGAN:	Ann Arbor.	Jan. 11-18	1	
	Detroit.	Jan. 25-Feb. 1	6	
	Ludington.	Jan. 26-Feb. 2	1	
MINNESOTA.	Minneapolis.	Jan. 18-25	2	
MONTANA.	Butte.	Jan. 11-25.	4	
NEBRASKA:	Omaha.	Jan. 25-Feb. 1	51	
	South Omaha	Jan. 11-31	13	
NEW JERSEY.	Camden.	Jan. 25 Feb. 1.	1	
	Jersey City.	Jan. 25-Feb. 1	2	
	Newark.	Jan. 25-Feb. 1	4	
NEW YORK.	Binghamton.	Jan. 25-Feb. 1	1	
	New York.	Jan. 25-Feb. 1	42	11
OHIO.	Cincinnati.	Jan. 25	16	1
	Cleveland.	Jan. 25-Feb. 1	9	
	Middletown.	Jan. 25-Feb 1	1	
	Toledo.	Jan. 25-Feb. 1	6	
PENNSYLVANIA	Allegh.	Nov. 30-Jan. 25	48	1
	Monessen.	Jan. 25-Feb. 1	1	
	Northwest.	Jan. 25-Feb. 1	2	
	Philadelphia	Jan. 25-Feb. 1	1	
	Pittsburg.	Jan. 25-Feb. 1.	1	
	Williamsport.	Jan. 25-Feb. 1	1	
RHODE ISLAND.	Providence.	Jan. 25-Feb. 1		1
SOUTH CAROLINA	Charleston.	Jan. 18-25.	1	
SOUTH DAKOTA	Groton.	Jan. 18-		
	Sioux Falls	Jan. 11-Feb. 1	1	
TENNESSEE.	Memphis	Jan. 25-Feb. 1	1	
WASHINGTON	Tacoma.	Jan. 11-18	1	
WISCONSIN.	Green Bay	Jan. 25-Feb. 1	1	
	Milwaukee	Jan. 25-Feb. 1	1	

SMALLPOX—Foreign.

BRAZIL	Para.	Nov. 1-30	4	
	Para.	Dec. 1-	11	
COLOMBIA:	Cartagena.	Jan. 13-19.	1	
FRANCE	Paris.	Jan. 18-25.	2	
GREAT BRITAIN	Bristol.	Jan. 11-18	1	
	Liverpool.	Jan. 11-18	1	
	London.	Jan. 11-18	177	31
INDIA	Bombay.	Jan. 14-Feb. 7	1	1
	Calcutta.	Dec. 28-Jan. 4	1	
	Madras.	Jan. 11-18	1	
ITALY.	Naples.	Jan. 11-18	1	
RUSSIA:	St. Petersburg.	Jan. 4-11.	1	
URUGUAY	Montevideo.	Nov. 1-Jan. 25	28	28

YELLOW FEVER

BRAZIL:	Para.	Jan. 1-Feb. 15		14
DUTCH GUIANA	Paramaribo.	Jan. 1-Feb. 1	2 cases	2 deaths
MEXICO	Vera Cruz.	Jan. 25-Feb. 1	1	

CHOLERA.

INDIA:	Bombay.	Jan. 11-Jan. 7		1
	Calcutta.	Jan. 28-Jan. 4		32
	Madras.	Jan. 11-18		1

PLAGUE

CHINA	Hongkong.	Jan. 14-21		1
INDIA	Bombay.	Jan. 11-Jan. 7		203
	Calcutta.	Jan. 28-Jan. 4		32
	Karachi.	Jan. 11-Jan. 7	71	28

The Philadelphia Medical Journal

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See Advertising Page 8.

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Dr. Adami's Criticism of Koch.—Theoretically speaking, medical literature should be divided into three groups, each requiring different treatment. The first of these is the narration of new facts, either derived from experiments or from observation; the second, the criticism of these facts; and the third, articles designed merely for instruction and the communication of more or less well established facts and theories. Anyone who studies modern medical literature will realize in a very short time that the first and third of these groups are being done to death. Not that we object to the addition of new facts, but that entirely too much so-called original research, that lacks both originality and the evidence of intelligent investigation, is being foisted upon the readers of the journals. It is refreshing therefore to find an article written by a man amply qualified for the task, which consists of a careful and intelligent criticism of a certain group of articles that have recently been exiting considerable attention, partly because to the vast majority of physicians the subjects discussed in them were novel, partly because they are of the utmost practical importance to the morbidity and mortality of the population. Inspired by the recent publication of Koch, which is the principal object of his analysis, Adami has gone carefully over the whole subject of the relation of human to bovine tuberculosis, and has analyzed the literature and the divergent views of different experimenters; and we learn from his paper, which we publish as a special article in this issue, that, in spite of the vigor of the arguments, the actual results of experimentation are not essentially contradictory. Thus, all observers agree that the human tubercle bacillus is comparatively slightly virulent for cattle, (Ravenel has since shown that this is not invariably true); that varieties of the human tubercle bacillus may be exceptionally virulent; that the bovine tubercle bacillus is not so virulent for human beings as the human tubercle bacillus, but that, nevertheless, either species may be infected by microorganisms derived from the other under certain circumstances. The important fact derived from this and the studies of tuberculosis in fish, chickens, ets., is, that we have varieties and not species of tubercle bacilli. Therefore, the advice of Koch to disregard bovine tuberculosis as a cause of infection in human beings is not only false, but was, as Adami says, little less than criminal on his part.

The timeliness and importance of Dr. Adami's article cannot be overestimated.

Sir William Bennett's Lecture on Renal Calculus.—In another column of the present issue of the Journal will be found an interesting clinical lecture delivered by Sir William Bennett at St. George's Hospital, London, on the subject of renal calculus. Three cases upon which he operated form the basis of his remarks. Each case goes to show the difficulty sometimes met with in making a differential diagnosis in renal disease. It is interesting to note the attitude of an eminent English surgeon in these extremely interesting cases, and in reading his lecture one will observe a few points in which he differs both in his method of examination and treatment from the American surgeon. We are surprised to see what little faith he puts in the X-ray examination of these cases. He speaks of the negative evidence of the X-ray as being "practically valueless," an opinion in which certainly a few American surgeons would not coincide. The work of Leonard, Beck and others has proved beyond doubt that the X-rays should always be employed not only to corroborate a diagnosis of renal calculus, but to make sure that there is not more than one stone in the kidney or ureter. The experience of more than one surgeon goes to show that the X-ray will demonstrate the presence of stones which the examiner's fingers in the kidney cannot detect. We cannot but feel that the X-ray is a most important and necessary adjunct to the diagnosis of renal stone.

Bennett lays great stress upon the importance of carefully examining the urine in cases of supposed renal calculus in order to eliminate bladder symptoms which may possibly be due to a phosphatic urine. Our readers, both medical men and surgeons, will find this clinical lecture by Sir William Bennett highly interesting and instructive.

Guarding Against Tuberculosis.—The action of Surgeon-General Wyman, in placing tuberculosis among the dangerously contagious diseases, and excluding tuberculous immigrants from the United States, is apparently ahead of the times, for it does not meet with approval by the entire profession. In fact it even stirs up opposition in places where prevention of tuberculosis is cried from the highways and the byways and proclaimed from the house tops. There is a taint of inconsistency and illogicality in this opposition. Surgeon-General Wyman has simply followed the theory of the communicability of tuberculosis to its logical conclusion. It is useless to argue that tuberculosis is communicable but not contagious, or though contagious not dangerously so. The terrible mortality from the disease—a hundred thousand deaths annually in the United States alone—shows that it is a dangerous disease, and, if communicable, a dangerous communicable disease. How it is communicated matters little, so long as it is communicated to the extent of one hundred thousand deaths annually. That it is communicated by the people who have the disease is admitted by the opposition, and that segregation is the most efficient way of preventing the spread of the disease is likewise admitted by them. Registration of tuberculosis has been advocated all over the world and has been established in many places, sterilization of houses which have been occupied by tubercular subjects is advocated everywhere and is practiced in many places, expectoration upon the streets and in public places is put under penalty, and compulsory isolation of tuberculous subjects is even talked of in some quarters. Millions of dollars have been expended during the last fifteen years in one way or another in pursuance of the theory that tuberculosis is a contagious disease, and the medical profession is advocating the expenditure of millions upon millions more. Has all that has been done in the name of the contagiousness of tuberculosis been justifiable? If so, then Surgeon-General Wyman is right, and he should have the united support of the medical profession in the stand he has taken. If it is not justifiable, then a halt should be called along the entire line. Surely no one will maintain the position that a native-born tuberculous subject may be restricted in his liberty for the general good, while a foreigner may not be.

It has been said by the opposition to Surgeon-General Wyman's act that a tuberculous subject can make himself innocuous, and therefore tuberculosis is not contagious in itself. This is a specious argument. Of course a tuberculous subject can make himself harmless, but in ninety-nine cases out of every hundred he don't. The fact that over a hundred thousand new implantations take place every year proves this. Moreover, education and wealth are no criteria of innocuousness in this or any other contagious disease. Tuberculosis spreads in families of the well-to-do as well as in families of the poor. As yet education in the prevention of tuberculosis has not gone far enough to warrant the assumption that any class of tuberculous subjects will make themselves innocuous to others. Surgeon-General Wyman's act is at least logical and has done more for the education of the people upon the subject of the contagiousness of tuberculosis than the resolutions of all the medical societies in the country. It has given the theory of the contagiousness of tuberculosis an official stamp, which with the people at large means a great deal. To reverse Surgeon-General Wyman's act would retard preventive medicine a decade, and some authorities think that, should such a result come about through the indifference of the medical profession, it would be a deplorable misfortune for medicine in this country.

Tuberculosis in China.—According to Dr. Sidney R. Hodge (*China Medical Missionary Journal*, January, 1902) tuberculosis is one of the commonest and most fatal of diseases in Hankow and that part of China. The contributory causes are the same as everywhere—overcrowding, bad ventilation, poor living and a hard life. The disease, however, is by no means confined to the poor. The Chinese seem to have an invincible prejudice against fresh air, or "wind", and their unsanitary mode of life evidently tends to spread the infection. The whole Yangtsze valley has a damp subsoil, which Dr. Hodge thinks favors the prevalence of tuberculosis. The climate is hot and damp for nearly half the year, and the drainage is bad. All clinical varieties of the disease are found, and fibroid phthisis is not uncommon. Primary laryngeal tuberculosis is said to be observed in not a few cases—a thing not common in other parts of the world, for this form is generally regarded as rare. Hemoptysis of non-tubercular origin is sometimes seen, and suggests some other form of infection. The Chinese treatment for phthisis pulmonalis may be summed up in one word—opium. Dr. Hodge hopes to see special sanatoria established in China for these cases, and has himself made some start in the open-air treatment of the disease.

We may note in closing that the Journal from which we quote, the *China Medical Missionary Journal*, is a thoroughly scientific and up-to-date medical periodical. It is a pleasure to read it, for it reflects its environment and gives us a glimpse of the work being done in that far-away medical field. It is a credit to the faithful men and women whose mis-

sionary work consists largely in trying to introduce scientific medicine into the Flowery Kingdom. May their labors he successful!

The Collection of Mortality Statistics.—A recent circular on the Registration of Deaths has been prepared by the Department of the Interior and deals with the relation of the Census Bureau with this subject. The data required for mortality statistics can only be obtained in complete and reliable form where compulsory registration laws make it obligatory that deaths should be recorded immediately after their occurrence. Upon the completeness and uniformity of these records will depend the sufficiency and the availability of the data for statistical purposes. We are informed that in the preparatory work upon the mortality statistics of the Twelfth Census the office was confronted with the problem of producing uniform tabulated statistics for ten states and one hundred and fifty-three cities in other states maintaining systems of registration under local laws, but varying widely in the character of the data afforded. This state of affairs suggested to the Census Office the necessity for uniform measures of registration and this circular details the cooperation now being given by the American Public Health Association, which had previously taken up this matter, and a paper prepared by a committee of that body is included stating the essentials of a registration law which bears the endorsement of the Census Office and Commissioner of Labor. It is hoped that this circular will lead to legislation governing the registration of deaths in those cities and states in which this is not systematically carried out. In addition, it is intended to furnish the authorities and states possessing such systems the most authoritative information which will lead towards a national uniformity of system. The importance of this subject can hardly be too strongly emphasized. Deaths are registered primarily for legal purposes, and the use of registration will assist in the compilation of sanitary statistics by which the health officials may direct their measures, improve their methods, and collate their results. The United States is the only civilized country in which the properly collected data which are essential to the knowledge of the movements of population do not form a necessary part of the statistics published. It is urged that while states and municipal registration offices should preserve their independence of organization, they should be considered as practically a part of the national service for the collection of vital statistics and their labors should be uniform and harmonious. We trust that any of our readers, who may reside in those sections of the country in which systematic registration of deaths is not practised, will do their share towards securing the enactment of the proper legislation along the lines suggested.

Up in a Balloon.—Dr. R. Süring, of the Royal Meteorological Institute of Berlin, has contributed to *Harper's Magazine*, for February, a diverting and instructive paper on some recent high balloon ascents. He claims that he and his companion reached an altitude of 35,000 feet, and that that is probably the highest ever attained by man. The intrepid aeronauts, Glaisher and Coxwell, in 1862, claimed that they went up as far as between 36,000 and 37,000 feet, but there seem to be some doubts on the subject because the bold voyagers were in a state of semi-consciousness, owing to the great altitude, and had little recollection of what they did after they reached 26,000 feet. In fact, the great uncertainty, as well as the great danger, in these very high ascents arises from the weakness and stupor that overcome such adventurers. Dr. Süring, who was accompanied on his highest trip last summer by Mr. Berson, narrates that the events which took place at an altitude above 34,000 feet were a little confused to them. The two men were indeed in a very perilous position. In spite of inhalations of oxygen—with which gas they were provided—they were overcome with a sense of apathy which tended to induce sleep. From this state they rallied by shouting and shaking each other. What would have happened if they had both sunk into a deep slumber at that height, with the temperature at 40° Fahr. below zero, may easily be imagined. But fortunately deep sleep did not seize either of them; their sense-perceptions were not especially diminished; they could read their instruments, look through a telescope, and even make notes. Still the fact remains that above 34,000 feet they were so little sure of themselves that they confess their observations may have been faulty. They cannot state the exact altitude reached by them. The ink in the barograph froze, so that the registration above 33,000 feet became imperfect, and the trace at 36,000 feet is so slight that it may be objected to.

The physiological effects of great altitudes on the human body were carefully noted during one ascent in which the physiologist von Schrötter accompanied them. Just as in high mountain climbing, the strength vanished and a feeling of sickness came on. There was no bleeding from ears and nose, nor any swelling of the limbs, as is often asserted. Such effects have never been observed by scientists in balloons. The functions of the heart and lungs were not really modified. The sickness is ascribed to the lack of oxygen, and can be relieved by inhaling that gas in long and slow gasps. The descent

was made quickly and safely, and no after-effects remained after a night's sleep.

Let Vaccinators Beware!—A verdict for $1000 against a physician was rendered a few days ago in a Philadelphia court by a jury of twelve men in the following case:

Dr. H. M. Righter alleges that he vaccinated a child, using every antiseptic precaution. The arm was scrubbed with green soap, washed with alcohol and a solution of bichloride of mercury, and rinsed with boiled water. The operator's hands were sterilized and a fresh point was used and taken directly from its case. Twenty-eight days afterwards, it is alleged, an eruption of impetigo contagiosa broke out, the vaccination having healed. Later symptoms of laryngeal diphtheria occurred, and the child died. Dr. Righter alleges that he did not see the child after vaccinating it until called to see the eruption.

Impetigo contagiosa is doubtless seen sometimes following vaccination, but it is known to be due to a secondary infection—just as is tetanus. If a physician uses every precaution he should not be held responsible for such secondary infection, which may evidently occur in some cases without his ability to prevent it. The exact relationship of the two diseases is thus accidental, but in this case the jury decided that Dr. Righter was responsible, although the evidence does not show in what way. The long interval elapsing after the vaccination is further evidence of a secondary or accidental infection.

In the light of this verdict we do not hesitate to say that no physician who vaccinates a person in this city is now safe. The verdict is particularly deplorable in this town at a time when the medical profession is doing its utmost to exterminate smallpox.

This verdict may remain as a precedent, and it behooves every physician to consider the situation carefully. If such a verdict is to stand, it means that every physician is in jeopardy and that such cases are not to be determined according to the known facts of medical science. We understand than an effort will be made to secure a new trial, and failing that, that the case will be fought in the higher courts.

A Doctor's Statue for the Capitol at Washington.—The *Atlanta Journal-Record of Medicine*, for February, contains a plea for a statue of Dr. Crawford W. Long to be placed in the statuary hall of the national Capitol as one of the statues of two of its citizens to which Georgia is entitled. It seems that in 1879 the General Assembly of Georgia selected Long and Oglethorpe as its two eminent citizens whose memories should thus be honored, but that a recent movement has been started in the state to replace the name of Long with that of some other Georgian. A lay correspondence in the *Journal-Record* protests against this change, and makes an eloquent plea for Dr. Long as the alleged discoverer of anesthesia. Into this vexed question we do not propose to enter. Dr. Long's claims to the honor of having been the first to use anesthesia have not been generally recognized—but that fact does not necessarily militate against the justice of them. We are simply interested in the movement to honor a member of the medical profession by placing his statue in the Capitol. It is not often that eminent physicians are publicly honored as they deserve, and our sympathies are naturally with Dr. Long as against some politician, "whose mouth," as the *Journal-Record* says, "is stopped with the dust of dead politics and mouldy issues."

A Physiological Argument for the Immortality of the Soul.—A recent paper by the Rev. George Matheson in the London *Expositor* gives curious evidences of the ways innumerable in which medical, and especially physiological, science touches upon other domains of human thought and human interests. The author is seeking for arguments to sustain the hope of immortality (which he assumes for argument's sake has been weakened by the advance of modern science), and finally turns to science itself for the very argument which he most needs. "A hand," he says, "has pointed us to one imperishable object; and it is the hand of science. Evolution—the doctrine of change—has itself revealed something which changes not."

This "something which changes not" is found by the author apparently in the *germ cell* of Weismann. It has not been unusual for followers of Weismann (with what authority we know not) to point out that according to his doctrine the original *germ* cell, as distinct from the *body* cell, is composed of living matter which practically is immortal. That is to say, since its first appearance on earth this germinal matter has been transmitted in continuity from parent to offspring, and therefore has never died. The prospect is, of course, that it will so continue to be transmitted—at least as long as this earth remains inhabitable. After that time apparently speculation must cease to follow it. The Rev. Matheson does not seem to see that the whole argument rests upon the scientific thesis—that the only immortal thing is matter.

Some of the newspapers are demanding that criminal proceedings be instituted against the St. Louis

pathologist who distributed tetanus toxin to diphtheria patients, and who is reported to have been dismissed from his position by the St. Louis Board of Health. He is generally regarded as officially, if not personally, responsible for the disaster. Whether a trial would offer him the best means for exculpating himself is a question we do not attempt to determine, but we feel strongly that there are many persons besides Dr. Ravold who need to profit by this terrible experience.

Current Comment.

NURSES AND MATRIMONY.

One objection to trained female labor, however utilized, is that the service is liable to be disorganized by epimedics of matrimony among the employees. Nurses are by no means exempt from this weakness, and of late a disposition has shown itself in certain hospitals to discourage the admission of young women who are "engaged" on the ground that the fact of their future being thus mortgaged indisposes them to that self-abnegation and singel-minded devotion to duty which are held to constitute the stock-in-trade of those who propose to take up nursing as a profession. It is to be feared that this proneness to matrimony which is innate in the female bosom cannot be checked by any precautions that jealous matrons or impatient physicians may devise. Were it possible, indeed, it would be contrary to public policy to enforce them, marriage being the natural, if not the invariable, destination of woman. Some may prefer the independence of the single state, but the majority assuredly only await the opportunity to disqualify themselves for the nursing profession.

—*The Medical Press and Circular.*

DOCTORS AND BLACKMAILERS.

The physicians of New York find themselves forced to organize for mutual defense against a class of blackmailers that has long existed in the big city, but has recently become larger and more aggressive than ever before.

The specialty of this class is cooking up charges of malpractice. The operator engages the services of a physician for himself or an accomplice and so manages matters as to provide himself with an ostensible grievance against the physician which he can make the basis of a charge of malpractice. He goes to the physician, threatens a lawsuit and an exposure, and finally accepts such a settlement as the physician is able and willing to make. The victims are generally young members of the medical profession not yet solidly established in practice. The older and better-known men have less reason to fear assaults on their reputation. They are pretty sure to fight a suit, and a fight is the last thing the blackmailers desire.

—*The Rochester Democrat.*

MEDICAL EDUCATION IN CHINA.

Readers of the *Journal* will be interested to learn that Chow Fu, the provincial treasurer of Chihli province, has made overtures to Dr. Peck, formerly of Pang-Chuang, now in Pao-ting-fu, to start a medical school in Pao-ting, somewhat after the model of the school which the late Dr. Mackenzie formerly conducted in Tientsin. It appears Chow Fu was conversant with the management of the Tientsin school, and was so convinced of the worth of the work done by Dr. Mackenzie that he wishes to see something of the same sort started under his own eye in Pao-ting-fu. If Dr. Peck undertakes the inauguration of such a school, he will not sever his connection with his Board—the American Congregational Board—but will still draw his salary as usual from it; the institution, however, being entirely supported by funds provided by the Chinese. It is to be hoped that Chow Fu's scheme may succeed and that the authorities in other provinces may follow his good example.

—*The China Medical Missionary Journal.*

Correspondence.

SMALLPOX QUARANTINE.

By HOWARD A. SUTTON, M. D.,
of Norristown, Pa.

To the Editor of the Philadelphia Medical Journal:

Regarding quarantine of houses in which smallpox has developed and the case taken to the isolation hospital views have been expressed varying from enforcing a system more careful than the present; daily visits of a medical inspector; paroling the inmates; to no quarantine at all, as in Germany.

The efficacy of vaccination as the only sure preventive to those exposed to the contagion is no longer in doubt, and from this standpoint alone, it seems to be, the matter must be considered. If a person exposed to smallpox has had a recent, i. e., within five years, successful vaccination, and all his clothing and belongings have been properly disinfected, he can not spread the disease, nor can he develop the disease and distribute the infection in this manner.

As soon as all others in the household who are vaccinated immediately after the exposure have an undoubted "take," they can be placed in the same class with the above and there is obviously no further need of restricting their liberty.

In short, when all persons exposed to the disease can exhibit a recent successful vaccination and have had a thorough disinfection of their belongings, away with the quarantine! Until then maintain quarantine of the strictest kind.

Reviews.

A Text-Book of Pharmacology and Some Allied Sciences. Therapeutics, Materia Medica, Pharmacy, Prescription-Writing, Toxicology, etc. By Torald Sollmann, M. D., Assistant Professor of Pharmacology and Materia Medica in the Medical Department of Western Reserve University, Cleveland, Ohio. Illustrated. Philadelphia and London. W. B. Saunders & Company, 1901.

This work of Dr. Torald Sollmann is bound in our opinion to take its place at once as a standard text book of pharmacology. The subject is treated from the point of view of the pharmacologist and the practical physician and the result has been to place before us a work of such broad scope, yet practical character that it can be truly regarded as one of the noteworthy productions of the past year. It is superior to any volume upon the same subject in English with which we are familiar with the possible exception of the standard work of Cushny and the comparison of these two books will reflect no discredit upon the work of Dr. Sollmann. The growing importance of pharmacology and the immense field which it offers for original research, together with the intricacies of the subject would all seem to indicate the decided need of special works from the pens of men who have devoted themselves to this subject. The author pays a just tribute to such standard works as those of Schmiedeberg, Lauder Brunton, all of which he has done well to consult freely. But the facts he has drawn have been taken judiciously and largely supplemented by the results of his own experimental research and the whole work has been moulded with rare discrimination into a coherent treatise. The subject is treated under several parts. The first deals with the Preparation and Prescribing of Medicines and Toxicologic Analysis, the second treats of Pharmacology, Therapeutics, and Ma-

teria Medica; the third is devoted to Practical Exercises, which will make the work of especial value to laboratory students or to such physicians as desire to become proficient in practical work. These practical exercises include work in Chemistry; the Introduction to Experiments on Animals; Experimental Work on Frogs, and Work on Mammals. The appendix deals with the methods of analyzing the causes of pharmacologic actions and in this the attempt is made to bring together the more important methods employed in pharmacologic research. We would especially mention the chapters upon Internal Secretions, the Series of Coal Tar Derivatives, that upon General Salt Action and the Ion Action of Soluble Salts as worthy of especial praise. The author's style is uniformally good and he writes with admirable clearness. His attempt has been to give all the important pharmacologic facts, as well as to facilitate their understanding and memorizing. In order to do this, he has arranged them in a systematic and logical manner. He calls particular attention to these points in the preface of the work as well as to the typographical arrangement. Liberal use is made of display type and considerable material intended only for reference has been added in smaller type, which has made it possible to include much valuable information within one, not unwieldy, volume. He has avoided as far as possible entering upon controversy upon matters concerning which several theories have been offered. He renders such explanations as can be received by investigators generally. It is a very great pleasure to review this work favorably, to congratulate the author, and to prophecy the early need of another edition. [T. L. C.]

A Text-Book of the Practice of Medicine. By James M. Anders, M. D., Ph. D., LL. D., Professor of the Practice of Medicine and Clinical Medicine, Medico-Chirurgical College, Philadelphia. Fifth Edition, Thoroughly Revised. One handsome octavo volume of 1297 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, $5.50 net.

The fact that this text-book has reached its fifth edition in such a comparatively brief time is sufficient proof of its value to physicians and students. It must be extremely gratifying to the author and the publishers to have launched a work of such value. As far as we can see after a careful inspection, the book is thoroughly abreast of the time, containing the most recent material relative to symptomatology, diagnosis and treatment. Nothing more need be added in reference to this book than has been said about it in previous reviews in this Journal. It need scarcely be said that the book is bound and printed in the high class manner so well known of Saunders' publications. [J. L. S.]

A Practical Treatice on Materia Medica and Therapeutics, With Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, M. D., LL. D., Professor of Materia Medica, Pharmacology, Therapeutics, and clinical Medicine and Clinical Professor of Diseases of the Skin in the Medico-Chirurgival College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association, of the Pennsylvania and Minnesota State Medical Societies, the American Academy of Medicine, the British Medical Association; Fellow of the American Academy of Medicine, the British Medical Association; Fellow of of the Medical Society of London, etc., etc. Fifth Edition, Thoroughly Revised. Pages viii-1143. Size 9¼x 6¼ inches. Extra Cloth, $5.00 net; Sheep, $5.75 net, delivered. Philadelphia, Pa., F. A. Davis Co., Publishers, 1914-16 Cherry Street.

The fifth edition of Dr. John V. Shoemaker's Therapeutics will need but little introduction to the profession, for the preceding editions have been very favorably received and the need of this latest revision is an evidence of the esteem in which the work is held. We observe that Dr. Shoemaker still retains the alphabetic arrangement rather than grouping the drugs in classes, as in done in standard works on Pharmacology, and a number of other treatises on Therapeutics. To be sure, the classification of drugs is outlined in the introduction, and the alphabetic arrangement may possess certain advantages in convenience for the student which is perhaps wanting in the pharmacologic classification. On the other hand, the latter arrangement has many advantages, not the least of which is the fact that while seeking information about a particular drug the student without effort learns something of others, the actions of which are analogous. One of the difficult features in the preparation of a work on this subject is deciding upon which of the newer unofficial remedies are worthy of mention. Many of the synthetic products have passed beyond the experimental stage and their inclusion in a work designed to be a standard text-book becomes a matter of necessity. The point, however, may be well taken that numbers of other synthetic products, and of these the name is legion, have by no means passed into generally accepted use. Dr. Shoemaker has taken a middle ground and while some of those preparations which he mentions may perhaps be open to criticism, he has wisely omitted many others which other authors have included. We are in a transition stage in this matter and it must be left largely to the individual judgment of our authors what they regard as worthy of mention and what to omit. In a work designed mainly for students, the advisability of including the official preparations alone may be well worthy of serious consideration, for the reason that the student's knowledge, at least the ground work of his knowledge, in systematic therapeutics is acquired in his undergraduate days. When he is engaged in the practice of his profession the unofficial preparations are exploited to him continually, while no such gratuitous service is being rendered on behalf of the pharmacopœial preparations. He is, therefore, frequently tempted to employ some new agent, overlooking a better remedy in the official list. But as we said, above, all this is largely a matter of taste and judgment on the writer's part. The chapters in Dr. Shoemaker's work devoted to Electro-Therapeutics, Hydrotherapy, Balneotherapy, Climatotherapy, and Climatology, are of uniform excellence and we would especially mention that part of the work devoted to the discussion of Diet in Disease. A well chosen formulary helps to make the work more valuable to the general practitioner. The index is prepared thoroughly and a "general index" as well as "clinical index" will assist in the usefulness of the book. [T. L. C.]

The Roentgen Rays in Medicine and Surgery. By Francis H. Williams, M. D., 8 vo., 639 pages and index. Profusely illustrated. The Macmillian Co. New York and London, 1901.

Any one conversant with Dr. William's work and writings in this field of diagnosis will not be surprised to find that he has devoted the major part of this book to the fluoroscopic technique which he has developed, and the results which he has obtained with it in the study of the pathological conditions found in the thorax. It is a very conscientious and comprehensive statement of the author's results and describes the apparatus and technique which he has found most appropriate to his work. It can hardly, however, be considered "a guide to practitioners and students" in this field of diagnosis, except in so far as they desire to follow Dr. Williams' methods and use it for fluoroscopic examinations of the character he details.

The book is wanting in a comprehensiveness of general technique and a comparative study of the various forms of apparatus tubes, coils, etc., as well as the various methods and technique developed by other investigators. The technique essential to the making and developing of accurate negatives, from which valuable diagnoses have been made, has received too little attention it seems for so large a work. The field of X-Ray literature has been drawn upon largely in describing the surgical, dental and therapeutic uses of this agent, and its value would have been increased if the methods by which those results were obtained had been given more at length.

If the design of the work had been only to describe the author's apparatus, technique, experiments and results, it would have been well done. [C. L. L.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Medical Laboratory, University of Pennsylvania.—The contract for the medical laboratory at the University of Pennsylvania, to cost $600,000, has been given the architects Cope and Stewardson. The amount immediately available is $300,000. It is expected that a building 340 by 245 feet will be erected. The laboratory is to be built on the plot of ground bounded by Spruce street, the dormitory buildings, Philadelphia Hospital and the University Hospital. It will be two stories high and, beside the many laboratories, will contain two large amphitheatres.

Society Meetings Next Week.—The following societies will hold meetings next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Tuesday evening, February 25, Neurological Society; Wednesday evening, February 26, County Medical Society; and Thursday evening, February 27, Pathological Society.

Philadelphia Neurological Society.—At the next meeting of the Philadelphia Neurological Society, February 25, Dr. Adolph Meyer, director of the pathological institute of the New York State Hospitals, will deliver an address entitled, "Conditions for Psychiatrical Research." Members of the profession are cordially invited to attend. After the address a reception will be tendered Dr. Meyer at the University Club.

Miners' Hospital, Pittsburg.—It has been announced that Andrew Carnegie has given $50,000 for the erection of a hospital in Pittsburg, especially for giving first aid to injured workmen.

Infectious Diseases in Philadelphia.—There has been a marked decrease in the number of smallpox and typhoid fever cases last week, but 74 new cases of smallpox were reported with 19 deaths, while 157 cases of typhoid fever were reported with 28 deaths. Most of the typhoid cases are still in West Philadelphia. Dr. John V. Shoemaker, president of the Board of Charities and Correction, is using his influence to have the Bureau of Health transferred from the Department of Public Safety to the Department of Charities and Correction, of which he is the head. The quarantine regulations hitherto enforced were changed February 18, when the new rules suggested by the commission of the Board of Health went into operation. Houses will only be quarantined until smallpox patients have been removed, rooms have been disinfected, and all inmates have been vaccinated.

Deaver Surgical Society.—The John B. Deaver Surgical Society of the University of Pennsylvania dined at the Ratskeller, February 14. No speeches were made.

Damages Against a Physician.—After two days deliberation, a Philadelphia jury, in the suit of a mother to recover damages for the death of her son who had been vaccinated, has rendered a verdict of $1000 against the physician who vaccinated the child. The suit was brought against the doctor on the ground that the child, a boy of six, died of impetigo following vaccination. She contended that the physician had deceived her, having told her that her son had pneumonia and diphtheria. In spite of the fact that witnesses appeared to show that every requisite antiseptic precaution had been taken, this surprising verdict was returned.

Charles K. Mills Neurological Society.—Dr. Roswell Park, of Buffalo, delivered an address before the Charles K. Mills Neurological Society, of the University of Pennsylvania, in Houston Hall on the evening of February 19, upon student life in the Middle Ages.

Bequests.—By the will of the late Sarah J. M. Black, $5000 was left to the Presbyterian Home for Aged Couples, and a number of smaller amounts was left to various charitable institutions.

William Pepper Medical Society.—The annual meeting of the William Pepper Medical Society of the University of Pennsylvania was held at the Flanders, February 13. Speeches were made by Dr. Alfred Stengel, Dr. C. K. Mills, Dr. De Forrest Willard, Dr. A. A. Abbott and Dr. H. A. Hare.

Berks County Medical Society.—At the February meeting Dr. Mordecai Price, of Philadelphia, delivered an address on sepsis. He described puerperal infection, saying that puerperal fever could be prevented. He condemns the use of the curette and douche early, and advises the removal of the cause of infection. Curettement is only indicated after the second week.

Marine Hospital of Pittsburg.—A bill to establish a marine hospital at Pittsburg was favorably reported by the committee on commerce of the House of Representatives, Washington, February 14.

Infectious Diseases in York.—An epidemic of diphtheria is prevailing in Mulberry, York county. While there have been many rumors of cases of smallpox, York has at present but three cases. The city buildings have all been fumigated.

Death of Dr. Weidman.—Dr. W. Murray Weidman, ex-president of the Pennsylvania State Medical Society, died suddenly February 8, at his home in Reading, of angina pectoris, in the 68th year of his age. Dr. Weidman was one of the most noted physicians in the Eastern part of Pennsylvania, having held positions of trust in the American, State and county medical societies.

Death of Dr. Penrose.—Dr. Thomas Neall Penrose, a retired naval surgeon and medical director, died February 13th at the U. S. Naval Hospital, Philadelphia, of heart disease and kidney trouble. Dr. Penrose was born in Philadelphia in 1835, and was graduated from the University of Pennsylvania in 1858. In 1861 he entered the army as assistant surgeon, and served throughout the war. In 1862 he entered the navy, and was attached to Farragut's fleet under the immediate command of Commodore Porter. In 1892 he was in charge of the naval hospital at Norfolk, Va. In 1889 he was commissioned medical inspector, and in 1896 medical director. He was retired in 1897.

NEW YORK AND NEW JERSEY.

Gratwick Laboratory, Buffalo.—The new cancer laboratory of the New York State Board of Health, in the new Gratwick laboratory of the University of Buffalo, will be opened February 22d. On the same date a meeting of the medical alumni of the University of Buffalo will be held, where Dr. Daniel Lewis, State Health Commissioner of New York, is to deliver an address.

New York State Medical Association.—The following resolution was passed at the Council meeting of the New York State Medical Association, February 7: Whereas, the Medical Society of the State of New York, having appointed a committee to confer with a similar committee from the New York State Medical Association, with the view to a union of the two organizations and notice of such creation of a committee having been officially given to our President, together with the request that a corresponding committee be appointed by us; therefore, be it resolved that this Council (the executive board of the Association) appoint for the purpose of the conference in question a committee of five, consisting of Dr. E. Eliot Harris as chairman, and Drs. William H. Biggam, Emil Mayer, Parker Syms, and Frederick Holme Wiggin, to which committee the President is added as a member ex-officio.

Smallpox in New York City.—The number of new cases in New York has decreased markedly, not more that ten being reported in a day. The majority of these cases are found in Brooklyn.

Jewish Hospital, Brooklyn.—A meeting was recently held to raise $100,000 for the establishment of a Jewish hospital in Brooklyn. $25,000 was subscribed at once, and it is expected that the remainder of the sum will soon be forthcoming.

Smallpox in New Jersey.—There has been a steady decrease in smallpox in Camden, only 44 cases having been reported during the month ending February 15th. There are at present less than 20 cases in the Municipal Hospital, with no more than 10 others in the city. A death from smallpox is reported at Princeton, where five cases of the disease are now under treatment. Two tramps, recently locked up in the county jail at Mt. Holly, have been discovered to have smallpox. The prison is now under strict quarantine. Dr. Thompson, of Bridgeton, who contracted with the Board of Health for $2000, for attention to one case of smallpox at Dividing Creek, has sued the authorities of Downe county for the money. They refuse to pay the bill, claiming that the father of the patient should pay it.

Dog's Hair on a Child's Head.—From the Flower Hospital, New York City, comes the report of an interesting opera-

tion. A boy was run over by a street-car, a large piece of scalp being scraped off. To remedy this defect a dog's skin, well covered with hair, was grafted on his head, and the boy recovered.

Bequests.—By the will of the late Caroline S. Rathbone, $70,000 is left for the benefit of the Rathbone Memorial Home for Aged and Infirm Persons, at Evansville, Ind. By the will of the late Dr. Dominick Bodkin, $1000 is left to St. Mary's Hospital and $500 to St. Vincent's Home for Boys. Both of the deceased lived in Brooklyn.

Private Smallpox Hospital.—Dr. Louis Fischer believes that a smallpox hospital for private patients should be erected in New York at once. At present cases of smallpox can only be treated at the Municipal Hospital on North Brother Island. As it seems probable that the number of cases will continue to increase until next summer, patients needing private rooms would have no other hospital to go to. A separate building would be maintained as an observation hospital into which suspected cases could be placed. Dr. Fischer's ideas are held by a number of prominent physicians of the city. 19,000 persons were vaccinated in New York City last week.

WESTERN STATES.

Chicago Medical College.—At the meeting of the Chicago Medical Society held February 12, in the new amphitheatre of the Mercy Hospital which was opened on this occasion to the public, Dr. John B. Deaver, of Philadelphia, delivered the address, on appendicitis. The new operating theatre was erected in honor of Dr. John B. Murphy at a cost of $25,000 by the Chicago Medical College, Northwestern University Medical School.

Chicago Pasteur Institute.—Dr. Antonio Lagorio, in charge of the Pasteur Institute in Chicago, states that he has examined 10,000 patients with supposed hydrophobia, the vast majority of whom, however, had been bitten by innocuous animals.

Diphtheria in Utah.—The Mayor of Gunnison, Utah, has appealed to the State Board of Health for assistance in checking the spread of diphtheria. The disease has gained such headway that it has been found necessary to quarantine the stores. Even the health officer has contracted the disease. A member of the Board has left Salt Lake City to take charge of the situation.

The New Milwaukee Hospital.—The new non-sectarian hospital to be erected in Milwaukee, toward which $25,000 was recently donated by a citizen of Waverly, Iowa, has been given a plot of ground worth $10,000 by a citizen of Milwaukee. It is hoped that $50,000 more will soon be raised.

Banquet in Honor of Dr. Gregory.—The medical profession of St. Louis expects to give a banquet, at the Planters House April 17 to Dr. E. H. Gregory, who has been an active teacher of medicine in St. Louis for 50 years. Many guests will be invited, including all the ex-presidents of the American Medical Association, since Dr Gregory was president of the Association in 1887. The committee having the affair in charge is composed of one member of every class taught by Dr. Gregory, 50 in all.

New Hospital for the Insane.—The new hospital for the incurable insane at Bartonville, near Peoria, Ill., which cost $1,000,000, will soon be opened. There are fifteen buildings and they will accommodate 600 patients. Dr. George A. Zeller will be superintendent.

The Schools of Madison, Wis.—The city schoolrooms in Madison, Wis., are being swept with wet sawdust as the result of some recent experiments. The sweepings of the floor were carefully analyzed by chemical processes and it was discovered that the dust, gathered when wet sawdust was used on the floor, contained a much greater percentage of disease germs than that collected by the common dry sweeping. From this fact it is argued that the latter process is less sanitary.

Chicago Morality.—Warden Healy, of the Cook County Hospital in Chicago, recently stopped an operation upon a woman in the clinical amphitheater, saying that he would not permit the indecent exposure of women before medical classes.

Smallpox in Chicago.—Three-fourths of all the reported cases of smallpox in the United States are in the territory surrounding Chicago. Only four cases of smallpox were discovered in Chicago during the week ending February 8, one of which came from Mexico, the three others from Wisconsin. In all, but 18 cases are in the isolation hospital. It is probable that people arriving from Iowa, Wisconsin and Indiana will be examined for signs of smallpox before being allowed to enter the city All railroad employés have already been vaccinated.

Stanford University, California.—Dr. W. F. Snow, formerly instructor in hygiene and physiology, will return to the university next semester, and will be acting head of the department of hygiene. Dr. Snow has been doing advance work at the Johns Hopkins University during the past year.

A Rabbit's Eye Transplanted.—A miner who had lost one eye from the effects of an explosion also lost the cornea of the other eye. His physician, in Clinton, Iowa, removed the cornea from a living Belgian hare, transplanting it to the eye of the human being. Since the operation the patient has not only been able to distinguish light, but has recognized objects Until this time he had been totally blind.

Smallpox in the Middle West.—Smallpox is prevalent, but not epidemic, in St. Louis, there being about two hundred and fifty cases quarantined at present. Health Commissioner Starkloff, of that city, says the disease was brought there by soldiers returning from the Spanish-American War. Students at St. Francis Seminary, near Milwaukee, Wis., and of St. Mary's Institute, Dayton, Ohio, were sent to their homes throughout the Western States because one boy in each institution developed smallpox. The town of Cold Water, Ohio, with 600 inhabitants, has just recovered from an epidemic of smallpox during which 351 people suffered from the disease, yet not a single death occurred. Some new cases are reported at Carthage, Mo., St. Paul and Minneapolis, Minn. Minnesota returns show 345 cases throughout the State. The new building for contagious diseases on the City Hospital grounds, Minneapolis, will be completed March 15. So severe has the epidemic become in Des Moines, Iowa, that churches and theatres are closed, and all public gatherings have been forbidden.

Bennett Hospital Burned.—A fire occurred February 14, in the upper floor of the Bennett Hospital, Chicago. Firemen, at the risk of their lives, found seven bodies in the dissecting-room of the hospital, which, together with the laboratory adjoining, was the only part of the building destroyed. Six of the seven bodies were removed from the dissecting-room by the firemen, one body only being burned. The loss amounted to $5000.

Chicago Academy of Medicine. At the annual meeting of the Academy of Medicine of Chicago, February 14, Dr. W. L. Baum was elected president, and Dr. J. G. Kiernan, secretary and treasurer. Beside these two, the other directors are Drs. W. A. Evans, H. N. Moyer and E. S. Talbot.

CANADA.

(From our Special Correspondent.)

The Ontario Medical Library has received a splendid gift from Dr. Howard Kelly, of Baltimore, who told Dr. N. A. Powell, curator of the library, to choose the best books from the library of the late Dr. Sweetman and then to draw on him for the amount necessary. This is said to have reached $1200.

Bad Discipline in Canadian Penitentiaries seems to be the cause of ill health among convicts, especially in the St. Vincent de Paul Penitentiary in the province of Quebec. It is asserted that opiates have been given to convicts to keep them in order. Hence the ill-health. This statement is supported by the fact that during the past year 150 pounds of tincture of opium and 10,000 morphine pellets were used in the dispensary of the institution.

Smallpox in Ontario. An increase in the number of patients with smallpox occurred in Ontario during January. According to a statement published by the Board of Health there were 661 cases throughout Ontario in that month scattered over 28 counties, with 87 centres for infection. These are now mostly in the older and more settled districts of the province, the outbreak being well in hand in the unorganized districts. Nearly all of the large lumbering and mining camps to the north in New Ontario now have their

regularly appointed surgeons, over 60 of these having been appointed in the past few months.

Ontario Health Board.—An effort will be made to amend the Ontario Health Act in the present Legislature in the appointment of health officers. The Act provides for the appointment of Township Officers of Health, at any remuneration the township councils may see fit to grant. It is considered that the office should be a County appointment and that the Government should fix the minimum salary, so that capable men might be secured for the positions. As the work of the Township officers is now perfunctorily performed, it is considered opportune to make a change.

Royal Victoria Hospital, Montreal.—During 1901, 2579 patients were admitted to this hospital. 2600 were discharged, of whom 1583 were well; 792 improved; 59 unimproved; 51 not treated; 115 died, and 173 remained in the hospital. The death-rate, therefore, has been 4.42%, but if those dying within forty-eight hours after admission to the hospital are deducted, it would be 3.54 per cent. In the out-patient department there were 3601 consultations. Plans are being prepared for the erection of an extension with provision for new operating theatres for the gynecological department and for special cases.

The Southwestern Medical Association of Manitoba was organized a few months ago. Out of 70 practitioners available for membership, no less than 67 immediately signed the roll. The objects of this Association are to arrange a tariff of fees, which has been accomplished; to discountenance lodge practice; to regulate medical examinations for fraternal organizations and insurance companies. The latter will be charged $5.00 per examination, while the former will be charged $3.00 and $2.00 respectively, whether there is insurance connected with the organization or not. The Association further recommends that all members render their accounts at least every three months. After the organization is fully perfected in the Southwestern part of the province, an effort will be made to extend its sphere of influence to the intire province. The secretary of the Association is Dr. J. T. Lamont, Treherne, Man.

Ontario's Death-Roll in 1901 was 25,736 or 13.1 per thousand of the population, of which 90 per cent. were reported. There were fewer deaths from tuberculosis than in 1900, the figures being 2286 and 2360 respectively. June was the healthiest month of the year, the number of deaths reported amounting to 1608, while March showed the heaviest death-roll, the total reaching 2525. 209 died from scarlet fever; 120 from measles; 512 from diphtheria; 112 from whooping cough; and 345 from typhoid. There was a considerable falling off in typhoid fever, as the deaths in 1900 numbered 550.

A Consulting Health Board for Montreal has been proposed by Alderman Ames. He proposes to supplement the Hygienic Committee with a consulting board, to consist of four doctors and a practical plumber. In the past, the very poorest among the aldermen have been elected on the Health Committee; and as Montreal really needs some one with a knowledge of the requirements necessary, the suggestion of Alderman Ames is considered one that should be acted on instantly.

The Population of Canada.—Mr. Paul Leroy Beaulieu has recently published his studies on Canada. In 1891 the total population was 4,833,000; in 1901, 5,338,000, an increase of only 10.5 per cent. From 1861 to 1871 the increase was 17.5 per cent.; to 1881, 19 per cent; to 1891, nearly 12 per cent. During the past ten years Great Britain (without Ireland) has increased about 12 per cent., that is, more rapidly that Canada. The corresponding increase for the United States (1890-1900) is 21 per cent. Australia has increased in the same period 19 per cent. In the maritime provinces, in Ontario and Quebec, the increase is very slow. Manitoba, the Northwest territory and British Columbia, on the other hand, have increased 62, 116 and 94 per cent., respectively, in the last ten years. The falling off in the eastern parts of the dominion is chiefly due to emigration to the United States.—*Economiste Francais.*

MISCELLANY.

Bubonic Plague.—A case of plague occurred at Beirut, Syria, toward the end of December last, while four new cases with two deaths occurred in Egypt at that time. In Bombay 6958 new cases with 5145 deaths occurred a week before. This was a decrease over the previous week of 654 cases and 599 deaths. In Calcutta 31 cases occurred with 30 deaths. The news from Punjab February 14 shows a great increase in the spread of the disease, 1000 having occurred in one day. An interesting report tracing the occurrence of the plague to rats from ships in the harbors appeared in a recent German health report. An excellent map shows the entire distribution of bubonic plague from 1894 to 1901. This appeared in the United States Marine Hospital report of February 7. The Governor of Mauritius states that for the week ending January 30, 12 cases occurred, nine of which have proved fatal.

Notes: An institute for the treatment of hydrophobia is soon to be established on the Island of Salonica.—In the Arctic regions people can converse when more than a mile apart. The air, being cold and dense, favors the transmission of sound, as does the smooth surface of ice or frozen snow.—Only physicians who are able to speak the English language will be given certificates to practice medicine in the Hawaiian territory.—Only one person in 15,000 reaches the age of 100 years.—In England there are 114 widows to every 54 widowers. In Italy, the relative numbers (per 1000 women and 1000 men) are 136 and 60; in France, 139 and 73; in Germany, 130.5 and 50; in Austria, 121 and 44. —The sale of medicines of unknown composition is prohibited in Turkey.—Orange blossoms were first used for bridal wreaths by the Arabs. The orange branch bears fruit and flowers at the same time, and is therefore considered an emblem of prosperity.—Each year 1,095,000 persons succumb to consumption.—The Chinese believe that the water obtained from melting hailstones is poisonous, and that rain water which falls on certain feast days will cure ague and malarial fever.—The bacillus of influenza is the smallest disease germ yet discovered.—Gray hairs at an early age are hereditary in certain families. It is thought to result when men with dark hair marry women with dark hair through several generations.—The mortality from cancer among sailors is very high, 44.5 per 100,000, while that of miners is only 12.2.—But eight States do not now require examination by a State Board for those wishing to practice medicine. They are Arkansas, Colorado, Kentucky, Michigan, Nebraska, Nevada, South Dakota and Tennessee.—Some Chinese medicine, consisting of monkeys' toes boiled down and hardened by being buried underground for a number of years, figured in a police court case at Shanghai recently.—The great majority of mosquitoes never taste human blood or that of any animal. They live upon vegetable juices and decomposing animal and vegetable matter, found in the localities where they are most numerous, and thus perform a valuable service as nature's scavengers.—There were 3516 immigrants refused admission to the United States last year.—A new tapeworm described by a Japanese physician is of gigantic size, being more than four inches broad and about thirty-five feet long.—Ireland has the highest average number of children per family, 5.20, while France has the lowest, 3.03.—According to a census bulletin just issued, there are in the United States 26,110,788 persons of school age, or from 5 to 20 years old. —A small grass seed which had germinated while in a patient's eye has just been removed by a Japanese oculist.

Death of Lieutenant-Colonel B. F. Pope.—Lieutenant-Colonel B. F. Pope, Deputy Surgeon-General U. S. A., died in Manila, February 14, of acute uremia. Col. Pope first entered the military service as Assistant Surgeon of the Tenth New York Heavy Artillery, on June 18, 1864. He was made acting Assistant Surgeon in the Regular army in 1867, and promoted in the same year to First Lieutenant. From 1882 to 1886 he was in charge of the Record and Pension Division with the rank of Major. He was stationed in the Department of the East when the United States declared war on Spain, and was promoted to Lieutenant-Colonel and Chief-Surgeon of Volunteers and ordered to Cuba. He was Chief Surgeon of the Fifth Army Corps at Santiago and returned to the United States in August with the troops going to Montauk Point. From that time until last April he served in the Department of the Lakes and the Department of California. He was made Chief Surgeon of the Division of the Philippines, and on January 1 was promoted to be a Colonel.

Obituary.—Dr. Samuel H. Rodman, at Huntington, L. I., February 10, aged 64 years.—Dr. Gotthelf Reiman, at Baltimore, Md., February 10, aged 84 years.—Dr. Henry Balser,

at New York City, February 14, aged 62 years.—Lieut.-Col. Benjamin F. Pope, at Manila, February 14, aged 59 years.—Dr. Thomas Neall Penrose, at Philadelphia, Pa., February 13, aged 67 years.—Dr. Richard Covington Mackall, at Elkton, Md., February 16, aged 81 years.—Dr. John L. Million, at Springfield, Ohio, February 14, aged 75 years.—Dr. Frank R. Warren, at Worcester, Mass., February 15, aged 32 years.—Dr. Henry R. Baldwin, at New Brunswick, N. J., February 3, aged 73 years.—Dr. Edwin Schwartz, at Knoxville, Ill., February 4, aged 48 years.—Dr. Joseph Wilkins, at Baltimore, Md., February 5, aged 78 years.—Dr. Benson G. Connor at Waxahachie, Tex., February 1, aged 80 years.—Dr. Henry W. Foster, at Minneapolis, Minn., February 3.—Dr. Alexander L. Williamson, at Humboldt, Neb., February 4.—Dr. Walter Saunders, at San Francisco, Cal., February 2.—Dr. Louis Z. Lajoie, at Haverhill, Mass., February 13, aged 35 years.

GREAT BRITAIN.

Fourteenth International Congress of Medicine.—Dr. F. W. Pavy, F. R. C. S., has been elected president of the National Committee for Great Britain and Ireland of the Fourteenth International Congress of Medicine, to take the place of the late Sir William MacCormac.

Contagious Diseases in London.—While smallpox shows no sign of abatement, influenza has appeared, and is seemingly more fatal in its results. Not only are many cases reported in London, but the disease seems epidemic throughout England. At Harrow more than 200 cases of influenza are reported, while the other big public schools have smaller outbreaks of the disease. A number of deaths from influenza have occurred in Liverpool. The *Hospital* states that there are still thousands of people in London unvaccinated. A seaman, who refused to be vaccinated, was promptly dismissed. He appealed, and the courts decided that the Company, in whose employ he was, was justified in dismissing him. Statistics show that this epidemic of smallpox is much milder than any previous epidemic in London.

An Appointment.—Dr. D. A. Welsh, of the University of Edinburgh, has been appointed professor of pathology at the University of Sidney, Australia. In his place as pathologist in the Edinburgh Royal Infirmary Dr. Theodore Shennan, at a salary of $2000 a year, has been appointed for five years.

The Harben Lectures of the Royal Institute of Public Health.—Professor Max Gruber, of Vienna, delivered the Harben lectures at the Royal Institute of Public Health, London, January 13, 14 and 15. His subject was "Bacteriolysis and Hemolysis."

London Centenarians.—The latest London statistics show 24 people over 100 years of age, only five of them males. The number of persons 75 years old and upwards is 52,679, of whom but 18,776 are men. This seems to show that should one desire a good chance of reaching senility, it is well to live in London and be a female.—*Medical Press and Circular.*

Obituary.—January 7, Samuel R. Lovett, a graduate of the University of Edinburgh, Bloomsbury medical officer of health, died, aged 69.—The death is also announced of Dr. Donald Wingate, a graduate of the University of Glasgow, January 17, at Easington, Durham, aged 39.—Henry Lankester died at Leicester, January 30, aged 77.

CONTINENTAL EUROPE.

Italian Pellagra Congress.—The National Pellagra Congress will be held in Bologna in May. The etiology, pathology, treatment, prophylaxis, and extirpation of the disease will be discussed.

Brussels Institute of Bacteriology.—In May the new bacteriological institute will be opened for the treatment of patients bitten by mad dogs. These patients were formerly sent to Lille or Paris.

Professor von Bergmann.—On the Emperor's birthday, January 27, the title of privy councillor, which grants the distinction of being called "Excellency," was conferred on Prof. Ernst von Bergmann. This honor probably corresponds to "Right Honorable" in England.

Illness of Professor Virchow.—Dr. Virchow, who is suffering from a fractured thigh, is improving very slowly. He has given notice that Professor Oskar Israel, his senior assistant, will deliver his lecture.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

February 1, 1902

1. A Clinical Lecture on a Further Series of Cases of Total Extirpation of the Prostate for Radical Cure of Enlargement of that Organ. P. J. FREYER.
2. Remarks on Ten Cases of Movable Kidney. J. S. RIDDELL.
3. An Address on Methods of Incising, Searching, and Suturing the Kidney. HOWARD A. KELLY.
4. Clinical Observations on the Treatment of Severe "Stammering" Bladder and Urethra. E. H. FENWICK.
5. Partial Nephrectomy with Three Illustrative Cases. B. G. A. MOYNIHAN.
6. Recurrent Carcinoma Treated by the Röntgen Rays. G. B. FERGUSON.

1.—Freyer gives the details of four cases of total prostatectomy performed by the suprapubic route. In the *British Medical Journal* for July 20, 1901, he described his method of operating and reported four cases. Of these eight cases [illegible] were completely successful in every respect. The remaining case had recovered from operation, and was passing his urine naturally when he was seized with acute mania, from which he died. Acute mania according to the author's experience, is prone to occur in eldery men suffering from advanced prostatic disease, whether subject to operation or not, and particularly when accompanied by a profuse discharge of prostatic secretion. The ages of these eight patients varied from 62 to 76 years, all were in broken health, and some of them almost moribund before operation. The prostates removed weighed from 2¼ to 10¼ ounces. Freyer opens the bladder suprapubically, [illegible] of the prostate and enucleates the gland. The lateral lobes are [illegible] its muscles has been pealed off and after the lateral lobes have been separated by forcing the finger between them, the superior commissure or joining portion giving way. A finger of one hand is placed in the rectum to steady the prostate and push it forward. Bleeding is usually slight and is readily controlled by hot boracic acid solution. A large drainage tube is allowed to remain in the bladder for two days. Three of the cases reported in the present paper were associated with stone. In one case the urethra was torn across at its junction with the bladder but no untoward result ensued. It is asserted that the operation as described by Freyer is anatomically impossible and that if it were possible there would be extravasation of urine into the pelvis with fatal consequences. This incredulity has its origin in the descriptions of the anatomy of the prostate which are found in many of the books. They describe the organ as a single body with a canal, the urethra, tunneled through it. Freyer maintains that the prostate really consists of two lateral and separate encapsulated glandular bodies lying closely approximated on either side of the urethra, and adherent above and below that canal like the segments of an orange. When the gland becomes enlarged and [illegible] the adhesions at the commissure partially give way and thus facilitate enucleation without injury to the urethra. The prostate has two capsules, a thin, strong fibrous covering closely adherent to the prostatic substance (this is the true capsule and the one removed in Freyer's operation) and a fibrous casing outside this which contains the venous plexus (this is formed by the recto-vesical fascia, is not removed, and prevents infiltration of urine). Freyer holds that "atony of the bladder" even in the most advanced stages of prostatic disease does not exist. The so-called middle lobe may impede the flow of urine during the early stages of prostatic hypertrophy but later the obstruction is always caused by lateral pressure of the lobes of the gland. Where a so-called middle

lobe exists, it is found to be merely an outgrowth from one of the lateral lobes. [F. T. S.]

2.—Riddle reports **ten cases of movable kidney** and discusses the pathology, symptoms, diagnosis and treatment without adding anything especially new. He contends that the palliative treatment is only fairly satisfactory but that operation should be advised only when the discomfort is extreme or when complications exist. He prefers suspending the kidney by means of gauze strips after the manner suggested by Senn. [F. T. S.]

3.—Kelly discusses the **methods of incising, searching, and suturing the kidney where calculus is believed to be present.** By means of the X-ray the presence or absence of a stone in the kidney can be determined in all cases with practical certainty. The method of establishing the presence of a stone in the kidney by means of passing a bougie with an impressible wax tip up the ureter is less certain than, and has been superseded by, the Röntgen rays. Before proceeding with the operation for the removal of renal calculi Kelly passes a catheter through the ureter into the pelvis of the kidney, irrigates the pelvis of the kidney, and then distends the pelvis with boracic solution in order to make the lobules and fibrous septa prominent, to determine the thinnest portion of the cortex, and to enable the operator at once to become aware that he has entered the pelvis by the sudden gush of solution. Furthermore distension of the pelvis and calices separates the two vascular systems of the kidney often as much as 2 cm. In the undistended kidney this space is rarely more than a few millimeters. Broedel has demonstrated that the kidney is vascularized by two systems which are completely separated by the renal pelvis. The major or anterior system carries three-fourths of the arterial blood to the kidney and supplies the anterior half and part of the posterior half of the organ. The minor system supplies the remaining portion of the kidney. The best incision is between these arterial systems. Hemorrhage after incision into other portions of the kidneys may be frightful and even fatal. The surface of the kidney is divided up into irregular areas, (bases of the pyramids about the size of the end of the thumb); these areas are defined by whitish lines or by groups of stellate vessels. On the anterior surface of the kidney these white lines come together in a longitudinal white line, Broedel's line. These white lines represent the columns of Bertini, extend between the pyramids, and carry the vessels. The kidney should be incised through the lateral portions of the posterior pyramids between the vascular system parallel to the posterior surface of the kidney and to Broedel's line, leaving about three-fifths of the kidney anterior and two-fifths posterior to the line of incision. The cut should not be directed toward the center of the kidney. About two-thirds of all kidneys are vascularized as above described, the rest may be recognized by the posterior displacement of Broedel's line, by the bulging of the posterior surface of the kidney which is normally flattened, and by the arrangement of the arterial trunks at the hilum. If the finger feels as many arteries entering anteriorly as posteriorly then the least vascular zone will be the middle of the cortex: if more vessels are found posteriorly, the incision is best made anteriorly. To explore the kidney Kelly uses the curved handle of a specially constructed blunt knife, the blade of which is used to incise to the stone when it is found. The wound in the kidney is closed with three sets of sutures. The pelvis is closed with fine catgut stitches which pass between the calices, including the fat and fibrous tissue, but which do not pierce the mucous membrane. The second layer consists of a series of mattress sutures which pass entirely through the kidney and effectually control the bleeding. Finally the capsule is stitched with a continuous suture. Kelly's paper is illustrated by Mr. Max Broedel. [F. T. S.]

4.—Fenwick says the term **"stammering of the bladder and urethra"** should be confined to those patients who cannot urinate at will although the organs are anatomically normal. He takes issue with those authors who assert that no organic ill effects follow this condition and assures us that in severe cases cystopyelitis does ensue. The cause of the obstruction is usually a spasm of the compressor urethrae and the treatment in severe cases is a longitudinal section of that muscle. Formerly Fenwick divided the muscle on a staff through a perineal incision; he now tenotomizes the muscle without opening the urethra. [F. T. S.]

5.—Moynihan reports **three cases of partial nephrectomy** with a gratifying result in each instance. Case 1 was a female, aged 42 years, whose symptoms resembled renal colic. A tumor as large as a cricket ball could be felt in the right abdomen. This proved to be a solitary cyst. While the renal vessels were compressed by an assistant the cyst together with a wedge-shaped portion of the kidney was excised and the kidney flaps sutured with catgut. Case II was a solitary cyst in the connecting band of a horseshoe kidney. The symptoms were those of pyloric obstruction due to the pressure of the cyst on the duodenum. An incision was made to the right of the median line, the peritoneum divided and the commissure connecting the two kidneys excised. The ureters were symmetrical and crossed the isthmus where it joined the kidney. Solitary cysts of the kidney are rare. A. von Brackel has collected 22 cases occurring between 1865 and 1899; the ages of the patients varied from 18 to 64; the cysts usually developed in the lower pole of the kidney, and were sharply limited. The cyst fluid contains albumin and salts, but rarely urea. These cysts may be due to retention or are possibly cystic developments in "rests" derived from the Wolffian or Mullerian ducts. In case III half of the right kidney was removed for myxo-sarcoma of the lower pole. Pain was the only complaint. [F. T. S.]

6.—Ferguson publishes the notes of a case of **recurrent carcinoma of the breast which was markedly benefited by X ray treatment.** Three years before the patient had had the breast amputated. Both the sternum and the axilla were infiltrated with the recurrent growth. The rays were employed on twenty successive days, the applications lasting twenty minutes. The growth has become much smaller and the pain and ulceration have disappeared. [F. T. S.]

LANCET.

February 1, 1902.

1. A Presidential Address on the Heart of the Child. D. B. LEES.
2. Notes Concerning a Native Remedy for Blackwater Fever. D. R. O'SULLIVAN-BEARE.
3. On the Ultra-Violet Light from a Rapid Oscillation High-Tension Arc, for the Treatment of Skin Diseases. HUGH WALSHAM.
4. Two Cases of Uterine Cancer Successfully Treated with Cancroin. ALBERT ADAMKIEWICZ.
5. The Trial, Execution, Necropsy, and Mental Status of Leon F. Czolgosz, etc. CARLOS F. McDONALD and E. A. SPITZKA
6. After-histories of 100 cases of Supra-vaginal Hysterectomy for Fibroids. G. CREWDSON THOMAS.
7. A Case of Recurrent Sarcoma with Apparently Spontaneous Cure and Gradual Shrinking of the Tumor. A. LAURIE WATSON.

1.—Lees delivered a Presidential address **on the heart of the child** before the Harveian Society of London on January 16, 1902. He holds the view that this subject "the heart of the child," has been much neglected. He states that the enormous amount of work which the heart must perform during a life time emphasizes the importance of careful study of the "child's heart," which is an undeveloped organ and if damaged by disease hinders its future work. From this view-point, therefore, a thorough knowledge of the "child's heart" is of more importance than the adult's heart. The methods of examination are the same as those for an adult. On account of the small amount

of adipose tissue, the lessened muscular development, the absence of pendulous breast, and the rare presence of emphysema, the examination of the child's heart" is less difficult than the adult's heart. He states that the method of palpation can determine the strength of the left apex, and when the hand is gently applied over the epigastrium, an impulse of the right ventricle may be determined. He thinks that percussion in cardiac diagnosis is a sign of little value for we can form only an approximate opinion of the size of the right ventricle and a more accurate one in regard to the size of the left ventricle and right auricle. He objects to the use of such illusory instruments known as "pleximeters." He thinks that percussion should always be performed with the fingers only. He believes that a spot on the right ventricle, a little distance from its extremity, (apex), is responsible for what is usually spoken of as the "apex beat." Attention is directed to certain precautions in regard to the use of the stethoscope. Care should be exercised not to frighten the child with the instrument. He prefers the binaural instrument and objects to the old wooden form because the examiner is apt to press too heavily upon the child's chest. He holds the view that the most frequent murmur, due to congenital disease of the heart, is a systolic murmur often very loud, which is loudest at or just below the junction of the fourth costal cartilage with the sternum and often indicates an incomplete septum. The next in frequency is the murmur produced by pulmonary stenosis. It can be heard loudest at the second left costal cartilage and is conducted toward the clavicle. A doubtful cause of murmur and one of little importance is one produced by patent-foramen ovale. Clinically, the most important affection of the right heart is produced by acute or chronic disease of the lungs, or disease of the left heart. Under such circumstances a careful watch should be kept on the right auricle. He mentions some points of importance in regard to the treatment of pneumonia and other similar pulmonary conditions when the right auricle is dilated. He thinks the application of leeches may relieve an over-distended right auricle. Pallor of the face and smallness of the pulse in pneumonia are not contraindications to bleeding. By relieving an over-distended right heart, the pulse will become stronger and the color of the cheeks improved. The size of the right auricle should be carefully noted when disease of the left heart exists, particularly when it has been injured by rheumatism. When the rheumatic process has injured the left side of the heart and interferes with its suction action, a rise in the blood tension of the pulmonary circuit follows, which can be determined by the accentuated pulmonary second sound. Later when dilatation of the right ventricle follows, an increase in the size of the right auricle can be made out. This, he emphasizes, should be always carefully watched. Enlargement in the size of the liver and dyspnea follow dilatation of the right auricle. These conditions may be relieved by prompt bleeding, and the use of strychnia will assist in restoring compensation. A systolic murmur over the tricuspid region is not very uncommon in healthy children. This condition is sometimes accompanied by slight irregularity of the heart's action. The heart muscle of the child shows marked susceptibility to the action of toxins and poisonous products circulating in the blood. This is particularly common in diphtheria. In this disease the heart is apt to undergo dilatation. Influenza may also produce rapid dilatation; enteric fever, pneumonia, acute or subacute rheumatism may also enfeeble the heart muscle. Enfeeblement of the action of the left ventricle appears to be the first cardiac indication of rheumatism, and may be determined when there is no evidence of pericarditis or endocarditis. Under such circumstances the cardiac impulse is diffuse and weakened. After an attack of rheumatism the left ventricle may remain more or less dilated and a murmur may persist. He thinks the rheumatic child is especially liable to a second attack of the disease which will again produce dilatation and, very frequently, endocarditis may also follow. Pericarditis is usually a late manifestation of rheumatism. The cardiac manifestations of rheumatism in children are frequently far in excess of any of the other indications of the disease. There may be little or no arthritis or soreness of the throat, or no subcutaneous nodules. A careful examination of the child's heart should always be made when there is the slightest suspicion of rheumatism. The author states that the examination should always be a most careful one and should consist of the methods of palpation, inspection, percussion and auscultation. The auscultatory phenomena if ascertained alone may betray the careless observer. In discussing the question of the treatment of rheumatism, when the heart is complicated, he lauds the use of sodium salicylate, a drug which possesses antagonistic properties to the rheumatic process. By the use of leeches, congestion of the cardiac vessels, even when applied over the liver, may be brought about. The application of the ice-bag over the heart depresses the cardiac inflammation. Hypodermic injections of strychnia, he thinks, are of great use and digitalis may sometimes be of service but only when the mechanical effects of the heart are interfered with, and this drug should be used, as a rule, after the rheumatic cardiac inflammation has subsided. [F. J. K.]

2.—O'Sullivan-Beare contributes **"notes concerning a native remedy for blackwater fever."** He thinks that at the present time we are ignorant as to the primary cause of blackwater fever. Malaria, he holds, acts as a predisposing cause. He further states "that blackwater fever is not a complication of ordinary malaria, but an entirely distinct disease which at present is endemic in certain districts only; that it attacks persons exposed to its influence whose vital powers of resistance have become weakened from the effects of chill, isolation, bad or insufficient diet, over-fatigue, or possibly from the abuse of quinine; but that it finds its most favorable nidus for development in the system of those persons who have become debilitated by repeated attacks of malaria." He holds the view that the use of quinine aggravates the disease and is distinctly harmful. The remedy suggested by him which has been used by the natives of Eastern Africa "consists of a decoction made from the roots of a cassia which grows in equatorial East Africa from sea-level to an altitude of some [illegible] feet. The tree attains a height of from 20 to [illegible] feet." The bark of the tree and its roots possess medicinal properties. He has had prepared a fluid extract of the root. He states that he has obtained very encouraging results from the use of this remedy in blackwater fever and proposes to the medical profession that they make a trial of this drug and that they give a record of their experience. [F. J. K.]

3.—Walsham discusses **"the ultra-violet light from a rapid oscillation high-tension arc, for the treatment of skin diseases."** This author has found that by passing the rays through transparent [illegible] the rays have a greater chance of exerting their destructive action on bacteria, because the cold when applied to the part can render it anemic. He thinks that ice thus fulfills the double object of rendering the part anemic and producing sufficient compression. In the treatment of lupus he has found that this method possesses a number of advantages. He enumerates them as follows: "(1) it is hard enough to cause efficient pressure, (2) it aids to this effect by increasing the anemia by cold; (3) by its transparency it allows the individual lupus nodules to be clearly seen; and (4) it is transparent to the violet and ultra-violet rays of the spectrum and opaque to the red and intra-red." [F. J. K.]

4.—Adamkiewicz reports two cases of **uterine cancer successfully treated with cancroin.** A detailed account of each case is given. The treatment in both instances was a brilliant success, the hemorrhage and abdominal pains disappeared promptly. The injections of cancroin were repeated until the symptoms had subsided. [W. A. N. P.]

5.—See Philadelphia Medical Journal, January 4, 1902. Page 31.

6.—Thomas gives the after-history of 100 cases of **supravaginal hysterectomy for fibroids.** He finds that as to the present condition of the patient 86 or 90.5% were able to perform hard work with comfort, although 12 of these cannot continue to do so for long; 8 or 8.3% were only able to do light work, and one to do none. Of the cases 61 patients had not experienced any abdominal pain since the operation, while 31 patients had stated that they had some pain in the abdomen. In many cases this had ceased within a year. In the majority of cases examined the cervix was found to be absolutely normal in size after the operation, and had it not been for the bimanual examination it would have been impossible to diagnose that the corpus uteri was absent. In none of the cases was there any condition that would lead to a suspicion of malignant change commencing. In 20 cases there had been some discharge from the cervix, usually viscid and opaque, causing little inconvenience; it had ceased altogether in 11 cases. 9 patients had a periodical loss every month. In each of these cases it is to be noted that one or both ovaries had been retained. The patients showed in many instances the striking value of the presence of an ovary in warding off the severity of an artificial menopause. The power of memory in some of the cases does not seem to be so good after the operation. Thomas concludes that in the vast majority of cases, hysterectomy does not interfere with the sexual passions. [W. A. N. D.]

7.—A. Laurie Watson reports a case of **recurrent sarcoma in which a spotaneous cure** has apparently taken place. The patient was a woman, 36 years of age, from whose back was removed a large pendulous tumor closely resembling, but differing in some respects from, a lipoma. The growth returned after operation and sections from this recurrent growth, examined independently by several pathologists, were in every case diagnosed as mixed cell sarcoma. Considerable suppuration about the recurrence took place, but after this had subsided the growth itself gradually shrunk until finally it had apparently disappeared. [J. H. G.]

MEDICAL NEWS.

February 15, 1902.

1. Address to the Graduates of the Training School for Nurses of the Colored Home and Hospital. T. GAILLARD THOMAS.
2. Heredity. J. W. KIERNAN.
3. The Limitations of Medical Therapeutics. FRANK BILLINGS.
4. A History of the Army Post Exchange or Canteen. DUNNING S. WILSON.
5. The Röntgen Method in the Diagnosis of Renal and Ureteral Calculi. CHARLES LESTER LEONARD.
6. Retinal Lesions of Chronic Interstitial Nephritis. EDWARD JACKSON.
7. Expositions of Femur Due to Traumatism. W. R. TOWNSEND.

1.—T. Gaillard Thomas gives numerous shortcomings which are commonly charged against the trained nurse: (1) It is very generally said that the trained nurse often gives so much trouble in the families into which she is called that the advantages of her presence are surpassed by the annoyance which commonly results from it in domestic affairs. Remember that you go to patients' houses at a time when they are deranged by sickness; that you are merely an employé in such houses, that every particle of trouble which you give will be registered against you, will work to your injury throughout the community in which you live, and by the patronage of which you must thrive; (2) we have arrived at a period in the world's history when it is no longer believed that disease is propagated in some occult and mysterious way. When measles, scarlatina, smallpox, or septicemia develop, they are now regarded as the results of disease germs which, attaching themselves to the bodies of individuals, or floating freely in the atmosphere, are wafted from person to person, as the pollen is carried from flower to flower. This entity, the disease germ, strikes down an individual, even as the bullet strikes down the soldier, by its own inherent power. Now these germs are readily carried from house to house, and from individual to individual by the clothing; the nurse who arrays herself in garments not susceptible of washing and thorough disinfection is guilty of criminal recklessness; (3) when you are called upon to nurse for an obscure and unknown physician, one perhaps, whose life has been passed in the depths of the country district, beware how you presume to ignore him, to despise his authority, and to set your opinions up against his dicta. Remember that you are the nurse in the case and that a nurse's duty is to obey the physician's orders. Are you convinced that he is an ignorant and inefficient man? That is not your affair. Those who employ you employ him, and they employ you not to keep the physician of their choice in order, but to obey his behests, whatever they may be; (4) regard no duty connected with your office as too menial for your hands; refuse no reasonable request which appertains to the duty of the nurse; but render yourselves so perfect in the performance of the smallest details that they shall lose their menial aspect and appear worthy of your hands by reason of the skill which you display in their performance; (5) let everything which you learn in the capacity of nurse in any household meet its tomb in your ear! Tell nothing good or bad concerning families in which you serve; for, if you talk of the good, the mention of the bad will assuredly follow, even as the "sparks fly upward," [T. M. T.]

5.—Charles L. Leonard states tnat out of 206 cases of suspected renal calculus, calculi were found in 65 cases and in over 60 per cent. they were in the ureter. In only three cases in which a negative diagnosis was rendered was it found incorrect. In one instance the error was due to faulty technique. In the other two calculi weighing less than one grain each were overlooked and subsequently passed. Other calculi as small have frequently been detected by this method. The author states that error in the negative diagnosis is very slight and the calculi that may be overlooked are so small that their final expulsion is certain. In suitable cases hydronephrotic and displaced kidneys have been demonstrated, while calculi have been detected in patients weighing over 200 pounds. [T. M. T.]

6.—Edward Jackson gives as follows the **retinal lesions of chronic interstitial nephritis:** (1) Alterations in the contour, size and color of the retinal vessels (2) hemorrhages and the progressively changing exudates which constitute steps in the removal of the effused blood; (3) retinal edema; (4) degenerative changes in the neural elements of the retina and alterations in the layer of pigment epithelium; (5) deposits of exudate which perhaps have a significance somewhat different from that of the foregoing symptoms. The prognosis statistics show that a large majority of patients presenting these lesions die within a year after they are first discovered. Out of 419 of Belt's cases 72 per cent. were fatal at the end of the first year and 90 per cent. within two years. Of men applying at Possauer's clinic all were dead within two years. Of all the women seen with this lesion 32 per cent. survivied this period. In private patients only 59 per cent. of the men died within two years and of the women only 53 per cent. He concludes his article as follows: Special emphasis has been laid upon the close relation between these retinal lesions and the degenerative changes in the walls of the blood-vessels. Whether the vascular changes cause the retinal lesions, or whether their connection is that both spring from a common cause, the retinal symptoms take from this close connection great importance. They throw light upon what goes on in the central nervous system, and, modified pari passu, in other organs of the body. Whether considered as a means of understanding the essential nature of this disease process, or as throwing light on the

character and course of the individual case, they have an importance that the mass of physicians very imperfectly appreciate. [T. M. T.]

MEDICAL RECORD.

February 15, 1902.

1. Tumors of the Central Nervous System, etc. JOSEPH COLLINS.
2. Latent and Masked Malarial Fevers. CHARLES F. CRAIG.
3. Autointoxication and Disease from a Practitioner's Standpoint. BEVERLEY ROBINSON.
4. Diabetes Mellitus. CHARLES E. NAMMACK.

1.—Joseph Collins presents remarks on noteworthy cases **of tumors of the central nervous system.** Full clinical notes of five cases with pathological findings are given. One of these was an **angio-sarcoma of the pons,** the second case was a **sypholoma of the anterior fold of the left hemisphere;** the third case a **sarcoma of the cerebellum in a child;** the fourth, **sarcoma of the right lateral ventricle;** the fifth case was an **osteo-sarcoma of long duration involving the inner one-half of the petrous portion of the temporal bone and adjacent structures.** this last case continued seven years, the patient dying not from the tumor, but from chronic Bright's disease. [T. L. C.]

2.—C. F. Craig presents an analysis of 195 cases of **latent and masked malarial fevers.** In his series the blood examination determined the diagnosis in all cases. One hundred and fifty of these patients were found to be suffering from **estivo-autumnal infections;** forty-four from **tertian infections;** and one from **quartan infection.** Fifty-five of these cases had been wrongly diagnosed as **chronic dysentery;** nineteen as **chronic diarrhea;** and a list of some thirty diseases is given for which these latent and masked cases of malaria were at first diagnosed. The source of infection was traced in one hundred and eighty cases; a hundred and twenty suffered from their first attack in the Philippine Islands, while sixty gave a history of having their first attack in Cuba. Of this series of one hundred and ninety-five cases, five proved fatal from the diseases which complicated them; three cases of masked malaria died from chronic dysentery, as well as 2 cases in which the infection was latent. In these latter 2 cases the chief pathological changes were found in the spleen and liver, both organs were much pigmented, the spleen being consid erably enlarged. The condition of the sections of the spleen as compared with those in which the malarial infection was masked seems to be simply of degree. The masked infections showing a much greater pigmentation and many more parasites than the latent infections. Craig wisely urges the necessity of **routine blood examination** in all cases of disease originating in the tropics, or in localities which are known to be malarious. [T. L. C.]

3.—Beverley Robinson presents a paper on **auto-intoxication and disease** from a practitioner's standpoint. The neurologist emphasizes rather too much intestinal auto-intoxication and medicates in part at least with drugs in such form as to be only soluble in the intestine, and not at all in the stomach. Robinson believes that this view is a contracted one and he does not admit the presence of changes in a limited portion of the digestive tract as separated from the rest. Drugs must be in solution to be useful and they must affect the stomach favorably and not solely in the intestines. He advises the administration of beechwood creosote in small doses combined with essence of pepsin and properly diluted with water or alcohol and water. In addition to the antiseptic medication drinking freely of water is advised, as well as massage, rest, good diet, hydrotherapy, electricity and systematic exercise. Robinson mentions that the general practitioner as a rule believes that too much stress is laid upon gastro-intestinal fermentation as being directly causative. This factor is only an element and not an entirety. We must not overlook the "wear and tear" of modern life, the influence of impoverished blood, excesses, poor hygienic surroundings, all of which tend to lower the tones of the nervous system and thus render the economy an easier prey to microbic infection, which if the body were in a healthy state would not take hold and produce diseases of different sorts. He advises in the treatment of these cases the **creosote** as mentioned, as well as the use of **charcoal** and the **subnitrate of bismuth.** In certain cases in which there is lowered nerve tone he has secured better results from **dilute phosphoric acid** than from the intestinal antiseptics. In a class of patients who are languid, depressed, and introspective a moderate **temporary course of static electricity** is often highly beneficial. **Faradism applied through water** is frequently curative in cases possessing manifestations of rheumatism due to auto-intoxication. He does not believe that any amount of **flushing of the colon** will prove of value unless a suitable purgative is employed at the beginning of the treatment. The question of diet is an important one and must be studied carefully and the particular needs of each case be determined. [T. L. C.]

4.—C. E. Nammack discusses the **etiology and pathogenesis of diabetes mellitus.** This paper consists of a critical summary of many of the views held by authorities upon the **causation of diabetes mellitus.** [T. L. C.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 13, 1902.

1. Surgery of the Gall Bladder and Ducts JOHN W. KEIFE.
2. Faulty Uterine Growth DANIEL H. CRAIG.
3. Treatment of Inversion of the Uterus. E. W. CUSHING.
4. Variola or Smallpox. JOSEPH E. DUNBURY.

1.—Will be abstracted when concluded.

2.—Daniel H. Craig discusses the subject of **faulty uterine growth,** which he believes deserves more attention than it has heretofore received. Since three years a number of cases have come under the author's observation. After alluding to the embryology of the female genital organs Craig divides the cases requiring relief for faulty uterine development into three classes. First, those between fifteen to seventeen years of age, who are brought by careful mothers for the purpose of ascertaining what the anteflexion is due to or to seek relief for irregular or scanty menstruation. Second, that class of women who have passed the age of puberty and have refrained from seeking relief on account of false modesty or who have neglected doing so. Third a few women who present themselves after marriage. The most common condition accompanying the faulty growth is that of antiflexion of the body or vix or both. Treatment must be local and general, neither alone being sufficient in any case. Constitutionally the patients should receive plenty of out door exercise, the bowels regulated, and iron administered even if there is no apparent anemia. The author has seen good results in these cases from the use of iron, even in the absence of anemia, which he thinks may be due to the increased determination of blood to the pylorus caused by the iron. Socially he prefers support of uterus pessaries, as a marked tendency to retroversion exists. [M. R. D.]

3.—In discussing treatment of **inversion of the uterus,** E. W. Cushing confines himself to chronic cases and refers to that class of inveterate cases in which surgical relief is demanded, and all other measures are futile and even dangerous. For such cases three procedures are applicable. (1) There is the method of Thomas in which the abdomen is opened and the funnel dilated so that the uterus can be replaced in its proper position; (2) the vaginal amputation of the uterus, which is easy of performance and which, of course cures the malady by robbing a woman of her uterus; (3) there is the method of Kuestner by which the cul-de-sac of Douglas is incised from the vagina, the funnel dilated if possible, and the uterus replaced, or, if this cannot be accomplished, the uterus is incised on its posterior aspect, as far as may be necessary to accomplish its reposition, and then the incision in the uterine tissue is sewed up, and the opening in the posterior vaginal fornix is closed. As a modification of this operation the anterior fornix may be incised, the bladder separated from the uterus and then the latter may be incised anteriorly as far as is necessary, when the fundus is replaced, its incision sutured, and the uterus fastened forward by the method of Mackelroit. He quotes a case as illustrative of the superiority of the Trendelenburg position in Thomas' operation for inversion of the uterus. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 15, 1902.

1. The Problems of Serum-Therapy. JOSEPH McFARLAND.
2. The Prevention of Pelvic Disease During and After Labor. J. F. BALDWIN.
3. Prevention of Pelvic Inflammatory Diseases after Marriage. RUFUS B. HALL.
4. The Prevention of Pelvic Disease Before and During Puberty. W. H. HUMISTON.
5. Isolation of Bacillus Typhosus from Unusual Localization, etc. O. McDANIEL.
6. Cold Weather Accountable for Turbidity of the Urine. L. NAPOLEON BOSTON.
7. On the Treatment of Obesity. HEINRICH STERN.
8. The Modern Subjection of Science and Education to Propaganda. W. T. SEDGWICK.

1.—McFarland contributes an article on **the problems of serum therapy.** He contends that with the advance of our knowledge of immune sera the evidence that they act in a chemical manner seems more and more convincing. He further states that new lines of research have been opened since the recognition of their chemical nature, and the laws governing them are not unlike the laws governing other reactions with which we are so familiar. He mentions that Pasteur was the originator of artificial immunity and that additions to the knowledge of this subject were furnished by Salmon and Smith and later more fully developed by Behring and Kitasato. Ehrlich also demonstrated that vegetable toxalbumins other than toxalbumins of bacteria could produce immune substances. Phisalix and Bertrand and Calmette demonstrated that antitoxic sera could be produced with animal poisons. In regard to the mineral poisons little success has been obtained. Morgenroth discovered that the appearance in the blood of a principle which impedes the action of rennet upon milk is brought about by the introduction of rennet into the body of an animal. Other experimentors have demonstrated that the introduction of fibrin ferment into the body of an animal is followed by the occurrence of some substance in the serum which delays or prevents the coagulation of the blood. The author states that variety of interesting reacting phenomena more or less related to one another has been clearly demonstrated. He further states that "except in rare cases, however, the appearance of antitoxic, anticoagulant or other phenomenal powers in the blood depends altogether upon the manipulations to which animals have been subjected." A satisfactory explanation of the formation of these bodies has been advanced by Ehrlich through the "lateral chain" theory. The writer sets forth the evidence which exists at the present time to support the lateral chain or chemical theory. McFarland discusses many interesting questions relating to certain toxins, antitoxins and hemolytic secretions. This article is most interesting and appears in the form of a brief review, difficult to abstract. McFarland thinks that the lesson "to be learned from the achievements thus far consummated in that the action of immune sera is far from simple, depends upon many factors with which we are just beginning to become acquainted, and that the failure of our efforts in many directions in the past may simply be referable to our ignorance of how to use the materials at hand." [F. J. K.]

2.—Baldwin remarks that the **prevention of pelvic disease during and after labor** consists in the the avoidance of infection and traumatism. Infection is frequently the almost necessary result of traumatism, but traumatism without regard to infection is frequently followed by a more or less serious pelvic disturbance. The utmost cleanliness is necessary before and during labor. The use of antepartum douches is to be unequivocally condemned. In case a portion of retained membrane or placenta becomes infected or causes hemorrhage it should be at once removed, and preferably by means of the finger. Slight laceration of the perineum should be repaired to prevent infection. [W. A. N. D.]

3.—Hall, in speaking of the **prevention of pelvic inflammatory diseases after marriage,** remarks that these diseases are preventable in the large majority of instances. The two chief causes of pelvic inflammatory diseases are gonorrhea and septic infection following abortion. The physician should instruct young men of the danger to the health of their future wives should they contract gonorrhea. Septic infection following abortion from retained membrane is of frequent occurrence, and in those cases in which the patient makes a primary recovery, as they usually do, there is left endometritis which is difficult to cure and often leads to salpingitis. The greater frequency of peritoneal tuberculosis in the female as compared with the same disease in the male is a well recognized fact, and it is fair to presume that the bacillus enters the peritoneal cavity through the uterus and tubes. Hence this is an indication of the necessity for proper prophylaxis in this direction in order that the germ of tuberculosis shall not gain entrance into the system through this channel. [W. A. N. D.]

4.—Humiston, in speaking of the **prevention of pelvic disease before and during puberty** remarks that the pathologic conditions of the uterus and its adnexa whose causative fators may be traced to the period leading up to and beyond puberty are: 1. Retroversions and retroflexions of the uterus; 2. endometritis; 3. metritis; 4. sclerotic and cystic degeneration of the ovaries. In order to prevent these diseases it is necessary that at the onset of puberty the girl should be especially protected and guided from a hygienic point of view. [W. A. N. D.]

5.—McDaniel reports a series of cases in which he **isolated the bacillus typhosus from unusual localizations,** including one case in which he had obtained it from the tissues of a five months' fetus. The mother aborted one week after the beginning of convalescence from typhoid fever, the course of the fever having been typical. The Widal reaction was present in her blood as well as in that of the fetus. The germ was isolated from the spleen, liver and peritoneal fluid. [W. A. N. D.]

6.—Boston discusses the effect of **cold weather as a cause of turbidity of urine.** This author mentions that cold is responsible for the turbidity which is found in many specimens of urine and that this cloudiness is commonly due to urates. He emphasizes that the application of heat will render the urine clear when the cloudiness is due to urates. This fact is to be of great importance in differentiating the turbidities dependent upon phosphates, bile pigments, pus, mucus, serum albumin with red corpuscles and many granular casts and urine containing an admixture of vaginal secretions from that due to urates. The turbidity of the above named substances disappears upon the application of heat. [F. J. K.]

7.—See **Philadelphia Medical Journal,** June 22, 1901. Page 1189.

8.—This article by Sedgwick entitled the Modern Subjection of Science and Education to Propaganda is an abstract of the President's Address delivered before the American Society of Naturalists. [F. J. K.]

AMERICAN MEDICINE.

February 15, 1902.

1. Surgical Treatment of Injuries and Diseases of the Pancreas. ROSWELL PARK.
2. A Consideration of 28 Cases of Tuberculous Peritonitis at the Boston City Hospital, etc. JOHN T. BOTTOMLEY.
3. The Inhibition of the Contraction of Striated Muscle. ALEXANDER SPINGARN.
4. Respiratory Gymnastics, etc. ALBERT ABRAMS.
5. One of the Etiologic Factors in the Production of Deflected and Deformed Nasal Septa and the Method for its Relief. NELSON M. BLACK.

6. Popular Dose Measures, and their Relation to the Use of the Metric System in Prescription Writing.
M. I. WILBERT.

1.—Roswell Park discusses the **surgical treatment of injuries and diseases of the pancreas.** He states that when necessary the pancreas may be reached through the gastro-hepatic omentum above the stomach; through the gastric omentum below the stomach; through the transverse mesocolon back of the colon and stomach; from the loin behind the peritoneum and through the liver, with a thermocautery. He names the various conditions which may call for surgical intervention upon the pancreas as follows: **traumatisms, prolapse, malignant disease, cysts, calculi, acute, subacute, and chronic pancreatitis,** and finally, **tuberculosis.** Experience has not yet shown that in a man a complete removal of the pancreas would be either justifiable or successful even though its blood supply or the principal duct were destroyed. He gives the technique of the operative procedures necessary in the conditions named and urges prompt surgical intervention in the treatment of pancreatic lesions. [T. L. C.]

2.—J. T. Bottomley reports a series of **twenty-eight cases of tuberculous peritonitis** with particular reference to the result of operative treatment. He sums up as follows: (1) We may reasonably expect cures (i. e., one year or more after operation) to follow the operation in from 30% to 40% of all cases. In fatal cases the patients usually die within a few months after operation. (2) Family history does not appear to be important etiologically. Previous inflammatory affections of the abdominal viscera may have etiologic significance. (3) Operation usually affords at least temporary improvement either locally or generally even in cases that later may prove fatal. The use of drainage following the operation should be avoided when possible. (4) Inferences as to the remote results of operation should be drawn very gradually, if at all, from the immediate results; though in cases which do not immediately receive from an operation either local or general benefits, the prognosis is very unfavorable. [T. L. C.]

3.—A. Spingarn presents a paper on the **inhibition of the contraction of striated muscle.** A résumé of the literature of the subject is given.: His conclusions are that: (1) It is possible, by means of electric, mechanic, physical and chemic stimuli, to inhibit a conditon of muscular contracton. (2) All motor nerves probably contain two sets of fibers, one excitatory and the other inhibitory, the excitatory ones ordinarily predominating in their effect on the muscles. (3) The function of the inhibitory fibers is to prevent all excessive manifestation of the energy of the muscle, when the latter has been aroused to contract; the inhibitory fibers bearing a relation to the muscle-machine somewhat like that of the "governor" to the steam engine. [T. L. C.]

4.—Albert Abrams states that **thorough lung ventilation** is of indisputable importance in the prevention and treatment of respiratory diseases.The author has frequently directed attention to constant areas of diminished lung resonance varying from dullness to flatness as obtained by percussion. In number and situation these areas vary, but they admit in the aggregate of the definite localization. They possess one characteristic feature, that they may be dispelled by repeated forced inspiration. These atelectatic zones are dependent on circumscribed pulmonary atelectasis and are dissociated with any demonstrable lesion. He concludes a number of observations from cases in his practice. These atelectatic areas bear an important relation to pulmonary tuberculosis and pulmonary anemia. In the former affection the zones bear an almost definite relation to the points of election and paths of distribution of the lesions in chronic pulmonary tuberculosis. He attaches importance to **pulmonary anemia** as an early sign of tuberculosis and states that the treatment indicated is lung development. His patients showed immediate and permanent improvement after **daily inhalations of compressed air.** [T. L. C.]

5.—N. M. Black discusses one of the etiologic factors in the production of deflected and deformed nasal septa and the methods for its relief. His conclusions are: In cases of deflected septum the bony structure has become weakened primarily by traumatism, strumous or rachitic diathesis, nasopharyngeal adenoids, or the result of some of the infectious diseases of childhood, in fact, anything which tends to lessen the resisting power of the bony septum. The resistance to what seems to be the natural tendency of the palate portion of the maxilla to becoming more V-shaped, being to a certain extent weakened in the median line, it continues to arch, buckling the already weakened perpendicular septum more and more, the cartilaginous portion yielding the most (as it is the weakest and is two-thirds surrounded by the bony structures of the septum) until it occludes the nares. It must be remembered that the etiologic features which tend to produce irregularities of the superior maxilla are causative factors as well. In order to achieve a satisfactory and permanent result in deflected and deformed nasal septa with the high arched palate, we should go to the specialist and primarily have removed the active factors, the high arched palate and acute-angle alveolar processes. [T. L. C.]

6.—M. I. Wilbert states that many of those who are trying to popularize the metric system frequently lose sight of a very important factor, that custom has sanctioned the practice of rewarding the capacity of certain household utensils, such as a teaspoon, tablespoon and wine glass as being equal to definite value of weights and measures, an assumption which is readily found to be erroneous. He mentions the method that has been used at the German Hospital, Philadelphia, for some years, the use of a medicine glass on which the tea and tablespoon equivalents were given in decimal figures. This article also contains Wilbert's suggestions for simplyfing prescribing by the metric system. [T. L. C.]

VRATCH.

December 15, 1901. (Vol. XXII, No. 50).

1. On the Aid to the Famine-Stricken.
D. N. ZSHBANKOFF.
2. On the Utility of the Work of the Digestive Glands.
L. B. POPELSKI.
3. On the Treatment of Exudative Pleuritis by the Method of Prof. Levaschoff. P. I. TANFILIEFF.
4. On Primary Acute Osteomyelitis of the Spinal Column.
F. K. VEBER
5. On the Question of Intrauterine Injections
G. I. LEBEDEFF
6. The Present Status of the Koumiss-Cure and Its Imperative Need in View of the Fight Against Tuberculosis. N. A. ZOLOTAVIN

2.—Popelski attacks the teaching of Pavloff and his school that **the secretion of a given ferment is determined by the** kind of food ingested, the latter in some way stimulating the special nerve-endings so as to procure just the kind of ferment needed, in the proper quantity and proportion. This theory, he claims, is not supported by the experiments of Vasilieff and Jablonski who aimed to prove it. Thus the former obtained larger amounts of trypsin with a diet of bread and milk than with one consisting of meat, which contradicts the theory of utility; while the latter observed a lowering of the secretion of trypsin and even total disappearance after a diet of milk and bread. Finally, milk which does not contain starch, causes a secretion amylopsin equal to that caused by meat and bread. Against the theory that the secretion of gastric juice upon the ingestion of lactic and butyric acids is for the purpose of preventing fermentation may be advanced the argument that other agents of fermentation far more deleterious do not excite

gastric secretion. The author's experiments, which will be published at a future date, show that **the secretion of the digestive ferments is in direct proportion to the degree and extent of irritation.** The stronger a given food acts as an irritant and the larger the mucous surface involved, the more active will the digestive glands be. The same holds true of the secretion of saliva: A strong acid irritant causes a profuse flow of saliva; dry food absorbes the saliva and produces dryness of the mucous membrane and the peripheral nerves, thus acting as a powerful irritant; dry sand acts in the same way, besides the mechanical irritation which it produces; a large pebble, on the other hand, fails to excite secretion of saliva. The conclusion is drawn that all the facts brought forward to prove the theory of utility are not in the least convincing. [A. R.]

3.—Tanfilieff calls attention to the neglected **Levaschoff's method of treating pleurisy by irrigation with normal salt solution.** Despite the fact that the method was proposed 11 years ago at the International Congress and an account of it was published in German, it received but little attention outside of Russia. The objections to it are mainly theoretical, and those who tried it consider it a valuable adjunct in the treatment of pleurisy with effusion. The author employed saline irrigations in a considerable number of cases of serous pleurisy with very good results. The normal salt solution was injected by means of a Potain syringe into the pleural cavity, the solution taking the place of the effusion which was withdrawn at the same time. The solution as well as the apparatus were rendered sterile by repeated boiling, and the entire operation was performed under strict asepsis. The fluid at the time of irrigation was heated to 35° C. Only a portion of the effusion was withdrawn, as a rule not more than 1000 c. c., and of the injected saline solution only a portion remained in the pleural cavity, the object being to dilute the remaining effusion rather than fully replace it. With two exceptions, the operation caused no inconvenience to the patient. This treatment was carried out in 10 cases, all in soldiers. Prior to the irrigations the patients were treated with **salicylate of soda** without, however, the least benefit being derived from it. On the contrary, in 2 cases the patients were made worse. On the other hand **the irrigations with normal salt solution were followed by prompt amelioration of the distressing symptoms and final recovery.** As a rule, the irrigations were followed by a marked elevation of temperature, which, however, gradually subsided to normal. The author considers the treatment indicated in all cases of serous pleurisy and in the light or very chronic cases of sero-purulent pleurisy following pneumonia. Tubercular pleurisy, unless it be a case of primary tuberculosis of the pleura, does not, from the author's experience, contraindicate the method. In encysted pleurisy it is useless for obvious reasons. The method is so simple and harmless that there is no reason why it should not be extensively practiced. [A. R.]

4.—Veber reports a case of **primary acute osteomyelitis of the vertebra** in a boy, 15 years old. The patient has been previously healthy and there was no history of traumatism. For a month before the attack he was employed in a store where he had to lift heavy weights. The disease affected the right half of the arch and the spinous process of the second lumbar vertebra, the pus finding its way through the muscles of the back externally and along the anterior surfaces of the vertebrae into the pelvis. A pure culture of **staphylococcus pyogenes** was isolated from the pus. Surgical intervention resulted in a good recovery. [A. R.]

5.—Lebedeff **defends the method of intrauterine iodine injections** first introduced in Russia by Grammatikati. He quotes authorities and cites his own extensive observations to the effect that the method, far from being harmful or dangerous, is of great value in the treatment of diseases of the uterus and adnexa. He has employed intrauterine iodine injections in 250 cases and only in one did an exacerbation of the diseased process in the uterine adnexa occur. To guard against the remote possibility of the injected fluid entering the abdominal cavity, the author recommends that traction on the uterus during the injections should be avoided, that the solution should not be concentrated, and that the return flow should not be obstructed. In cases in which difficulty is experienced in introducing the syringe he enjoins the use of force and recommends preliminary dilatation by means of Hegar's bougies. The objection raised that the iodine may produce atrophic changes in the uterus and ovaries is met by the statement that histological studies of uterine scrapings before, during and after injections established the fact that the mucous membrane is completely regenerated, and as to the ovaries, the reestablishment of menstruation after a temporary amenorrhea produced by the injections shows that no atrophic changes take place. [A. R.]

6.—Zolotavin precedes his discussion of the **koumiss-cure** by some **interesting statistics concerning the morbidity from tuberculosis in Russia,** as compared with other countries. According to Gurvitch, there are 2,000,000 to 3,000,000 tubercular patients in Russia, giving a yearly mortality of 360,000 to 500,000. In St. Petersburg the mortality from tuberculosis is 47.1 per 10,000 of the population and in Moscow, 42.75. In the Russian army 7,655 persons died of tuberculosis from 1890 to 1897, or 17.3% of the total mortality. In the rural districts 1.62% of the population is tuberculous. The greatest mortality from that disease, however, is observed in large cities among the laboring classes. In St. Petersburg the mortality from tuberculosis is 7.2 to 16.2%. Of these, clerks give a mortality of 16.2%; wood carvers, 14.2%; factory hands in general, 13%; stone masons, 13%; engravers, 12.6% and locksmiths, 11.7%. Mention is made of the various sanatoria and the brilliant results achieved in the treatment of incipient tuberculosis. Of the 3 to 4 sanatoria in Russia, the oldest and the only one which furnished the results of the treatment is the sanatorium "Chalil." In that institution 109 patients were treated during 1895-6. Of these 21 (19.3%) recovered, 59 (54.1%) improved and 20 (18.3%) remained in the same condition. Considering this terrible scourge and the possibility of curing it in the incipient stages, the author wonders why koumiss is not more extensively used in the treatment of tuberculosis. After a brief historical sketch of koumiss, the author describes the prevailing method of preparing it. One glass of sour cow's milk is mixed with 2 glasses of mare's milk and placed in a bottle in a warm room (20-30° R.) for 24 hours, the contents being frequency shaken. At the end of that time the contents of the bottle are poured into 2 bottles and each filled with fresh mare's milk and allowed to stand in a warm room for another 24 hours, with frequent agitation. On the third day the process is repeated. On the fourth day the process is repeated, only that the contents of each bottle are poured into 4 bottles and each filled with the mare's milk. On the fifth day the contents of the latter are poured into a wooden vessel (kadka), 1 to 1½ bucketfuls of mare's milk added and the whole agitated for 1⅛ to 3 hours. It is then poured into bottles and there allowed to undergo complete fermentation. In preparing a second lot, the old koumiss is used, 1-4 or 1-3 of the *kadka* being filled with koumiss and diluted with the requisite amount of fresh mare s milk. It is then agitated for 1½ to 3 hours and poured into bottles. The great therapeutic value of koumiss depends on its ready assimilability, nutritiousness and alterative properties. It is indicated in anemia, malnutrition and especially in tuberculosis. In addition to the observations of other authors, the writer gives the results of his own experience. During the past summer he treated 40 patients. 33 were suffering from pulmonary disease, 5 from anemia, 1 from pleurisy and 1 was healthy and came just for a rest. All, except 5, gained considerably in weight during the koumiss-cure. Histories of a number of the cases are given. In the concluding chapter the author dwells on the dark sides of the koumiss-cure: The deplorable condition of the koumiss-establishments, lack of experimental data concerning the best methods of preparation and the exact chemical composition of the beverage, lack of accurate observations on the climatic conditions of the *steppe*, etc. A number of suggestions are made, which, however, have mainly a local interest. [A. R.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

November 14, 1901.

1. The Practical Results of the Newer Study of Malaria and Some Further Problems Connected with the Same. F. PLEHN.
2. Concerning the Knowledge of Metallic Nerve Poisons. H. EMBDEN.
3. Overirritation of the Nerves as a Cause of Autointoxication. A. v. POEHL.
4. A Panoptic Triacid Stain. A. PAPPENHEIM.
5. The Determination of the Size of the Internal Organs. E. REICHMANN.
6. A Case of Poisoning with Oleandrin. S. WATEFF.

1.—After some preliminary remarks concerning the forms of parasites found in the blood, particularly in the tropics, Plehn refers to the fact that the large, deeply pigmented parasites cause short paroxysms, associated with chill, with more or less marked enlargement of the spleen are not likely to be associated with dangerous complications, but have only a slight tendency to spontaneous cure. The small, slightly pigmented forms usually cause no chill, and no marked enlargement of the spleen, but are likely to cause severe complications, although, on the contrary, they have a distinct tendency to spontaneous cure. The German Malaria Commission came to the conclusion that the clinical picture of malaria in the tropics is uninfluenced by quinine; and, when caused by the small parasites, runs under the picture of malignant tertian—i. e., an irregular intermittent tertian, with protracted paroxysms; but only when there is one generation of parasites in the blood. This, he insists, is not always the case. Just as double infection with ordinary tertian parasites causes fever, so does double infection with small, unpigmented parasites occur; and the presence in the blood of two generations of these parasites produces an irregular remittent or continuous course of the fever. He emphasizes the importance of treating tropical malaria with quinine, and treating it at once—without waiting for the paroxysm to pass off and the opportunity to give the medicine in the interval. He mentions several cases in which the latter plan was pursued, two of them treated by himself and others by other physicians. The interval was waited for, but never came; and when quinine was finally given it was too late, and the patients died. It is evident, therefore, that in the tropics cases occur which do not follow the scheme laid down in the textbooks, but which run a course of irregular remittent or continuous fever. It makes little difference whether these cases are really due to the parasites described by Koch as the parasites of irregular malaria, whether it is double infection with the same form of parasite, or mixed infection with various species of parasites; the important point is to recognize that such cases may occur, and to interfere at once by giving quinine. [D. L. E.]

2. Embden describes chronic manganese poisoning, making it similar in its general features to chronic saturnism and chronic mercurialism. He draws his general conclusions from the observations made in three cases. The men were all engaged in working with manganese and the atmosphere in which they worked was constantly filled with dust. The symptoms began with edema of the legs, and this was followed by nervous disturbances; first weakness in the back and in the legs, a tendency to fall readily, and a tendency to retropulsion; then the arms becoming more or less involved, and disturbances of speech and of the voice being noticeable. When the disease is well advanced, the patients are unable to work, and there are various pareses, but no real atrophy and no reactions of degeneration. There is a mask-like appearance of the face and inability to whistle; the gait is more or less disturbed, being uncertain, particularly if the patient attempts to mount stairs, in which case he tends to rush forward several steps at a time, and to have decided retropulsion. There are no ocular symptoms. The tendon reflexes are excited. There is decided tremor of the body, but no true intention tremor. Writing is much disturbed, the letter becoming smaller and smaller, until, as the attempt is continued, it becomes utterly impossible to write. There is no nystagmus. Sensation is undisturbed, except for slight parasthesias and slight pain. The psychic functions are intact, although the constant tendency to laughter may often give, at first, a false impression of psychic disturbance. The sexual functions are not disturbed. The symptoms closely resemble those of multiple sclerosis at times, but can be distinguished from that disease. The main point in the therapy is prophylaxis, *i. e.* to have workers in manganese change their occupation early if symptoms occur.. [D.L.E.]

3.—Poehl gives a series of conclusions which are not confirmed by the work of other authors, upon which he bases the final statement that overirritation of the nerves causes autointoxication. He says that overfatigue causes a reduction of the alkalinity of the tissue fluids, reduces the oxidative process, causes an increase in the intermediary, nitrogen-containing, metabolic products in the tissues, produces a reduction in the osmotic tension of the tissue fluids, reduces the rapidity of the stream through the urinary tubules, and decreases the electric conductivity of the tissues. He believes that these facts explain the occurrence of certain symptoms in nervous overirritation and overstrain, and that the symptoms are referable to autointoxication. [D. L. E.]

4.—Pappenheim has experimented with a series of different stains, for the purpose of providing a panoptic stain, and has ultimately introduced into the triacid mixture, as the basic stain, the staining principle of the polychromic methylene blue of Unna, which Michaelis calls methylene azure. This staining mixture, he says, gives good results even in an old stock solution, but the results are particularly satisfactory when the mixture is kept dry and the stain prepared fresh. The nuclei of the lymphocytes are reddish; those of the polynuclear leukocytes blue; of the erythrocytes almost black. The bodies of the lymphocytes are bright blue; the erythrophiles or erythroblasts fuchsin red; the xanthophile erythroblasts orange. The neutrophile granules are violet; those of the mast cells are a deep carmine-red; those of the eosinophiles bright scarlet. The author is not yet able to state whether bacteria and malaria parasites are stained: it is, however, probable that they would be. [D. L. E.]

5.—Reichmann describes a new method which closely approaches the principle of the phonendoscope and of auscultatory percussion for determining the limits of the internal organs. In order to avoid the error due to the different degrees of tension in the skin in stroking the finger across the skin, he uses a piece of wood in which is cut a deep thread. He places this vertically on the skin, and then runs his finger down the thread. The vibrations can, he states, easily be heard; and by placing this piece of wood in different regions, one can, he thinks, closely limit the borders of the organs lying beneath. He admits, however, that he has not had any opportunity to confirm these results by postmortem inspection of the organs. [D. L. E.]

6.—Oleander is largely used in Bulgaria as an emmenagogue and for other medical purposes, as a household remedy. An 18-year old girl was given a decoction of oleander for gastric disturbance. The decoction contained about 40 leaves in 200 grams of water, and about half of this was drunk at once. The symptoms caused were nausea, vomiting, headache, marked weakness, burning and some swelling of the face, marked oppression, and decided circulatory failure. The patient recovered readily. [D. L. E.]

JOURNAL DE CHIRURGIE.

November 10, 1901. (21me. Annee No. 11.)

This number contains the reports of the French Surgical Congress, the German Surgical Society's Thirtieth Congress, and the Congress on Gynecology, Obstetrics, and Pediatrics, held during this year.

December 10, 1901. (21me. Annee No. 12.)

1. Supravaginal Hysterectomy for Lesions of the Adnexa. F. TERRIER and J. C. F. DELAGE.
2. Reflux in Gastro-enterostomy. E. TAVEL.
3. The Repair of Bone Marrow After its Destruction. V. CORNIL and F. COUVRAY.
4. Tumors of the Fallopian Tubes. E. QUENU and L. LONGUET.
5. Tubercular Rheumatism. M. PATEL.
6. Subserous Appendectomy. VIGNARD.

1.—Terrier and Delage, who describe the technique of **supravaginal abdominal hysterectomy** in the treatment of lesions of the adnexa, divide the subject into the preparation for operation, the operation, and the care after operation. If rest in bed, applications, injections, etc., fail, then operation is indicated. Three days before operation, cleansing of the patient is begun. They advise chloroform anesthesia. The operation is divided into eight stages, opening the abdomen, freeing adhesions, supravaginal hysterectomy, ablation of the adnexa, hemostasis, suturing the uterine stump, reconstruction of the peritoneum, and suturing the abdominal wall. Minute details are given. [M. O.]

2.—**Reflux after gastro-enterostomy** has been noted frequently. It may occur in four different ways, through the pylorus from the stomach or from the duodenum, and through either the afferent or efferent anastomotic branch. It is most commonly seen from the afferent branch, the cause being generally the formation of a spur. Tavel describes the various methods of performing gastro-enterostomy to prevent reflux. His researches show that none of the simple methods will surely prevent reflux; that concomitant entero-anastomosis guarantees a certain amount of function; and finally, that gastro-duodenostomy, when possible, will give complete security from reflux phenomena, if Doyen's hypothesis, that bile and pancreatic juice occasionally enter the stomach through the pylorus, is wrong. If he is right, however, reflux can result after all operative methods of performing gastro-enterostomy. The full description of a case with reflux following gastro-enterostomy, cured after the fourth operation, follows. Many diagrams illustrate the operations. [M. O.]

3.—From a number of experiments upon dogs, Cornil and Coudray show that, **following injuries of the bone,** an exudate of blood first fills the marrow and inflammatory cellular tissue forms; about the fourth day ossification of this tissue begins, and gradually bone is formed. No trace of cartilage appears. Subperiosteal ossification about the traumatism also occurs. Finally a new medullary cavity is formed. Knowing that this process occurs following operation, they discuss the treatment of bone affections. The result of resection, with injury to the marrow of the diaphysis, is good, especially when the lesion is tubercular. While extensive operative intervention is not always necessary in acute osteomyelitis, it is always needed in chronic osteomyelitis, with open drainage, curetting, removal of sequestra, etc. Operation will also relieve pain of neuralgic osteitis, but will rarely be indicated in syphilitic ostealgia. [M. O.]

4.—Quénu and Longuet have been able to collect but 64 cases of **primary tumors of the Fallopian tubes** from the literature. These are divided into the epithelial tumors, papilloma, adenoma, epithelioma (carcinoma), and deciduoma; connective tissue tumors, mixed tumors, sarcoma, and enchondroma; muscular tumors, fibroma, and fibromyoma; and complex tumors, dermoid cysts. Epithelioma is most common, fibromyoma comes next, and sarcoma third in frequency. Epithelioma may be cylindrical or atypical (cancer), the majority appearing in women between 40 and 50 years of age, generally among those who have borne children. The only rational treatment of cancer of the Fallopian tube is removal of the uterus and adnexa. Fibromyoma may be subserous, interstitial, or submucous. In most cases salpingectomy with ovariectomy was performed successfully. Secondary tumors of the Fallopian tubes are common, either uterine or ovarian in origin. The histories of three cases reported by Quénu and Longuet follow, as does a table of the 64 cases collected. Details of the diagnosis and treatment of the various tumors are given. [M. O.]

5.—Patel reports in full seven cases of **tubercular rheumatism.** After reviewing the symptomatology, he concludes that articular manifestations, rheumatismal in character, acute, chronic, deforming, etc., may be due to tubercular infection; that this is the case experimentally; and that pathology has confirmed this, tubercle bacilli and their effects, true tubercular conditions, having been found in the joints affected. All of which proves the existence of tubercular rheumatism or pseudo-rheumatism. [M. O.]

6.—Vignard discusses **subserous appendectomy,** reporting a successful case. The details and technique of the operation, with his method of resecting the appendix, follow. Subserous appendectomy is often necessary in difficult cases in which the ordinary methods are dangerous. The peritoneum is first drawn back, and then the appendix is removed. [M. O.]

ARCHIVES DE MEDECINE DES ENFANTS.

December, 1901. (Volume IV, No. 12.)

1. The Soluble Ferments in Milk. L. M. SPOLVERINI.
2. Congenital Laryngeal Stridor. LEON CERF.
3. Tuberculous Meningitis with Recovery. ROCAZ.

1.—Escherich in 1900 stated that human milk contained zymases which made mother's milk superior to all methods of artificial feeding. Spolverini considers two principles fundamental in artificial feeding, sterilizing the milk, and making its composition as near mother's milk as possible. During his investigations several soluble ferments were found in milk, such as the tripsinic, pepsinic, amylolytic, hydrating, lipasic, oxydasic, and glycolytic **ferments,** the first two of which are always present **in the milk of man and animals,** while the presence and amount of the others varies. Asses' milk comes nearest to human milk in composition. These **soluble ferments** are destroyed by heat. His other experiments seem to show that the animal ferments are excreted by the mammary gland, and this can be caused by the ingestion of vegetable ferments. He concludes that many cases of infantile dyspepsia and atrophy are due to the lack of zymases in milk. Therefore care should be taken to see that the soluble ferments of human milk are present in humanized milk. [M. O.]

2.—By **congenital stridor** is meant noisy inspiration, occasionally expiration, also, occurring in infants, generally a symptom of a laryngeal affection, sometimes accompanied by cyanosis and dyspnea. These children do not seem incommoded by it as a rule. Snoring is noticed after birth, becoming more strident on crying. The entire thorax may rise and fall with respiration, as in emphysema. The condition is a symptom of various conditions, malformations of the larynx, or epiglottis, obstetrical laryngitis, adenoids, enlarged bronchial glands, hypertrophied thymus, a nervous condition, etc. The cause is laryngeal in most cases. The symptoms, as they appear in the different varieties of congenital stridor, follow, and several cases are given in detail. [M. O.]

3.—Rocaz reports a case of **probable tuberculous meningitis with recovery** in a boy of 8. His father died of phthisis, and his mother shows many symptoms of it. He emaciated rapidly, complained of headache, and went to bed. All the typical symptoms of tuberculous meningitis were present. Kernig's sign was absent. There was some dulness over the right lung, while the tubercle serum reaction was positive. Lumbar puncture gave a clear fluid in which flakes containing lymphocytes settled in an hour. Instead of growing worse, he improved, and was well in six weeks. Lumbar puncture then showed no cellular elements. He has kept well since. Rocaz believes that this was a case of tuberculous meningitis, because of the marked lymphocytosis in the acute stage, and because it was typical clinically. That he recovered alone speaks against this diagnosis. At any rate, it was meningitis in a tubercular subject. [M. O.]

Special Article.

ON THE RELATIONSHIP BETWEEN HUMAN AND BOVINE TUBERCULOSIS.*

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When in 1884 Koch published in the second volume of the Mittheilungen of the German Imperial Health Office, the classical account of his researches on the tubercle bacillus and the relationship of the same to different forms of tubercular disease in man and animals, he laid down with the greatest precision that there was but one form of tubercle bacillus, that grape disease (Perlsucht) in cattle, tubercular phthisis or pulmonary consumption in man, and tuberculosis in the domestic animals, are caused by one and the same micro-organism. This view was not based upon isolated observations—he studied 19 cases of miliary tuberculosis in man, 29 cases of pulmonary phthisis, tuberculous ulcers of the tongue, tuberculosis of the womb, testicles, etc., 21 cases of scrofulous lymphatic glands, 13 cases of tuberculous joints, 10 cases of tubercular bone affections, 4 of lupus—all these in man—and 17 cases of grape disease in cattle; while he made experimental inoculations with the bacilli obtained from all these cases into some 273 guinea-pigs, 105 rabbits and numerous smaller animals including rats, cats, dogs, pigeons, hens, etc. It was a most remarkable and exhaustive piece of work. And when he declared after all this prolonged study of years, that the organisms isolated from man and cattle were identical, it is not surprising that his view was almost universally accepted, although this was counter to the teaching of Virchow, who, since 1863, had laid down that tuberculosis in man and grape disease in cattle were two distinct diseases.

From Virchow's address to the Berlin Medical Society, July 27, 1901, (*Berliner klinische Wochenschrift*, August 5, 1901, p. 810) it would appear that at the Charité-Hospital in Berlin they have from time to time collected material from cases of human peritoneal tuberculosis showing massive tubercular growths quite unlike the ordinary tuberculosis of the abdominal cavity in man and resembling more those characteristic of the bovine disease, thus indicating, so far as I follow Virchow, that despite the general acceptance of the view enunciated by Koch and the disrepute into which his own earlier opinion had fallen, Virchow had, since 1884, still upheld that earlier opinion regarding the want of identity between the two diseases. But for years then Koch's conclusion was unreservedly accepted by pathologists in general, by veterinarians and those interested in hygiene, the view, namely, that one form of bacillus causes all forms of tuberculosis in the different species of animals.

The first check to these views came from Italy and France, when it was shown by Mafucci (1899) and by Cadiot, Gilbert and Roger (1890) that the bacilli obtained from fowls, pheasants and other birds suffering from tuberculous disease, grow more readily and in their growth and in their action upon the animals of the laboratory differ markedly from the tubercle bacilli isolated from man, and in 1890 at the International Congress in Paris, Koch admitted these differences. As I have already pointed out (Report of the Minister of Agriculture for the Dominion for 1899) the researches of Nocard and Roux have clearly indicated that these differences in properties are not due to the existence of two absolutely distinct species of bacilli but to the fact that bacilli grown and passed from member to member of one species gradually assume characters different from those assumed by the bacilli of like origin, infecting and passing through members of another species of animal. The extreme example of this difference in the characters of different races of tubercle bacilli is to be met with in fish. It has been found by more than one observer that fresh water fish such as carp, fed for a long period with the sputum of human tuberculous patients, may eventually develop swellings of an inflammatory type from which tubercle bacilli can be obtained growing easily at the ordinary temperature on the usual media employed for this purpose (whereas tubercle bacilli obtained direct from man only grow at the body temperature and then only with difficulty). These piscine bacilli when inoculated into rabbits and guinea-pigs are found to be remarkably attenuated and lessened in their virulence. I learn that Professor Harrison of the Guelph Agricultural College has repeated and confirmed these experiments.

It is not surprising, therefore, that differences have been made out between the tubercle bacilli derived from cases of tuberculosis in man and cattle respectively. As a matter of fact, as already reported, Theobold Smith has more especially called attention to the differences in the cultures and the appearance of the bacilli, differences which we have been able fully to confirm (ibid. p. 139), while several observers have noted either that tuberculous sputum from man, when fed to calves had no effect upon them, or, that pure cultures of the bacilli isolated from lesions in man were similarly without effect, or must [illegible] to a localised disturbance at the point of inoculation with little or no liability to lead to generalized disease. (Chauveau in France, Günther and Harms and Bollinger (1894) in Germany, Sydney Martin (1895) in England, Frothingham (1897) Theobald Smith (1898), and Dinwiddie (1899) in the United States.)

We so fully accepted these results in 1899, that we only tested the matter upon one heifer, using large quantities of human tubercle bacilli and obtaining no result (ibid. p. 147). The control heifer which received a like inoculation of bovine bacilli died of generalized tuberculosis in 42 days. One English observer, Crookshank, obtained positive results, but as I have previously noted (ibid.) and as Crookshank himself acknowledged at the London Congress, his case is peculiar, and is to be explained not as a pure tubercular infection but as an example of a mixed infection, the suppurative disturbance

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and consequent lowered resistance in the calf favoring the multiplication of the tubercle bacilli and the development of a generalised tuberculosis.

It may be noted here that in one of the capsule experiments in the calf, by my assistant, Dr. Higgins, in which the capsule containing the bovine bacilli ruptured, a few small tubercles were found in the neighborhood. These were clearly arrested in their development.

Thus, previous to Koch's address, it was well known to those intersted in the subject, that differences existed in the bacilli obtained from man and the cow; that human tubercle bacilli only occasionally and under special conditions are capable of causing tuberculosis in cattle, and that these do not cause nearly so virulent and rapid a development of the disease when inoculated into rabbits and guineapigs. The question had already been mooted as to whether bovine tubercle bacilli being more virulent for the lower animals, are also specially virulent for men, or whether the reverse was the case, so that passage of the tubercle bacilli through a series of cattle while leading these to be more dangerous for cattle and for the animals of the laboratory, but will render them less capable of setting up infection in man.

In this connection before coming to deal directly with Koch's' address it is but right that I should here note that in August, 1899, at the meeting of the Canadian Medical Association at Toronto, I delivered an address upon Bovine Tuberculosis and its significance, and upon the possibility of its eradication in Canada,* in which I cautiously drew attention to the fact that the evidence in favor of the view that bovine tuberculosis is transmissible to man, was not so strong as it was generally thought to be, that while cases did exist of such transmission, they were few in number; and I concluded therefore than inasmuch as it was with great difficulty that human tuberculosis was conveyed to cattle and vice versa, that therefore it was quite possible for us here in Canada to proceed to eradicate bovine tuberculosis from district to district of the Dominion, and this even when measures for eradicating human tuberculosis were either ineffective or not put into action. This paper was taken at the time by certain critics to mean that I did not belive that tuberculosis was transmitted from cattle to man: that I never stated, nor have I since then believed this to be the case. I believe that it is transmissible under certain favorable conditions, but that it is comparatively rarely transmitted. Throughout I was most careful to point out that this question of the transmissibility of the disease from one species to the other should not in any way lead to lessened restrictions or diminished endeavors to eradicate tuberculosis from cattle, but that on the contrary, as already stated, the less the extent of transmission from the one species to the other, the greater the hope of eradicating the disease from among our cattle, the greater the hope also of materially benefiting the Canadian farmer.

In discussing Dr. Koch's celebrated address it is but right in the first place to call attention to the fact that it was not directly but only incidentally upon this subject of the relationship of human and bovine tuberculosis, the full title given by him being "the combating of tuberculosis in the light of the experience that has been gained in the successful combating of other infectious diseases." The distinguished writer laid down in the first place that the most important lesson we have learnt from experiences is that it is a great blunder to treat pestilences uniformly. He pointed out that in the case of the plague, for example, we have learnt that human plague is dependent upon rat plague, that the real transmittors of the disease are rats, and that therefore to stamp out the disease we have to destroy the rats in a region; that with cholera the main propagator is water and that in combating this disease water is therefore the first thing to be considered. The compulsory muzzling of dogs has had remarkable effects in freeing Great Britain from hydrophobia, and leprosy has from early days been combated by isolation. Thus, to select the right means of eradicating tuberculosis, we must determine what is the root of the evil and must not squander for insubordinate ineffective measures, and, to arrive at a satisfactory result, we must, in the first place, enquire how infection takes place in tuberculosis.

He showed how we have abundant evidences that the disease is mainly set up by inhalation and that the sputum of consumptive people is to be regarded as the main source of the infection with tuberculosis. He took it that upon this point all were agreed. He next asked whether there were not other sources also copious enough to demand consideration in the combating of tuberculosis, Taking these into consideration he indicated that hereditary tuberculosis, while not absolutely nonexistent, is so extremely rare that in considering practical measures we are at liberty to leave this form of origin entirely out of the question. It was at this point he discussed next the possibility of tubercular infection from the transmission of the germs of the disease from tubercular animals to man. Here it would be well to give his exact words.

"This manner of infection is generally regarded nowadays as proved, and as so frequent that it is even looked upon by not a few as the most important, and the most rigorous measures are demanded against it. In this Congress also the discussion of the danger with which the tuberculosis of animals threatens man will play an important part. Now, as my investigations have led me to form an opinion deviating from that which is generally accepted. I beg your permission, in consideration of the great importance of this question, to discuss it a little more thoroughly.

"Genuine tuberculosis has hitherto been observed in almost all domestic animals, and most frequently in poultry and cattle. The tuberculosis of poultry, however, differs so much from human tuberculosis that we may leave it out of account as a possible source of infection for man. So, strictly speaking, the only kind of animal tuberculosis remaining to be considered is the tuberculosis of cattle, which, if really transferable to man, would indeed have frequent opportunities of infecting human beings through the drinking of the milk and the eating of the flesh of diseased animals.

"Even in my first circumstancial publication on the etiology of tuberculosis I expressed myself regarding the identity of human tuberculosis and bovine tuberculosis

*Philadelphia Medical Journal December, 1899

with reserve.[1] Proved facts which would have enabled me sharply to distinguish these two forms of the disease were not then at my disposal, but sure proofs of their absolute identity were equally undiscoverable, and I therefore had to leave this question undecided. In order to decide it, I have repeatedly resumed the investigations relating to it, but so long as I experimented on small animals, such as rabbits and guinea-pigs, I failed to arrive at any satisfactory result, though indications which rendered the difference of the two forms of tuberculosis probable were not wanting. Not till the complaisance of the Ministry of Agriculture enabled me to experiment on cattle, the only animals really suitable for these investigations, did I arrive at absolutely conclusive results. Of the experiments which I have carried out during the last two years along with Professor Schütz, of the Veterinary College of Berlin, I will tell you briefly some of the most important.

"A number of young cattle which had stood the tuberculin test, and might therefore be regarded as free from tuberculosis, were infected in various ways with pure cultures of tubercle-bacilli taken from cases of human tuberculosis; some of them got the tubercular sputum of consumptive patients direct. In some cases the tubercle-bacilli or the sputum were injected under the skin, in others into the peritoneal cavity, in others into the jugular vein. Six animals were fed with tubercular sputum almost daily for seven or eight months; four repeatedly inhaled great quantites of bacilli, which were distributed in water, and scattered with it in the form of spray. None of these cattle (there were nineteen of them) showed any symptoms of disase, and they gained considerably in weight. From six to eight months after the beginning of the experiments they were killed. In their internal organs not a trace of tuberculosis was found. Only at the places where the injections had been made small suppurative foci had formed, in which few tubercle-bacilli could be found. This is exactly what one finds when one injects dead tubercle-bacilli under the skin of animals liable to contagion. So the animals we experimented on were affected by the living bacilli of human tuberculosis exactly as they would have been by dead ones; they were absolutely insusceptible to them.

"The result was utterly different however, when the same experiment was made on cattle free from tuberculosis with tubercle-bacilli that came from the lungs of an animal suffering from bovine tuberculosis. After an incubation period of about a week the severest tubercular disorders of the internal organs broke out in all the infected animals. It was all one whether the infecting matter had been injected only under the skin or into the peritoneal cavity or the vascular system. High fever set in, and the animals became weak and lean; some of them died after a month and a half to two months, others were killed in a miserably sick condition after three months. After death extensive tubercular infiltrations were found at the place where the injections had been made and in the neighboring lymphatic glands, and also far advanced alterations of the internal organs, especially the lungs and the spleen. In the cases in which the injection had been made into the peritoneal cavity the tubercular growths which are so characteristic of bovine tuberculosis were found on the omentum and peritoneum. In short, the cattle proved just as susceptible to infection by the bacillus of bovine tuberculosis as they had proved insusceptible to infection by the bacillus of human tuberculosis. I wish only to add that preparations of the organs of the cattle which were artificially infected with bovine tuberculosis in these experiments are exhibited in the Museum of Pathology and Bacteriology.

"An almost equally striking distinction between human and bovine tuberculosis was brought to light by a feeding experiment with swine. Six young swine were fed daily for three months with the tubercular sputum of consumptive patients. Six other swine received bacilli of bovine tuberculosis with their food daily for the same period. The animals that were fed with sputum remained healthy and grew lustily, whereas those that were fed with the bacilli of bovine tuberculosis soon became sickly, were stunted in their growth, and half of them died. After three months and a half the surviving swine were all killed and examined. Among the animals that had been fed with sputum no trace of tuberculosis was found, except here and there little nodules in the lymphatic glands of the neck, and in one case a few gray nodules in the lungs. The animals, on the other hand, which had eaten bacilli of bovine tuberculosis had, without exception (just as in the cattle experiment), severe tubercular disease, especially tubercular infiltration of the greatly enlarged lymphatic glands of the neck and of the mesenteric glands, and also extensive tuberculosis of the lungs and the spleen.

"The difference between human and bovine tuberculosis appeared not less strikingly in a similar experiment with asses, sheep, and goats, into whose vascular systems the two kinds of tubercle-bacilli were injected.

"Our experiments, I must add, are not the only ones that have led to this result. If one studies the older literature of the subject, and collates the reports of the numerous experiments that were made in former times by Chauveau, Günther and Harms, Bollinger, and others, who fed calves, swine, and goats with tubercular material, one finds that the animals that were fed with the milk and pieces of the lungs of tubercular cattle always fell ill of tuberculosis, whereas those that received human material with their food did not. Comparative investigations regarding human and bovine tuberculosis have been made very recently in North America by Smith, Dinwiddie and Frothingham, and their result agreed with that of ours. The unambiguous and absolutely conclusive result of our experiments is due to the fact that we chose methods of infection which exclude all sources of error, and carefully avoided everything connected with the stalling, feeding, and tending of the animals that might have a disturbing effect on the experiments.[2]

"Considering all these facts, I feel justified in maintaining that human tuberculosis differs from bovine, and cannot be transmitted to cattle. It seems to me very desirable, however, that these experiments should be repeated elsewhere, in order that all doubt as to the correctness of my assertion may be removed.

I wish only to add that, owing to the great importance of this matter, the German Government has appointed a commission to make further inquiries on the subject.

"But, now, how is it with the susceptibility of man to bovine tuberculosis? This question is far more important to us than that of the susceptibility of cattle to human tuberculosis, highly important as that is too. It is impossible to give this question a direct answer, because, of course, the experimental investigation of it with human beings is out of the question. Indirectly, however, we can try to approach it. It is well known that the milk and butter consumed in great cities very often contain large quantities of the bacilli of bovine tuberculosis in a living condition, as the numerous infection-experiments with such dairy products on animals have proved. Most of the inhabitants of such cities daily consume such living and perfectly virulent bacilli of bovine tuberculosis, and unintentionally carry out the experiment which we are not at liberty to make. If the bacilli of bovine tuberculosis were able to infect human beings, many cases of tuberculosis caused by the consumption of alimenta containing tubercle-bacilli could not but occur among the inhabitants of great cities, especially the children. And most medical men believe that this is actually the case.

"In reality, however, it is not so. That a case of tuberculosis has been caused by alimenta can be assumed with certainty only when the intestine suffers first—*i. e.*, when a so-called primary tuberculosis of the intestine is found

(1) I have carefully read through Professor Koch's "first circumstantial publication" and found in it no signs of the reserve here mentioned. The impression given to the whole scientific world by that paper was that Koch had proved the identity of the two conditions and disproved the teaching of Virchow and others, who held their non-identity.

(2) As I have pointed out elsewhere (Canadian Journal of Medicine and Surgery, Nov. 1900), and as appears in the United States have been Koch here by no means given to American workers the credit that is their due. In fact Gaiser, working under Dr. Long (Univ. of Pennsylvania Med. Bulletin, Nov. 1898), had published two years before, together with [illegible] and had obtained negative results with the former and highly [illegible] with the latter. This it will be seen was a single observation, and it attracted little attention. The credit lies with Frothingham. The [illegible] Smith and Dinwiddie, who, by carefully planned experiments free from all sources of error, established the fact that cattle are in general immune to pure cultures of tubercle bacilli derived from man. Koch and Schütz at most confirmed these observations which, it may be added, appeared before these last observers began their series of studies.

But such cases are extremely rare. Among many cases of tuberculosis examined after death, I myself remember having seen primary tuberculosis of the intestine only twice. Among the great *post-mortem* material of the Charité Hospital in Berlin ten cases of primary tuberculosis of the intestine occurred in five years. Among 933 cases of tuberculosis in children at the Emperor and Empress Frederick's Hospital for Children, Baginsky never found tuberculosis of the intestine without simultaneous disease of the lungs and the bronchial glands. Among 3,104 *post mortems* of tubercular children, Biedert observed only sixteen cases of primary tuberculosis of the intestine. I could cite from the literature of the subject many more statistics of the same kind, all indubitably showing that primary tuberculosis of the intestine, especially among children, is a comparatively rare disease, and of these few cases that have been enumerated, it is by no means certain that they were due to infection by bovine tuberculosis. It is just as likely that they were caused by the widely propagated bacilli of human tuberculosis, which may have got into the digestive canal in some way or other—for instance, by swallowing saliva of the mouth. Hitherto nobody could decide with certainty in such a case whether the tuberculosis of the intestine was of human or of animal origin. Now we can diagnose them. All that is necessary is to cultivate in pure culture the tubercle-bacilli found in the tubercular material, and to ascertain whether they belong to bovine tuberculosis by inoculating cattle with them. For this purpose I recommend subcutaneous injection, which yields quite specially characteristic and convincing results.[3] For half a year past I have occupied myself with such investigations, but, owing to the rareness of the disease in question, the number of the cases I have been able to investigate is but small. What has hitherto resulted from this investigation does not speak for the assumption that bovine tuberculosis occurs in man.

"Though the important question whether man is susceptible to bovine tuberculosis at all is not yet absolutely decided, and will not admit of absolute decision to-day or to-morrow, one is nevertheless already at liberty to say that, if such a susceptibility really exists, the infection of human beings is but a very rare occurrence. I should estimate the extent of infection by the milk and flesh of tubercular cattle, and the butter made of their milk, as hardly greater than that of hereditary transmission, and I therefore do not deem it advisable to take any measures against it."

After these statements he concludes that the only main source of infection of tuberculosis being the sputum of consumptive patients, the measures for the combating of tuberculosis must aim at the prevention of the dangers arising from its diffusion. And from this point he proceeds to take up overcrowded, bad hygienic conditions, sanitaria and so on.

Let me now discuss the above statements. It will be seen that they divide themselves into three parts, (1) a study of the transmissibility of human tuberculosis to cattle; (2) a study of the transmissibility of bovine tuberculosis to man, and (3), the conclusions to be drawn from the facts and inferences set forth. It will be well to consider these in order.

1. *The transmissibility of tuberculosis from man to cattle.*—From what I have stated in my preliminary remarks and from this additional evidence afforded by Koch and Schütz, it must be accepted that experimental inoculation of pure cultures of tubercle bacilli derived from man (bacilli which are virulent for rabbits and guinea-pigs), leads to little or no result in cattle; the bacilli are practically harmless. It must however be clearly recognized that this is not the same as saying that human tuberculosis is never conveyed to cattle for (1), as Hüppe points out, different breeds of domestic animals react differently towards various diseases. Most breeds of swine are insusceptible to anthrax and this led to the statement that this disease cannot be given to them, but more recently some breeds are recorded as being liable to succumb thereto. It is possible that further study will show that certain cattle can be infected with pure cultures of the tubercle bacilli. At most it may be laid down that the results gained by observers in widely separated regions in Europe and America upon the effects of inoculating young cattle (which are more susceptible and less resistant to tuberculosis and infectious diseases in general than are fully grown animals), indicate that the majority of cattle are not liable to be infected by human tubercle bacilli.

(2). A more important consideration is that we must clearly distinguish between experimental and natural infection. Because under the conditions of the experiments observers have obtained negative results, it does not follow that under all conditions the infections cannot be conveyed. As a matter of fact we realize more and more that the mere presence of virulent bacteria is not sufficient to set up the disease, that an equally important factor is the condition of the system. Thus in connection with this very matter of tuberculosis in man we know that, while all are exposed to infection, at most 7% die of the disease; those in good health resist infection, that this infection is specially liable to occur when the system has been lowered by other infectious diseases so that an attack of tuberculosis is notably liable to be dated from an attack of la grippe, pneumonia, typhoid and other acute infections. So it may well be that natural infection is possible; indeed Crookshank's observation already referred to proves that this is the case. It will be remembered, that, injecting under the skin of the calf sputum from cases of phthisis, he introduced also suppurative microbes and caused abscess formation, and, when the animal died, found distinct evidence of acute though not very extensive tubercular infection. Dolépine of Manchester during the last few weeks would appear to have obtained results of a like order. Judging from his preliminary note he is causing tuberculosis in calves by injecting a mixture of phthisical sputum containing tubercle bacilli derived from several individuals together with other micro-organisms.

Ravenel's observations, communicated also to the British Congress, clearly point to the same conclusion. He found, taking four calves and inoculating them intraperitoneally with 10 cc. of human tuberculous sputum from different sources but all containing a large number of tubercle bacilli, that one showed no ill effects and at the autopsy was found to be entirely free from the disease, the other three all become infected with tuberculosis, the lesions in two being quite extensive. Making an emulsion from the material of well developed tubercular nodules of these last two cases he inoculated 20 cc. of these emulsions, which were found rich in bacilli, into two other calves. The result was absolutely negative in the one animal, practically so in the other. Ravenel concludes that since both calves received a

(3) This method had been previously recommended by Theobald Smith.

much larger number of tubercle bacilli in the emulsion than did those which were inoculated directly with the sputum, the development of the disease in the latter must have been due to a mixed infection which operated to the advantage of the tubercle bacilli. The attempt to infect two calves with human sputum by the digestive tract failed wholly. Herein he confirmed the previous results of Sydney Martin, and the earlier French and German observers, and Koch's recent results.

It is generally held that in experimental inoculations one overcomes the resistance of the body tissues by introducing microbes in very much greater quantity than ever by any possibility gain entrance in the course of a natural infection. As I have emphasized in previous reports the number of pathogenic bacteria introduced is one factor in the production of disease. Where a mixed infection is set up, the suppurative microbes, growing rapidly, may permit the human tubercle bacilli introduced at the same time to grow with little hindrance until their number is so great as to overcome the resistance of the tissues and so gain a definite foothold. What is more, it may be that these other microbes in their growth may give the bacilli time to "accommodate" themselves to the changed conditions of existence, so that gradually they assume properties harmful to the organism of their host. The power we possess of making the tubercle bacilli from birds grow in rabbits, etc. (Nocard, Hüppe and Fischel), affords evidence of this accommodation; Ravenel's observations (*Univ. of Penn. Med. Bull.* September, 1901) that human bacilli passed through hogs gain an increased virulence for guinea-pigs and rabbits, point in the same direction.

Striving to balance these various factors and possibilities I am inclined to conclude that while human tuberculosis may be conveyed to cattle, circumstances favoring this transmission *under natural conditions* will be found to occur very rarely, so rarely that, for practical purposes, we may neglect this as a cause of tuberculosis in cattle. Or in other words, it is safe to lay down as a practical rule that tuberculosis developing in cattle is derived from previous cases of the disease in other cattle, or it may be in other herbivorous animals and from these only. From which it follows that measures calculated to lead to the eradication of bovine tuberculosis may be undertaken with a full prospect of success even in districts where human tuberculosis is frequent and is permitted to continue unchecked.

2. *On the transmissibility of bovine tuberculosis to man*:—Under the above heading, as indeed was the case in the previous section, two distinct issues have to be considered, (i) the *possibility* of transmission, and (ii) the *relative frequency* of such transmission of the disease from the one to the other species. Most writers on the subject have confused the two, yet a little consideration will show that they are not directly related. It is possible, for example, that, while tuberculosis may be transmitted from cattle to man, Professor Koch's conclusion is in the main correct, namely, that it occurs so rarely as to be outside the range of practical politics. Or otherwise, in order to prove the extent to which this transmission is a danger to the community and to determine the need for special legislation, the demonstration of a definite case or cases of transmission having occurred, is not all that is needed; it is necessary to show that transmission occurs with sufficient frequency to constitute a menace in the well-being of the community.

Let me be permitted here to anticipate matters and state that I am of an open mind upon this point; that, on the one hand, with Baumgarten and Ribbert and other German authorities who wrote prior to Koch's latest utterance, I believe that the danger has been exaggerated; that I believe the transmission to be infrequent; but that on the other hand I consider that the transmission has been demonstrated; that it is more frequent than Koch has indicated; that in one class of the community, namely little children, the transmission does occur and this through the use of infected cow's milk; that I hold that even if this be so, a far greater danger from milk, a far more alarming cause of infant mortality are the other contaminations to which milk is liable, so that our first thought should be how to reduce these other contaminations. I am of an open mind as to how far there should be special legislation for the prevention of the use of tuberculous milk over and above legislation and municipal regulations tending to insure the freedom of milk from infective properties in general (tuberculous infection included). Having thus briefly indicated my position I will now proceed to state, as impartially as possible, the evidence we possess, for and against, upon these matters so that the reader may form his own conclusions.

The transmission of tuberculosis from cattle to man:—It must in the first place be noted that Koch nowhere denies in his address categorically the possibility that such transmission does occur, the most he states is that if it exists it is of very rare occurrence. As a matter of fact the occurrence has been absolutely demonstrated. There are several cases on record in which veterinarians and butchers, when cutting up the bodies of tuberculous cattle, have wounded and thus infected themselves and subsequently manifested the symptoms of local and generalized tuberculosis. Ravenel of Philadelphia brought forward some five cases of this nature at the British Congress. In **The Philadelphia Medical Journal**, July 21, 1900 he quotes three cases which had come under his immediate observation. Two similar cases are recorded by Tscherning and Pfeiffer and he gives two other cases in which there might be some doubt.

There are other cases in which it is impossible to reach any other conclusion than that there has been definite infection brought about by drinking the milk of cows suffering from advanced tuberculosis. The most recent collection and critique of these cases is by Professor Rep[illegible] (*American Medicine*, October 26, 1901, p. 645, and November, 2, p. 688), Professor of Pathology and Veterinarian to the Iowa State Col-

lege, namely, cases by Olivier, Stang, Demne, Hills, Ernst, Leonhardt, Sontag, Hermsdorf and Rich.*

To summarize, we have cases in which members of a family brought up on the milk of cows found to be tuberculous have died of tuberculosis, while other members who have not used this milk have remained healthy; cases in which several infants at childrens hospitals or girls at school have nearly simultaneously shown evidence of intestinal tuberculosis and the number of cases raising suspicion, the cows affording milk to the institution have been examined and found to be in an advanced state of tuberculosis; cases in which children brought up on the milk of one cow have developed the disease and the cow has been later condemned as suffering from advanced tuberculosis. The evidence thus must be regarded as clear and convincing that the transmission is possible.

On the Frequency of such Transmission:

(a) *Through wounds*:—The direct introduction of tuberculous material into the system through gross wounds is in itself a rare event. Beyond demonstrating that bovine tuberculosis can thus be the cause of human infection it is doubtful whether cases of this order have a high value for our present purpose at most, that is to say, personal care and the full recognition that the disease may be conveyed by this means alone can be of avail.

These doubts are increased when it is remembered that we have evidence pointing to the fact that all cases of wound infection with bovine tubercular material do not lead to the development of tubercular disease in man, even when large numbers of tubercle bacilli are introduced into the system and which have been gained from pure cultures. Baumgarten, for example (*Berlin. klin. Wochenschrift*, September 2, 1901, p. 694), has recorded a case of a physician working in his laboratory at Tübingen, who, accepting the view of Rokitansky that tuberculosis and cancer are antagonistic diseases, the one never developing when the other is present, inoculated more than half a dozen patients suffering from inoperable malignant tumors, with pure cultures of bovine bacilli. He did not, it is true, cure the patients; we now know that Rokitansky's statement was incorrect, the two diseases can occur together—and among others Dr. W. F. Hamilton of this city has brought together cases of their coexistence. But, on the other hand, not one of these patients developed tuberculosis. An abscess formed at the site of inoculation which gradually healed, and when Baumgarten performed the post-mortems, he discovered merely scar tissue at the site of inoculation and neither by the naked eye nor under the microscope could he find a single evidence of the development of tuberculosis in any part of the system.

One who is now a well known writer on veterinary subjects, a former pupil of our school, has reminded me that while engaged some years ago in Montreal in removing puriform material from a suspected tuberculous mass in a cow in order to test its nature by inoculating into a guinea-pig, the animal lurched causing the needle of the filled syringe to penetrate deeply into the ball of the thumb. The guinea-pig, subsequently inoculated, died of virulent tuberculosis, the deep wound in his thumb muscles healed completely and no ill results ever showed themselves.

These observations must not be taken as contradictory but rather as being in harmony with what I have already stated to the effect that infection is not purely determined by the presence of bacteria. This however may be accepted as clearly indicating that bovine tubercle bacilli are *not* more virulent for man than are tubercle bacilli of human origin.

Dr. Ravenel, in his remarkable paper already referred to read before the British Congress on Tuberculosis, remarks "excepting it is proven that the bovine tubercle bacillus has as a rule considerably greater pathogenic power than the human bacillus for a large majority of experimental animals, how should we interpret this as regards man? Is it fair to conclude that this increase of virulence will hold good for man also? Until the contrary is proven, or until good reason for believing the contrary is shown, it is in my judgment right that this conclusion be held at least as a working hypothesis. I am aware of the objections to this view which will be raised by some and acknowledge freely that it cannot be accepted as conclusive."

The above observations seem to me clearly to afford proof that we are not justified in concluding that, because the bovine bacilli are more virulent for guinea-pigs and rabbits, they are therefore more virulent for man.

Granting as I have shown that under certain conditions and in certain cases bovine tuberculosis is transmissible to man, it is at the same time very remarkable how singularly rare are the cases which afford reasonably sure grounds for being certain that infection has been through the milk. The number of clear cases may be counted upon the fingers of the two hands and this notwithstanding the fact that for now 17 years the identity of human and bovine tuberculosis has been generally accepted. Not one clear case or series of cases by an individual observer has been published per annum. And this notwithstanding that tuberculosis ranks with our greatest zymotic scourge and notwithstanding the fact that in some countries from 30 to 50% of all the milch cattle give evidence of the disease.

There are, it is true, reasons which possibly explain this state of affairs. First and foremost there is the long incubation period, or long period intervening between the moment of infection and the development of definite symptoms of the disease, thus rendering it difficult to determine whether modes of infection other than through milk may not have been the cause. It will readily be understood that when the period of incubation is evidently variable

*Repp also quotes as evidence Thorne's Report that 22 physicians out of 339 practicing in Ohio, replied in the affirmative to the question, "Have you been able to trace any case of tubercular disease to the milk of unhealthy cows?" and that 33 replied affirmatively to the question, "Have you had reason to suspect the origin of tubercular disease in older children or adults, to be in the milk or meat supplied?" So few show themselves to have a correct appreciation of what constitutes positive evidence, that these mere affirmative and negative answers of practitioners of Ohio cannot be held to be of any value; to arrive at a judgment it will be necessary to know the facts of the individual cases. On the other hand, it is but right that I should note that, talking over this subject with medical men of various districts, I have heard of unpublished cases (unpublished because one or two links in the evidence appeared to be a little weak), which, however, have left little room for doubt.

and when two or three months may elapse before the symptoms appear, it is difficult to put one's finger upon a particular spot or period and say it was at that point or time that infection occurred, especially when human tuberculosis is so generalized and there are so many possibilities that the infection may be traced to this latter source. Nevertheless, I am inclined to believe that this is not an adequate explanation of the rareness of these cases. It is remarkable that not a single case or series of cases have yet been recorded as occurring, even among children fed from the milk of one milk round. With typhoid, scarlet fever, and according to some authorities, diphtheria, we recognize local epidemics, sharply marked out, as occurring among those and those only who have drunk the milk from a particular dealer. This never occurs with tuberculosis. Now were the bovine tubercle bacillus virulent for man, we ought to meet with such cases. We know that 70% of the cattle, or more, on certain farms may be affected with this disease, that from 2 to 3% of these cattle may be subject to tuberculosis of the udder and in their milk there may be literally millions of the active bacilli.

It is no sound argument to say that a distinction must be made between the tubercle bacillus and the bacilli of the other diseases mentioned, because these grow rapidly in milk whereas the tubercle bacilli grow with peculiar slowness, and again, that the explanation is to be found in the fact, that in the milk round the milk of a tuberculous cow is so diluted with milk containing no bacilli that at a given meal it contains a number insufficient to set up infection. At most this is but a partial explanation, whereby I mean that such diluted milk is found repeatedly by experiment capable of setting up tuberculosis in cows and even in swine, and this to such an extent that in certain districts and states regulations have been framed forbidding swine to be fed with unsterilized skimmed milk from creameries. If thus calves and swine are liable to be infected by such milk and the mode of infection is in them clearly recognizable, why is it that we never find the same occurrence in man? The only possible explanation can be that the bovine tubercle bacillus is not of specially high virulence for man, that in general it must be a susceptible individual who drinks milk containing relatively enormous quantities of the bacilli that is liable to be infected. So far then as we can justly draw any inference from the reported cases of definite infection from milk, it would seem that Koch rightly calls attention to the fact, that "if the bacilli of bovine tuberculosis were able to infect human beings, many cases of tuberculosis caused by the consumption of alimenta containing tubercle bacilli could not occur among the inhabitants of great cities, especially the children, and that in reality this is not the case."

But when we come to consider other aspects of this subject of infection through the milk we become more doubtful. All I think will agree that circumstantial evidence points to the fact that with increasing age individuals become less and less prone to infection with any form of tuberculosis and that we have practically no evidence of those over 25 years of age becoming infected by bovine tuberculosis through the food. There remain however the children and young adults, and here the evidence is undoubtedly in favor of believing that milk does form a mode of setting up tuberculous infection. In our great cities, for example upon this continent, tuberculosis in general is about as common as it is among the inhabitants of the great cities of Europe, and yet Dr. Northrup pointed out with regard to its appearance in the city of New York, and as Dr. Blackader has noted to me in connection with Montreal, tuberculosis of young children and especially peritoneal and intestinal tuberculosis is remarkably rare, whereas it is relatively common in London, Paris and other great European centres. For myself, although I had performed several hundred autopsies here in Montreal during the last nine years, I cannot recall but one case of primary tuberculosis of the abdominal cavity in a child under ten, four other cases in which there were grounds for considering that infection had been through the digestive system, and Dr. Wyatt Johnston's much greater experience is in the same direction. Dr. Nicholls recalls one case in which he found a caseous mesenteric gland with tuberculosis elsewhere, the child dying from another disease.

Deaths from tuberculosis in this city average some 935 per annum according to the health report of the Province, year ending June, 1900; only 3 of these are put down as being due to abdominal tuberculosis in children under five, only 4 in children under fourteen. It is true that Koch points out the great infrequency of primary tuberculosis of the intestine at the Charité and Hospital for Children in Berlin, but I do not here refer to primary tuberculosis of the intestine merely, but to cases in which, from the greater involvement of either the intestine or the mesenteric glands, it is reasonable to suppose that infection proceeded from the digestive tract; for it is well known that in animals fed with tuberculous material there may be no obvious ulceration of the intestines but definite enlargement and caseation of the mesenteric lymphatic glands which receive their lymph from the intestinal walls. These cases ought not to be left out of account; nay, more, they are relatively common in European cities. Thus Still at the Great Ormond Street Hospital for Children in London, found that of 769 autopsies on children under 12 years of age 269 revealed tuberculous lesions, and in these cases no less than 23.4 per cent. showed evidence of primary infection having been from the alimentary canal. Widerhofer in Germany found 101 out of 418 cases of tuberculosis in children in which there was involvement of the intestine (or about the same proportion), and 42 per cent. of these cases of intestinal tuberculosis were in children between the ages of 2 and 5 years.

This remarkable difference between the extent of primary abdominal tuberculosis in Europe and America would seem to be very possibly related to the relative frequency of bovine tuberculosis in the two areas. In this neighborhood for example advanced bovine tuberculosis is extraordinarily rare, and in general the percentage of bovine disease in the States is very much lower than it is in

Europe. This, however, may possibly not be the only fact we have to take into consideration in explaining the rareness of infantile tuberculosis in America. In Europe this is most common in crowded cities, and the wretched hygienic conditions, the overcrowding, the bad atmosphere, the narrow streets, the back-to-back houses in the poorer quarters of the large cities, have much to answer for; the children here, even the poorest classes, are not so poverty-stricken and are brought up under healthier surroundings. Notwithstanding all this I think these differences in the statistics of the two areas do point to infected milk being a factor in the frequency of tuberculosis among young children.

Certainly Dr. Tatham's observations and Sir Richard Thorne-Thorne's impressive summary of the British statistics cannot be gainsaid. If there has been in Great Britain during the last 45 years a reduction of 27.9 per cent. in the deaths from all forms of tuberculosis, if the reduction in phthisis reached 66 per cent., while the corresponding reduction from tabes mesentericus only reached 3 per cent., it will be seen to quote Thorne-Thorne, "that in considering the latter cause of death we are dealing with a totally different state of affairs. The matter, too, assumes a still more serious aspect if we limit ourselves to the first year of life, when milk is most largely used as food, for then we find that the reduction in the rate of deaths from the various forms of tuberculosis, which reduction has been going on at all ages for about half a century, not only disappears but is actually transformed into a large increase, reaching no less than 27.7 per cent. This in itself is grave enough, but its significance is still further emphasized when we remember what are the circumstances under which this increase in the rate of death from tabes mesentericus has gone on synchronously with the decrease in that of other forms of tuberculosis."*

For myself I do not see how we are to explain these remarkable figures, save on the supposition that impure and infected milk is an essential factor in the production of abdominal tuberculosis in young children. Not all these cases, it is true, should be regarded as due to milk. The habit of expectoration by adults, the creeping habits of children, their liability to put everything into their mouth, lead to a very great possibility of infection with human tubercle bacilli through the digestive tract. But admitting this and admitting also the wretched hygienic conditions above mentioned, admitting even that the hygiene of the house in Great Britain has not improved at the same rate as has the hygiene of the factory and of work places in general (which improvement is the main cause of the decrease in tuberculosis in adults in Great Britain), if mesenteric tuberculosis were in the main due to infection with human tubercle bacilli, with the lessening of tuberculosis in adults there ought certainly to be a corresponding diminution in the number of cases of tabes mesenterica in children, and this has not occurred.

The last adverse criticism to be applied to these figures of Thorne-Thorne and Tatham is that possibly they are incorrect: not that they have been wrongly drawn up, but that in the earlier portion of the 45 years tuberculosis in children was entered under some other heading, as wasting disease of one or the other order. But tabes mesenterica is a condition which has for long years been commonly diagnosed.

Taking into consideration all these various data, I am forced to the conclusion that human beings at the age at which they are most susceptible to disease in general are distinctly susceptible to tuberculosis of bovine origin. Nay, more, I must admit that it is quite possible that cases of scrofulous, that is to say tuberculous, lymphatic glands, and of tuberculosis of the tonsils, may also be of this origin. And as the infection may spread from the glands of the neck to the glands of the thorax, that many cases which have apparently originated in connection with the lungs and respiratory tract are truly of alimentary origin.

Yet granting all this, it must only be the more weakly children living under bad hygienic conditions or children peculiarly susceptible, who are liable to this mode of infection, otherwise it is difficult to understand how, with bovine tuberculosis so very rife, the majority of the children in certain districts do not die from this form of disease.

Lastly, it is necessary, I think, to call attention to what appears to be a faulty argument on the part of Professor Koch. "Hitherto," he states, "nobody could decide with certainty in such a case whether the tuberculosis of the intestine was of human or of animal origin; now we can diagnose them; all that is necessary is to cultivate in pure culture the tubercle bacilli found in a tubercular material and to ascertain whether they belong to bovine tuberculosis by inoculating cattle with them." The reasoning here appears to be not in complete harmony with the facts at our disposal. Were bovine tubercle bacilli very virulent for man and did they lead to a very rapid development of the disease, then in such cases it is quite possible that growing in the human body they would retain their original characteristics and would be peculiarly virulent for rabbits and guinea-pigs. But frequently, as is well known, these cases are of long duration, and where this is the case, even if of bovine origin, the bacilli, living and multiplying in the human organism, should gradually become modified and we should expect them to assume more and more the character peculiar to human tubercle bacilli. They would be modified by their environment, and it is doubtful whether by this test one could surely determine the origin of the infection in every or even in the majority of cases.

I do not mean here to say that there would be absolute correspondence between the bacilli taken

* (Note during passage through press). The late Sir R. Thorne-Thorne's well-known statement has always puzzled me, and that because, indirectly it may be, it does not appear to harmonize with the relative frequency of intestinal tuberculous lesions found in the post-mortem room. But such is his reputation for thoughtful and sound statistical investigation that I felt bound to accept his figures. Since sending in this Report my attention has been called to a series of letters in the Lancet, and British Medical Journa for 1898 and 1899 by Carr, Donkin, Guthrie and others, in which these figures were actively attacked, and it was pointed out tha the "Tabes Mesenterica" of death certificates in England is, in the majority of cases, non-tuberculous gastro-intestinal catarrh. If this be so, the strongest argument in favor of the frequent infection of the human being by bovine tuberculosis is rendered valueless.

from all cases of tuberculosis. As a matter of fact, and as Lartigan has recently shown (*American Journal of Medical Research*, N. S., Vol. No. 1, 1901, p. 156) there is a great variation in the virulence of tubercle bacilli derived from different cases of the disease in man. He indeed noted one case in which, from the slow development, ground glass appearance of the colonies and extreme virulence of the bacillus for guinea-pigs and rabbits, he was inclined to believe that he was dealing with bacilli of bovine derivation. I do not say that cases of this nature may not be detected, I only urge that the characters of the bacillus vary according to its host and to the length of the sojourn within the human body, and so the test is liable to be an uncertain one.

Summary.

In endeavoring to record as impartially as is in my power the various data we possess bearing upon this question of the intercommunicability of human and bovine tuberculosis, it may well be that detailing many facts, some of which upon first reading seem to point in the one direction, others in a direction diametrically opposite, I have left the unfamiliar reader uncertain as to my interpretation of the same, and as it is only right that the reader should expect from me possible definite conclusions that he should know what are my opinions, it is fitting that I should sum up the conclusions which I regard as safely to be deduced from our present knowledge of this subject. These conclusions are:

1. Bovine tuberculosis is easily conveyed from cattle to cattle and, whether by inhalation (the most common method), by the milk (in calves), by contamination of stalls and drinking water through the agency of the saliva and nasal discharge, through the genito-urinary passages, or by intrauterine infection (very rare), this transmission from one animal of the bovine species to another is far and away the commonest mode of infection in cattle, so common that *for practical purposes* all other modes may be neglected.

2. Human tuberculosis is transmissible to cattle. Pure cultures of these bacilli rarely cause infection. Mixtures of tubercle bacilli with other micro-organisms (as in sputum) appear to be more infectious. The difficulty in inducing artificial tuberculosis favors the idea that natural infection of cattle with human tubercle bacilli must be of singularly rare occurrence.

3. Swine appear to be fairly easily infected with both human and bovine tubercle bacilli and when infected with the former these gain an increased virulence for guinea-pigs and rabbits. But while through the use of infected milk these animals become frequently infected from cattle, conditions favoring the reverse process are rare. Thus, while it may occasionally be that swine, or possibly other domestic animals, act as intermediaries in the passage of tuberculosis from human beings to cattle, the conditions favoring such transmission from man to the hog, or from the hog to cattle, so rarely show themselves that again, for practical purposes, this mode of infection may be neglected.

4. If this be so, it should be possible to eradicate bovine tuberculosis in a region in which human tuberculosis continues to be widespread.

5. Human tuberculosis in the majority of cases is conveyed from human being to human being by inhalation, more rarely it is conveyed through the alimentary tract, still more rarely through the genital tract, through surface wounds, and, from the mother to the fetus, during intrauterine life.

6. Everything points to the fact, that in the main the bacilli causing infection in man are derived from previous cases of the disease in man.

7. By sojourn in the human body and passage from man to man the human tubercle bacilli have acquired properties differing from those acquired by bacilli which have passed through cattle: their shape differs, the rate of growth and the appearance of the growths outside the body are different; their virulence towards the animals of the laboratory is also different.

8. These differences are not, however, sufficiently marked or constant enough to permit us to conclude that we are dealing with distinct species. On the contrary, the evidence at our disposal points clearly to the fact, that in the different species of animals we encounter at most *races* of tubercle bacilli, which by growth in the bodies of animals of another species take on the characteristics of the race of bacilli peculiar to that species.

9. Bovine tuberculosis can be transmitted to man and this either through wounds or through the digestive tracts.

10. By passage through cattle the tubercle bacillus gains increased virulence for cattle, rabbits and guinea-pigs, but lessened virulence for man and (it would seem also) for carnivorous animals.

11. Save in the very rare cases of wound infection, there is a significant lack of evidence that bovine tubercle bacilli infect adult human beings.

12. It is infants and those of early age who are liable to be infected by the tubercle bacilli of bovine origin and this through the agency of milk. The statistics bearing upon the continued frequency of tuberculosis in children and upon the relative frequency of intestinal and abdominal tuberculosis in children must be accepted as conclusive evidence upon this point.

13. Even with children a consideration of the great frequency of bovine tuberculosis in certain regions and of the absence of any record of tuberculosis affecting those supplied from a given "milk round," leads to the conclusion that the bovine bacilli have not heightened virulence.

14. The few positive records we possess of direct transmission of tuberculosis from cattle to man through the agency of the milk indicate that infection is brought about only by the employment of milk of cattle which are very extensively diseased, more especially of those suffering from udder disease. Such milk contains enormous numbers of bacilli. In other words, large numbers of tubercle bacilli are required in order to infect human beings with bovine tuberculosis. This again is an indication that the bacillus cannot be regarded as having gained a heightened virulence for man, and that infection is not very readily communicated.

15. Animals showing physical signs of tuberculo-

sis (for mild grades of the disease afford no physical signs) and, above all, those exhibiting udder tuberculosis, should therefore be condemned and under no conditions should their milk be used for food.

16. Where there is tuberculosis in a herd, Bang's method should be employed, the animals reacting to tuberculin being separated from the healthy ones; the milk from the reacting animals for whatever purpose used, should be Pasteurized so as effectively to destroy the tubercle bacilli. (Vide previous Report.)

17. The great cause of infantile mortality is inflammation of the stomach and intestines (gastro-enteritis and diarrhea) and this is proved to be mainly brought about by the use of badly kept and fermenting milk. Wholly apart therefore from the question of tuberculosis it is imperatively necessary that greater care should be exercised by all concerned in the distribution of milk, the general measures taken to lessen this, the greatest scourge of childhood (prohibition of use of milk from cattle showing *any* form of sickness, Pasteurization of milk, etc.), will equally lessen the danger of the transmission of tuberculosis from cattle to man.

Had this been more fully realized at the agitation (in England more especially) for municipal and governmental supervision of the milk supply and for the distribution of pure milk and based upon what we know concerning contaminated milk in general and its dangers, rather than, as it was, upon the danger arising from the conveyance of tuberculosis, it is safe to say that Koch's address would not nearly had had the same deleterious effect.

But acknowledging this, Koch is by no means absolved from blame for the manner in which he published his conclusions. It was his duty to have pointed out that those conclusions did not effect in the slightest the legislative and other measures adapted to reduce the danger to cattle and to the agricultural community resulting from the spread of tuberculosis among cattle and the domestic animals. Not doing this he left it to be inferred that legislation against bovine tuberculosis is in excess of what is necessary. And this, it is right to protest, was little less than criminal on his part.

The Agglutination of Tubercle Bacilli.—Descos of Lyons, in the *Bulletin Médical* (December 28, 1901) criticises an article by Koch in the *Deutsche medicinische Wochenschrift*, (November 8, 1901) in which he finds fault with serodiagnosis as performed by the Arloing-Courmont method, and proposes two new methods for the agglutination of tubercle bacilli. His dry and moist methods are not only dangerous to the investigator, but take five times as long to give any results. While Koch believes that the power of agglutination increases with the immunity, Arloing and Courmont have shown that, in tuberculosis, the agglutination often appears in inverse proportion to the gravity of the disease and the resistance of the individual. Koch's results with agglutination in human subjects are exactly contrary to those found by French observers. He proposes the use of a new tuberculin, a mixture of TO and TR. From Koch's report of cases, Descos cannot see any benefit derived from the use of his new tuberculin; nor does he agree with Koch in any of his conclusions. [M. O.]

Original Articles.

SOME POINTS RELATING TO RENAL CALCULUS.

A CLINICAL LECTURE DELIVERED AT ST. GEORGE'S HOSPITAL, LONDON, DECEMBER 3, 1901*.

By SIR WILLIAM BENNETT, K. C. V. O., F. R. C. S.,
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As most of you know, the symptoms of stone in the kidney are proverbially uncertain and unreliable. You may on the one hand have a series of symptoms which are exactly like that described in the text books as certain evidences of renal calculus, and yet on investigation no calculus is found. On the other hand you may sometimes find a calculus of large size existing where no symptoms of stone worthy of the name have occurred. During the last ten days I have had three cases in the Hospital under my care which illustrate these uncertainties very clearly, and they will, I think, provide a very good text for our discussion this afternoon.

CASE 1.—The first of these cases was that of a man who is in the Fitz William ward. I have spoken of him before in another connection. He is 28 years of age and, so far as he knew, he was well until a year ago. At that time he began to complain of pain in the back, chiefly on the right side, which was sharp but of variable severity. At times the pain shot down the groin into the testicle, being occasionally diverted, without any ascertainable reason, down the thigh. From time to time he passed blood in his water, but there had been no increased frequency of micturition, and the act of micturition had not been painful to him. Lately he had noticed, in addition to the blood in the urine, that there was in it a thick sediment, and with the occurrence of this sediment the pain about his loin, which was always on the right side, had increased. Upon examining the man, it was found that he was a thin, delicate, poorly nourished individual, complaining of the pain I have mentioned, and on carefully examining the right side of the belly, to which he referred the pain, there was found, at the angle between the erector spinae and the last rib—which is the typical situation for tenderness in renal calculus—very distinct evidence of tenderness on pressure. In addition there was, around about that side of the belly, very distinct rigidity of the muscles, those on the opposite side being normal in their softness and in their ordinary characteristics. There was a large scar at the back of the scrotum, and in this scar was a small sinus—very small indeed—through which he said from time to time a few drops of water, which he thought to be urine, flowed. This case was obviously a complicated one. On examination, the urine was found to be acid and of high specific gravity, containing a certain amount of red blood, and some pus. Upon examining the urethra, a stricture was found, as of course was expected, seeing that there was a small sinus in the perineum, which I have mentioned, through which urine leaked. It was clear that we could not determine the actual condition of things in the belly without giving the patient an anesthetic, which was accordingly done. Then in the right loin there was found to be a very well marked tumor, of an elastic nature, occupying the space from the last rib to the iliac crest. Even under the anesthetic the muscles over this area became soft only after a great deal of difficulty, that is to say they became relaxed very reluctantly, a very practical point in cases of this kind. It was quite clear that we had to deal with a man who had many of the signs of stone in the kidney. He had also a stricture, with a well marked tumor in the right loin, and he had the aspect of a man who was suffering from tubercle. His temperature rose and fell in a very characteristic way: never reaching any point higher than 101°, but was never at any time normal.

*Specially reported for the Philadelphia Medical Journal.

Here, then, was a case in which it was necessary to distinguish between three conditions: stone in the kidney, tuberculous disease of the kidney, and pyonephrosis, the result of distention of the kidney from backward pressure connected with the stricture; it was further, of course, possible, that he might be suffering from two of these conditions in combination. Obviously, the first indication was to dilate the stricture and relieve the pressure on the kidney. This was done, and with the dilatation of the stricture, as the stream of urine increased in size, the tumor in the loin decreased somewhat, as it naturally ought to have done. But the tumor did not diminish to the extent that it should have done if it had merely been the result of dilatation from backward pressure connected with the stricture, which by the way had not been in existence for a very long period, at least to any grave degree. We were now reduced to two conditions, the question being whether the case was one of tubercle or whether it was one of stone. The ordinary tests for the presence of tubercle bacilli showed nothing, the evidence in that direction being purely negative. At the same time that of course did not altogether put the existence of tubercle out of court. Taking the case altogether as it stood, it appeared to me that most likely the man had stone, and of course the question naturally arose at the time, if my surmise proved to be right, as to the connection between the stone and the stricture? Was there any connection at all? In other words, had this stone formed in the kidney in consequence of the changes brought about in the organ by the backward pressure resulting from the stricture, or was the stone itself merely an accidental complication, quite independent in origin? I said in speaking of the case at the bedside that the stone, if existing, was an accidental complication, but that the stricture exercised a very great influence in determining the severity of the symptoms from which the man suffered. You will see the reason of that later on. Well, the kidney was explored in the ordinary way, and any of you who happened to be present at the operation will recollect that as I came down upon the kidney and began to divide the layers of fascia round about it, I said I thought, from the way in which they were uniformly adherent to one another, that the case would turn out to be one of stone and not of tubercle. It is very important in connection with cases of this kind to bear in mind that the peri-renal structures which are involved in the extension of inflammation from a calculous kidney will pretty generally be matted together, and that the matting will be uniform, so that each successive layer of tissue can be peeled off smoothly and intact. In the case of tubercle, on the other hand, you generally find that although the structures may be matted together, they are not separable in this easy manner, but that in parts they will be tightly clinging, and in parts they will be comparatively loose, so that in dealing with the layers you may find that you will unavoidably tear the tissues, and in some cases you will find caseous nodules between the structures, which account to a great degree for this peculiar lack of uniformity in the degree of adhesion of the various layers. This irregularity of adhesion is a very strong indication of the existence of underlying tuberculous disease.

Having exposed the kidney, I could feel no stone at all. The kidney was large, but not particularly full of fluid; in fact, it was flabby, yet I could feel no stone. But of course I proceeded further, as one always does, and upon opening the kidney on its convex side and passing a finger in, it came down almost directly upon a stone, and by the side of the finger as it entered flowed a good deal of pus, which was horribly foul. The pus which is around a stone in the kidney in these cases of calculous pyonephrosis, is probably as foul as any with which you meet. And the pus in this case was no exception to the rule. Although the stone was easily felt by the finger passing into the kidney, its removal was very difficult without breaking it into several pieces as it was much branched and very tightly fixed. It is very important, when extracting a stone from the kidney, that you should as far as possible get it out unbroken. Once a branching stone is broken, it is often extremely difficult to clean the kidney completely of stony material, because the little separate broken-off branches get into the remote parts of the calices or other little pouches and easily escape observation on the one hand and the wash of the irrigator on the other. In such a case, when the stone is very difficult to get out, the proper course is to make a *long* incision in the convexity of the kidney, by which no harm is done, so that you may extract the stone whole, as we did in this instance. We know that we have got the stone away whole because it is, as you see, smooth in all its parts and obviously intact. Supposing that in the extraction of this stone I had found one or more of these ugly branching processes broken off, I should have had to investigate the kidney again, in doing which I should have done a great deal more damage than was done by the very free incision which I made to enable me to extract the stone whole. The man has been very well since the operation. The purulent discharge continues, and is still going on, but it is gradually diminishing, and I think we shall save the kidney.

A very important point which arose in connection with this case is the following: The kidney was a good deal dilated and had undergone rather serious changes, and the question naturally arose at the time of the operation whether it would really not be better treatment to remove it than to try to save it. Why did I in this case not perform nephrectomy, for although the operation would have been more severe, the convalescence if all went well would have been more rapid? I have seen kidneys not worse than this man's removed as being more or less incurable kidneys, and I think I might have been tempted to remove the kidney except for one reason, and that was the co-existence of the stricture. You must please bear in mind what I said just now—that although the stone in this case had no pathological relation to the stricture so far as its origin was concerned, the course which the case took was mainly dependent upon the existence of the stricture. Had this man not had a stricture I think he would not have had pyonephrosis; he would have had the ordinary symptoms of stone in the

kidney without the suppuration and inflammation which he had when he came under observation, and without the blockage which led to the dilatation of the kidney. If I had felt convinced that all these changes in the kidney were due to the stone only, I should have taken the kidney out, because if such were the case I do not think it would have been worth while trying to save it. But seeing that the secondary changes were in my opinion due more to the stricture than to the stone, and having removed the backward pressure from the kidney by treating the stricture, I thought it better to try to save the kidney and remove the stone only. I was more especially induced to do this because in all probability, seeing the amount of backward pressure which had been exercised, the other kidney is involved in the same change, although perhaps not to the same degree, and the opposite kidney being therefore probably not a healthy one, it is far better under such circumstances to attempt to save a kidney which is damaged, even as this was, if possible, and I think in this case we shall do it. The urine is getting of better quality every day and the discharge from the groin is decreasing. Indeed the man's condition is altogether better, and his temperature is practically normal.

That is an example of a complicated case in which, although the signs of stone were in many respects quite clear, there was a counter-condition in the shape of a stricture, which might have been sufficient to account for the symptoms, because the blood might have come from the urethra, and the pain in the loin and down the thighs might have come from the pyonephrosis. Altogether, the case was difficult to diagnose, although it proved to be not an exceptionally difficult one to deal with.

CASE 2.—The next case is a very instructive one from another point of view. The patient is also in the Fitz-William ward; he is of middle age and his symptoms were very vague. He was well, as far as he knew, until three or four weeks before he came to the hospital. Since that date he had occasionally had severe pain in the left loin and this pain had on two occasions been associated with vomiting. There had been no pain in the testicle or thigh, and no pain in the groin; the pain was concentrated in the loin. Rest or movement, no matter if the movement were jolting or walking, had no effect whatever upon the character of the pain; it was more or less persistent and was uninfluenced by the position of the patient or by movement. With the exception of the pain and the vomiting there was no symptom pointing to stone in the kidney. The very points to which you are led to attach especial importance—increase of pain on movement, the occurrence of bleeding after movement, and the shooting pain down towards the thigh and into the testicle—were all absent in this case. In addition it is true he passed from time to time "red sand" in his urine, a matter of small diagnostic importance for, as you know, many people pass red sand in the water at intervals but very few of these develop stone in the kidney. This man, of whom I am speaking, was a stout, beefy looking man, just the sort of person who develops stone in the kidney; his appearance was, therefore, rather in favor of stone. He was robust to a degree and perfectly well, but this discomfort—he called it simply discomfort—was just enough to interfere with his doing his work properly. So he wanted relief. We had a skiagram taken of the loin, but the result was negative. There was no temperature, the urine contained some albumin but nothing else; the albumin was in considerable amount, at all events at first, but its quantity varied, sometimes it was more abundant and sometimes less so. Under the microscope no blood was seen. Upon manipulating the loin there was perhaps a little less softness on that side than on the other, but there was nothing like rigidity to be felt. Deep pressure elicited no tenderness, although he felt "as if there was something there" he said. Those were all the symptoms. The case was clearly a very vague one, but the man was insistent that he should have something done, and I accordingly cut down upon the kidney and examined it, as some of you will remember. I could feel nothing in the kidney at all upon manipulating it externally after exposure. It appeared to me a perfectly healthy kidney, but upon making an incision into the posterior border of it in the ordinary way and passing my finger into the pelvis, I found this kidney-shaped stone, which I show you. Here, then, is an example of stone in the kidney in which the symptoms, excepting the vomiting—which might occur from several causes—and the occasional slight attacks of pain, which might also have occurred from any cause, were non-existent.

CASE 3.—The next case shows the other extreme, the patient is a girl upon whom I operated to-day. She is twenty-eight years of age and is in the Drummond ward. Her illness began at about the commencement of October in the present year. Since then she has had many attacks of paroxysmal pain in the left side of the back. She is said to have passed blood in her urine on several occasions. Any movement, such as jumping or riding in an omnibus or in cabs or anything of that kind, immediately increased the pain and was occasionally followed by the passage of blood in the water—as typical a series of the symptoms of stone in the kidney as you could well have, the pain being concentrated in the left loin and passing down to the thigh. Nothing could be very much clearer than the symptoms I have mentioned as pointing to stone in the kidney. The pain which she experienced was generally associated with feelings of sickness, but she never actually vomited. She felt faint during these attacks of pain and sweated very freely. Those are exactly the signs which you generally get in stone in the pelvis of the kidney, especially if it is inclining to get into the ureter. The case up to that point appeared to be pretty clear so far as the treatment was concerned. The patient was thin but not unhealthy looking. Her temperature was a little above the normal, and, there was slight rigidity of the muscles in the left lumbar region, and some tenderness, but only on deep pressure. That is to say when deep pressure was exercised in the ordinary way between two fingers of opposite hands, one being placed in the angle between the last rib and the erector spinae and the other on the anterior abdominal wall opposite it, a sudden jolt being given with the hands in this position, the patient flinched. That is the characteristic test for pain in the kidney due to calculus, and her response to it was an additional sign of stone in the kidney. The urine was acid, on her admission, and normal, except that there was rather a heavy deposit of urates. There was no stone in the bladder. We had a consultation about her case, and as there was still, in spite of the symptoms, some doubt whether she had stone, because no blood had actually been seen by us in the urine, and as she looked rather delicate, it was thought better to let her go out for a time to see whether the symptoms would again occur. She came back about a week afterwards with the history that she had ridden on an omnibus two days previously and that the pain was thereby greatly increased and that an attack of hematuria followed. There was now no doubt as to the existence of blood in the urine, and the case therefore seemed to be complete. If in an examination paper you were writing about the symptoms of stone in the kidney in a woman you could hardly have made a more perfect answer than by giving an account of this particular case. This afternoon I cut down upon the kidney in the ordinary way but could feel nothing. I made an incision into the posterior border of the kidney and passed my finger into the pelvis, and found it perfectly healthy; certainly there was no stone there; it was absolutely normal as far as appreciation by touch could tell me, and its consistence was as it should be. I am perfectly certain that there is no calculus in this woman's kidney Yet her symptoms were as precise as they could be, except that a skiagram showed nothing, and negative evidence in such cases is practically valueless.

General Observations.

Those are three very excellent cases to show what I began by saying, that the uncertainty of the symptoms in cases of stone in the kidney is often very remarkable. The cases themselves illustrate that point sufficiently in themselves without emphasis from me, but there are some other points about the cases which are perhaps worth considering for a moment.

First of all with regard to the operation which is necessary in these cases. There is no operation, as far as I know, which is simpler than that of cutting down upon a kidney if it is done in the right way; if it is done in the wrong way you may find yourselves in all sorts of difficulties, a contingency which of course is not peculiar to operations on the kidney. If, when cutting down upon the kidney, the incision is made from the angle between the last rib and the erector spinæ downwards and forwards, to the crest of the ilium, you can expose the kidney without meeting any vessel which requires ligature, and you need divide very little muscular structure at all. This incision conducts you directly to the point you aim at, which is the anterior border of the quadratus lumborum muscle. Having exposed in that way the peri-renal fat—it is not always so easy to expose the kidney itself, because it will sometimes slip away from you in a peculiar way—the operation of opening the kidney on the left side, although you might at first expect the contrary to be the case, is associated sometimes with a little more difficulty, and perhaps a little more risk, if there be risk in these cases, than in the case of the kidney on the right side. In exposing the kidney by making your way through the peri-renal tissue, of course you must bear in mind that there is in relation to the kidney, although you ought, under ordinary circumstances, not to see it in an operation of this kind, the colon below, and on the left side there is the spleen above. Under ordinary circumstances you see neither of them. But occasionally, as happened this afternoon, the first thing exposed in cutting down upon the kidney after passing through the parietes, is the lower border of the spleen, and it is even possible to mistake the spleen under those circumstances for the kidney. In addition, on the left side you will occasionally see rise up, as it also did this afternoon, the colon, which may sometimes pout into the wound, not because the incision had opened any improper part, but because of the way in which the colon is occasionally arranged on the left side. That at first sight does not appear to be a matter of much importance; but you must bear it in mind for this reason: in exposing the kidney by denuding it of its surrounding fat, it has happened on more than one occasion that the colon has been torn, and a hole made into it. That would have been extremely easy this afternoon if I had not borne in mind that there was a possibility of the colon coming within the areas of the operation. You saw it bulged up freely by the side of the kidney; and had I, in separating the peri-renal fat, been a little too rough or too free with my manipulations, I might readily have wounded it. That has been done without the operator having been aware of it at the time of operation; an empty colon might be opened without under the circumstances any immediate sign of the damage being noticed. The first sign of the colon having been damaged in a case which I saw but did not operate upon was the escape of feces from the wound at the first dressing. These two points are worth bearing in mind in connection with exposing the kidney on the left side: the possibility of the spleen coming into the way, and the danger of the colon coming into the field of operation with the consequent danger of its being wounded under certain circumstances.

So much with regard to the details of the operation. Of course I need hardly say that I suppose no surgeon in these times would ever think of saying that a kidney contained no stone until he had passed his finger into the renal pelvis. It is sometimes questioned whether, in so freely incising a kidney as we do, and passing a finger through the tissue, there is not some danger of subsequent permanent damage arising, but no damage seems to ensue, and the scar in the kidney seems to be of no disadvantage. There is at all events not so much likelihood of damage arising from the injuries caused by passing the finger through the renal substance as from a stone which has been overlooked in consequence of imperfect investigation. In the second case I have mentioned I should certainly not have found the stone by any external manipulation, and had I not cut into the kidney and passed my finger into it I should have failed to find it.

You will have noticed how very much the symptoms varied in two of the cases, how much trouble the stone seemed to give in the first case and how very little in the second. There is a practical bearing in this fact. Speaking generally, you will find that smooth *movable* stones give rise to more symptoms than spiky *fixed* ones. At first this sounds unlikely. But a movable stone, *i. e.*, one which rolls about or changes its position from time to time as determined by circumstances, will give rise to more pain and discomfort than a branched stone which is firmly fixed. Heavy pressure upon a kidney containing a branched stone may produce an amount of tenderness greater than that which would similarly be caused in the case of a kidney containing a smooth stone like the one I show you; but as I have said, speaking generally, a small smooth movable stone will produce more actual pain and will respond more to the ordinary tests which are used for diagnosing stone in the kidney than a larger stone which is fixed. Now in the case of this stone, which was firmly fixed in the kidney, so firmly that I had some difficulty in getting it out, you will remember the symptoms were very acute. If you look at the stone you will see at once that it is coated with phosphates. It was not the shape and the spiky character of the stone which gave rise to so much trouble: it was the condition of the urine in which the stone lay. The pelvis of the kidney was in a condition of inflammation; there was pyonephrosis, and the urine was foul with pus and deposited large quantities of phosphates. It is the

condition of the urine which is commonly responsible for some of the worst symptoms in these cases. It is an important practical point, as well as very useful for examination purposes, to bear in mind that whether the stone be in the bladder or in the kidney, the trouble and pain is very greatly in proportion to the amount of phosphatic deposit upon it. Exception to this statement may be taken in certain cases of phosphatic stone in the post-prostatic pouch, but speaking generally, is perfectly accurate.

One other point is worth consideration: What will happen in the third case which I have described; that in which I operated this afternoon and found no stone? Has that operation been a justifiable one? In other words, after our experience today, am I in a position to say that the operation will be for the patient's benefit, or at least that it will do no harm? I can say positively that, supposing all goes well, as I suppose it will, the operation will almost certainly cure the patient. I cannot exactly explain to you why a cure should come about, but as a matter of fact in a large percentage of cases of renal trouble in which precise symptoms of stone have been present, as they were in this case, and in which at the operation no stone has been found, a cure has followed. The explanation of that I am not, as I have already said, quite prepared to give you; it has been said by some that the bleeding from the kidney is the cause of the cure; I think it quite as likely that the cicatricial contraction, which follows in the kidney subsequently, leads to some alteration which brings about a cure. There is one remote possibility which we cannot neglect in cases like this. I have told you that if things go well with this girl, as I have very little doubt they will, she will probably be cured. But there is one condition which may prevent anything of that sort occurring. It is just possible that a stone exists in the opposite kidney. Cases have been known in which symptoms just as precise as they were in this girl were caused by a stone lying in the kidney opposite to that to which the symptoms pointed. The practical bearing of this is that in the event of the symptoms recurring the opposite kidney should be explored and no further operation be done upon the one which has already been dealt with. These are cases of what are called crossed symptoms from renal calculus; they are rare but not so rare as to be ignored with safety. I do not anticipate anything of the kind in this woman; I quite expect she will get well. A very practical point in her case is this: although we have operated upon her under the belief that there was probably a renal calculus and found none, we have not done a wrong thing, we have done what was quite right from a surgical point of view. Of what may follow I cannot be sure, but I think she will be cured unless the complication to which I have alluded exists. Be that as it may I think you will find the cases I have discussed both interesting and profitable if you will give them a little consideration.

THE PROGRESS OF KNOWLEDGE CONCERNING VENOM AND ANTIVENENE. A SYNOPTICAL REVIEW OF THE LITERATURE OF THE PAST FIFTEEN YEARS.

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(Continued from page 332.)

T. Lauder Brunton (*British Medical Journal*, Jan. 3, 1891) pointed out that the venom contained in the heads of the "Fer-de-lance" was destroyed by alcohol, while that contained in the glands of cobras was not. He concludes, therefore, that the venoms of those two serpents are chemically different. He agrees with Wolfenden that the peptone of Mitchell and Reichert is probably an albumose, as it is precipitated by ferrocyanide of potassium which peptones are not. Brunton and Sir Joseph Fayrer, as well as Mitchell and Reichert, agree that the potassium permanganate which was first recommended for the treatment of snake-bite by Winter Blythe (*The Analyst*, Feb. 28, 1887, p. 204) is the best local antidote. They all agree that strychnia, first recommended by Dr. Moeller, of Victoria (*Allahabad Pioneer*), is the best physiological antidote. Brunton thinks that one grain of it may be necessary to combat the effects of venom when the snake has been large and the bite serious. It should be given in repeated small doses until its effects are evident. Brunton observed that when frogs swallow cobra venom, it has a very irritating effect upon the gastric mucous membrane and produces vomiting. As vomiting is a frequent symptom of invenimation, he concludes that it may depend upon an eliminative effort on the part of the alimentary apparatus, and goes so far as to suggest that in cases which recover from the primary effects of the venom to die later, death may result from reabsorption of the venom thus eliminated; that the treatment of venom poisoning should be combined with the destruction of whatever poison may be thus eliminated with alcohol in the form of whiskey or brandy, and that the reported beneficial effect of whiskey in the treatment of snake-bite may depend upon the local destruction of venom in the stomach by the alcohol rather than upon its action on the heart and respiration. He notes that a man can be bitten while drunk and die. These opinions have been experimentally confirmed by Alt (vide infra, L. P. 18). Brunton quotes Fayrer as suggesting that the immunity of serpents to their own venom depends upon the absorption of the contents, of their venom glands, and regrets that the death of all his snakes prevented him from trying the experiment of ablating their glands and noting the persistence or disappearance of their imunity. (This suggestion is of importance in connection with the experiments of Phisalix to which reference will be made later).

In a lecture at the Victoria Institute upon "The Venomous Snakes of India and the Mortality Caused by Them" (*British Medical Journal*, 1892, p. 620) Sir Joseph Fayrer remarked that the cobra is the most formidable of the Indian snakes. It is found throughout Hindoostan, and is equally

dreaded and fatal wherever met. Other snakes are, however, destructive to life, notably the "krait," the "kupper," Russell's viper (the "hamadryas") and the "raj-samp." The mortality from snake-bite in India is very great. The average loss of life during the eight years ending in 1887 was 19,800 human beings and 2,100 head of cattle yearly. Throughout India in 1889 there were 22,480 human beings and 3,793 cattle killed by snakes, while 548,415 snakes were destroyed at an expense of 23,556 rupees. In 1890 there were 21,412 human beings and 3,948 cattle killed, while 510,659 snakes were destroyed at an expense of 19,004 rupees. The average result for all the provinces showed a mortality of one to every 10.153 population in 1890 as compared with one in every 9,673 in 1889. To reduce this annual loss it is necessary to make known the appearance and habits of poisonous snakes and initiate proper rewards for their destruction.

E. Vollmer (*Archiv für experimentelle Pathologie und Pharmakologie*, 1892-3, Vol. No. 31, p. 1-14) "Ueber die Wirkung des Brillenschlangengiftes" found:

(1). A preservation of 16 years had not observably altered the virulence or operation of cobra venom.

(2). In frogs poisoned with 0.3-0.5 cc. of a 1 per cent. solution of cobra venom, in spite of the occurrence of paralysis of respiration, the heart continued to beat so strongly and so rapidly that the circulation seemed to be uninjured.

(3). There was a distinct paralysis of the peripheral motor nerves.

(4). Mechanical disturbances of circulation and important changes in the blood can be excluded from explaining the rapid affection of the respiratory center.

W. H. Welch (Transactions of the First Pan-American Medical Congress, Washington, 1893 vol. 1, p. 354) together with C. B. Ewing, made some interesting experiments to determine "The action of Rattle-snake Venom upon the Bactericidal Properties of the Blood." A rabbit was fatally poisoned with venom and immediately after its death the blood collected from the large veins. Control blood was obtained from a healthy rabbit. The bactericidal power of the blood was tested by introducing into the sera obtained from these bloods, cultures of the bacillus anthracis, and of the cobra bacillus. It was found that while normal serum destroyed thousands of the respective bacilli, the venom serum had lost this power. It is supposed that the rapid decomposition of the bodies of those who die of snake poisoning, as well as the extensive suppurations, etc., from which they suffer, may depend upon this cause.

Calmette published in the *Annales de l'Inst. Pasteur*, March, 1892, vol. VI. p. 160, a paper upon "The Venom of the Naja tripudiens," which was the first of a series of most excellent and important contributions. Concerning cobra venom he found it neutral in reaction and readily soluble in water and dilute alcohol. It is precipitated by strong alcohol, ether ammonium, tannin and iodin, the precipitates being soluble in water. It does not adhere to precipitates of phosphate of soda as do the toxins of diphtheria and tetanus. There is no apparent precipitate with 10% NaCl or Na_2SO_4. Placed in a dialyzer with NaCl and $(NH_4)\ SO_4$, it dialyzes slowly, 1 cc. of the fluid being necessary to kill a pigeon, while of the whitish albuminous looking fluid remaining upon the dialyzer 5 drops were fatal.

Heat does not readily destroy the venom. Exposure to +90° C. for an hour does not destroy its activity, but simply retards its effects. Exposure to +97° C. on a water-bath does not destroy it, but exposure to +98° C. for 10 minutes takes away all its strength. Fifteen days' exposure to 38° C. in the incubator did not alter its virulence. When deprived of air and enclosed in sealed tubes, it lost power rapidly when exposed to the sun.

The venom is most quickly fatal when introduced into a vein, next most fatal when injected into the subcutaneous tissue. The serous membranes absorb it more slowly and a larger dose is required to kill than is necessary upon subcutaneous inoculation. Calmette surmises that this depends upon destruction of some of the absorbed venom in the liver. Upon the conjunctiva the venom acts as a violent irritant, being almost as active as jequirity. This effect is entirely destroyed by heating to +90° C.

When introduced into the trachea, the venom is absorbed with fatal results. It can be swallowed with impunity if there is no lesion of the mucous membranes. Introduction into the colon of the guinea pig is without effect.

When animals are bitten by venomous snakes or experimentally injected with venom, the blood that flows from the wound, being mixed with the venom, is poisonous when injected into other animals, but the circulating blood of the poisoned animal is not poisonous.

The injection of cobra venom is not very painful but causes a hyperemia and slight edema of the surrounding tissues. The absorption of the venom takes place so rapidly that when a rat was inoculated in the tail, and the tail cut off in five minutes, the animal died in an hour—only twenty minutes longer than when the tail was not amputated. Another experiment in which, after inoculation into the tail, the member was cut off in one minute, was followed by death in 4 hours and 8 minutes. Cobra bites are fatal in from 25 to 45% of the cases, according to circumstances. Venom is fatal for all mammals, for birds, for batrachians, for fish, and for some invertebrates, as leeches. Serpents are, however, immune to it.

In mammals the intoxication is followed by a general lassitude. The pupils half close, the animal assumes an attitude of repose, but gets up occasionally and walks about supporting itself with difficulty. Soon it is seized with nausea and vomiting and suffers from respiratory anxiety.

"Il appuie sa tête sur le sol, la redresse en cherchant à aspirer l'air, porte ses mains à sa bouche, comme pour arracher un corps étranger du pharynx. Il vaille sur ses membres et se couche sur le côté, la face contre le sol. Le ptosis s'accentue et l'asphyxie complete survient bientôt. Le coeur con-

tinue à battre cinque minutes au moins après que la respiration a cessé, puis il s'arrête en diastole."

Cadaveric rigidity comes on very quickly and persists up to the time of beginning putrefaction. During the last moments of life the pupils fail to respond to light. Sensibility is preserved intact. The electrical sensibility of the muscles of the face persists, but that of the limbs and trunk is almost entirely abolished. Spasmodic opening and closure of the sphincters occurs together with discharges of urine, feces and spermatic fluid in the male. Birds suffer from similar symptoms, but asphyxia comes on much later, probably because of the reserve supply of air in the wing bones. They flap their wings, repose with the back on the floor of the cage and have frequent convulsions.

Frogs suffer much longer before asphyxiated because of their cutaneous respiration, usually living 30 hours after receiving a quantity of venom fatal to a rabbit in 10 minutes.

Fish succumbed in 5 hours from a quantity fatal to pigeons in 20 minutes.

Calmette points out that the oculo-motor symptoms and the progressive bulbar palsy indicate that the venom acts upon the nuclei in the floor of the fourth ventricle. The peripheral nerves are not affected even by immediate contact. If the spinal cord of frogs is severed below the medulla and they are then inoculated in the thigh, they die in nearly the same time as control frogs.

The venom has no direct action upon the muscles either voluntary or cardiac.

When mixed with blood, cobra poison does not alter the corpuscles in any way. After death the blood coagulates very quickly.

Concerning antidotes Calmettes' opinion is, that permanganate of potassium, while it is capable of destroying the poison when directly mixed with it, is unable successfully to attack it in the tissues, and entirely unable to do good when injected into the circulation. He therefore prefers chloride of gold, which destroys the venom *in vitro* and is also able to follow it into the tissues. One can inject considerable quantities of chloride of gold under the skin, into the muscles and into the serous cavities without any danger. Tissues freshly impregnated with chloride of gold are incapable of absorbing venom. The solution used is 1:500, and of it from 1 to 5 cc. were used to impregnate the tissues of the experiment pigeons, fowls and rabbits.

For successful treatment he found it unnecessary to inject the venom into the wound, as its introduction at a considerable distance from it was sufficient surely to preserve the animal's life, if it was given before symptoms of intoxication came on.

"Le chlorure d'or, introduit en suffisante quantité dans les tissues d'un animal inoculé avec une dose mortelle de venin de cobra, même, en dehors du point d'inoculation de ce venin, empêche l'intoxication de l'animal pourvue que l'on intervienne avant que des symptômes d'asphyxie bulbaire se soient manifestés."

Intravenous inoculation of the chloride of gold is, however, not practicable.

Calmette says in this paper that his attempts to produce immunity to the venom failed.

A number of interesting papers by Phisalix upon the venom of the Salamander terrestre deserve mention as of importance in connection with subsequent works.

"Nouvelles experiences sur le venin de la salamandre terrestre (Compt rendu de l'Acad. de Sciences de Paris, 1889. Tome. 109, p. 405; also Compt. rendu de la Soc. de Biol. de Paris, 1889, 11 Series. T. 1, p. 658, Sept. 2).

The venom which is secreted by certain of the cutaneous glands is known as salamandrin.

1. One-tenth of a millegramme of the chlorhydrate of salamandrin is fatal to a mouse; 1.8 mg. is fatal for 1 kilogramme of dog when subcutaneously administered.

2. Much smaller doses are fatal and the poison much more rapidly fatal when intravenously administered.

3. Introduced directly into the stomach of a dog, 8 to 10 mg. per kg. of animal are without effect. Mice and guinea pigs are refractory to 10 to 20 milligrammes.

4 mg. placed upon the tongue of a dog weighing 1 kg. causes distinct salivation followed by convulsions, general palsy and death in 35 minutes. Dogs can gradually become accustomed to the venom, so that a dog of 2 kg. received within a month a number of doses, beginning with 0.25 mg. and ending with 4.0 mg., without harm, while a control dog which received 4 mg. in 24 hours died.

Neither the larvæ nor the adult salamander is immune to its own venom. Large doses cause death with palsy and convulsions. Even by pricking the skin of the salamander freely so as to cause the superficial capillaries to absorb its own venom, the death of the animal may be brought about.

Phisalix and Langlois, "Action physiologique du venin de la Salamandre terrestre" (Compt. rendu de l'Academie de Sciences de Paris, 1889, T. 109, p. 482, Sept. 16) continued the study of the venom, finding that in mammals it caused inquietude, hallucinations, fear, convulsions of the trigeminal distribution, facial and ocular muscles, dyspnea, somnolence and death. Because of the convulsions the temperature ascends to +43° C. Death follows cramp asphyxia. If artificial respiration is maintained, the animal continues to live for a very long time. The poison does not exert any important action upon the heart.

C. J. Martin and J. McG. Smith (*Jour. and Proc. Roy. Soc.*, New South Wales, 1892, XXVI, 240-264) give an account of "The Venom of the Australian Black Snake (Pseudechis porphyriacus)." (This paper is known to me only by reference. I was not able to refer to the original.)

Phisalix, in a paper, "Sur quelque points de la physiologie des glandes cutanées de la Salamandre terrestre" (Compt. rendu de la Soc. de Biol. de Paris, May 3, 1890, 9 Series, T. 11, p. 225), discusses the physiology of the secretion of this cutaneous venom and shows how the specific glands appear not to be under voluntary control but stimulated to action by the slightest reflex provocation. The venom appears upon the skin as small drops of a creamy liquid.

The secretion of these specific glands is acid,

A continuation and elaboration of the study of this cutaneous poison by Phisalix and Contejean is found in "Nouvelles Recherches Physiologiques sur les Glands à Venin de la Salamandre Terrestre" (Memoirs de la Soc. Biol. de Paris, 9 Series, Tome III, p. 33, March 14, 1891).

Still further study of cutaneous venoms by Phisalix and Bertrand (Compt. rendu de la Soc. de Biol. de Paris, May 6, 1893, 10 Series, Tome V, p. 477, and Compt rendu de l'Acad. des Sciences de Paris, May 8, 1893, Tome 116, p. 1086). They also published an interesting paper upon the "Toxicité comparée du sang et du venin de crapaud commun, considerée au point de vue de la secretion interne des glandes cutanées de cet animal."

The primary consideration which led to this investigation was the probability that the immunity of venomous serpents to their own venom depends upon an absorption (internal secretion, as Brown-Sequard would say) of the venom.

It being well known that the secretion of the dermal glands of the toad, as well as its blood, are poisonous, it seemed well adapted to the experimental investigation of the problem. The investigators found that extracts made from the blood and dermal glands of the toad possessed identical physiological activities, and hence conclude that the glands impart to the capillaries circulating among them, some of their secretion, which, being retained in the blood, plays an important rôle in the physiology of the species in which it occurs.

Memoranda of these observations are also published in Brown-Sequard's *Archiv. de Physiologie*, July, 1893.

K. Alt—"Ueber die Ausscheidung des Schlangengiftes durch den Magen" (*Münchener med. Wochenschrift*, 1892, XXXIX, 724, Oct. 11th, No. 4) calls attention to the frequently recorded observation that vomiting is an almost constant symptom of poisoning by venomous snakes, and the statement that dogs that vomited freely did better than those that vomited little, led Alt, who had previously studied the elimination of alkaloidal poisons by the stomach, to investigate whether in invenimation the poison was thus excreted. He found it to be so eliminated, and that its reabsorption was attended with danger. He believes that the effect of alcohol, which had been so highly recommended, is in precipitating this venom, and that it is by so doing rather than by its stimulating effect that the alcohol does good in the treatment of bites.

Persuing the same thought, Phisalix investigated the blood of the salamander—"Toxicité du Sang de la Salamandre Terrestre" (22nd Session Association Francaise pour l'Avancement des Sciences, Besancon, 1893, Ière Partie, p. 257, Séance du 10 Août) —and found that 2 cc. of the serum or blood of the salamander injected under the skin of a frog seriously depresses it and makes voluntary movement impossible, although involuntary movements, trembling and reflex movements, are active. Later these also cease and it cries dolorously when placed on the back and cannot turn over. After 6 to 12 hours the animal recovers. Chlorhydrate of salamandrine produces identical results, so that it may be inferred that the poisonous character of dermal secretion and blood are identical.

(To be continued.)

ORTHOPEDIC CASES.*

By JAMES K. YOUNG, M. D.,
of Philadelphia.

RECOVERY FROM POTT'S DISEASE WITHOUT DEFORMITY.

The most common result after recovery from spine disease is with more or less deformity. It has been customary to tell patients that the deformity which is present at the time they consult the surgeon cannot be overcome by treatment of any kind, but that some diminution of the deformity may be brought about from compensatory changes above and below the kyphosis. This was before the introduction of Calot's operation, and the growth of forcible correction of deformity by various methods.

It seems possible to the writer to prevent the occurrence of deformity by early and persistent treatment and the cases here recorded are illustrations of recovery from Pott's disease without any deformity. To accomplish this the patients must be taken to the surgeon very early, they must be treated thoroughly and efficiently for a long period. The following cases illustrate this recovery:

CASE 1.—W. N. M., ** was referred to me by Dr. Horace G. Wetherill, of Trenton, N. J., now of Denver, Col. Patient was white, male, aged 4 years, of good family history and well nourished. At the first examination the deformity was seen to be marked, his body was thrown forward and to the right. His right thigh was markedly flexed. He walked with a decided limp and complained of pain in the region of the right hip. The object of the consultation was to decide whether the lesion was in the hip or the spine. The deformity was due to spasm of the psoas muscle, in addition to which there was a marked prominence of the first, second, and third lumbar vertebrae.

Taylor's spine brace was applied, constitutional remedies administered and all injury guarded against. Recovery was rapid and uneventful, and the result is a perfect cure without any deformity and with perfect flexibility of the spine in every direction.

CASE 2.—K. R., white, female, aged 13 years, father tubercular, mother in good health, consulted me at the Philadelphia Polyclinic in March, 1898, suffering from a well marked paraplegia with a slight but well recognized deformity of the 5th, 6th and 7th cervical vertebrae. The neck was so shortened that apparatus was applied with great difficulty, the head resting upon the shoulders. The body was covered with a rash and the paraplegia was in the first stage. A spine brace was applied, with head piece, and the paraplegia gradually disappeared, the neck lengthened and the result was a perfect recovery. This is one of the most marked and satisfactory recoveries from cervical tuberculosis which the writer has ever seen, and at the Polyclinic it attracted considerable attention.

CASE 3.—R. C.,** male, aged 4 years, maternal grandmother died of phthisis. The child was admitted to the University Hospital in July, 1894. The first symptom was noted in April, 1893; the child screamed and was rigid at night. A severe chill occurred three weeks later, attended by muscular spasm. Upon examination marked lordosis was apparent. A Taylor brace was applied and internal medication administered. Patient complained of pain in the sitting posture. The spine was arched and a fluctuating tumor was felt in the left iliac region. I operated July 20, 1894, under strict antiseptic precautions. The incis-

*Read by title before the American Orthopedic Association, June, 1901.

**The Philadelphia Polyclinic, August, 1898.

ion was made along the outer third of Poupart's ligament, the pus evacuated, and a counter opening made a little above the sacro-iliac junction. Iodoform dressings were applied. The sinus healed July 5, 1895, and the recovery continued, leaving absolutely no deformity at the seat of the disease.

CASE 4.—M. S., Italian, female, aged 6 years, was sent to the Polyclinic Hospital by Dr. M. Hermance Oakley. On inspection the left hip was flexed, the abdominal walls tense, and there was a swelling in the left inguinal region. An anesthetic was administered and the tumor was found to be a lumbar abscess resulting from tuberculosis of the lumbar spine. The following day through and through drainage was established, and the patient made an uninterrupted recovery, both sinuses being healed three months after the operation. The deformity in the spine entirely disappeared, and has not returned.

Perfect recovery from spine disease can from time to time be obtained in the cervical and lumbar regions, but the writer has never seen a patient recover from Pott's disease in the dorsal region, without deformity. Recovery is accomplished by the early treatment of the patient, and it may sometimes be expedited by the early application of a well-fitting spine brace. The prone position should be required for a long period from time to time. In all of the reported cases the bed treatment has been employed from the acute stage of the disease, after which the patients were permitted to walk for a very limited length of time each day.

In dorsal caries the patient may be prevented from sitting up in bed by the use of a heavy netting of rope fastened over the top of the crib.

THE TREATMENT OF LATERAL CURVATURE.

Increased experience has confirmed the opinion that any form of lateral curvature which may be benefited at all by treatment is best treated by light gymnastic exercises. The methods which have been before described* have been amplified by the addition of an introductory portion. This consists of light exercises taken in the horizontal position lying on a table. In addition to these special attention is given to breathing exercises. The treatment otherwise does not differ from that formerly described, consisting as it does of four parts:

1. The developing of the weak muscles by exercises adapted to them individually or collectively.
2. Slight over-development of the weak muscles.
3. Uniform development of all the muscles.
4. The use of eight special movements to prevent relapse.

In the second part the over-development of the weak muscles is accomplished by first finding the best voluntary position which can be assumed by the patient and then taking all the exercises in that position. In taking these special, or keynote, positions, the arms may be placed at different angles. This keynote position places the muscles in the best possible relation for exercising. The use of the spiral movements, such as the keynote, forward, sideways turning, have been found to be very beneficial, and the writer has not met with any of the bad effects from these movements referred to by some other writers. The studies of Lovett would seem to prove that the twisting and turning movements of the body might have the effect of correcting rotation of the bodies of the vertebræ. Special attention should always be paid to the development of the lower extremities, both because these are frequently unequally developed, and because it is necessary to have a firm base of support upon which to erect a straight superstructure.

In taking all these movements for the correction of the curvature, the greatest care should be exercised, and the patient should be constantly under the observation of the surgeon. The tendency of surgeons to relegate the treatment of lateral curvature to trained assistants is to be condemned, and the preference should be given to treatment by trained assistants under the daily supervision of the surgeon.

The treatment should be given daily for periods of from three to six months, preferably the latter, and the tendency to insert new exercises from time to time in order to please the individuals is not to be recommended. A certain amount of variety may be permitted, but it is better occasionally to change the exercises, returning frequently to those which are found to be the most beneficial, or, better still, to continue those which are the most useful, supplementing these from time to time with others.

The use of massage after the exercises have been taken is a subject which is deserving of some consideration. The writer is of the opinion that patients do better who have daily massage after their exercises than those who do not. The massage should consist of several different movements intended to improve the weaker muscles, to divert the blood from the spinal column, and to rest the patient after the exercises.

The exercises should be taken daily except Sundays and during the menstrual period. During the summer the exercises may be modified, and in many instances it is best to discontinue them all together, depending upon the out-door life of the individuals for the necessary exercise.

Patients who are being treated for lateral curvature should not be permitted to attend school, since school life not only fatigues but interferes with the proper amount of rest required by the individual. Patients should not be permitted to go out in society, nor be encumbered with social engagements of any kind. The writer has had one patient, under twelve years of age, who kept a visiting list, and sometimes had as many as eleven engagements a day. The morning of each day should be devoted to the treatment, and at least two hours in the afternoon should be spent in the prone position. Late hours should be avoided, and evening entertainments should be interdicted. All games which employ one side of the body more than the other should be forbidden. And the possibility of the one-sided games producing lateral curvature should not be forgotten. The writer has met two patients otherwise very well developed who became deformed from playing ball to an unusual degree.

the active principle being a convulsing poison. After ablation of the cerebral hemispheres or section of the bulb the glands entirely cease secreting.

*New York Academy of Medicine, Nov., '96.

THE SURGERY OF THE SPINE

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(Concluded from 336.)

We must also remember that this includes all of the patients who were operated on immediately, many of whom would in all probability have died of the shock alone. Thus we find out of 27 affected in the cervical region, operated on immediately, 21 died, while out of the 10 operated on at a later period only 2 died; in the dorsal region, out of 49 operated on immediately 23 died, while of those who were operated on later, only 5 died from a total of 63. Even in the lumbar region the same disproportion exists; thus, from 6 immediate operations, 4 died, while from 22 done at a later period, only 4 were fatal.

The inserted table shows the results better than any description I can write.

Cervical Region.	Immediate Operation.	Later Operation.
Deaths	21	2
Recovery	0	2
Improved	2	1
Not improved	0	4
Subsequent death	4	3
	27	12

Dorsal Region.	Immediate Operation.	Later Operation.
Deaths	23	5
Recovery	4	10
Improved	9	18
Not Improved	6	16
Subsequent death	7	16
	49	65

Lumbar Region.	Immediate Operation.	Later Operation.
Deaths	4	4
Recovery	1	6
Improvement	1	6
No improvement	0	4
Subsequent death	0	2
	6	22

Sacral Region.	Immediate Operation.	Later Operation.
Death	0	0
Recovery	0	1
Improved	0	3
Not improved	0	0
Subsequent death	0	0
	0	4

These statistics are decidedly against immediate operation and we must urgently advise never operating until it is evident that the patient will not succumb to the direct effects of the injury. As soon, however, as he has recovered from the shock and his exact physical condition is known, the operation should be performed.

This emphasizes the fact, which is already recognized, that the cervical is the most dangerous region for operation, and at the same time the least satisfactory in its ultimate result. The results in the dorsal region have improved since the earlier statistics, due probably to the improvement in technique, the greater rapidity with which the operation is done, and the fact that operations are done earlier than was formerly the case. The lumbar region shows a surprisingly small number of surgical interventions when it is taken into account that the safety of the operation in this region and the decided improvement following it was emphasized in all the earlier papers on this subject.

I cannot but feel that some of the incomplete recoveries recorded have been due to incomplete relief of the compression. Unless the operator has had considerable experience in spinal surgery, it is a very easy matter to overlook a compressing point. It is essential, in order to make the operation perfectly successful: 1. to remove enough laminæ absolutely to settle the fact that there is no remaining compression of the cord; 2. to chisel off any projecting bone, whether it be a portion of a vertebral body or bodies, or one or more articular processes; 3. to remove all blood clots, even though laminæ of unaffected vertebræ have to be removed to get beyond the hemorrhagic area; 4. to look out for thickening and compression resulting from inflammatory processes or injuries of the structures within the vertebral canal. It is sometimes difficult to be absolutely certain whether all compression has been done away with, but one usually recognizes the fact that the cord is smaller in the exposed area than it should be, and that its pulsation is not complete, not as full as in a normal cord. Care should be taken, therefore, that the cord dilates to its full extent, and that the pulsation returns. This can happen only where the cord has not been completely destroyed. And if the operator cannot be sure of this fact without opening the dura, he had better make an incision and definitely determine whether the integrity of the cord has been preserved. He will also somtimes recognize the fact that the dura is discolored, looks as though there had been an intradural hemorrhage, and while this accident, if it has occurred, has probably produced more or less disintegration of the cord itself, the dura should be opened and this blood clot extirpated, for one may look for a certain amount of regeneration in the cord provided it is relieved from the compression at a sufficiently early period and has not been completely destroyed.

After commenting on the former statistics of the operation, Keen said: "With such statistics before us it is impossible to draw any other conclusion than that the operation is advisable in case extension directly after the accident fails to reduce the deformity. Of course, the limitations arising from the time that has elapsed since the accident, the region involved, and the severity of the lesion must be given due weight in reaching a conclusion in any given case. In an instance therefore of such gravity followed by such an immense percentage of deaths, if no operation be done it would seem to be advisable with our present experience, in all suitable cases to give the patients the real though often desperate chance that operation offers and that the operation should be done at a much earlier period than has hitherto been the rule." If this was the conclusion reached after a careful weighing of all the data presented up to that time, how much more emphatically may we advise operation with the present statistics before us.

The question may be asked: What are the dangers

of the operation? And this applies equally to all conditions in which laminectomy is indicated. We have already spoken of the shock, and this necessarily includes the anesthetic, but, with our improved methods of handling shock at the present time, this need be much less than formerly. In the cervical region, one must remember the dangers of phrenic paralysis when the third and fourth, or even the fifth and sixth cervical vertebræ are interfered with, and here it is advisable that the operator should manipulate the cord as little as possible. Hemorrhage has been spoken of as a serious danger, but we have not found it so. If one is not accustomed to operate in this region, he will lose much time in attempting to control bleeding by the application of hemostatic forceps. This is hopeless. If, however, he is prepared to make a rapid clearing of the laminæ and then pack the wound for a few minutes with firm compresses, the extravertebral hemorrhage will entirely cease. The hemorrhage arising from the vessels about the dura may be somewhat troublesome, but it usually stops in a very short time, and in our experience has never proved dangerous. In the cervical region, if the injury includes the costo-transverse foramen, hemorrhage from the vertebral artery, which has proven fatal several times, must be guarded against. Formerly the loss of cerebro-spinal fluid was feared, but a number of cases have since been reported in which this oozing went on for weeks and large quantities were lost, yet the patient survived and eventually recovered. In one of my cases a fistula persisted for ten or twelve weeks with no appreciable inconvenience to the patient. If the dura is opened, and closed again with fine catgut, or fine silk, there will be but little escape of cerebro-spinal fluid. The weakening of the spine is perhaps an important element, particularly in those cases in which a portion of a displaced body or a projecting articular process or processes have to be removed. Here supporting apparatus should be employed and the method of wiring the vertebra, as suggested by Hadra, may be considered. Finally, operation on that part of the spine below the first lumbar vertebra, in which we find only the cauda equina, comes under rather a different ruling from those in which the medulla itself may be affected. Here the lesion is a nerve compression or nerve section and the results of operation would not differ from operative measures undertaken upon nerve tissue in any other part of the body.

Pott's Disease.—A certain number of these cases is undoubtedly amenable to operative interference. Unfortunately in many instances of Potts' paraplegia mechanical treatment is persisted in, even though there is an increasing compression, or even after it is evident that there is little or no chance of recovery by this means. In cases far advanced in Pott's disease, with long-continued pressure or with tubercular lesions in other parts of the body, or with a general sepsis, or amyeloid degeneration, the operation can be of little benefit. But where the tubercular lesion is in the posterior portion of the spine, or where an abscess has formed, the other organs not being involved, and where it is possible by following up this abscess by careful surgical dissection, provided the undertaking can be done comparatively early in the disease, we may hope for a better result. Why should tubercular disease of the spine be treated differently from tubercular disease of other bones, especially when it is taken into consideration that the damage to surrounding structures is here more serious, far-reaching and permanent than almost anywhere else in the body?

I have operated upon fifteen patients, all of them unfortunately in advanced stages of tubercular disease, without a single operative death. Two of these cases were successful and the others died from an advancement of the tuberculosis. There would be more hope for these patients could we see them earlier, before general tuberculosis has intervened or before the pressure upon the spinal cord has produced degenerations which are irremediable by operative or other means.

No surgeons would undertake an operation of this magnitude where there was any chance of recovery by other means, but there still remains a considerable number of cases that occupy debatable ground, in which the chances of recovery without operation are very slight, in which continued mechanical treatment yields little or no result, and in which an extension of the disease may render the patient hopeless if it does not destroy life. Such cases had better be operated upon.

There is another class of cases which shows a progression of the disease in spite of all care, and in which a degeneration is set up threatening the integrity of the cord.

This may be due to a pachymengitis, to a tubercular deposit in the canal, to a gradual increase in the kyphosis, causing bony pressure, to an inflammatory thickening along the ligamentum subflava, to caseous deposit around the tubercular focus, to rupture of an anterior abscess into the canal or to pressure from such an abscess, or to debris from a tuberculosis of the body or other portion of the vertebræ being forced into the canal, or to sequestra.

These cases should be operated upon as early as possible. While there are any chances of recovery by other means, operation should not be undertaken, but care should be taken lest the operation be postponed until an ascending myelitis destroys all chance of recovery. The first sign of ascending degeneration should be the signal for immediate operation.

Cases of posterior spinal involvement with paraplegia should be operated upon, for here the lesion is easily reached. The removal of the involved laminæ and the clearing up of secondary deposits in the bodies or articular processes, with the proper removal of plastic material or other causes of compression, will place the patient in a far better position than he can be if only mechanical measures are depended upon.

The same rules in regard to the regions invaded apply here as they do in fractures. In all of my operative cases I was surprised to find that the cause of the pressure was tubercular debris and granular tissues rather than bony pressure, and as this was gradual in its growth or deposit, although the para-

plegia may have been sudden, the pressure on the cord was seldom very intense, and consequently there was more or less recovery of function almost immediately.

I have succeeded in tabulating 154 cases, and of this number, 128 are sufficiently complete to be included in the statistical results. The total uumber of deaths occurring as a result, or near enough to the time of the operation to be attributable to it, was 21, or 16.45 per cent. The total number of recoveries was 37, or 28 per cent.; of improvement, 16, or 12.5 per cent.; of unimproved, 18, or 14.06 per cent.; of subsequent deaths, 36, or 28.2 per cent.; total, 128.

In the tabulation of the subsequent deaths I have been perhaps unnecessarily strict. Many who have shown a recovery from paraplegia or very decided improvement are included in the list. My reason for this is that in the majority of instances these patients died of sepsis or of pulmonary tuberculosis and should not be included if we accept the theory that those patients with advanced sepsis or tubercular disease in other regions than the spine, or with advanced disease of other viscera should not be operated on. They have, therefore, not been counted in the list of recoveries, improvements or non-improvements, but have ruthlessly been classed among the subsequent deaths. One cannot but be impressed with the percentage of mortality and recovery when it is considered that these patients are almost without exception in wretched physical condition when the operation is performed. It is also perfectly evident that if the mechanical treatment is stopped as soon as it is evident that the disease is not arrested by it, and before marked sepsis, cystitis or destruction of the cord supervene, the result of the operation must be much improved.

It is also exceedingly important to consider the region involved. Thus we find that in the cervical region, of 18 patients, 5 died immediately following the operation, while an equal number recovered. Only 3 were improved; 1 was not improved and 4 died subsequently. At least 2 of the immediate deaths were the result of hemorrhage following wounding of the vertebral artery when the transverse process and the vertebral foramen were involved. This must, therefore, be carefully considered in operations in this region, as well as paralysis of the phrenics which follows manipulation of the cord in the region of the third or fourth cervical vertebræ.

In the dorsal region, as we should expect, the conditions are somewhat improved. Here we have by far the largest number of cases—103. Of these, 16 died from the effects of operation, 15.54 per cent., as against 27.77 per cent. in the cervical region; 29 recovered, 28.15 per cent., as against 27.77 per cent. in the cervical. The ratio of difference, it will be noticed, is exceedingly slight. Dorsal improvement is 10.67 per cent., as against 16.66 per cent. in the cervical. This is in favor of the cervical region. There was no improvement in 5.55 per cent., in the cervical region, and in 15.54 per cent. in the dorsal, while the percentage of subsequent deaths was 22.22 per cent. in the cervical and 30.09 per cent. in the dorsal. The chief difference, therefore, seems to be in the ratio of deaths, and if care is taken to protect the vertebral artery and the origin of the phrenic nerves in the cervical region, its results should compare much more favorably with those of the dorsal region. There are too few cases in the lumbar region to serve as a basis of comparison.

Tumors.

This field of surgical activity only dates back to 1887. Gowers and Horsley were the first to undertake any operation for intravertebral tumor, but since then many other surgeons have had satisfactory results. It is true that tumors involving the spine had been operated on earlier, but they were favorable cases in which there was an extravertebral manifestation. Of the 58 reported by Gowers and Horsley, all the patients died except the one operated on by Mr. Horsley, yet 80 per cent. of these could have been completely relieved by operation, and those which were hopeless might have been benefited if the pressure had been removed. The careful studies made by Starr, Mills and Gowers and many other observers have enabled the surgeon to do brilliant work in this class of cases. There can be no question of what one would do in a case of extravertebral tumor producing pressure on the cord, and with the present status of laminectomy there is no reason why any intravertebral tumor should not be attacked with every confidence of an improvement in the patient's condition.

In compression of the cord, not amenable to medical treatment, surgical intervention should be the rule. The neurologist now localizes these regions so accurately that there is little difficulty in determining the point of the spine to be attacked, and as most of these tumors are small, owing to the confined space in which they develop, the area of the vertebral column which is to be removed is of very small moment. Chipault collected 22 cases of operations on spinal tumors, and Keen added 3 more: 11 of these patients recovered, 11 died, and the result in 3 is uncertain. I have been able to collect 51; of these 16 recovered, 4 improved, 2 were unimproved, and 5 died immediately and 23 some time after the operation.

In the cases reported by Keen I find that he includes my own case of fracture of the third lumbar vertebra, in which the compression was due to callus. If these are to be regarded as cases of tumor, I have had several instances, both in the Pott's and fracture classes, in which I have operated that might be tabulated. While the conditions are identical, I do not feel that these cases should be classified among tumors, and have therefore not included them.

Table of Growths, Region and Frequency.

The following table gives the different growths that have been recorded, as well as the region and frequency of their occurrence.

Kind	Number	Intradural.	Extradural.	Unclassified.	Intra Vertebral	Extra Vertebral	Cervical	Dorsal.	Lumbar.	Sacral	Recovery.	Improved	No Improvement.	Death from Operation	Subsequent death
Cancer . . .	2		2		1	1		1	1						2
Abscess .	2		2			2		2							2
Sarcoma .	15	1	7	2	5	1	2	12			1	2		2	9
Myxosarcoma	1	1						1					1		
Echinococcus	8	1	7		2	3		3	3		3				5
Myxoma	1	1									1				
Connective tissue mass	2		2					2			2				
Unclassified	10	4	4			2		9			4		1	2	2
Lymphangeoma	2		2		1				2		1	1			
Psammoma	2	1		1	1			2			1				1
Chondro-sarcoma	1		1					1				1			
Osteo-sarcoma	1		1			1		1							1
Lipoma	3	1	1			1			2	1	2				1
Enchondroma	1					1		1					1		

A glance at this table immediately explains the large number of deaths recorded, but not due to operative interference. For instance, 2 were carcinoma, 2 abscess, 9 sarcoma, 5 echinococci, 1 osteosarcoma. It is at once evident that a complete and radical cure was impossible in many of these, and yet no one, who has witnessed the sufferings that these patients have to bear and the relief they obtain when the pressure is removed, will say that the operation was unjustifiable. Only 9 per cent. have died as a direct result of the operation itself. In the 23 dying some time after the operation, there was marked relief from the intense pain and general discomfort, and it may be considered an established fact that the patient was more comfortable and died a less horrible death than would have been the case without the operation. The recoveries here are 31.37 per cent., with only 9.80 per cent. immediate or operative deaths. Undoubtedly earlier diagnosis and a consequent earlier operation will improve these results.

Spinal Anesthesia.—Finally, just a word to show that spinal anesthesia has not been forgotten. First suggested by Corning, of New York, it has lain dormant for years to be revived with great force when associated with a foreign name. It is yet *sub judice*. My own opinion in the matter is that gradually it will adjust a place for itself, having a given application but never displacing the more common anesthetics. In some instances it fails utterly and in others the excitement incident to the operation taken together with the poisoning from the cocaine has produced hysterical conditions closely bordering on mania.

It is not free from danger, either to the life of the patient or to the integrity of the cord, and is distinctly unsafe in the hands of any but the most skilled operators, who are thoroughly versed in aseptic details. Its field of operation will probably be found in operations on the lower part of the body in patients who are not in a safe condition to stand a general anesthetic. As a general rule it will be found, I believe, that patients prefer unconsciousness to a knowledge of what is going on about them during an operation, as well as relief from the actual pain. I should hardly care to use spinal anesthesia for operations upon the anterior portion of the urethra, for instance, as has been advised, when an equally satisfactory result may be obtained by the injection of a few minims of cocaine into the glans penis.

It has been demonstrated that the analgesia begins in the parts farthest removed from the site of the injection, and lasts longer in that area.

The feet and legs, therefore, offer the most favorable field for operation. Fowler says that spasm of the quadriceps tendon in suture of the patella was the only difficulty experienced. So, too, in the areas of the perineum, anus, etc., the method is singularly successful and the time limit of anesthesia, 45 minutes, sufficient for nearly all purposes. In hernia there may be some pain when the ilio-inguinal and ilio-hypogastric distributions are involved.

Incisions below the umbilicus may be made, but the peritoneum may give pain, and if inflamed even locally, may necessitate recourse to general anesthesia. The area of the kidney is also included in the analgesic field.

Fowler says subarachnoid lumbar cocainization is applicable to a large number of operations. It is simple, easy—without danger. It involves a very small loss of time, does away with at least one skilled assistant, the anesthetizer, and will permit of the performance of very many operations with the help of nurses, or even of non-professional persons alone.

No contraindication to its use in the areas in which it is applicable has as yet developed, save those pertaining to the mental state of the patient and purely esthetic considerations, of these latter the operator in the case must be the judge and come to a conclusion as to the choice between the employment of a general anesthesia and subarachnoid lumbar puncture. The patient's own wishes in the matter should not be ignored, since, under certain circumstances, his morale may be so interfered with as to lead to serious psychic disturbances.

Neurasthenia and Old Age.—Pierre Parisot has studied 174 neurasthenics, aged from 60 to 96 years. Three of them were women. Care was taken to exclude all but true neurasthenia. 27 cases developed after the patients passed their sixtieth year. Neither arteriosclerosis nor old age itself can cause neurasthenia. But lithemia or gout, with arteriosclerosis, predisposes to neurasthenia. There is always a nervous heredity found; when this is slight, neurasthenia may not develop until late in life. Old women seem more disposed to neurasthenia than old men; or neurasthenia which appeared early in life and is apparently cured, will reappear in old age. The majority of the cases were cerebro-spinal in type. Headache occurred in 26 of the 27 cases, and vertigo was common. Senile neurasthenia differs but slightly from that of adult age. Parisot believes that senile neurasthenia certainly predisposes to dementia. (*Revue Medicale de l'Est*, August, 1901, No. 15.) [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended February 14, 1902:

SMALLPOX—United States.			Cases.	Deaths
DISTRICT OF COLUMBIA	Washington	Jan. 25-Feb. 1	2	
CALIFORNIA:	Los Angeles	Jan. 25-Feb. 1	1	
	San Diego	Jan. 25	1	
	San Francisco	Jan. 26-Feb. 2	3	
ILLINOIS:	Belleville	Feb. 1-8	1	
	Chicago	Feb. 1-8	2	
	Danville	Feb. 1-8	2	
	Freeport	Feb. 1-8	1	
	Galesburg	Feb. 1-8	1	
INDIANA:	Evansville	Jan. 25-Feb. 8	13	
	Indianapolis	Feb. 1-8	25	
IOWA:	Clinton	Feb. 1-8	2	
	Ottumwa	Dec. 28-Feb. 1	13	
KANSAS:	Wichita	Feb. 1-8	1	
KENTUCKY:	Covington	Feb. 2-9	2	
	Lexington	Feb. 1-8	2	
LOUISIANA:	New Orleans	Feb. 1-8	3	
MARYLAND	Baltimore	Feb. 1-8	8	
MASSACHUSETTS:	Boston	Feb. 1-8	4	1
	Brockton	Feb. 1-8	1	
	Cambridge	Feb. 1-8	4	
	Everett	Jan. 25-Feb. 8	4	
	Fall River	Feb. 1-8	1	
	Holyoke	Feb. 1-8	1	
	Lowell	Feb. 1-8	1	
	Malden	Feb. 1-8	1	
	New Bedford	Feb. 1-8	1	
	Newburyport	Jan. 27-Feb. 8	3	
	Somerville	Feb. 1-8	1	
MICHIGAN:	Bay City	Jan. 27-Feb. 8	12	
	Detroit	Feb. 1-8	3	
	Ludington	Feb. 1-8	11	
MINNESOTA:	Minneapolis	Jan. 27-Feb. 3	15	
MONTANA:	Butte	Jan. 24-Feb. 2	1	
NEBRASKA:	Omaha	Feb. 1-8	15	
NEW HAMPSHIRE:	Nashua	Feb. 1-8	3	
NEW JERSEY:	Camden	Feb. 1-8	8	1
	Jersey City	Feb. 2-9	11	
	Newark	Feb. 1-8	53	7
NEW YORK.	Binghamton	Feb. 1-8	1	
	New York	Feb. 1-8	41	10
OHIO:	Cincinnati	Jan. 31-Feb. 7	12	
	Cleveland	Feb. 1-8	3	
	Dayton	Feb. 1-8	3	
	Hamilton	Feb. 1-8	3	
	Toledo	Feb. 1-8	2	
PENNSYLVANIA	Allegheny City	Feb. 1-8	1	
	Norristown	Feb. 1-8	1	
	Philadelphia	Feb. 1-8	116	20
	Pittsburg	Feb. 1-8	1	
RHODE ISLAND	Providence	Feb. 1-8	1	
SOUTH CAROLINA	Charleston	Feb. 1-8	2	
	Greenville	Jan. 25-Feb. 8	1	
SOUTH DAKOTA	Sioux Falls	Feb. 1-8	2	
TENNESSEE:	Memphis	Feb. 1-8	15	
	Nashville	Feb. 1-8	4	
TEXAS:	Houston	Feb. 1-8	22	2
WASHINGTON:	Tacoma	Jan. 24-Feb. 2	3	
WISCONSIN:	Fond du Lac	Feb. 1-8	3	
	Green Bay	Feb. 2-9	4	1
	Milwaukee	Feb. 1-8	7	
SMALLPOX—Foreign.				
AUSTRIA:	Budapest	Jan. 15-21	15	
	Prague	Jan. 11-18	3	
BELGIUM:	Antwerp	Jan. 11-25	6	1
BRAZIL:	Rio de Janeiro	Dec. 21-Jan. 12	94	94
CANADA:	Halifax	Jan. 25-Feb. 8	3	
	Quebec	Jan. 25-Feb. 3	30	3
	Winnipeg	Jan. 25-Feb. 1	10	
COLUMBIA:	Cartagena	Jan. 26	2	
GREAT BRITAIN	Liverpool	Jan. 19-25	8	
ITALY:	Naples	Jan. 18-25	1	1
	Rome	Dec. 16-21	1	1
RUSSIA:	Moscow	Jan. 4-18	1	6
	Odessa	Jan. 11-25	3	3
	St. Petersburg	Jan. 12-25	12	2
	Warsaw	Jan. 4-11	2	
SPAIN:	Coruna	Jan. 18-25	1	
URUGUAY.	Montevideo	Dec. 28-Jan. 1	17	4
YELLOW FEVER.				
BRAZIL:	Rio de Janeiro	Dec. 21-Jan. 12		15
MEXICO.	Vera Cruz	Jan. 25-Feb. 1	1	1
CHOLERA.				
JAVA:	Batavia	Dec. 7-14	3	
STRAITS SETTLEMENTS	Singapore	Dec. 21-28		1
PLAGUE—Insular.				
HAWAII:	Honolulu	Jan. 23-24	2	
	Kauai, Eleele	Jan. 22-26	3	
PLAGUE—Foreign.				
BRAZIL:	Rio de Janeiro	Jan. 4-12	8	

ZEITSCHRIFT FUER HEILKUNDE.

October, 1901. (22. Jahrgang. Vol. X. No. 3.)

1. The Pathogenesis of Pancreatic Cysts. PAUL LAZARUS
2. Gonococci, the Complications, and Metastases of Gonorrhea. KARL SCHNEIDER.

1.—In 1882 Gussenbauer first correctly diagnosed a **cyst of the pancreas** and cured the patient by operation. Since then over one hundred such cases have been reported Lazarus describes his experimental investigations upon dogs, and twelve preparations of cysts of the pancreas which were in the Vienna Museum. His article is detailed and interesting. Ligation of the duct of Wirsung never caused cyst-formation, though lobular secretory stasis followed circumscribed proliferation of the connective tissue in the walls of the pancreatic ducts. When part of the pancreas was ligated off from the rest of the gland, cirrhosis and atrophy of that part followed with slight dilation and proliferation of the glandular acini. Complete stoppage of secretion caused hemorrhagic pancreatitis with necrosis and finally cyst-formation. Following the injection of pancreatic juice or inflammatory material, or following injury to the glandular substance, necrosis of the fatty tissue occurred. With mild injuries, the resulting pancreatic hemorrhage was rapidly absorbed. Some proliferation of the connective tissue may then follow, possibly becoming widespread. This can produce cyst-formation by causing stenosis of the ducts; secondly, the flow of secretion from the injured parenchyma can cause necrosis of the interstitial fatty tissue, forming cystoid cavities; or thirdly, cysts may result from the effect of the secretion collected, upon the hematoma and surrounding tissues, while reactive inflammation at the periphery forms the cyst wall. Pathogenically pancreatic cysts may be of two kinds. (1) those which are formed from the ducts and acini, by proliferation, as is most common; by rentention, with chronic pancreatitis; or by degeneration, with infectious pancreatitis, and (2) the cystoid form, following softening; autodigestion, after injury; or the effusion of blood and pancreatic juice, following rupture of the pancreas. A full bibliography is given. [M. O.]

2.—Schneider found that during the past fifteen years **gonorrhea** formed about 4% of all diseases, and half of all the veneral diseases, reported in Austria. Complications occurred in 25%, only two thirds of 9000 cases being simple, uncomplicated gonorrheal urethritis. Severe prostatitis is rare, while cystitis occurs in about 4%, with renal troubles frequently following. Epididymitis and orchitis occur in [illegible] and seminal vesiculitis is almost as general. The lymph-glands are but rarely affected, though lymphangitis of the penis may occur. In women, gonococci were found in 36%. Vulvo-vaginitis, cystitis, nephritis, endometritis, salpingitis, ovaritis, and peritonitis may be gonorrheal. Many of these cases showed mixed infection. Gonorrheal mastitis has also been reported. Gonococci may cause puerperal infection and joint suppuration. Gonorrheal conjunctivitis may occur, followed by nasal and middle ear disease, and even stomatitis has been noted. Among the metastases of gonorrhea are arthritis, endocarditis, phlebitis, pleurisy, periostitis, osteomyelitis, abscesses, parotitis, irido-choroiditis, insanity, etc. Besides, general pyemia may result from gonorrheal infection. In spite of frequent experiments, no immunity has yet been secured to gonorrhea. Schneider advises prophylaxis and strict treatment in all cases. [M. O.]

The Influence of Variations of Temperature Upon Experimental Tuberculosis.—Lannelongue, Achard, and Gaillard describe a series of experiments in the *Bulletin Médical* (October 16, 1901, No. 82) upon the effect of variations of temperature upon the evolution of tuberculosis in guinea pigs. From these experiments it was noted that brusque variations of temperature, while compatible with the life of healthy guinea pigs, precipitated the progress of the infection in the inoculated animals in a striking manner [M. O.]

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A New Policy for this Journal.—When, four years ago, the **Philadelphia Medical Journal** entered the field of medical journalism, it was desirable that it should achieve a circulation quickly in order to accomplish its purpose of reaching a higher plane than that generally aimed at by journals of this kind. With this object in view the subscription price was fixed at the exceedingly low figure of $3.00 per year. In the time which has elapsed since its establishment, this journal has won a success and achieved a position of which both its promoters and its friends may well be proud. It occupies a front rank in the medical journalism of the world, and because especially of the thoroughness and intelligence with which its various departments are conducted, it holds a place in this country which is unsurpassed.

In order to accomplish and preserve all this, a maximum of literary and scientific talent must be employed. A glance at the pages of any one number of the Journal will demonstrate the fact that a high standard of literary and scientific excellence is attained and maintained, and a little reflection will convince any one that work of this quantity and quality has become worth more than the sum charged for it.

In this connection we desire to call our readers' attention to the fact that in the present state of medical science no physician is well equipped who is not supplied with some *one* medical journal that reflects in a measure the *whole* medical field. It is this lofty mission which we have assumed and are prepared to execute.

Beginning with the first of March the subscription price of the **Philadelphia Medical Journal** to all *new subscribers* after that date will be $5.00 per year. In order, however, to show our appreciation of the support and loyalty of all our old subscribers, we shall maintain the price at $3.00 per year for all subscribers now on our books, provided these subscribers, as a privileged class, shall hereafter send in their subscriptions in advance or remit promptly upon notice from this office at the expiration of their year.

It is believed that by this plan we are furthering the best interests of the **Philadelphia Medical Journal**, and at the same time giving our old subscribers a share in our prosperity.

Dr. Theobald Smith on Tuberculosis.—By a happy coincidence the medical world was treated last Saturday to two important papers on the Relation between Human and Bovine Tuberculosis. One of these, by Professor Adami of Montreal, we had the pleasure of publishing and commenting on in the **Philadelphia Medical Journal.** The other, by Dr. Theobald Smith, appeared in the pages of the *Medical News.*

The special value attaching to Dr. Theobald Smith's paper consists in the fact that the author is evidently in some sympathy with the stand assumed by Koch on this vexed question. In fact, Dr. Smith, as will be remembered by all American readers especially, was practically the originator of the idea that the bacilli of human and bovine tubercle are not identical—an idea which Koch seems to have adopted and elaborated without giving sufficient credit for it. In his recent paper Dr. Smith says: "As the broad student of infectious diseases Koch is correct, I think. The differences between bovine and human bacilli are too striking to lead the experimenter to any other preliminary conclusion." With all this, Dr. Smith is evidently unwilling to advance to the extreme position assumed by Koch, for in his conclusions he says that while there is no evidence to show that the bovine bacilli may indiscriminately affect the human subject, yet there is some evidence that bovine bacilli have been isolated from human beings, but that the successful transfer is uncommon, and depends upon conditions which still need investigation.

From these statements it appears that Dr. Smith is unwilling to dogmatize, and that he is in fact in a rather self-contradictory position. If Koch is right, then it is difficult to understand how it is correct to say that under some circumstances the bovine bacilli may infect the human subject.

The gist of Dr. Smith's article, it appears to us, is found in the statements that the bovine bacilli differ morphologically from the human bacilli and that the two varieties exhibit marked differences in their

virulence for various animals. These are tangible facts which anybody can understand, and they seem to offer a foundation upon which a future superstructure of reliable knowledge can be built. Beyond stating these facts, we do not see that Dr. Smith has materially cleared the ground. Still in doing this much, he has done very much indeed for the instruction of the general reader. For the expert bacteriologist his paper will no doubt prove a suggestive one along lines of future investigation.

The supreme difficulty in this whole problem, of course, arises from the fact that we are compelled in the case of the human subject to rely upon clinical, as distinct from experimental, evidence. We cannot inoculate the human subject. Dr. Smith's paper is of practical value in pointing out that from our present inadequate knowledge we have no right to relax our sanitary vigilance.

Insane Politics.—Governor Odell of New York has signed the bill abolishing the boards of managers of the state hospitals for the insane. His memorandum on the subject is merely a specious plea for economy. By picking flaws here and there; by marshalling all the sins of the old boards; by holding up to public obliquy some isolated acts of extravagance or negligence; by presenting grossly misleading figures and comparisons about the cost of construction and repair; by all these and similar devices he is able to present a plausible reason for this "reform" movement. We have neither space nor inclination to meet these arguments. We are quite willing to admit some of them, for these things are faults of human nature which are not confined to boards of managers of hospitals. Such faults have even been known to exist in state commissions and state legislators and state officials—and even in Governors. The fact that the old boards are to be abolished does not stand as a guarantee that the millennium has come in the management of the exchequer of the insane department of the State of New York.

But what Governor Odell has completely ignored in his rescript is the fact that he is deliberately making a big political engine out of the insane hospital, and that this new department of the state government will inevitably sink into the mire of politics. Perhaps this does not seem to be a half bad idea to Governor Odell; and it is just possible that some succeeding governors of New York may find the arrangement even more to their liking. If such a time and such governors ever come—if, in other words, the whole mechanism of New York's state charities for lunatics ever degenerates into a political machine—why, then, God help the insane poor of New York!

McCarthy's Supraorbital Reflex.—In the *Neurologisches Centralblatt*, 1901, No. 17, Dr. D. J. McCarthy, of Philadelphia, described a new reflex to which he gave the name supraorbital reflex. This paper has created not a little discussion in the foreign journals as to the nature of the reflex and to whom belongs the honor of first describing it. This reflex, caused by light tapping over the distribution of the supraorbital nerve and resulting in a few fine fibrillary twitchings in the inferior fibres of the orbicularis palpebrarum, is one of the most sensitive reflexes in the body. To this fact may be attributed much of the misunderstanding on the part of different observers as to its nature. A severe tap of the hammer, or undue excitement of the patient, is likely to lead to a semi-voluntary twitch of the lids, in order to protect the eye from injury. It is this gross movement of the lids that both Overend (*London Lancet*, January 25, 1902) and v. Bechterew (*Neurologisches Centralblatt*, No. 18, 1901, and No. 2, 1902) have mistaken for McCarthy's reflex. Overend, by tapping over the bridge of the nose, and v. Bechterew, by tapping over the malar bone, both outside of the distribution of the supraorbital nerve, have observed the reactive movement of the entire orbicularis muscle and have not differentiated it from the local fibrillary twitches in the inferior fibres of the orbicularis, which McCarthy lays so much stress on in his discussion of the reflex. Overend calls this reaction the "ophthalmic reflex" on account of the fact that it may be elicited from anywhere in the distribution of the ophthalmic nerve. v. Bechterew, after discussing the nature of this reflex, considers the name supraorbital misleading and suggests the name "Augenphänomen" or "Augenreflex." Hudovernig (*Neurologisches Centralblatt*, No. 17, 1901), after a very extensive investigation, came to the conclusion that the reaction in the orbicularis was due to an overflow impulse from the occipitofrontalis muscle. Neither v. Bechterew, Overend, McCarthy, or Sailer agree with him. v. Bechterew considers it a combination of a nerve reflex with indirect mechanical irritation transmitted along the periosteum, sheath and muscle fibres to the orbicularis fibres. Overend considers it a combination of nerve and periosteal reflex. Sailer (**Philadelphia Medical Journal**, 1901) agrees with McCarthy that it is a pure sensori-motor reflex. In a paper soon to appear in this Journal, McCarthy, working under the direction of Weir Mitchell, appears to have proven that it is a sensori-motor reflex in connection with the supraorbital nerve, independent of other nerve distribution.

The subject, at first glance, would not appear to

have sufficient importance to call forth such extended discussion. The importance of this reflex depends, however, upon whether the nature of the reflex is such as McCarthy describes it or not. If the former be the case, then it will have a distinct localizing value for lesions affecting the fifth or seventh nuclei in the pons for differentiating such lesions from those affecting fibres to these nuclei from the higher brain centres. As a matter of practical clinical experience the value of this reflex as an aid to pontine localization may be said to be established. Discussions as to priority of discovery are usually, if not invariably, useless, inasmuch as the credit is given to the one who creates a popular interest in the subject, independent of the real first observer. There is no doubt that the reflex described by Overend in 1896 closely resembles the reflex described by McCarthy in 1901, with the differences above referred to. The same might be said of the reflex first officially reported by v. Bechterew the month following McCarthy's report, although he had demonstrated it at a society meeting some time before. Hudovernig concedes to McCarthy the priority of publication, and until it has definitely been decided that these different observers are not referring to slightly different but distinct conditions, it is useless to attempt to assign the credit where it belongs.

Some Odd Effects of the X-Ray.—Kienböck, of Vienna, (*Interstate Medical Journal*, Jan. and Feb., 1902) in experimenting on pigeons with the X-ray found that the effects on the skin were not immediate but showed themselves after several days or weeks. Two weeks after the last exposure all the feathers of the back fell out, and later those of the breast, neck and cranium followed suit. The feathers of the wings, side and rump were only slightly affected. The downy feathers and the minute hairs of the skin were also lost. A fresh crop of feathers began to show itself in two days. The remarkable thing was that the X-ray was effective not only where it impinged directly upon the skin, but also at the place of its exit on the under side of the birds' body. This high degree of penetration does not obtain in man and mammalia generally, and is accounted for in birds by the existence of air-spaces in their anatomy.

Kienböck cautions physicians that severe burns and ulcers are caused alone by over-exposure, and that the operator can no longer shield himself behind a supposed idiosyncrasy of the patient. This potent agent should only be used by those who have become thoroughly expert with it, especially by studying its underlying principles and by experimenting on animals. The effects are in direct proportion to the strength or activity of the rays, and these qualities depend on various factors which must be fully understood by the operator.

The X-ray is evidently a giant in chains; he must be careful who unchains it.

St. Louis Tetanus Investigation.—The *St. Louis Medical Review* publishes the report of the Board of Health of that city giving the results of its investigation of the manufacture and distribution of poisonous diphtheria antitoxin. The Board finds that the horse from which the serum was taken on September 29, was found to have tetanus on October 2 and killed; that Dr. Amand Ravold, the city bacteriologist, knew of the poisonous character of the serum but failed to cause it to be destroyed; that the poisonous serum was distributed between October 10 and October 20, with fatal results as known, and that the bottling of the serum was done by the janitor, Taylor, who did not appear to know of its poisonous character, but whose course was reprehensible in that he obscured and retarded the investigation by conflicting statements under oath. In view of these findings the dismissal of Dr. Ravold and the janitor, Taylor, was recommended, and these two officials were subsequently removed from their positions.

This probably terminates this melancholy affair as an official incident, although some of the newspapers are demanding that criminal proceedings be instituted. In view of the facts, as known to the public, it is difficult at this distance to see how the St. Louis Board of Health could have acted differently. Dr. Ravold, who has always borne an excellent reputation, is left in a most deplorable position. We regret it exceedingly, but we trust some good may come from the case in the increased vigilance and sense of responsibility which the tragedy will inspire in all persons concerned in the manufacture of serums.

Killing the Indians.—Mr. D. A. Sanford, a missionary among the Cheyenne and Arapahoe Indians, has published a paper, which is abstracted in the *Literary Digest*, in which he criticises the policy and methods of the United States Government in the case of the American Indians. He says that there is much that is mercenary and unjust in the Indian Service, but what interests us most is the mortality caused by our educational methods. Mr. Sanford says that the government schools are expensive and are encouraged by interested parties who reap pecuniary returns from them. These schools, with their restraining modes of life, are fatal. Tuberculosis especially is to be feared. In one school, out of one hundred and twenty-five pupils, five died last

year from consumption. Ten per cent. a year of young converts have died of tuberculosis.

These facts seem to be in accord with what we have recently said in these columns—that the infectious diseases proverbially make havoc among uncivilized peoples. This has always been so in the case of tuberculosis and the American Indians. We are therefore a little inclined to be sceptical about Mr. Sanford's conclusions in reference to the schools. It may be no more just to charge the schools than to charge his mission-stations, for, as he says himself, there is a higher mortality among his communicants. But this is a conclusion he would probably not endorse, and we refer to it simply as showing how unfair it may be to lay the blame at the door of any one agency when more than one may be portals for infection.

Compulsory Vaccination in Spain.—The alcalde of Valencia in Spain evidently believes in compulsory vaccination, and means to have it in his bailiwick. He has issued a proclamation declaring vaccination compulsory, and indicating some methods for making it so. This edict makes interesting reading. Among its provisions are the following: All municipal doctors are to refuse to attend the sick poor unless the latter get vaccinated within twenty-four hours. All school masters are to demand certificates of vaccination from their pupils. Laborers employed by the city will not receive their wages unless they present certificates of vaccination. Mill owners shall demand such certificates from their employees under penalty of fine. Directors of jails, hospitals, almshouses, asylums and sanatoriums shall admit no visitors without certificates of vaccination. Paupers, sick or well, shall receive no assistance unless they submit to vaccination. Charity tickets "distributed on feast days" will not be honored unless accompanied by a certificate of vaccination. All applications for stalls and booths in public markets must be accompanied by such certificates or no notice will be taken of them. The name of no unvaccinated person shall be inscribed on the parish poor lists. Submayors are to visit and inspect all houses and enforce vaccination; and finally, the proprietors of hotels shall refuse to admit any one without proof of recent vaccination.

From all this it appears that the alcalde of Valencia is a veritable Lord Mayor, and means to have his people vaccinated. His motives are good, even though his "proclamation" reads a little as though it came out of the pages of Cervantes.

A New Method of Dealing with Opposition to Vaccination.—Some ancient storyteller relates that a petty despot in a Greek colony published some verses, which were promptly condemned by a local critic, who was promptly sent to the galleys for his presumption. However, the monarch took the strictures to heart, and, having revised his verses, sent for the prisoner and began to read them. In a few moments the critic gathered up his toga and started from the room. "Whither away?" said the tyrant. "Back to the galleys," was the reply.

We have the authority of the London *Sanitary Record* for the statement that a Liverpool magistrate has adopted the plan compelling all objectors to vaccination who come before him, in order to make the formal statement of their "conscientious scruples," as required by English law, to listen to the reading of a statistical pamphlet in favor of vaccination issued by the British Medical Association. As the reading occupies an hour, it is hoped that the knowledge of the unpleasant ordeal may have a deterrent effect, but while the plan is ingenious, it is rather hard on the magistrate, unless he can induce some of his subordinates to help him.

The Skull of Sir Thomas Browne.—When the author of the *Religio Medici* expressed a strong objection to having his bones "knav'd out of his grave," he may have had a prophetic vision of the zeal of the relic hunters of the nineteenth century. The skull of Sir Thomas Browne was obtained in 1840 by a workman having driven his pickaxe through the lid of the coffin. Since then it has been preserved in the Museum of the Norfolk and Norwich Hospital, in spite of some doubts of its authenticity. We learn from the *British Medical Journal* that Dr. William Osler, of Baltimore, has just presented to the hospital a beautiful silver-mounted glass case in which to preserve and exhibit the relic. On the supporting stand are placed four gilt plates on which are engraved the name of the donor and the following texts from the *Religio Medici*:

"I believe that our estranged and divided ashes shall unite again: that our separated dust, after so many pilgrimages and transformations into the parts of minerals, plants, animals, elements, shall at the voice of God return into their primitive shapes and join again to make up their primary and predestinate forms."

"At my death I mean to take a total adieu of the world, not caring for a monument, history, or epitaph, not so much as the bare memory of my name to be found anywhere but in the Universal Register of God."

"In these moral acceptions the way to be immortal is to dye daily. Nor can I think I have the true theory of death when I contemplate a skull, or behold a skeleton, with those vulgar imaginations it casts upon us."

Dr. Osler has thus paid a unique tribute to the memory of the medical author of a true English classic; but surely our accomplished American physician must have felt his own latent sense of humor stirring when he dedicated a casket of crystal and silver to contain what is left of the skeleton of the

man who wrote so quaintly that at his death he meant to take a total adieu of the world, and who did not relish the "vulgar imaginations" which a skull casts upon us. Alas, poor Yorick!

If there were anything poetical about smallpox, we should say there is poetic justice in the case of Dr. Immanuel Pfeiffer of Boston. This physician is (or was) an ardent anti-vaccinationist, and so convinced was he that there is nothing contagious in smallpox that he went to the smallpox hospital and visited the patients without the formality of vaccinating himself. The latest reports say that Dr. Pfeiffer has now developed a remarkably vigorous attack of smallpox of the confluent variety, and the world is wondering what effect the disease will have upon Dr. Pfeiffer's logical apparatus. But perhaps Dr. Pfeiffer does not possess such an apparatus.

There is something frightful to contemplate in the possibilities for destruction with which a great city like Philadelphia is threatened in its system of overhead wires. When the rain fell on Friday of last week and froze on the wires as it fell, the city in a few hours was not only cut off from communication with the outside world, and its property at the mercy of fire, but the lives of men and beasts were not safe on the streets. Why the electric currents were allowed to continue to run as long as they were, with the wires hanging and lying here, there, and everywhere, is hard to understand. Five men and many horses were electrocuted.

Current Comment.

AN ARGUMENT AGAINST KOCH.

One of the evil results following the publication of Koch's views on non-indentity of human and bovine tuberculosis is the increased sale of meat from tuberculous cattle. This was to be expected. It is claimed that Milwaukee packers at once began the sale of meat from cattle which were tuberculous.

—*The Colorado Medical Journal.*

"CHRISTIAN SCIENCE" IN GERMANY.

The German Emperor is stated to have no intention of allowing the mischievous and crack-brained disciples of Mrs. Eddy to have an opportunity of spreading their doctrines in the Fatherland. It will be interesting to see what steps the German authorities will be able to take in the matter, for while it is the duty of a Government to watch over the health of the people it cannot possibly be the province of any Government to decide what is and what is not correct medical treatment. It may be said that such a manifest absurdity as the theory of Christian Science cannot possibly pretend to be a system of therapeutics; but, unfortunately, that is just what it does pretend to be. The German Emperor will earn the gratitude of English and American legislators if he can devise a plan which will stop these silly persons from playing with the lives of their fellow-creatures and which will at the same time give no chance to refractory persons to say that the freedom of the individuals is being unduly curtailed.

—*The Lancet.*

THE SPITTING NUISANCE.

By a recent ordinance of the Boston Board of Health, the old regulation in regard to expectoration which was passed in 1896 and extended to 1900 is rendered more effective. It regards the deposit of sputum in public places as a nuisance, a source of filth and a menace to health, and therefore orders "that spitting upon the floor, platform, or steps of any railroad or railway station, or car, or from any electric car while said car is in the subway or elevated above the surface of the ground, or upon the floor, platform, or steps of any public building, hall, wharf, theatre, market, or any sidewalk immediately connected with said public places, be, and hereby is, prohibited." We suggested not long ago that the most effective way to suppress the spitting nuisance would be to induce women to take the matter into their hands. We are pleased, therefore, to learn that the Woman's Sanitary League of Philadelphia is endeavoring to secure the passage by the City Council of an ordinance which shall provide that persons expectorating in public shall be punished. The present order of the Board of Health is declared to be almost inoperative. The formation of a similar league in this country would, we venture to think, be highly advantageous in the promotion of what may be called the minor sanitary morals. The force of public opinion on such matters would find more effective expression in the glare and frown of a strong-minded woman than in a wilderness of pamphlets. And if silent reprobation proved insufficient, ladies of the type fitted for such a crusade might be trusted to discharge torrents of "rattling and indignant eloquence" on the heads of offenders. We are inclined to think that ordinances are unlikely to be of much use in the suppression of promiscuous expectoration. *Dux femina facti* should be the motto of antispitting crusaders.

—*The British Medical Journal.*

Correspondence.

INFORMATION WANTED.

By JOSEPH McFARLAND, M. D., of Philadelphia.

To the Editor of the Philadelphia Medical Journal:

I will be greatly obliged to any of your readers who may have had or know of cases of tetanus following vaccination if they will communicate with me concerning them. I am engaged in a critical analysis of such cases in the hope of determining their etiology, and desire to secure all the data possible.

A CORRECTION.

By ALEXANDER DUANE, M. D., of New York.

In an article entitled "A New Clinometer," published in the Philadelphia Medical Journal, June 8, 1901, I failed to give credit to Dr. G. T. Stevens, who had already (*Ophthalmic Record*, May, 1898) described an instrument founded on quite similar principles. Dr. Stevens' instrument and mine differ in construction, and mine has perhaps a somewhat wider range of application. Yet had I known of his instrument at the time, I doubt if I should have constructed mine; and in any case would not have failed to mention his name along with that of others who have applied the same principle.

Reviews.

Studies in the Psychology of Sex.—Sexual Inversion. By Havelock Ellis, L. S. A. (England). F. A. Davis & Co., Philadelphia.

Mr. Havelock Ellis prides himself upon being a martyr to science. We suspect from the preface that he is fond of arranging a series of mental tableaux, in the first of which he is represented as the unconquerable victim of the persecution of the police and Mrs. Grundy, and in the latest as being hailed by an admiring scientific world as one of the most distinguished laborers in his chosen field. Our own sympathies are rather with the prudes than with Mr. Ellis. Let it not be understood that we decry investigations in the pathology of sex. Such investigations, in so far as they reveal that certain morbid tendencies are the result of disease, and not mere wilful perversion or lack of moral restraint, either as a result of improper education or defective moral sense, are of value to medicine, and particularly to legal medicine. The question arises, however, whether the writers upon these subjects are actuated solely by a love of scientific progress. It is unquestionable that the most notorious explorer in this field —Krafft-Ebing—has made a very respectable fortune from his book. If it had only occurred to him to donate the profits to some charitable institution, we might have admitted that his motives were not wholly ulterior. This does not appear to have been the case. Instead he has increased the number of case histories, and, if possible, exaggerated their unpleasant details. And Mr. Ellis has very closely imitated him in his methods. If we examine the book as a scientific production, we find that it consists essentially of two parts; these are the long histories of cases, usually written by the patients, and the pseudo-philosophical reflections of Mr. Ellis, with abstracts of the opinions of his colleagues in the same field. The idea is of course that the histories are the raw facts from which the inductions are made; therefore the value of the work depends upon the accuracy of these writers. When we remember that they are written supposedly by persons with impaired moral sense, in one direction at least—not infrequently by men (or women either) who have adopted a literary career, and therefore are perhaps prone to sacrifice matter to style—when we read revolting details upon which the historians apparently delight to enlarge, and many of which have practically no bearing whatever upon the subject of sexual inversion, we feel that Mr. Ellis has perhaps deceived himself, but has certainly endeavored to please the prurient faction of his audience.

As for the conclusions, they amount, when summarized, to the statement that certain crimes against society must be regarded as manifestations of disease and not of depravity, and the gusto with which Mr. Ellis quotes the opinions of certain of these perverts, urging that their crimes be legalized, leads us to suppose that he would not vigorously oppose any such measure. But after all, the great fault of the work is that it is a book. If this subject is to be discussed—and there is no reason why it should not be—the discussion should be limited strictly to the more scientific medical journals. In them the material would be almost inaccessible to the laity and every scientific requirement could be fulfilled. Such articles have appeared in the *Archiv für Psychiatrie*, where they have been read by all who should read them, and we believe, have not been read by those who should not, and therefore the book-writers have not the excuse that they cannot get their articles published in any other form. If books of this character must be written—and we do not believe that they must—then let the case histories be edited or altogether suppressed. The conclusions are the important things, and anyone sufficiently interested to desire the premises could easily correspond with the author.

We have no patience with Mr. Ellis nor with his like, and we have all sympathy with those who, as defenders of public morals, seek to suppress their books. [J. S.]

The Practical Medicine Series of Year Books under the General Editorial Charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post Graduate School. volume II, General Surgery. Edited by John B. Murphy, M. D., Professor of Surgery, Northwestern University Medical School. The Year Book Publishers, Chicago. Cloth, $2.00.

The volume before us is one of a series of ten, issued at monthly intervals, and covering the entire field of medicine and surgery. There is no pretense to include even a reference to all the surgical articles that have appeared during the past year, but an effort has been made to select those which record some advance or add to the advances already made. The editor sets forth the subjects, as given by the various authors, and often in their own words. Numerous papers, many of which are of distinct value and which deserve a place in all year books, have been omitted and several apparently worthless articles have been abstracted at some length. One could gather very little of the value or of the method of applying the O'Harra forceps from the brief paragraph we here find. The chapters on muscles and tendons, bone diseases and fractures, diseases of joints, goiter, diseases of the air passages, and on the male genitalia seem to us altogether too short from the amount of literature on these subjects. Because of the colossal nature of the literature of appendicitis the editor gives a digest of the subject as he estimates it from a perusal of numerous articles. He insists on the early removal of the appendix and tells us that the least mortality in acute appendicitis when treated by the average operator is obtained by protecting the general peritoneal cavity by gauze and draining; the expert operator may excise the organ and separate adhesions without increasing the death-rate. From the literature on spinal cocainization Murphy concludes that it is a safe, practical, and efficient anesthetic for a large number and variety of operations below the mammary line and that it is safer than general anesthesia in obese patients, in those with arterial disease, and in those with pulmonary and renal lesions. It should be the method of election for acute infections of the peritoneal cavity and for intestinal obstruction. Personally we shall value the work more from the editorial notes that are appended to various abstracts than for any other one reason. It is not a book for the surgical scholar because abstracts will not satisfy him and because many references are omitted, but it will be a distinct help to the man who desires to keep abreast with the line of advance, but whose circumstances do not otherwise permit.

We are sorry to note and record the execrable paper of which the book is composed; this causes a frequent blurring of the type and makes the cuts much less clear than they should be. [F. T. S.]

Municipal Engineering and Sanitation. By M. N. Baker, Ph. B., C. E. Small 8 vo; 309 pages and index. New York. The Macmillan Co. $1.25.

This is the last of a series of books grouped under the title "The Citizen's Library of Economics, Politics and Sociology." In view of Mr. Pickwick's shrewd observation that the word Politics comprises in itself a difficult study of no inconsiderable magnitude, we can easily understand that the scope of this series is rather extensive and as the volumes are small, the topics must be treated concisely. There is a larger amount of interesting and valuable matter in the work under consideration. The author has had much experience in the editorial department of one of the most active engineering journals and has kept himself informed of all the advances in municipal management. The medical side of the question is naturally not so fully treated as the engineering. The preface states that the work "is intended for that large and growing class of persons who either as officers or citizens are striving to improve municipal conditions." This suggests a thought as to how far such a result is attained by such a book. How far does it find opportunity for the missionary influence for which it was intended? It will doubtless have considerable sale

and be widely scattered, but will it reach and influence the voter who is walking in the darkness of indifference or political bigotry, so common in American municipalities at the present time? It will be of much service to certain classes of municipal officers, for it is full of data and is abreast of the times, as is shown, among other points, by the fact that the new method of sewage purification with the septic tank and contact-beds is described. It is so comprehensive in scope that it includes chapters on administration, finance and political economy. Taxation is briefly considered but the merits of the so-called single-tax system are not discussed, although the advocates of that system regard it as especially adapted to aid in the proper development of a municipality.

The text is well written and well printed. There are no illustrations. [H. L.]

Bath Waters, a Rational Acount of Their Nature and Use, with Special Reference to Gout, Rheumatism, and Rheumatoid Arthritis. By Preston King, M. D., Cantab., Hon. Physician Royal Mineral Water Hospital; Hon. Assistant Physician Royal United Hospital, Bath. With an editorial sketch by S. Baring-Gould, M. A., Bristol, J. W. Arrowsmith, 11 Quay street.

Dr. Preston King has presented an excellent little work on bath waters, which is of especial interest. It contains an historical introduction by the Rev. S. Baring-Gould, who tells us that the legendary history of Bath begins with Bladud, the son of King Hudibras, who, afflicted with leprosy, was sent to herd swine in the forest of the town, where he noticed his bristly charges roll in the warm slime from the spring, and testing the effect of a bath in the hot water found himself cured of his disease. He returned to his father and in due time became king of Great Britain, when, to testify his appreciation of the healing fountain, he built Bath.

Dr. King informs us that the earliest written records of the healing spring of Bath dates to 81 A. D. He tells us the story of Richard Nash, who is responsible for the fame of modern Bath, and who came accidentally to test the waters of the place. The work deals with a description of the thermal waters, the bathing establishment, and the therapeutic action of the waters, as well as those diseases which are especially benefited by a course of treatment at the resort. These are rheumatism, gout, and rheumatic arthritis. Dr. King's book is a distinct contribution to the important subject of balneo-therapy. [T. L. C.]

Transactions of the State Medical Association of Texas. Thirty-third Annual Session held at Galveston, Texas, April 23-26, 1901. Austin, Texas. von Bolckmann, Schutze Co., 1901.

The Transactions of the State Medical Association of Texas form a volume of 463 pages. In addition to the usual data of the business meetings, list of members and the like, there are two interesting papers on the medical aspects of the Galveston Disaster, by H. A. West, one of which has already been published in the *Medical News* of February 3, 1901. Other articles of interest are that by Carter, on the Relation of the Parathyroids to the Thyroid Gland; that by Allen J. Smith on a Spore-forming Bacillus Associated with the Ameba Coli in Hepatic Abscess, and that by Charlotte Schaeffer on Anchylostoma Duodenale in Texas. The volume contains many typographical errors, probably due to the inexperience in medical publishing on the part of the printers. [J. M. S.]

Dysphagia Following Goiter Operations.—L. Thévenot states that dysphagia frequently results from operation for the removal of a goiter, whether partial thyroidectomy, exothyropexy, intraglandular or massive enucleation. (*Bulletin Médical*, September 11, 1901, 15me. Année, No. 72). It may appear as early as four hours after operation, and may be slight or severe. Some congestion of the throat occurs at the same time. The condition lasts only three or four days after the operation, as a rule. The cause of the dysphagia seems to be the effect of the operative interference upon the rich anastomosis of the cervical sympathetic nerves. Thévenot advises hypodermic injections of morphine, cocain gargle, and finally, when necessary, the introduction of a permanent œsophageal bougie. [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Orthopedic Hospital.—Dr. S. Weir Mitchell, for 30 years physician to the Philadelphia Orthopedic Hospital, has resigned the position of senior physician. At the same time Dr. J. Madison Taylor resigned as assistant physician. Dr. John K. Mitchell was elected to the vacancy on the staff of physicians caused by his father's withdrawal. Dr. S. Weir Mitchell becomes consulting physician to the institution. Dr. Taylor, who has been connected with the institution for 20 years, absolutely severed his connection with the hospital.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening, March 3, Academy of Surgery; Wednesday evening, March 5, College of Physicians; Thursday evening, March 6th, Obstetrical Society.

Dr. Kinyoun Resigns.—Dr. J. J. Kinyoun, for the last year commanding officer and chief surgeon of the United States Marine Hospital in Detroit, one of the best bacteriologists and plague experts in the United States Government service, has sent in his resignation, to take effect May 1. Dr. Kinyoun has come to Philadelphia, where he will make his residence and devote himself to the study of bacteriology.

Polyclinic Hospital.—At the meeting of the Board of Trustees, February 18, the resignation of Dr. D. D. Stewart, professor of diseases of the stomach and intestines, was accepted. Dr. Joseph Sailer was then elected to fill the vacancy.

Methodist Episcopal Hospital.—Dr. Louis A. Salade has been appointed gynecologist to the Methodist Hospital, in the place of Dr. George Erety Shoemaker, who recently resigned. Dr. C. B. Farr has been appointed visiting physician as assistant to Dr. W. C. Hollopeter.

Philadelphia County Medical Society.—At the meeting of the North Branch, February 20, John W. Hill, consulting engineer of the city's water department, stated that the great difference between the water from the Delaware and Schuylkill rivers was in the amount of bacteria present. While the Delaware shows 6000 colonies per c.c., the Schuylkill shows 39,000. He also said that there is no city in the world where the conditions governing the source of the water supply are worse than in Philadelphia. When, however, the new filtration system shall be concluded, Philadelphia will have, at Lardner's Point, the largest pumping station in the world. Schuylkill water will then only supply districts receiving water from the Shawmont pumping station. Thus 900,000 of the city's population will drink filtered Delaware river water. The filters will probably be finished in two and a half years more.

Fire at the Municipal Hospital.—Destruction by fire threatened the smallpox pavilions at the Municipal Hospital, February 23, and for a brief period 400 patients were panic stricken. The coating of snow upon the roofs of the wooden shanties and a stiff breeze from the northwest saved the buildings, however. But slight damage was done to the boiler house, 60 feet south of the eastern pavilion. No one was injured.

Smallpox.—During the week ending February 22, only 63 new cases with 15 deaths were reported. This makes 465 cases at present in Philadelphia. Quarantine was raised from more than 200 dwellings in accordance with the new regulations. The greater part of the new cases occurred among the mill hands, a large proportion of whom, being English, refused vaccination. Dr. Benjamin Lee, secretary of the State Board of Health, has called attention to the increasing virulence of the disease. While fewer cases are reported, it is quite probable that the number of deaths will increase. New cases have been reported in a number of the suburbs of Philadelphia, there being five cases in Upper Darby, one in Darby, and 24 in Chester. Chester has decided to secure a temporary hospital for smallpox patients. The disease has totally

disappeared from Plymouth, while one case is already reported in Wilkesbarre.

Patent Medicines and Their Dangers.—Dr. Albert Robin, bacteriologist and pathologist of the Delaware Board of Health, strongly deprecated the "patent medicine habit" in a paper read before the Philadelphia College of Pharmacy, February 18. Patent medicines demoralize the people by engendering constant dread of disease, so-called pathophobia. Dr. Robin told how a vaunted remedy sold at $1 a box, was composed of granulated sugar; how certain opium cures contain morphia, and tonics, especially recommended for inebriates, are largely made up of alcohol.

Death of Dr. Lewis.—Dr. Louis Lewis, a graduate [illegible] University of London, fellow of the Royal College of Surgeons of England, member of the British Chemical Association, died in New York, following an operation, February 19. For a short time he served as surgeon in the British Army. In 1883 he came to America, settling in Philadelphia, where he has lived since. He was editor of the *Medical World*, the *Medical Council* and the *Medical Times and Register*. Dr. Lewis was 63 years old.

NEW YORK AND NEW JERSEY.

Donations to Hospitals.—Mrs. F. F. Thompson, of Canandaigua, N. Y., has given $100,000, half of which is to be used for erecting the building of a new hospital in Canandaigua, the other half to form an endowment fund for the hospital. Two other residents of the town have given $25,000 each, making a maintenence fund of $100,000.—Mrs. H. M. L. Sherman, of Lawrence, L. I., has given $25,000 to the Post-Graduate Hospital, New York City, to support a new ward for women and children with nervous affections. Five out of the fourteen beds in the new ward will be supported in perpetuity by Mrs. Sherman's gift. Two years ago Mrs. Sherman built an annex to the New York Infirmary for Women and Children at a cost of $30,000.—Mrs. John H. Burtis, president of the Board of Managers of the Memorial Hospital for Women and Children, has given $5000 to the institution, upon the condition that $15,000 additional be raised.

Compulsory Vaccination.—The Public Health Committee of the Senate of the State of New York has reported favorably upon the McCabe bill of compulsory vaccination.

Hospital Frauds.—Governor Odell, in a memorandum filed with his approval of the bill abolishing the local board of managers for all State hospitals for the insane, charges fraud and extravagance, especially in connection with the management of the Manhattan Hospital in New York City. Expensive quarters, he says, are maintained for the managers, when the meetings should be held in the institution itself. $60,000 was spent in unauthorized purchase by a series of fraudulent vouchers, $7000 of which was never vouched for. A long list of offences against economy and efficiency in hospital management follows.

$30,000 for the Loss of His Feet.—February 24, a jury in the Supreme Court of New York awarded a boy of 7 $30,000 damages for the loss of both feet by being run over by a car of the Metropolitan Street Railway Company. The child's stepfather had sued for $50,000. The jury was out less than half an hour, and it was said that the smallest sum suggested by any of the jurors was $25,000.

A Tuberculosis Antitoxin. The Board of Health of Newark, N. J., has prepared an antitoxin against tuberculosis which has been used upon a number of cases with much success. The serum is injected subcutaneously, 10 c.c. being given daily for a week or ten days. Fever, night sweats and cough decreased or disappeared entirely. The appetite improved markedly, as did the appearance of the patients. Urticaria and vague joint pains were the only accidents accompanying the injections.

NEW ENGLAND.

Smallpox in Maine.—A few smallpox cases have appeared in almost all the prominent cities in Maine. There are a number of cases in Portland where the Board of Health has ordered compulsory vaccination. New cases are reported from Saco, and Shiloh.

Compulsory Vaccination in Boston.—A Boston man who went to jail rather than submit to vaccination has won double martyrdom. It was bad enough to go to jail, but it was worse to be vaccinated because he had gone to jail, and still be obliged to serve out his sentence. When he was fined and wouldn't pay his fine, he had to go to jail to serve a ten days' sentence. The jail physician vaccinated him because the authority of the Board of Health extends, in matters of vaccination, to jails. Thus he has been vaccinated and must still serve eight more days in jail for refusing to submit to the operation. There were three times as many cases of measles as of smallpox in Boston last week, and as many deaths from the former disease as from the latter. The force of vaccination physicians sent out by the Board of Health has been increased to 140.

Three-Year Medical Course at Yale.—An announcement by the Yale authorities shows that the course in the Yale medical school can be made hereafter in three years instead of four, the student in the academic department arranging his studies so as to cover the work required in the first year in the medical school.

Library for the Blind.—A circulating library for the blind is one of the most unique departments of the Perkins Institute, in South Boston. This library has 12,821 volumes, and they are sent all over the country. About five hundred books are taken out annually by the adult blind in Massachusetts and about one hundred more by blind persons outside of the State. These books, with their raised letters, are very large. The Bible, which is most read among the blind, takes twenty-five volumes, which means a cost of $5 or more. Novels are seldom put in the embossed type for the sightless, as this kind of printing is very expensive, and great care must be exercised in selection. Only standard classical works in fiction are prepared for the blind, who are usually great readers of history and biography.

Pay for a Smallpox Case.—In the case of Dr. V. A. Clement vs. the City of Lewiston, Me., a suit for $1530 for services rendered in a smallpox case, the jury returned a verdict of $1212 for the plaintiff, February 12.

Coughs Caterpillars.—A woman in Fairfield, Me., is expectorating caterpillars of the kind that have been so much of a nuisance within the past few years. Several people of undoubted veracity have seen the caterpillars as they come out of her mouth after periods of violent coughing, and they vouch for the fact that the caterpillars are alive. The woman is believed to have swallowed caterpillars' eggs with water when she narrowly escaped drowning in a boating accident. The insects are full grown.

Measles, Not Smallpox.—Patients at Woods Holl, Mass., have been quarantined for the past six weeks with what was called smallpox. The arrival of a physician from New Bedford shows that the disease was really measles. Nevertheless the physicians of the local Board of Health still believe that the disease was varioloid.

Compulsory Vaccination for Rhode Island.—A compulsory vaccination act was passed in both houses of the General Assembly, February 19. The act provides that every child shall be vaccinated before the age of 2 years, under penalty of $5 for every year during such neglect; that, if a board of health deems it necessary, it may enforce vaccination of all inhabitants at public expense. Refusal entails a fine of $5. Inmates of hotels, manufacturing establishments, hospitals, asylums, and correctional institutions may be vaccinated if the Board of Health so orders. A certificate from two physicians that a person is an unfit subject exempts. Revaccination may be ordered.

Harvard Medical School.—The committee who have undertaken to raise the $755,000 necessary, in order to take advantage of Mr Rockefeller's gift of $1,000,000, received $88,000 more February 20. This makes the sum already raised $471,000, leaving but $284,000 more to be collected in four months. $75,000 was contributed by members of the faculty.

Smallpox in Woonsocket, R. I.—Physicians found 10 additional cases of smallpox in the quarantined district February 16, four cases being in families already under guard, and six in two new families. This makes a total of 84 persons in quarantine, 38 in the isolation hospital and the remainder at their homes. The infection is entirely in one section of the city.

Sanatoria for Narcotic and Alcoholic Patients. The

laws of the State of Connecticut permit narcotic and alcoholic patients to commit themselves voluntarily to a sanatorium for treatment, for a length of time not exceeding one year. Treatment and restraint may be given in the same manner as if the patient had been committed by the Probate Court.

Hartford Hospital.—J. Pierpont Morgan has offered to give $25,000 toward a fund now being raised to pay the floating debt of the Hartford Hospital, on condition that this amount with other collections will clear the hospital from debt by next January. The debt amounts to $75,000 and $48,000 has already been contributed here.

WESTERN STATES.

Smallpox in the West.—The smallpox epidemic throughout the West is now considered to be the most serious outbreak since 1885. During the week ending February 15, 13 new cases of smallpox developed in Chicago, making a total of 23 cases in the isolation hospital, with no deaths. In Illinois the most serious situation exists at Shelbyville. Out of 81 towns and cities in Indiana, Iowa, Michigan and Wisconsin, only 38 are free from smallpox. Racine, Wis., has a great number of cases, and the disease has appeared among the white men of the Nevada Indian Agency, near Wadsworth.

Sanatorium Burned.—The Kellogg Sanatorium at Battle Creek, Mich., was totally destroyed by fire, February 18, entailing a loss of over $300,000. Of the 400 patients in the sanatorium, all were saved, with possibly one exception, a man of 83 who is missing.

Death of Dr. C. L. Lane.—Dr. Levi Cooper Lane, the nephew of Dr. E. Cooper, one of the most famous surgeons of San Francisco in the city's early days, died in his home in San Francisco, February 18, after a long illness, aged 69 years. He graduated at the Jefferson Medical College, Philadelphia, in 1851, and then spent some time in Europe. In memory of his uncle he founded the Cooper Medical College, and, six years ago, established the Lane Hospital. In 1875 he was made member of the Royal Chirurgical Society of Great Britain, and was a member of numerous other societies. Beside being an excellent surgeon, he was well known as a philanthropist, having for 30 years given at least two hours a day to giving free dispensary work in the tenement district of San Francisco.

SOUTHERN STATES.

Dr. Rixey's Successor.—Dr. P. M. Rixey was commissioned Surgeon-General of the Navy and Chief of the Bureau of Medicine and Surgery, with the rank of Rear Admiral, from February 10th. Medical Director W. S. Dixon succeeds Dr. Rixey as officer in charge of the Marine Dispensary.

Johns Hopkins University Jubilee.—On February 22, Johns Hopkins University celebrated its 25th anniversary. A number of addresses were made Friday afternoon by the presidents of other universities. A new site, consisting of 176 acres of land in the Northern suburbs of Baltimore, was given to the University unconditionally. Among the many upon whom honorary degrees were conferred was one physician, Dr. John Shaw Billings, of New York.

MISCELLANY.

Appointment of Volunteer Surgeons.—Representative Hull, Chairman of the Committee on Military Affairs, introduced in the House, February 14, a bill providing that the Act of February 2, 1901, in so far as it authorizes the President to appoint for duty in the Philippines 50 surgeons of volunteers with the rank of major, and 150 assistant surgeons with the rank and pay of captain, for a period of two years, shall be extended one year longer, or shall continue for three years from the enactment of that measure. Such volunteer medical officers, however, may be discharged as soon as their services are found unnecessary. The time which any assistant surgeon has served as surgeon, assistant surgeon, acting assistant or contract surgeon since April 22, 1898, is to be counted as a portion of the five years' service required for the rank of captain. In fixing the relative rank between assistant surgeons of the same grade and date of appointment, the time which each has served as medical officer or contract surgeon in the regular or volunteer forces since April 22, 1898, is to be taken into account.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

February 8, 1902.

1. A Clinical Lecture on Two Cases of Perityphlitis. DAVID W. FINLAY.
2. Remarks on Appendicitis and its Treatment. JAMES TAYLOR.
3. A Clinical Lecture on Some Cases of Chronic Non-Malignant Gastric Ulcer. ARTHUR E. BARKER.
4. An Address on Some Points in Connection with Ulceration of the Stomach and Duodenum. C. R. BOX.
5. The Treatment of Interstitial Obstruction from Malignant Disease. LEONARD A. BIDWELL.
6. Two Cases of Recovery After Operation for Diffuse Peritonitis from Perforation of the Appendix. CHARLES A. MORTON.
7. On Intracranial Thrombosis as the Cause of Double Optic Neuritis in Cases of Chlorosis. C. O. HAWTHORNE.
8. Arsenic in the Hair of Beri-Beri Patients from Penang. RONALD ROSS.
9. Contract Practice; the Evil and its Remedy. A. BAILLIE McKEE.

1.—Finlay reports **two cases of perityphlitis (appendicitis)** both of whom had a mass in the right iliac fossa; one recovered under medical treatment and the other after incision and drainage. He believes that there are many cases of inflammation around the head of the cecum in which we have no proof that the appendix is at fault, even after the evacuation of pus. He divides cases of perityphlitis into three classes: that in which it is doubtful as to the implication of the appendix and which always recovers under medical treatment; that in which the appendix is almost always the offender and which often requires an incision for the evacuation of an abscess; and finally that class of cases in which owing to the absence of adhesions because of a sudden perforation of the appendix a diffuse peritonitis is set up, and which rapidly kills the patient unless surgical measures be quickly resorted to. He advocates operation in the relapsing cases and treats the simple cases with leeches, opium, and rest. Purgatives are strongly condemned. [F. T. S.]

2.—**Appendicitis,** according to Taylor, may be classified into the simple, acute, fulminating, and the chronic varieties. The ordinary forms are best treated by rest, and opium; the action of the bowels is left alone until the acute symptoms have subsided. Operation should be performed during an attack of fulminating appendicitis and in the interval in cases of chronic appendicitis. [F. T. S.]

3.—Barker publishes the notes of 9 cases of **chronic ulcer of the stomach and duodenum.** From a study of these 9 cases the author concludes that it is impossible to say when severe complications may arise or that these complications will not be dangerous if they do occur. Hemorrhage frequently comes without warning and cicatricial contraction is preceded by a long train of troublesome symptoms. These considerations lead to the question whether or not surgical treatment should be employed in a larger proportion of cases, in which purely medical measures appear to be unsuccessful, than is at present the case. At the present time operation is resorted to only at the time of desperation, when perforation or hemorrhage is surely killing the patient. On the other hand, recovery from operations upon the stomach for other non-malignant conditions is the rule, if the operation is done before the patient is quite worn out. All the operations that the author has done for non-malignant disease without perforation have been successful. [J. M. S.]

4.—Box believes that **ulcer of the stomach** is due to micro-organismal infection of the lymph nodes of the stomach

wall. Secondary perforation may be brought about by overdistension of the stomach by food, by taking copious draughts of fluid which weigh down the organ or by some unwonted muscular exertion when the stomach is so distended. An ulcer which has perforated in this manner and not by the active spread of an inflammatory process need not present an area of surrounding edema at all. There are many gastric ulcers that are never indicated by the occurrence of hemorrhage in connection with other gastric symptoms. Indeed, beyond vague dyspeptic pains in the first obtrusive symptoms of the condition are often those of perforation. In many cases of duodenal ulcer melena is never noticed; and sometimes, when it does occur, unassociated with hematemesis, the ulcer proves to be in the stomach. On the other hand, there are cases in which hematemesis is associated with gastric pain and with vomiting in which there is no gastric ulcer present. This combination may be seen in cases of uremia, in cases of the gastric crisis of locomotor ataxia, in cases of hysteria and in connection with mitral disease. Gastric ulcer is not the only cause of constant vomiting in young people; the vomiting of early pregnancy, the vomiting of uremia, and the vomiting of cerebral tumor are well known examples of that symptom unassociated with gastric lesions. Any patient who presents this symptom should have the urine examined thoroughly for albumin and for casts. The vomited material should be examined by the physician and the eye-grounds should be examined with the ophthalmoscope. It has been stated that in cases of gastric ulcer vomiting ceases after perforation. This statement, however, is incorrect. After perforation of a gastric ulcer through the anterior wall of the stomach the following signs may be obtained at the base of the left lung: considerable restriction of the respiratory movements; diminution or cessation of the action of the diaphragm with immobility of the upper left quadrant of the abdomen; more or less localized pain and tenderness in the axillary region and sometimes actual edema and bulging; dullness on percussion, which may extend higher than the angle of a scapula; diminution of tactile fremitus with more or less suppression of breath sounds, and in some cases the appearance of distinct bronchial breathing; friction sounds which may have a respiratory or a cardiac rhythm; and a certain amount of upward displacement of the apex beat. The collections of pus that follow perforation of an ulcer through the anterior wall of the stomach are usually localized round the anterior and external surfaces of the spleen and between the left lobe of the liver and the diaphragm. They are walled off from the general peritoneal cavity by adhesions between the anterior abdominal wall and the great omentum or stomach. These localizations are aided by the costocolic fold, which extends from the tenth and eleventh rib to the splenic flexure of the colon. The pleura may become infected secondarily from such a collection. In the treatment of these conditions the sixth or seventh ribs should be resected in the left axilla. If the pleura is found to be free from involvement, it can be accurately stitched off before the abdominal cavity is opened. The exploring needle should not be used. In some cases the pus may collect in the pelvis, to which it extends along the ascending or the descending portions of the colon. A general infection of the lesser sac of the peritoneum is uncommon, because of the adhesions which form between the posterior wall of the stomach and the adjacent structures in cases of ulcer on the posterior wall. In cases of suspected ulcer an examination of the stomach contents for the presence of excess of free hydrochloric acid should always be made. If the first examination is negative, a second one should be made before concluding that the phenomenon is absent. Every patient in whom gastric ulcer is diagnosed should be looked upon as seriously ill. [J. M. S.]

5.—Bidwell contributes a paper on the **treatment of intestinal obstruction due to malignant disease.** When the obstruction is situated in the rectum or in the lower part of the sigmoid, the early symptoms consisted of the passage of tape-like motions and alternate attacks of diarrhea and constipation together with the presence of pus and blood in the stools. When the growth is located in the region of the cecum the bowel movement will be of normal calibre and there will neither be diarrhea nor the passage of mucus and rarely the passage of blood. The lower in the intestinal canal the tumor develops, the sooner the symptoms of obstruction appear; pain is less acute when the disease attacks the lower end of the large intestine than when the upper portion is involved. When the obstruction is in the rectum a hugely distended sigmoid may often be felt by abdominal palpation; in cecal obstruction active peristaltic movements may be seen through the abdominal wall. In obstruction low down the energetic use of enemata will sometimes relieve the acute symptoms; this never occurs when the trouble is in the region of the cecum. Because of the severe pain and shock caused by handling the mesentry, Bidwell always employs general anesthesia in preference to local anesthesia. Lavage should be practised before the administration of the chloroform if there be fecal vomiting. After the abdomen has been opened, the hand should feel for the sigmoid; if it be dilated, the growth is probably in the cecum, if it be collapsed, the rectum is involved. If the growth be movable it should be excised and the ends of the intestine united with sutures. The author advises against the Murphy button because of the accidents which may follow its use. It is preferable to remove the tumor at the primary operation rather than to make an artificial anus and postpone the excision to a later date because of the difficulty of the secondary operation from the dense adhesions which form. When the growth is removable, an ileo-sigmoidostomy should be performed in order to sidetrack the affected large intestine. The formation of an artificial anus should never be performed for any growth which is situated above the middle of the sigmoid flexure. Bidwell bases his remarks on eight cases on which he has operated and which he reports in detail in the present communication. All survived the operation. [F. T. S.]

6.—Morton reports **two cases of recovery following operation for diffuse peritonitis due to perforative appendicitis.** In both cases there was free pus in the peritoneal cavity and the intestines were reddened and covered in patches with lymph. After excising the appendix and sponging out the pelvis and lower abdomen, several large glass tubes containing iodoform gauze were inserted between the lips of the incision. [F. T. S.]

7.—Hawthorne suggests **intracranial thrombosis as the cause of optic neuritis in case of chlorosis.** He submits in evidence the history of a girl, aged 17 years, who was the subject of chlorosis and who developed a double optic neuritis and diplopia, the right external rectus being paralysed. After a few weeks treatment, the neuritis subsided and the paralysis disappeared. The simultaneous development and disappearance of these two conditions indicate a common origin, the most likely, because of their transient duration, being intracranial thrombosis. Welch has collected 82 instances of thrombosis occurring during the course of chlorosis, 78 of which were venous, 32 involving the cerebral sinuses. [F. T. S.]

8. Reys has recently examined 20 specimens of hair **from beri-beri patients.** Nineteen specimens were obtained from Penang, and one from India. Out of these 20 specimens 6 contained arsenic. The specimens which contained arsenic were obtained from recent cases, while nearly all the negative specimens came from older cases. This result augments the evidence in favor of beri-beri being due to arsenic, since it suggests that the arsenic was present only at a certain stage of the disease. Dixon Mann suggests that in recent cases of beri-beri, arsenic would not be found in the hair because it would not have had

time to get there; while in old cases the arsenicated hair might have been shed or cut away. The probability is very strong that the Penang beri-beri is arsenical, and the people there are employed in tin factories and are brought closely into contact with arsenic is corroborative evidence. [J. M. S.]

LANCET.

February 8, 1902.

1. A Clinical Lecture on Two Cases of Solid Abdominal Tumor with Ascites. THOMAS WATTS EDEN.
2. Preliminary Note on the Possibility of Treating Mitral Stenosis by Surgical Methods. LAUDER BRUNTON.
3. Trial, Execution, Etc. of Leon F. Czolgosz. CARLOS F. MACDONALD and E. A. SPITZKA.
4. Ovarian Tumors and Ovariotomy During and After Pregnancy. ALBAN H. G. DORAN.
5. Four Cases of Word-blindness. JAMES HINSHELWOOD.
6. A Case of Tumor of the Left Pre-Frontal Lobe Removed by Operation. WILLIAM ELDER and ALEXANDER MILES.
7. Acute Suffocative Pulmonary Edema. THOMAS LISSAMAN.
8. Two Cases of Acute Delirium. R. H. COLE.
9. The Decay of Auscultation and the Use of the Binaural Stethoscope. H. W. SYERS.

1.—Thomas Watts Eden, in a clinical lecture, describes **two cases of solid abdominal tumor accompanied by ascites.** The first patient was a woman sixty-four years of age who was perfectly well until three months previous to admission, when she began to suffer from some incontinence of urine and great frequency of micturition. Since the beginning of her illness her general health had greatly deteriorated and there had developed considerable distention of the lower portion of the abdomen. Upon admission a solid tumor freely movable and of considerable size could easily be palpated and the abdominal cavity was found to contain a large amount of ascitic fluid which was not free but limited by adhesions. No connection between the tumor and the pelvic organs could be discovered. The second case was a woman forty-seven years of age, whose illness began eighteen months prior to admission, when the patient first observed a small lump in the lower part of the left side of the abdomen. Upon examination, a solid tumor much less movable than that in the first case was discovered. The tumor was surrounded by a small amount of limited fluid. A distinct "ballottement" could be obtained. An examination of both liver and spleen showed these organs to be of normal size in both patients. Before beginning the discussion of the question of diagnosis Eden deplores the tendency of many surgeons to postpone diagnosis until the abdomen is opened. He then mentions the various solid tumors which may be associated with ascites and discusses the two patients separately. By excluding other conditions he shows that the first patient probably has a solid tumor of the omentum. In the second case an attachment between the tumor and the uterus could be demonstrated and exclusion of other organs excepting the ovary was not difficult. The probability of the tumor being a pedunculated fibroid or an ovarian growth is carefully considered and the opinion expressed that the latter diagnosis is correct largely because of the presence of ascites. The uterine cavity, however, was found enlarged and the patient had never been pregnant, and bcause of these facts the suggestion of coexistence of fibroid disease of the uterus is made. Attention is called to the peculiar fact that fibroid tumors of the ovary are frequently associated with ascites while this condition is seldom or never seen in uterine fibroids. The duration of the growth in the second case together with the fact that the patient had lost no flesh suggested an innocent growth. In the first patient, however, the advanced age, the loss of flesh and the situation of the tumor suggest malignancy. [J H. G.]

2.—Brunton contributes a preliminary note **on the possibility of treating mitral stenosis by surgical methods.** He contends that "the good results which have been obtained by surgical treatment of wounds in the heart emboldens one to hope that before very long similar good results may be obtained in cases of mitral stenosis." He discusses the possibilities of this operation and thinks the first question that arises is whether the mitral orifice should be enlarged by elongating the natural opening or whether the valves should be cut through their middle at right angles to the normal opening. He believes the heart may be exposed sufficiently by removing a portion of the ribs,the lungs might easily be pushed aside in order to open the pericardium. In operating upon the living heart, he thinks the knife should be introduced into the left ventricle during diastole, as one is less likely to wound the opposite wall of the ventricle and that the pericardium should not be closed immediately after the operation in order to allow any blood, which might ooze out throught the wound, to flow away instead of being retained in the pericardial cavity. Experiments upon animals have shown that small wounds of the ventricle are followed by little hemorrhage, on the other hand, a needle puncture into the auricle gives rise to much bleeding. In discussing the risk of such an operation Brunton states that "the risk which such an operation would entail naturally makes one shrink from it, but in some cases it might be well worth while for the patients to balance the risk of a shortened life against the certainty of a prolonged period of existence which could hardly be called life, as the only conditions under which it could be continued might to them be worse than death." [F. J. K.]

3.—See Philadelphia Medical Journal, January 4, 1902.

4.—Doran reports two cases of **ovariotomy during pregnancy** and reviews the literature of the subject. Williams in 1897 showed that ovariotomy had proved as successful during pregnancy as apart from pregnancy, while the mortality associated with obstetric operations undertaken in cases of labor, complicated by ovarian tumor, was appalling. Orgler of Breslau has prepared a most exhaustive treatise on ovarian disease and ovariotomy in pregnancy. He places on record 148 cases of ovariotomy during pregnancy which he has tabulated from literature. Only six mothers were lost, a mortality of 4%. Two of these fatal cases were not due to the operation, thus leaving four deaths, or a mortality of only 2.7%. In 30 cases the ovariotomy was double; in 24 of this group pregnancy was not interrupted and the remaining six included one case in which the mother died. In 141 of the cases the ovariotomy was abdominal. Doran has performed 15 ovariotomies after pregnancy, the tumor having been present during labor. In three of these cases no complications were found at the time of the operation. [W. A. N. D.]

5.—**Four cases of word-blindness** are reported by Hinshelwood. The first occurred in a man 34 years of age. In this case the condition developed after an attack of left hemiplegia with paralysis of the left side of the face from which he had been recovering gradually. The second case occurred in a man 57 years of age. The condition came on very suddenly during active exercises. It was ushered in by slight frontal headache and some mental confusion. The third case occurred in a man 60 years of age. The onset in this case was also abrupt. The fourth case occurred in a woman 34 years of age. In this case the onset was marked by unconsciousness which remained for several days. Then consciousness was restored, paralysis in the right arm and right leg developed, and she was completely aphasic. [F. J. K.]

6.—Elder and Miles report a case of **tumor of the prefrontal lobe** which was **removed by operation.** Reference is made to the fact that only a small per cent. of brain tumors are operable and that still there is much to be learned about the localization of cerebral growths. The patient whose case is reported was a man 47 years of age, who had

good health until five months before admission, when he began to suffer with head-ache which later became definitely located in the prefrontal region on the left side. Occasional attacks of cerebral vomiting occurred. Notwithstanding these symptoms the patient was able to continue his work until one month before admission when he became depressed, would not take his food well and frequently became very emotional. Later loss of memory developed, all sense of decency disappeared and he became oblivious of his surroundings. About the time of admission a swelling appeared over the left frontal eminence and great pain in this region was complained of. On admission he was dull, sleepy and apathetic, but could be roused to answer questions. No aphasia was present, but there was some paresis on the right side. The patient could walk easily and there seemed to be no want of co-ordination. At this time there was no severe pain in the head but percussion over the left frontal region produced pain. The swelling over the frontal region presented a soft center and seemed to involve the bone. Over the right frontal region was a small depressed cicatrix, the result of an old abscess. The patient denied having had syphilis. His wife had had three miscarriages, at six, seven and eight months, respectively, and had given birth to four living children. There was no history of an injury to the left side of the head, although four years previous to the occurrence of the abscess on the right side of the head he had received a blow in that position. On admission he was put upon potassium iodide and mercury, but he rapidly grew worse, becoming much more stupid and developing stertorous respiration. On the third day operation was determined upon and performed by Mr. Miles. The skull in the left frontal region was found superficially necrosed over a small area. The under-surface of the bone was smooth and the dura was not adherent, though it bulged into the trephine opening. Exploration of the frontal lobe resulted in the discovery and removal of a hard tumor two inches long by one and a half broad and one and a quarter thick. An examination of the growth showed it to be a syphiloma. The operation was followed by a rapid disappearance of the symptoms of dulness and depression; and for these, in fact, was temporarily substituted a tendency to witticism and hilarity. The report of the case closes with an interesting discussion of the symptoms presented by the patient. [J. H. G.]

7.—Lissman reports a case of suffocative pulmonary edema which came under his care. The patient is a married woman 45 years of age. She presented no organic lesions of the heart, kidneys, or lungs. The onset of the edema was abrupt. When the author first saw the patient, which was in June, 1899, she was suffering from most terrible dyspnea. Her skin was bathed in cold sweat; her face was livid; and with each expiration there was ejected a considerable amount of thin pinkish fluid. The pulse was small and frequent. Over the entire chest loud moist rales were audible. This attack subsided gradually. Medicaments seem to have little effect upon the condition. A subsequent attack occurred in March, when she was treated with inhalations of chloroform with marvelous results. The heart's action became less labored and stronger; breathing became easier and the lividity rapidly disappeared. Twenty-three attacks occurred within three months all of which were treated with chloroform and invariably relief followed within 20 to 30 minutes. The author believes that at the present time his patient is better in every way than she has been for years and that no longer is she an invalid. He can find no organic disease of any kind. [F. J. K.]

8.—Cole reports two cases of acute delirium. One occurred in a single woman 40 years of age. There was no history of insanity in the family but the patient and her mother were decidedly nervous. She had had an attack of pernicious anemia some months before coming under the author's observation. She was ill for three months with this illness. On February 21, 1901, she had a relapse, she was also very nervous and complained of vague cranial restlessness. The nervousness increased. On March 4 she was removed to an asylum and at this time she presented delirium. She had a wild appearance; her speech was incoherent—and the same phrases being repeated over and over again. She appeared to be under the influence of visual and aural hallucinations. Death occurred on March 11. An autopsy was not made. The other case occurred in a man 27 years of age. An aunt had suffered from chronic insanity. The patient had always enjoyed excellent health except for an attack of influenza. The patient had lead a regular and temperate life. His illness dated back to April 3, 1901, when he complained of being depressed and unable to collect his thoughts. Sleeplessness was a distressing symptom. On April 7 he looked very dejected and appeared to suffer from delusions—he believed he had neglected his work, ruined his family. He was somewhat suspicious about his diet. It was necessary at this time to have an attendant watch him. From April 14 to April 21 it was necessary to administer food with a nasal tube. Gradually restlessness became more pronounced and finally he drifted into a semi-stuperous condition. About May 8, acute delirium set in and it appeared as though the patient was under the influence of terrific hallucinations, chiefly of a visual character. Death occurred on the 15th of May, apparently from exhaustion. An autopsy was not made. [F. J. K.]

9.—Syers in an article condemns the binaural stethoscope for general clinical work and he also contends that for many reasons ascultation is greatly neglected at the present time, which is due mainly to the use of the binaural instrument. For general clinical work, he is convinced that the single wooden stethoscope is by far the best instrument to use. The author writes as follows: "What I protest against, and in the strongest possible manner, is the predilection shown for the binaural stethoscope by the young student who is allowed to make use of it from the very commencement of his clinical work, so that he is totally unable to appreciate the advantages which appertain to the employment of the old-fashioned instrument. No words can condemn too strongly this adoption of the binaural instrument which is, I am convinced, the cause of much of the indifferent diagnosis of the chest disease so often observed at the present time." [F. J. K.]

MEDICAL NEWS.

February 22, 1902. (Vol. 80, No. 8).

1. Some Notes on the British Congress on Tuberculosis. E. G. JANEWAY.
2. The Relation Between Bovine and Human Tuberculosis. THEOBALD SMITH.
3. A Plea for an Accepted Nomenclature with Reference to the Classification of Pulmonary Tuberculosis. J. EDWARD STERRETT.
4. Some Notes on the Prophylactic Stage in the Treatment of Tuberculous Conditions of the Larynx and Pharynx. STEPHEN W. WELLS.
5. The Pathology and the Etiology of Prostatic Hypertrophy. Suprapubic Urethrotomy and Myomectomy Considered as Methods of Treatment and Cure. AUGUSTUS CHARLES FERNALD.

1.—E. G. Janeway, in his article on some notes on the British Congress on Tuberculosis, says that the first to address the meeting was Robert Koch, who approached the subject from the side of its method of development and considered that all the facts pointed to the sputum of tuberculous individuals being the most source of infection. He advocated devotion of energy toward the prevention of this infecting sputum becoming a source of danger. Dr. Biggs, another member, declared emphatically his disbelief in the identity of human and bovine tuberculosis for the following reasons: (1) Experiments on properly selected animals (cattle) showed that the bacilli originating from human tuberculosis when inoculated or injected in cattle or when fed to them would not induce tuberculosis. (2) Moreover, he believes that, while it was not proper to make a contrary experiment by using bovine tubercle bacilli in human beings, we have a practical experiment in the fact that milk and butter contained to a considerable degree bovine

tubercle bacilli. (3) If the danger existed, as had been supposed, we should have a much greater amount of primary intestinal tuberculosis. After having experimented for over two years on animals he says: "We should estimate the extent of infection by the milk and flesh of tuberculous cattle and the butter made of their milk as hardly greater than that of hereditary transmission, and does not deem it advisable to take any measures against it." Prof. McFadyean recommends for the prevention of possible tuberculosis from cows' milk in human beings the following precautions: (1) Compulsory notification of udder disease and of any symptoms of tuberculosis in the milch cows, with, of course, the power to inflict a fine for not reporting. (2) The interdiction of the sale of milk from any cow suffering from tuberculous disease of the udder or exhibiting clinical signs of tuberculosis. As to the curative agent of tuberculin, Dr. Koch believes that it should only be employed in afebrile cases. As a diagnostic agent, he had employed it in 3000 cases without bad results. It was generally considered that the construction of sanatoria for incipient and curable cases should be encouraged, as well as hospitals for the far advanced, where uniformity of action shall insure the destruction of the bacillus, giving comfortable surroundings to the sufferer and preventing him from being a source of danger in the wards of a general hospital. [T. M. T.]

2.—See Editorial.

3.—J. Edward Stubbert says that there are no two men who hold exactly the same opinion as to where the dividing lines should be drawn between the incipient and moderately advanced, or between the latter and far advanced stages of pulmonary tuberculosis. He gives two conditions to be classified: (1) The condition of the patient when he comes under observation and treatment. (2) The condition that exists when he is discharged from the physician's care. Under the first heading he deals with three, and possibly four, conditions: (b) Incipient; (c) moderately advanced; (d) far advanced, and as a fourth but naturally preceding the others (a) variously designated as the "pretuberculous" or "prebacillary" stage. The definition of this last stage is as follows: One in which tuberculosis is suspected, but where the symptoms are slight and bacilli cannot be found in the expectoration. Ingals and Hance define the stage as a condition in which the physical signs are indefinite and in which there are loss of weight and strength, a rapid heart action, slight fluctuation in temperature and sometimes a slight hacking cough. Most authorities agree as to the **incipient stage** as one with slight physical signs of limited extent in one or both lungs, with or without bacilli in the sputum, with or without slight constitutional debility or complications. The **moderately advanced** is one in which there are more or less well marked constitutional symptoms with extensive signs in one or both lungs, or in which there is only a slight amount of pulmonary involvement, with very severe rational symptoms. There seems to be more harmony in the term "far advanced," in which there are extensive physical signs with or without cavity formation, and in which there is severe constitutional disturbance, with or without complications. The term **"cured"** seems to be in disfavor with the majority of authorities, while that of **"apparently cured"** seems to be the most acceptable. A composite definition leaving out the question of time would be: Absence of all rational symptoms of disease and disappearance of nearly all physical signs, or only those which would be indicative of scar tissue. An **"arrested case,"** compiled from the opinions of the majority, would be one in which there was absence of all constitutional symptoms, including cough and expectoration, and therefore bacilli, physical signs showing no further activity, although the limits of diseased areas may remain the same. By **improved** is meant the lessened or improved symptoms, local or general, or both. [T. M. T.]

4.—Stephen W. Wells describes his **prophylactic screen** as a screen consisting of a sliding iron upright set in a weighted base; at the upper end of the upright is attached a metal frame holding a glass plate 13 in. by 15 in., which can easily be removed and cleaned. The frame is attached to the upright so that when in use the right arm is but one-third the length of the left arm. This arrangement permits considerable freedom in handling the instruments on the right, while the left hand is passed under the screen, thus easily controlling the laryngoscope. The screen has the advantage of being adjustable to any height; it can be easily placed in position; it does not interfere with the view of the larynx; it relieves the patient to feel that he cannot cough into the physician's face and it thoroughly protects the physician. [T. M. T.]

5.—In A. Charles Bernays' article the conclusions are: (1) In old cases of hypertrophied prostate palliative measures are sometimes preferable to radical measures. (2) Drainage of the bladder by the suprapubic route is preferable to perineal drainage in cases of cystitis, because the suprapubic method gives the sphincter apparatus more complete rest than the button-hole or fistula. (3) In recent cases of hypertrophy in which the patient's health has not been injured by chronic cystitis or nephropyelitis the dangers of myomectomy or perineal prostatectomy are minimal, and in these cases a radical and satisfactory functional result can be achieved by myomectomy. (4) Operation must be regarded as a palliative measure intended to enable the patient to evacuate his bladder more completely than before. It will probably have a very limited usefulness and will be crowded out of practice as the technique of myomectomy or perineal prostatectomy is perfected. (5) Bottini's operation is dangerous and must not be undertaken unless most careful measurements have been made. (6) Myomectomy done through a median perineal incision is the operation which promises the best results and is the operation of choice. It is applicable to the greatest number of cases in which permanent cure may be expected, the kidneys being physiologically sufficient and unimpaired. The perineal fistula will always close spontaneously after the perineal drainage is discontinued and if enough mucosa has been left there will be no stricture. [T. M. T.]

MEDICAL RECORD.

February 22, 1902.

1. Gonorrheal Infection of the Prostate. JOHN VAN DER POEL.
2. An Eight Year's Experience in the Radical Cure of Movable Retroversions of the Uterus by Alexander's Operation. LE ROY BROUN.
3. Intermittent Claudication Due to Obliterating Arteritis. CHARLES L. DANA.
4. Unilateral Right-Sided Venous Thrombosis, Associated with Cardiac Disease; Autopsy. JOHN WINTERS BRENNEN.
5. The Management of Critical Cases of Ruptured Extra-Uterine Pregnancy, with Case of Combined Intra- and Extra-Uterine Pregnancy. J. W. ELLIOTT.
6. A Preliminary Note on the Prevention of Nausea and Vomiting Following Ether Anesthesia. RALPH J. HESS.

1.—John van der Poel discusses **gonorrheal infection of the prostate.** In the majority of cases signs and symptoms of a posterior urethritis are more or less marked, although the infection of the prostate may develop gradually. Rectal examination reveals the prostate much increased in size and elastic and tender. The seminal vesicles are also unusually involved and may also be tender and swollen. This acute condition may last for a week or longer, much depending upon the treatment and then resolve and form the initial stage of a chronic prostatitis or go on to suppuration prostatic or periprostatic. All efforts of treatment should be directed towards the extermination of the gonococcus. The author recommends irrigation with some of the newer silver salts, such as protargol, argentamin, albargin, etc. Instruments or catheters should never be introduced into the urethra as long as a purulent discharge is present. In subacute or chronic cases he injects the silver salt directly into the bladder once every 24 hours. Massage of the prostate by the finger is recommended. [T. L. C.]

2.—Leroy Broun contributes a paper on **8 years experience in the radical cure of movable retroversions of the uterus by Alexander's operation.** The series includes observation upon 230 cases. Of this number there have been 2 deaths, neither of which can be attributed to the opera-

tion. The technique is considered in detail as well as the anatomical result, the surgical result, the permanency, the relation to child-bearing, and hernia following the operation. [T. L. C.]

3.—Charles L. Dana reports a case of **intermittent claudacation due to obliterating arteritis.** The condition consists of a group of symptoms characterized by intermittent or temporary attacks of paralysis usually of one leg accompanied by pain, paresthesia, stiffness, and vaso-motor disturbances, and absence of pulsation of one or both foot arteries. It is due to arterio-sclerosis, causing obliteration of the smaller arteries, also to disease, such as aneurysm of the larger trunks. It is chronic in its course and may lead to gangrene or symptoms resembling erythromelalgia or Raymond's disease, it affects oftenest one leg, but may attack both and may affect the arms. [T. L. C.]

4.—J. W. Brennen reports a case of **unilateral right-sided venous thrombosis, associated with cardiac disease.** The report of the autopsy is given. [T. L. C.]

5.—J. W. Elliot discusses the management of critical **cases of ruptured extra-uterine pregnancy with the report of a case of combined intra- and extra-uterine pregnancy.** In the report of a large hospital he has found in the table of surgical operations cases of ectopic gestation with 6 deaths. The deaths are accounted for as follows; 1 exhaustion, 4 days; 2 exhaustion, hemorrhage, 5 days; 3, shock, hemorrhage, 48 hours; 4, shock, hemorrhage, 24 hours; 5, shock, 6 hours; 6, hemorrhage, 3 days. He believes that waiting and stimulating the patient could hardly have failed to improve these results. One rarely hears of a person dying of extra-uterine pregnancy without the assistance of the surgeon, but we constantly hear of persons who have not rallied from the operation. As to the operative procedure itself it should be performed quickly and accurately and without excessive handling. [T. L. C.]

6.—In a preliminary note on the **prevention of nausea and vomiting following ether anesthesia,** R. J. Hess presents the following conclusions: (1) Post-anesthesia vomiting is a source of danger and great discomfort to patient, and is preventable. (2) It is due to excretion of ether into the stomach, with resulting acute gastritis. (3) Drugs are of no avail in prevention or treatment of post-anesthetic vomiting. (4) The present technique of preparation of patients for etherization is faulty, in that fluids are usually entirely prohibited or limited, whereas they should be pushed to aid in excretion of ether. (5) The dose of ether should be as small as possible, and the strength of ether vapor should not cause bronchial irritation with excess of mucus. (6) The combined use of NO and ether gives the best results. (7) In anticipation of gastric irritation give one to two glasses of water just before beginning anesthetization. [T. L. C.]

THE NEW YORK MEDICAL JOURNAL.

February 15, 1902.

1. The Management of Cerebral Hemorrhage, and Its Abortive Treatment. WILLIAM BROWNING.
2. The X-Ray in the Diagnosis, and Wiring in the Treatment of Fractures. CHARLES GRAEF.
3. Soaps of Lime and Magnesia in Urine. GEORGE E. PFAHLER.
4. Age of First Menstruation on the North American Continent. GEORGE J. ENGELMANN.
5. Treatment of Lobar Pneumonia. CHARLES E. NAMMACK.
6. The Active Principle of the Suprarenal Gland in Genito-Urinary Work. CHARLES CHASSAIGNAC.
7. How to See the Stomach Curvatures With Our Naked Eyes Without the Aid of Intragastric Instruments or Inflation. MARK I. KNAPP.
8. The Eye, Ear and Throat Sequelae of Typhoid Fever. L. D. BROSE.

1.—Wm. Browning's "dont's" in the **management of cerebral hemorrhage and its abortive treatment** are given as follows: (1) Don't give stimulants. Their use in such cases is most reprehensible. The patient is prostrated, and the lay mind naturally turns to tonics and bracers—about the worst thing that can be done; (2) don't resort to saline injections. During the acute stage a limitation of fluids is in order; (3) don't use the depressant diaphoretics, such as ipecac, pilocarpine or apomorphine. They tend to nauseate, an inclination otherwise too common, and, in the degree of attempts at vomiting, most undesirable; (4) don't prescribe digitalis. It is a dangerous drug in any individual with a liability to apoplexy, and for this, if for no other reason, of unquestionable utility in nephritis. If anything of this sort must be used, strophanthus, in the author's experience, it is by far the safest; (5) don't resort to opiates; (6) don't try nitrites; (7) don't permit any muscular exertion on the patient's part; and moving by others should be limited as much as possible. In the *subacute stage*, the important question is, when should the patient be encouraged to sit up? He should be kept as quiet as possible for the first few days lest further effusion occur from the same vascular rupture. In about a week sitting up should be encouraged. Vascular depressants in lesser dose should be given at this time. Care should be taken that the patient should not be allowed to remain listless abed and thus a secondary dementia is favored. In the *chronic stage*, which is often hopeless enough, the use of nux vomica, massage, electricity, etc., are to be tried. The chief benefit will be derived from cultivating in the patient whatever power remains. [T. M. T.]

2.—Charles Graef reports a case of the above after confirming the physical examination with the X-ray. He cut down on the seat of injury, removed the loose bands of connective tissue between the fragments, freshened the bone surface, and, after flushing the joint and wound with hot normal saline solution, drew the portions of bone into apposition and wired them with short silver wire, afterward strengthening the junction with tension sutures through the soft tissue about the point of juncture; closed the wound and placed the arm in a fully extended position on an anterior splint of steel. After two weeks he took the arm down and removed the stitches. At the end of four weeks daily passive motion and massage were given. The splint was removed and during the fifth week gentle active movements were used. At the examination of the patient two months after operation it was found that he had gained steadily in motion and the use of the limb, had strong union at the fracture, was beginning to use the arm more and more freely and at that time was able to straighten it and actively flex it to nearly a right angle. [T. M. T.]

3.—George E. Pfahler, in his article on **soaps of lime and magnesia in urine,** says that this sediment is very rarely found, and that von Jaksch has only once had the opportunity of examining these crystals, when he found them quite numerous in a feebly acid urine of a woman with severe puerperal septicemia. The author was fortunate enough to have been able to examine these crystals in three separate cases: (1) In a case of acute mania; (2) a case of abscess of the liver, and (3) a case of cocaine poisoning. The crystals are colorless, highly refractive, and in form resemble tyrosine, but possess distinctive characters of their own. They are larger and the individual spicules are more tapering than those of tyrosine. They are soluble in acetic and hydrochloric acid, and slowly in water and in decomposing urine. [T. M. T.]

6.—Charles Chassaignac gives the following conditions in which he believes that **the active principle of the suprarenal gland** would be useful, as well as a valuable and additional aid in the management of certain conditions of the genito-urinary tract, acting as a hemostatic either with a permanent effect in view, or merely as a temporary expedient. (1) In cases of hematuria in locating the source of the blood. If, after an application, there is immediate clearing up of the urine, this would be positive evidence that it was a bladder lesion, while the absence of any effect whatever would be only of relative or corroborating value in fixing the location upon the kidney; (2) useful in facilitating cystoscope examinations when a diagnosis is desired without delay; (3) to reduce the engorgement in certain cases of stricture of the urethra, thereby relieving the irritation and facilitating the passage of instruments; (4) troublesome sequel of urethritis in which we have a slight but persistent mucous discharge, after all infection or stricture has been disposed of, due at times to

persistent local congestion produced by some chronically engorged blood-vessels of the urethral mucous membrane. The urethroscope should be used for applying the suprarenal solution when it is deemed necessary to apply it in rather strong solution to special areas of congestion. When used to affect the entire mucous membrane it should be used in a milder solution by irrigation. [T. M. T.]

6.—Mark I. Knapp states that outside of *palpation* the methods used in physical examination of the stomach have objections. These objections are: The having to enter the stomach with an instrument or by the methods otherwise employed, changes the position and axis of the viscus. The stomach, weighted with water for gastrodiaphany or inflated with air or gas, is not the stomach when not so interfered with. Palpation is true, but it is an art that must be acquired by patient and constant practice. But even above palpation the author places inspection. For the purpose of inspection of the stomach, the thickness of the abdominal wall is of absolute indifference. The greater curvature of the stomach and also the lesser can be seen with absolute and unerring distinctness upon the wall of the abdomen, no matter how thin or thick, without the aid of anything else than the naked eye. For seeing the "curvature" of the stomach the patient should bear his abdomen and lie down on a table in the usual dorsal position. The examiner stands either at the side or at the shoulder of the patient so as to have either to look up to the stomach region or down to it. He now brings his eye on the same level with the prominence of the patient's abdomen and watches abdominal respiration with one or both eyes. The curvatures of the stomach will be seen distinctly as very fine lines moving under the skin with the respiration. Watch these lines a few respirations, note where they stop each time, and mark with ink where such lines constantly stop. These are the lines produced by the curvatures. An acute observer will not fail to notice that there is also a distinct difference in the plane of the abdomen where the curvatures are seen. By way of corroboration, percussion can be done in the following way: The closely apposed index and middle fingers of the left hand are placed on the abdomen so that the ink line representing the curvatures is between these fingers. Now percuss very gently over each finger without separating them and without removing them from where placed. If the line marked on the abdomen exactly corresponds with the curvature, the difference in percussion resonance will be heard. [T. M. T.]

7.—L. D. Brose, in the *eye sequelae*, mentions (1) Disease of the external eye. The lower part of the cornea is especially prone to suffer from desiccation and subsequent infection; (2) catarrhal conjunctivitis; (3) phlyctenular disease of the conjunctiva or cornea may arise during convalescence; (4) iritis, chorioiditis and vitreous suppuration are not as frequent as in relapsing fever; (5) cataract is rare; (6) hemorrhage into the retina during height of fever is quite frequent; (7) the optic nerve may be affected through a basilar meningitis, through hemorrhage into the nerve sheath or thorough toxemia, the result of the typhoid poison; (8) weakness of lens muscle and asthenopia are of frequent occurrence during convalescence. Bezold gives three ways by which ear infection occurs: (1) By direct propagation of a nasopharyngeal inflammation to the middle ear through the Eustachian tubes; (2) by transmission of septic matter from the nasopharynx to the ear; (3) by embolism of the blood-vessels of the mucous lining of the middle ear. Purulent middle ear inflammation with involvement of the mastoid is less frequent than non-perforative middle ear catarrh. The prognosis of middle ear disease is generally favorable, although death may result from meningitis, owing to caries of the tegmen tympani, or by transmission through suppurative sinus phlebitis, or through septic embolus. Deafness is not uncommon in the early stage of typhoid fever, but generally disappears during convalescence. The character of the laryngeal disease may be catarrhal, infiltrative or ulcerative. The catarrhal inflammation occurs during the first and second week, and when followed by desquamation of the epithelium gives rise to erosions and ecchymoses. The most serious are the infiltrations and ulcerations.

[T. M. T.]

February 22, 1902. (Vol. LXXV, No. 8).

1. A Critical Review of the Recent Literature of Tuberculosis. JOHNATHAN WRIGHT.
2. General Anesthesia and Its Administration in Throat Surgery. M. L. MADURO.
3. Twenty-three Consecutive Cases of Appendicitis Treated by Operation, with Recovery. WILLIAM G. WOOD.
4. On the Identification of the Cardiac Neuroses, with Special Remarks on the Nomenclature. JAMES K. CROOK.
5. Practical Pharmacy for the Physician. EDWARD T. HARGRAVE.
6. The "Poultice Method" of Healing Cutaneous and Subcutaneous Abscess Cavities. M. B. HUTCHINS.
7. The Management of the Tendency of the Upper Fragment to Tilt Forward in Fractures of the Upper Third of the Femur. RUSSELL A. HIBBS.
8. Cretinism. WALTER SANDS MILLS.

2.—M. L. Madura, in his article on **general anesthesia and its administration in throat surgery**, gives the following important facts: (1) It should be carefully ascertained that the valves of the gas apparatus fit accurately, thereby establishing the certainty of a rapid exit of atmospheric air from the lungs. (2) A certain amount of re-breathing of nitrous oxide should be allowed at the end of its inhalations, in order that a longer gas and a shorter ether anesthesia can be obtained. (3) The transition to ether should be accompanied by a rather free amount of admixture of air through the various inlets in the apparatus without removing its face-piece. (4) The head of the patient should be well drawn back, and forward pressure made on the jaws at the time of the transition to ether. [T. M. T.]

3.—William C. Wood reports 23 cases of **appendicitis treated by operation**, and emphasizes the fact that the surgical treatment is the safest one, and that the physician who still clings to the idea of there being a medical treatment for this disease is needlessly and uselessly risking valuable lives of persons who have put their trust in them. On looking over the table appended to his article, it will be seen that all the patients recovered; in four that were gangrenous nothing but operation would have saved them. The recurrent cases showed that medical treatment was a failure. The table also shows us how little either duration of attack or severity of symptoms can tell of the condition of the patient. [T. M. T.]

4.—James K. Crook states that our knowledge at the present time concerning the clinical and pathological features of the cardiac neuroses may be properly set forth under the following heads: (1) Palpitation; (2) tachycardia; (3) bradycardia; (4) the dyspeptic heart; (5) neurasthenia cordis; (6) the irritable heart; (7) arrhythmia, including tremor cordis and delirium cordis: (8) the heart in Graves's disease; (9) angina pectoris, including pseudo-angina.. [T. M. T.]

5.—Edward T. Hargrave gives the following suggestion to those practitioners who have no practical knowledge of pharmacy: (1) Study the properties of drugs and preparation used whenever opportunity occurs. (2) Carefully inspect every prescription. (3) Study the subject of incompatibility. To those who dispense their drugs the following suggestions are given: (1) Study the subject of extemporaneous pharmacy and incompatibility in any textbook of pharmacy. (2) Note the appearance, odor, etc., of all drugs and preparations handled, and avoid the indiscriminate mixing of drugs without regard for their properties. (3) Be careful, accurate and neat in every manipulation. [T. M. T.]

6.—M. B. Hutchins reports a few cases treated by this method. It is simply to apply over the opening of the abscess a poultice of flaxseed meal, made with a three per cent. solution of carbolic acid instead of plain water. A thin cloth or gauze layer can be put next to the opening. The three per cent. of carbolic acid in the mixture really becomes about one per cent., and is hence very weakly germicidal. Absolutely nothing is put in the abscess cavity; it is simply emptied of pus by pressure, through a small opening, if not already open. The poultices are changed as often as cleanliness or their getting dry requires. The wet poultice affords constant drainage and absorbs the discharge. The moisture in the poultice and in the constant flow of discharge prevents pre-

mature union of the mouth of the cavity. There is no painful packing in of gauze strips and retardation of healing by the presence of the foreign substance. There is no re-infection in dressing, and there is a saving of from 75 to 80 per cent. in time of healing. When incision is necessary it may be small instead of "free" and long. The pressure of the poultice aids in the coaptation of the walls and the rapid removal of discharge clears the way for natural reparative processes. [T. M. T.]

8.—Walter Sands Mills recommends Murray's treatment. Start with from 5 to 10 minims of liquor thyreoidei; some prefer dry preparations. It has been found that the treatment is more successful in young than in old. The physical improvement is always greater than the mental. In the beginning of thyroid treatment the patient should be kept in bed. The contraindications are in irritable heart or weak heart. If there is marked increase in the pulse-rate, or rapid loss of weight, reduce the dose. If diarrhea appears stop the drug. The drug must be discontinued for a week or so after it has been given some time. At first the dose should be five grains of the thyroid once a day, gradually increasing until as much as fifteen grains a day are given, divided into three doses. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 20, 1902.

1. The Significance, Pathological and Clinical, of Abdominal Pain. MAURICE H. RICHARDSON.
2. The Treatment of Eclampsia by the Method of Professor W. Stroganoff. F. S. NEWELL.
3. Surgery of the Gall Bladder and Ducts. JOHN W. KEEFE.
4. On the Value of Modern Methods of Diagnosis and Treatment in Gastro-Intestinal Diseases. RICHARD F. CHASE.

1.—Will be abstracted when concluded.

2.—F. S. Newell, in discussing the treatment of **eclampsia** by the method of Professor W. Stroganoff draws the following conclusions; although the reported cases do not furnish sufficient evidence to judge of the true value of any method of treatment. (1) In post-partum eclampsia the use of morphia and chloral in combination seems to have a distinctly beneficial action in controlling the convulsions. (2) In ante-partum eclampsia the treatment is less efficient than in the post-partum form, but the course of the disease seems to be altered for the better in the majority of the cases. (3) Although the treatment has not given as good results in our cases as in those reported by Stroganoff, a further trial is indicated, since our results have not been any worse than under any other method of treatment which has been tried, and further experience may disclose errors in the application of the treatment which may be remedied to good effect. At any rate, a method of treatment which has proved so efficient in the hands of its originator should not be abandoned until it has had a more thorough trial than we have been able to give this one as yet. The method of Stroganoff is directed toward the prevention of the convulsions by decreasing the irritability of the nervous system, and by removing all external sources of irritation, especially those connected with the birth canal. Another object sought for is the strengthening of the vital process by careful supervision of the cardiac and pulmonary circulation. [M. R. D.]

3.—John W. Keefe believes that within the next ten years the general practitioner will be in as close a touch with diseases of the **gall bladder and ducts** as he is at present with appendicitis. When he does become more familiar with gall-stone disease, the author believes early operation will be more frequently resorted to, and that in no other field of major surgery can such brilliant results be afforded by operation. [M. R. D.]

4.—Richard F. Chase's paper deals with the consideration of the value of **modern methods** of diagnosis and treatment in gastro-intestinal diseases. He quotes two cases as illustrative of the facts that very similar subjective symptoms may be produced by entirely different gastric conditions, and that the employment of these newer methods is absolutely necessary in determining the true conditions of the stomach and its secretions and in directing proper treatment. In one case there was low acidity, a large amount of mucus and a large but not dilated stomach. In the second case there was a secretion of gastric juice as late as nineteen hours after the last meal, and with an acidity nearly as high as that which is usually found one hour after a test meal. In addition there was hyperacidity after the test meal, and also a moderately dilated stomach. These cases are to illustrate the similarity of subjective symptoms, and, unless individually subjected to **modern methods** of diagnosis, would, the author believes, have received the same diagnosis and treatment. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

February 22, 1902.

1. An Experimental and Clinical Research into Cocain and Eucain. GEORGE W. CRILE.
2. Cancer of the Penis. HENRY H. MORTON.
3. Median Perineal Prostatectomy, etc. ALEXANDER H. FERGUSON.
4. Fracture of the Metacarpal Bones and Oblique Fracture, etc. W. W. GRANT.
5. The Question of Spinal Braces in Lateral Curvature. A. B. JUDSON.
6. The Report of a Typhoid Epidemic at the Iowa State Agricultural College. W. E. HARRIMAN.
7. The Identification of Criminals Through the Fundus of the Eye. W. F. WEYMANN.
8. The Organization of the Medical Profession.

1. Crile contributes an article on **experimental and clinical research into cocain and eucain.** Mention is made that cocain or eucain when injected into a nerve trunk produces a "block" or a condition of the nerve which prevents the passage of afferent or efferent impulses. The conductivity is as completely interrupted as if the nerve were divided. This "physiological block" may also be produced when one of the above named substances is injected underneath the nerve sheath. The effect of cocain or eucain upon the nerve structures—rest of functional activity—is the same. The general action of cocain and eucain is also practically identical. Injection of cocain into the venous system is followed by a temporary increase in the blood pressure. In toxic doses the blood pressure rapidly sinks. The author carefully details the effects of cocain when injected into the spinal cord or into the subarachnoid space. He then cites the clinical application of the experimental evidence noting the effect of an injection of cocain into the nerve trunks for operations on the extremities; for amputations of the leg; amputations at the shoulder joint, and laryngotomy. The histories of a number of cases are included in his article. The following clinical summary is drawn: "In the clinical use of cocain and eucain particular attention is called to a most important feature, viz., that shock is almost wholly avoided, because all afferent impulses are blocked. It is not known that afferent impulses set up by injury or operation are the cause of shock. These impulses are but slightly modified by general anesthesia. The afferent impulses constituting pain is diminished by general anesthesia, but those affecting the vasomotor, the respiratory, and the cardiac mechanisms are not controlled; but cocain or eucain absolutely blocks their passage, making a physiologic amputation of the part. These anesthetics wholly prevent reflex inhibition, but the principal causes of collapse in certain operations and injuries, e. g., operation on the larynx and pharynx. Given hypodermically, the experimental evidence shows that they diminish shock in operation on the splanchnic area and absolutely alter this effect in the processes of operation or exposure, as abundantly proved by the series of double experiments. I have had the opportunities of testing this clinically, both in operations for gunshot wounds of the intestines, and in such the experimental evidence seemed to be corroborated. Comparative results required such a large num-

ber of observations that I prefer for the present to offer no more than the clinical suggestion." [F. J. K.]

2.—Henry H. Morton discusses the question of **cancer of the penis.** Age is thought be an important predisposing cause and the next most important is phimosis. Demarquay found that out of 59 cases of epithelioma phimosis existed in 42. The great rarity of the condition in Jews contributes to the confirmation of this opinion. Any form of irritation such as smegma or dirt produces an inflammation which in time is apt to undergo a transition into carcinoma. The condition rapidly proceeds to ulceration and breaking down with the formation of cauliflower-like projections. The inguinal lymphatics are usually the seat of a mixed infection composed of malignant disease and pyogenic bacteria. Any warty growth or persistent erosion in an aged person should be looked upon with great suspicion, and malignant disease eliminated or confirmed by microscopic section. If unoperated upon the disease is fatal within from one to two years. Stress is laid upon early amputation together with the thorough removal of all inguinal glands. In complete amputation Morton suggest the separation of the corpora cavernosa from the pubic rami by means of the Pacquelin cautery since this method is attended by much less hemorrhage than when the knife is employed. [J. H. G.]

3.—Alexander H. Ferguson reports **six cases of median perineal total prostatectomy.** He believes that this operation, which consists in a median incision, exposure of the prostate, the splitting of its capsule, and then the removal of the whole gland by piece-meal, is much to be preferred to either the suprapubic method or the combined suprapubic and perineal method. Stress is laid upon the importance of introducing retractors into the split capsule which not only makes a better opening for the removal of the gland but draws it well down into the field of operation. The posterior wall of the prostatic urethra is of course perforated. A drainage tube surrounded by gauze packing is then introduced and connected by a long rubber tube with the receptacle below the bed. The advantage of removing the gland by piece-meal is that the surgeon is enabled to work through a small opening without bruising the surrounding parts; hemorrhage is avoided if the work is done within the capsule. The operation is not a prolonged one and consequently the danger of uremia is lessened. It is claimed also that the shock accompanying this operation is less than that which follows the suprapubic prostatectomy. [J. H. G.]

4.—W. W. Grant in discussing **fractures of the metacarpal bones and oblique fracture, simple or compound, of the forearm** urges the frequent employment of the fluoroscope to ascertain the exact position of the fragments in these fractures. He acknowledges the great improvement that has been made in the functional result of fractures and thinks that now more attention should be given to contour. In order to accomplish better results in the treatment of fractures below the elbow Grant suggests the application of Buck's extension apparatus to the fingers. This can be accomplished by means of adhesive strips applied to the fingers, an ordinary pulley, and weights. This method necessarily requires confinement for ten to fifteen days but the results claimed for it are supposed to outweigh this objection. A detailed account is given of a very severe compound fracture of the forearm and matacarpals in which this method produced good results. [J. H. G.]

6.—Harriman contributes a **report of a typhoid fever epidemic** at the Iowa State Agricultural College, which occurred in the fall of 1900. The cause of this epidemic was probably due to an infected milk supply. The author adds that in the light of the facts there can be no reasonable doubt as to the infectiousness of the milk. The total number of the students at the time of the outbreak was about 900. Between October 8 and November 3, 42 cases of enteric fever developed. The total number of cases was 65. Of the 42 cases treated in the college hospital intestinal symptoms were present in all. Intestinal hemorrhage occurred in seven; endocarditis in one; pericarditis in one and myocarditis or cardiac myasthenia in six. Bronchial symptoms were present in about one-half of the cases. One was complicated with lobar pneumonia. Five patients suffered from phlebitis. Neuritis was experienced in four instances. One case was complicated with intestinal perforation. Acute mania developed in one instance. The cold bath treatment was employed; plunges were given whenever the temperature reached 102.6°. In a few instances sponging was substituted for the cold emersion bath. The percentage mortality of the cases treated at the college was 4.7. Twenty-three cases were treated outside of the college hospital and out of this number three died, a mortality of 13%. [F. J. K.]

7.—**The identification of criminals through the fundus of the eye** is discussed by Weymann. This author thinks that, by a careful anatomical study of the fundus oculi, persons could be identified, as he contends that in no two individuals is the anatomical structure the same. He submits the following propositions: "Absolute identification can be obtained by a drawing (exact as a photographic reproduction or nearly so) of the papilla and a surrounding retinal circle distant from the scleral ring by two papillary diameters. So great is the multiplicty of the anatomical relations of the vascular twigs that I have never been able to find even two fellow organs exactly alike. The points to be considered are: 1. The method of division (dichotomous or otherwise). 2. The exact point of division. 3. The exact angle of the vessels with the primary meridians. 4. The exact distance of one divisional point from the other. 5. The relative size of the divided twigs. 6. The angle of division. 7. The course of the twigs (straight, curved, etc.) 8. The exact distance, everywhere and at every point, between venous and arterial branches (parallelism, convergence or divergence, twining, etc.)." [F. J. K.]

AMERICAN MEDICINE.

February 22, 1902.

1. The Etiology of Yellow Fever. WALTER REED.
2. Observations Concerning the Possible Infectiousness of Meat and Milk from Tuberculous Animals. ERNEST N. HUTCHINSON.
3. An Outline of the Care of the Actually Insane. ARTHUR McGUGAN.
4. Indications for Perineal Section in Stricture. G. FRANK LYDSTON.
5. Report of a Case of Pernicious Anemia. G. E. TYLER and C. E. COOPER.
6. Measurements of Chatanooga School Children. ARTHUR MacDONALD.

1.—Reed and Carroll present a **supplemental note on the etiology of yellow fever.** Guided by the work of Löffler and Frösch, who determined conclusively that the microorganism of foot and mouth disease of cattle pass readily through a porcelain filter, they put forward the suggestion that perhaps the specific agents of some of the acute and infectious diseases of man and animals might also belong to this group of ultra-microscopic organisms. It was for the purpose of ascertaining whether observations conducted along the same lines as those above mentioned might throw additional light upon the etiology of yellow fever that the six experiments of Reed and Carroll were undertaken. Six individuals, supposedly non-immunes, were bitten by mosquitoes and of this series four gave negative and two a positive result. The blood from the positive cases was used for the purpose of inoculation, the three kinds of material derived from the blood of a positive were as follows; (a) the unheated and partially defibrinated blood, (b) the partially defibrinated blood which had been heated to a temperature of 55° C. for 10 minutes and (c) the diluted blood-serum which had been filtered through a Berkefeld filter. Each of these materials was used for the inoculation of one or more non-immune individuals. A patient treated with (a) developed a typical case of yellow fever and this demonstrated that the blood drawn from the general circulation of a case at the beginning of the third day contained the specific agents of the disease. Three cases were injected with (b) negative results, and of 3 non-immune individuals who received subcutaneously an injection of (c) 2 developed an unmistakable attack of

yellow fever. The third case was negative. As a further test and in order to determine whether the serum filtrate contains something more particulate than a soluble toxin, they inoculated a third individual with blood drawn from one of the patients whose attack had been occasioned by the injection of 1.5 cc. of serum filtrate. If under these circumstances it would be found that the injection of a small quantity of blood was followed by an attack of yellow fever in the third individual, the evidence would point clearly to the presence of the specific agent of the disease in this blood, for we can hardly believe that a toxin which had undergone so great a dilution in the body of the second individual would still be capable of producing the disease. The patient so inoculated developed a typical case of yellow fever and these authors express the opinion that the source of infection in his case must be attributed to the injection of blood drawn from the patient in whom the disease was progressing rather than the filtered serum with which he had been inoculated one week before. They believe that the blood injected contained the specific organisms which had therefore passed through the filter along with the filtrate with which this later individual had been inoculated. [T. L. C.]

2.—E. N. Hutchinson contributes observations concerning the **possible infectiousness of milk and meat from tuberculous animals.** He concludes his paper with the words of Dr. Woods Hutchinson. "We should not tolerate for a moment the use as human food of either the meat or milk of animals suffering from any serious disease whether infectious or not: nor can we afford to run any risk which is so clearly avoidable." [T. L. C.]

3.—Arthur McGugan presents an outline of the **care of the acutely insane** as carried on at the Michigan Asylum in Kalamazoo. The problem presented is three-fold: The first to eliminate waste products; second to limit so far as possible the output of energy; and third to feed the depleted nerve cells. His consideration includes rest and exercise, diet, hydrotherapy, electrotherapy, massage, surgery, and drugs. [T. L. C.]

4.—G. F. Lydston discusses the **indications for perineal section in stricture.** He believes the operation is much more frequently required than is generally supposed, and that it will result in a radical cure in a large proportion of cases, granting that the after-treatment is conducted intelligently. He believes that in many instances strictures are tortured into a recurrence after perineal section by the too assiduous use of sounds. The most imperative indication for this operation is traumatic stricture and it is not necessary for the stricture to be extensive in order to demand perineal section. The operation is indicated also in strictures complicated by severe cystitis or fistula.

[T. L. C.]

5.—G. E. Tyler and C. E. Cooper report a case of pernicious anemia. The patient suffered from considerable gastro-intestinal derangement, but has done well on Fowler's solution and a carefully regulated diet. [T. L. C.]

6.—Arthur MacDonald presents a study of the **measurements of Chatanooga school children** which he states is one of the first studies of this kind made in the South.

[T. L. C.]

Pelvic Appendicitis.—In the *Bulletin Médical*, (September 4, 1901, 15me. Année, No. 70) X. Delore reviews the subject of pelvic appendicitis, reporting two of his own cases in detail. One was a man of 19 who had been ill 10 days. Rectal examination was painful, but no mass could be felt. An oblique iliac incision was made and a pelvic abscess evacuated which contained a half liter of pus. Drainage was left in place, and he recovered in four weeks. In the other case, a boy of 18, rectal examination revealed an abscess which was opened through the rectum. He recovered in two weeks. Delore gives the advantages and disadvantages of operating by the intraperitoneal, subperitoneal, vaginal, rectal, and transperitoneal methods. He concludes that rectal examination is indispensable in all cases of pelvic appendicitis; that, when an abscess is found, a rectal incision should be made; that a vaginal incision should be made when possible, which is but seldom; that when the abscess is high up, the subperitoneal method is to be preferred; that, finally, the transperitoneal method is only applicable when the diagnosis is doubtful, and then it should be performed at one sitting always. [M. O.]

Original Articles.

TWO CASES OF ADIPOSIS DOLOROSA: ONE IN A MAN, COMPLICATED BY EPILEPSY: ANOTHER IN A WOMAN, PRESENTING ALSO CIRCINATE RETINITIS.

By F. X. DERCUM, M. D.,

of Philadelphia,

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Thus far some twenty-four or possibly twenty-five[1] cases of adiposis dolorosa have been placed upon record. Of these only three have occurred among men, namely a case reported by Ewald,[2] one by Vitaut,[3] and one by Féré.[4] The case here presented constitutes the fourth case. It is briefly as follows:

CASE I. Charles B., age 39, single. Woodturner by trade. American by birth.

Family History.—Father and mother living and well. Four brothers and two sisters living and in average health, except that one brother and one sister were for a time nervous.

Personal History.—Had some of the diseases of childhood but was in average health up to fifteen years ago, when he was seriously ill with some febrile affection which confined him to bed for over two weeks. He does not remember what the disease was but knows that the liver and kidneys were affected. Some time after this he began to grow stout. After a year or two had passed the fat began to accumulate in large masses upon the side of the chest and upon the abdomen and lower portions of the trunk. These masses were exquisitely painful to touch. Other fatty masses, also painful to touch, made their appearance about the arms and upper portions of the forearms. Smaller deposits of fat took place upon the thighs and also in the upper parts of the legs. Like the rest in other situations it was very painful to pressure. Neither spontaneous pain nor crises of pain were present in any of the fatty masses. He noticed also that, as the deposits of fat grew he became exceedingly weak and easily fatigued. Very slight exertion either in respect to the use of his arms, would fatigue him very readily. He observed also that his flesh would bruise very easily, that slight blows would bring about black and blue marks. Seven years ago, after a bruise of the left leg, he developed an ulcer which was a long time in healing. A similar ulcer also developed in consequence of a bruise on the opposite leg. The ulcers were always slow in healing.

Between four and five years ago he had an epileptic seizure. The attack was preceded by an aura which began apparently in the abdomen and ascended toward the head. Unconsciousness was complete and the convulsion general. Three months later he suffered from a similar attack and gradually the attacks became more frequent, until they occurred once a month and more recently three times in a week. He compares the aura to a sensation of nausea and vertigo. There was not at any time any vomiting. He frequently bit his tongue and almost always passed his urine during the attack. In addition he frequently suffered from slight attacks which he says were not accompanied by loss of consciousness. Frequently, when the aura comes on he can stop it by pressing his hands rapidly together, prevent the attack from maturing.

Some of the black and blue marks which make their appearance upon his body or limbs he cannot trace to injury. He says that sometimes he cannot account for them. He had at one time, about three years ago, also an attack of severe pleurisy in which he lost so much blood that he was completely exhausted. He has had no other

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1 Ewald, Berliner klin. Wochenschrift, January 28, 1901.

2 Vitaut, Marseille Médical, 1901.

3 Féré, Revue de Médecine, 1901.

occasions when he suffered from any form of hemorrhage.

Status Praesens.—The patient is a man very much below the normal stature, his height only being four feet, ten and a half inches. He presents a striking appearance because of numerous accumulations of fatty tissue over the entire trunk. The abdomen is so pendulous that the genitals are concealed as though by an apron. Huge folds of the fat also hang from the sides of the trunk. The deposits of fat in the arms are not as great in proportion as the deposits of fat in the trunk. This is also true of the deposits of fat in the thighs and legs. Everywhere these masses of fat are exquisitely painful to pressure. All of the parts appear to be equally painful, save perhaps in the upper portion of the left side of the trunk and left shoulder, where the pain appears to be more pronounced than elsewhere. The skin is dry, but otherwise presents no abnormality.

The measurements of the trunk are as follows:

The circumference of the trunk at the axilla, is 42½ inches, the circumference of the trunk at the level of the nipples is 47½ inches, the circumference of the trunk at the umbilicus is 51¾ inches, and the circumference of the trunk below the imbilicus is 57 inches.

The right arm measures, in its upper third, 16 inches, in the middle third, 14½ inches, while the upper portion of the forearm measures 9¾ inches.

The left arm measures at the upper third 15¾ inches, in the middle third 12¾ inches and the upper portion of the forearm measures 9 inches.

The circumference of the neck is fifteen inches.

The right thigh measures in the upper third 23 inches, in the middle third 17¼ inches and in the upper third of the right leg 14¼ inches.

The left thigh measures 23½ inches in its upper third, in the middle third 16½ inches and in the upper third of the left leg 14¾ inches.

Weight, 206 pounds.

It is a noteworthy fact that the lower portions of the forearms and hands, and the lower portions of the legs and feet are entirely free from all fatty deposit, the skin being here, indeed, so fine in texture, that the tendons can be very readily discerned beneath it.

There is some fatty deposit in the face, though this is much less in proportion than that which is observed in other portions of the body. There is also a dependent fold of fat beneath the chin. The face is somewhat flushed with a tendency to lividity. Irregular flushing, with here and there tendency to lividity, is also observed over various



Fig. 1—A Case of Adiposis Dolorosa.



FIG. 2 A Case of Adiposis Dolorosa.

parts of the body. Here and there also the veins are somewhat prominent.

Extensive scaring, due to leg ulcers, one of them still incompletely healed, are present in the legs.

The knee-jerks are normal. There is no ankle clonus. There are no areas of anesthesia or hyperesthesia. The viscera, as far as it is possible to examine them, are normal. The urine also reveals no abnormalities.

An examination of the eyes was made by Dr. C. A. Veasey with the following result:

There is a very slight ptosis of the left side and some weakness of the internal rectus. The appearance of the conjunctiva is very interesting. In front of the equator of the eyeball it is so translucent that the muscle fibres and the tendinous insertions of the various muscles can be distinctly seen. Back of the equator of the eye-ball the conjunctiva assumes a thickened yellowish appearance, as if due to deposits of fat beneath. There are accumulations of fat in the orbital cavity which can be distinctly felt by the fingers. The reaction of the pupils to light is normal. The reaction to accommodation and convergence is present, but very sluggish and if either eye be tested separately, the other eye being covered, there is a very moderate *ditatation* of the pupil in accommodation and convergence, instead of contraction. This result was obtained by repeated tests and confirmed by the observation of those standing by. The fundus changes are those of very high myopia. With his glasses, the vision of the right eye equalled 6-12 and of the left 6-15. Both eye-balls are quite prominent. The media were hazy on account of many vitreous opacities.

CASE II. Mrs. R., age 33, married, housekeeper.

Family History.—Negative, except that the mother was a very "stout" woman and died of an acute pulmonary trouble following la grippe,—and one sister died of heart disease.

Personal History and Status Praesens.—Was always in average health previous to the present trouble. She has been married 12 years; has never been pregnant.

About ten years ago she began to suffer from pain and soreness over the various portions of the trunk and limbs. At the same time she noticed that the thighs were becoming very large. Gradually some enlargement took place in the upper arms and also in the legs below the knees. Everywhere this enlargement was tender and sore to touch. These symptoms progressed gradually and slowly until at present the thighs are enormously enlarged, so much so that a large mass of fat projects forward and hangs over the knees in each leg. There is also a very decided enlarge-

ment of the upper and middle thirds of the legs, decided enlargement of both upper arms and of the upper and middle thirds of the forearms. There is also some deposit of fat over the shoulders and over the trunk generally, though this deposit is not excessive and is evenly diffused.

She now complains of excessive tenderness and soreness to touch, over more or less widely distributed areas of the arms, legs and thighs, and the anterior and lateral portions of the thorax, the most sensitive areas being in the upper arm, the legs above the ankles and infra-mammary regions. There is no spontaneous pain. The soreness is elicited by pressure over the parts named—or by a little unusual muscular exertion. She tires very easily,—a few movements of the arms are sufficient to bring on very decided fatigue which is especially pronounced in the arms, and she states that she is aging (turning gray) more rapidly, recently, than she should. She states that there is a marked tendency to discoloration of the tissues, upon slight bruises or knocks,—and she has had occasional attacks of epistaxis. Her station is normal; her tendon reflexes are also normal, or slightly exaggerated.

There are no uterine or menstrual disturbances. Heart and lungs are apparently normal. For more than two years she has had some eye trouble, accompanied by a constant daily dull frontal headache.—worse over the left eye on account of which she applied for treatment. She sleeps well, but is "nervous" and much depressed mentally. Complains that she cannot see objects directly in front of her left eye.

The eyes were examined by Dr. de Schweinitz, who reported that the right eye is perfectly normal in all respects, while in the left eye she has a circinate retinitis—a mass of partly fibrinous and hemorrhagic exudate in the center of the retina surrounded by crescents of fatty degeneration in Müller's fibres. Dr. de Schweinitz was not disposed to regard the condition as related to the adiposis dolorosa from which the patient was suffering. It is important, however, to bear in mind, first the fact that circinate retinitis is generally observed about the middle period of life, while this patient is a woman of only thirty two, and secondly that the changes, hemorrhage and fatty degeneration, are after all the changes which are noted elsewhere in her body. It does not seem impossible therefore that both the adiposis dolorosa and the hemorrhagic and fatty changes in the retina are dependent upon the same pathological cause.

Vitaut divides adiposis dolorosa into, first, the nodular; secondly, the localized diffused, and, thirdly, the generalized diffused forms. Both of these cases evidently belong to the second group. The preponderance of the deposit in the man is upon the trunk; in the woman upon the thighs. Although there is some enlargement on the upper arms and thighs in the man, this is comparatively insignificant when compared with the deposit upon the trunk. Both patients present in a striking manner the characteristic symptoms of fatty deposit and pain upon touch. Crises of pain or spontaneous pain, such as have been found in other cases, have not been noted in either.

Vitaut regards the fatty deposit, pain, asthenia, and the psychic phenomena as the four cardinal symptoms of adiposis dolorosa. While fatty deposit and pain are the two most prominent symptoms of the disease, marked or even grave asthenia and psychic or general nervous symptoms were so prominent in all the cases which I have myself observed, that I am equally disposed to ascribe great importance to both of these last mentioned symptoms. The asthenia appears not to depend upon the fatty deposit, at least not directly. Thus, in the case of the woman, the fatty deposit is not at all marked upon the trunk and to a comparatively slight extent upon the arms, and yet a very few simple movements of the arms bring on decided fatigue and weakness. Weakness and ready exhaustion are also marked symptoms in the man. Here they could, of course, be readily ascribed to his excessive weight and size.

As regards the psychic symptoms there are very commonly present marked mental depression, decided mental slowness, sometimes, as in Eshner's case, hallucinations, and in others still great irritability and tendency to causeless quarrelling and even vague ideas of persecution. The neurasthenia and hysteria, which has been described in association with adiposis dolorosa, is, of course, to be included among these general nervous manifestations. Among the less frequent nervous complications is epilepsy, which is present in the case of the man. It has been noted in one other case, namely in the patient reported by Frederick P. Henry.

In the autopsy made in my original case of adiposis dolorosa,[5] and also in that of Dr. Burr,[6] there were found, as the most important changes, interstitial inflammation of the nerves passing through the fatty deposit and also striking changes in the thyroid gland. The latter presented signs of atrophy, together with here and there evidences of hypertrophy, a hypertrophy which appeared to be an effort at compensation. In the case of Dr. Burr there was also present an enlargement of the pituitary body, and in my own sclerotic changes in the columns of Goll. However, the neuritis and the degenerative changes of the thyroid gland were in both autopsies the most important findings.

Hysterical Pseudo-Phthisis.—Louis Rénon and Paul Sollier report in full an interesting case of hysterical pseudophthisis in a young woman of 22. The case-history covers two years. Because she had frequent fainting spells, and some cough, and because radiography showed lessened transparence over the left apex, phthisis was suspected. Slight pulmonary signs appeared, few rales and friction sounds. Under careful observation the diagnosis of hysteria was made, as there was anesthesia, pain on pressure in spots, etc. Rest in bed, isolation, and hypnotism, followed by exercise, effected a cure. The emaciation, cough, pleural friction, tachycardia, and fever all led to the suspicion of pulmonary tuberculosis. Yet the condition was hysterical. Such cases are no longer rare. [M. O.]

The Abdominal Type of Influenza.—E. Michel describes this year's epidemic of influenza in Marseilles, in the *Bulletin Médical* (November 6, 1901.) Gastro-intestinal symptoms predominated. Not only were influenza bacilli found, but colon bacilli, typhoid bacilli, pneumococci, etc., were also noted. The abdominal type of influenza is apt to affect people with dyspepsia or other chronic gastro-intesinal disorder. The abdominal and pulmonary forms of influenza may co-exist, or the disease may be primarily abdominal in type. It may resemble simple enteritis, cholera, peritonitis, mucous disease, or typhoid fever. Finally influenza and typhoid may exist together, the latter following the former. The diagnosis is often exceedingly difficult; while the prognosis varies according to the severity of the affection. He advises high intestinal injections, hypodermoclysis, quinine and stimulants. Cold baths may be of service. [M. O.]

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5. Journal of Nervous and Mental Disease, August, 1900.
6. Journal of Nervous and Mental Disease, October, 1900.

A CASE OF ASCITES, DUE TO HEPATIC CIRRHOSIS TREATED BY TRANSPLANTING THE OMENTUM BETWEEN THE PERITONEUM AND ABDOMINAL WALL.

Results With Autopsy Eight Months Later and Exhibition of the Abdominal Viscera, Showing Specimen and Horse Shoe Kidney.

By W. J. ROE, M. D., and GEO. W. SPENCER, M. D.,
of Philadelphia.

Mrs. H. V. C., born December, 1858. At six years of age, had varioloid; was married at 17. Her first child died, aged 1½ years, of cholera infantum; second and third children are adults and are and have been in good health. After the birth of her third child, and four years after marriage, she suffered from what she thought was a slight attack of rheumatism, which lasted for several months accompanied by eruption upon the skin, sore throat and loss of hair. She had suffered about six months from the above, when she had a miscarriage and subsequently had fifteen still-born children, including a pair of twins. Then she gave birth to a child at seven months, which lived twenty days, and subsequently had two still-born children.

Labor occurred at the following months of pregnancy: One at third; the twins at fifth; and the others between the beginning of the sixth month and full term. Other than this, she had considered herself in good health until the onset of her last illness, which probably began two and a half years previous to my first visit (May 28th, 1899), during which time she had suffered from pain in the left side of the abdomen just above the ilium; shortness of breath; occasional attacks of vomiting; symptoms of gastric and intestinal indigestion; headache and dizziness. There was no history of jaundice, chill, fever or sweats. On one occasion she vomited blood and several times blood was noticed in the stool.

Ascites began three months previous to my seeing her, after which the symptoms were exaggerated with rapid emaciation, loss of strength and increasing edema of the feet and legs.

Physical Examination, May 28. Temperature 98.8°; pulse 120; respiration 30. Marked emaciation; enormously distended abdomen, which examination showed was due to free fluid. Quite marked edema of feet and legs. Heart, lungs, uterus and its appendages free of evidence of organic disease.

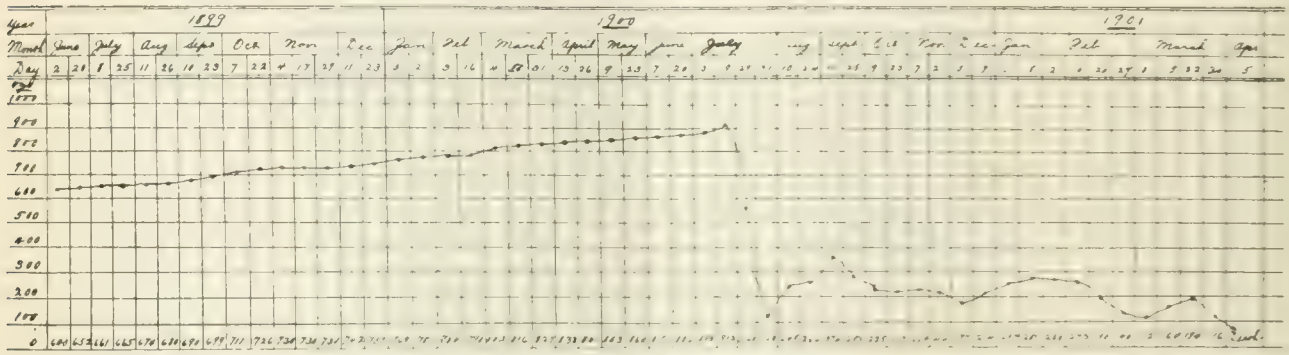
Urine Examination: Clear and amber; acid 1020; no albumin, sugar or tube casts.

I was unable to palpate either the liver or spleen, but believed the ascites was due to fibrous hepatitis. I was also unable to secure any history of tuberculosis in the family or any evidence in the patient, and she had never used alcoholic beverages of any kind. Her history led me to believe that she had been a victim of syphilitic infection, which had remained unrecognized and untreated, and that, therefore, the cirrhosis was due to the same. Dr. W. Joseph Hearn, who kindly referred this patient to me, had seen her on two occasions and concurred in the diagnosis.

I put her upon mixed treatment, and in addition, gave her hydrochloric acid, nux vomica and cardamon, at the same time, keeping up mild purgation.

On June 2nd, owing to increase of the pressure symptoms, I performed paracentesis, and, during the following fourteen months, repeated it thirty-one times, with the result as indicated in the following table.* The fluid

TABLE NO. I.



accumulated with gradually increasing rapidity, necessitating tapping at somewhat shorter intervals.

During most of this time, I kept her on specific treatment alternating mercurial preparations with mixed treatment, and with the iodides alone, in addition, giving her the usual line of treatment for such conditions. She was steadily losing flesh and strength and was solicitious to have something further done for her relief. At the end of twelve months, when I explained to her the possibilities of an operation and its great dangers, she readily consented, but I purposely deferred operating for two months, hoping there might be some change in her condition. Repeated examinations of the urine, previous to and at the time of operation, showed no albumin or casts.

The daily quantity at such times fluctuated between 32 and 45 ounces.

Examination of Ascitic Fluid: The ascitic fluid was slightly opaque pale yellow, with a greenish hue; alkaline, S.P. 1010 and gave one half layer of albumin upon boiling. Microscopic examination was negative. Examination of the ascitic fluid subsequent to operation gave practically the same results..

I operated July 31st, 1900, at the Jefferson Hospital, through the courtesy of Dr. George W. Spencer, who assisted me. The purpose of the operation was to establish venous circulation through the medium of adhesion between the veins of the omentum and the veins of the anterior abdominal wall and by this means relieve the obstructed vena porta. The patient had unfortunately been freely purged by magnesium sulphate during the night.

* 31 Tappings prior to operation, averaging 760 ounces per tapping.
21 Tappings subsequent to operation, averaging 218 ounces per tapping.
Average interval between tappings prior to operation—14 days.
Average interval between tappings subsequent to operation—12 days.
Previous to operation, tappings were only performed at the patient's request and not until the pressure became unbearable, and this explains the comparative regularity of the quantities of fluid. Subsequent to operation, I endeavored to tap her at regular intervals of two weeks, but during the last two months she insisted upon being tapped at much shorter intervals, although the quantity was comparatively small.

which added greatly to her already weak and depressed condition. When brought to the operating room, her pulse was scarcely perceptible and 130 per minute, and she complained of feeling very weak. She was given, hypodermically, strychnia sulphate, one tenth grain; and tincture digitalis fifteen minims.

We decided to give her intravenous transfusion of normal saline solution which was begun as soon as she was partially anesthetized. This was done to prevent the shock of the operation and evacuation of the two days' accumulation of ascitic fluid; to improve the character and lessen the frequency of the pulse and especially to prevent the possibility of the formation of a heart clot. Ether was administered. We made a five-inch incision in the median line of the abdomen and above the umbilicus and found the parietal peritoneum very much thickened and it had lost its glistening appearance. After evacuating the fluid, we examined the viscera. There were no adhesions to be found, the liver was greatly lessened in size from that of a normal liver and was found to be very little deeper on its posterior than its anterior border. It was firm to the touch, but not hobnailed; the gall bladder was moderately distended and free of calculi, as were also its ducts. The spleen felt to be normal in size and consistency. The stomach, pancreas and intestines appeared normal. The omentum was not more than four inches in length, was practically deficient of fat and looked shrivelled. Its arteries were numerous but small, and its veins were large and distended.

Midway along the line of the incision we made a horizontal incision through the peritoneum only and extending three and one half inches upon each side. We then stripped the peritoneum from the abdominal wall below the horizontal incision down to and beyond the limit of the lower extremity of the median incision. This made a pocket between the peritoneum and the transversalis fascia seven inches in width and three and one half inches in depth. Into this we carried the omentum and first secured the left extreme portion in the left and lower corner of the pocket by a silk worm gut suture, carried through the abdominal wall and omentum, tied loosely upon the skin surface. A second suture was used to fix the left margin of the omentum and two others to fix the lower border along the bottom of the pocket. We next sutured the free extremity of the peritoneal pocket to the under and middle portion of the omentum close to the transverse colon. Next we introduced a continuous cat gut suture, beginning at the left extremity of the transverse incision in the peritoneum and between the upper and attached margin of the peritoneum and transversalis fascia and to the anterior surface of the omentum along its attachment to the greater curvature of the stomach, taking care not to include in our suture the left gastro-epiploic vein. The same procedure was carried out upon the right side, and, when complete, the greater curvature of the stomach was in contact with the upper margin of the transverse incision in the peritoneum, and the omental border of the transverse colon was in contact with the free margin of the peritoneal pocket,—practically the entire omentum was in the pocket. The abdominal incision was closed by through and through sutures of silk worm gut, which were not tied until the aponeurosis was closed by a continuous suture of chromicised cat gut. I was guided in deciding upon this method of operation by the almost certainty which it offered of securing extensive adhesions without having to keep up continuous drainage, having the posterior surface of the omentum in contact with the stripped peritoneum and the anterior surface in contact with the transversalis fascia, practically the entire venous tributaries of the portal vein through the media of the transverse colon, stomach and omentum are brought in intimate relation with the system of veins in the anterior abdominal wall, comprising the superficial and deep epigastric veins and the internal mammary veins, through the medium of the superior epigastric and its musculo-phrenic branches.

I feel satisfied that it would have been quite impossible to have secured adhesion between the capsule of the liver and the parietal peritoneum by strapping of abdomen to approximate the parietal and visceral peritoneum (Drummond & Morrison), as the liver was so shrunken and the abdomen had been so repeatedly and enormously distended that the lower ribs were carried out and the liver was separated some distance from the surrounding parieties, and held suspended by its ligaments.

I feared drainage on account of the reported cases of peritonitis and death (Schelky; Weir), which have resulted in spite of great care and the regular and frequent changing of the dressings, and would rather perform paracentesis when reaccumulation demanded it.

The operation occupied twenty minutes and ether was discontinued at the beginning of the suturing of the abdomen. The patient received by transfusion thirty ounces of normal saline solution and an additional one-twentieth of strychnia hypodermically during the operation. Her pulse was better at the end of the operation than before and her general condition was very good.

Her recovery from the operation was uneventful, and, ten days after, I again performed paracentesis, afterwards removing the sutures, the abdominal wound having healed perfectly. She left the hospital in four weeks, feeling better than she had at any time during the previous two years.

Soon after this she showed unusual nervous manifestations, excitability, restlessness and insomnia, which annoyed her very much. In spite of this, her strength improved sufficiently to enable her to undertake light housework and go out for short walks and drives. For several months previous to operation she was unable to come down stairs, and, part of the time, was confined to bed. Subsequent to operation paracentesis was performed twenty times, the last time six days before her death, which occurred April 5th, 1901.

At the autopsy, Dr. George W. Spencer and I found, upon opening the abdomen, five thin bands of adhesion, varying from three fourths to five inches in length, extending between loops of the intestine and the region of the transplanted omentum, each of which apparently contained a large vein. There had formed adhesions, in which were numerous large veins, between each side of the omentum together with the relative portions of the greater curvature of the stomach and the omental border of the colon, with the walls, sides and margins of the peritoneal pocket.

In order to save the specimen and to study it at leisure we determined to do abdominal evisceration. In accomplishing this, we were surprised to find entire abscence of the right kidney, and a very large horse shoe kidney, which extended from the region of the left kidney downward and to the right, the right extremity being in contact with the head of the colon and appendix; its convexity extending some distance below the pelvic brim.

The following are the results of my examination of the viscera after removal: The attachment of the greater curvature of the stomach to the abdominal wall began three inches from the pylorus and opposite to the median line of the abdomen, and extended the entire length of the left half of the pocket—3½ inches. Beyond this point the border of the omentum had formed adhesions with the parietal peritoneum for at least two inches, leaving not more than a space of three inches before reaching the gastro-splenic omentum, which was greatly increased and practically united the entire concave surface of the spleen to the fundus of the stomach. Adhesions had also formed to the right of the attached portion as far as the pylorus. The omental border of the transverse colon was attached to the entire width of the pocket (7 inches), and by adhesions for fully an inch beyond its extremity, and the omentum was adherent between the walls of the pocket.

I dissected out the portal vein and its main tributaries and found them normal in every particular. The liver was considerably decreased in size, was irregularly shrunken with a wrinkled capsule; its anterior border was thick and rounded; the gall bladder being situated over the anterior border.

The following is the report by Dr. John Funke of his examination of the liver tissue:

"Upon microscopic examination, the capsule of the liver,

although greatly thickened, is found to consist of a rather loosely woven fibrous tissue. The individual fibre bundles appear to be pushed apart by some substance, yet, with a high magnification, and by faintly transmitted light, the presence of such a substance cannot be demonstrated. Intervening between the liver substance and the fibrous capsule, and loosely connected with the latter by means of thin fibrous strands, is a layer of elastic tissue. This layer is as thick as the normal capsule of the liver. From the elastic layer short trabeculae penetrate the liver substance.

"The liver substance shows a high degree of fatty infiltration, this being especially well marked in the peripheral zones of the lobules, but very often it embraces the entire lobule. All the blood vessels of the liver show a great increase in the adventitia; the elastic tissue largely predominating. A few vessels are found the lumina of which are occluded. In these the endothelial lining is proliferating. In a number of the vessels are collections of erythrocytes and lymphoid cells, which in all probability are the beginning of thrombus formation. In these vessels the endothelial cells are proliferating, especially where the thrombi lie in contact with them. Throughout the liver newly formed bile ducts are seen." In the fibrous and elastic tissue of the blood vessels are collections of small round connective tissue cells."

The spleen was about normal in size and appearance.

The greater curvature of the kidney measured 26 cm. The left and right renal arteries entered its lesser curvature about 4½ cm. from the corresponding end of kidney. The middle sacral artery entered the posterior surface of the kidney about midway between its greater and lesser curvatures and 5 cm. from its right extremity and 18 cm. from the left.

Its posterior surface was quite smooth and regular in outline and was in close contact with the common iliac arteries, the aorta bifurcating about opposite to its lesser curvature. Upon the anterior surface were several lobules and what corresponded to two pelves with individual ureters passing down in front of the kidney. The right and left ureters were situated 4½ and 10 cm. respectively from the corresponding extremities of the kidney; the right being opposite to or slightly to the right of the median line. There was one large renal vein and two smaller ones formed by tributaries from all portions of the kidney. The larger one was formed 7 cm. from the left extremity of the kidney by tributaries from all portions of it, running upward and to the right, joining the inferior vena cava just before it entered the posterior border of the liver. The other two joined the cava lower down.

In contrast to a normal kidney, the relations of the vessels entering and leaving the pelvis were reversed; i. e.,—ureters were most anterior; arteries most posterior and veins intermediate.

The surgical treatment of ascites due to cirrhosis of the liver has been so thoroughly elucidated by LeConte[1] and Packard;[1] Frazier,[2] Thompson,[3] Wier,[4] White;[5] Bristowe;[6] Stockton;[7] Rolleston[8] and Turner;[8] Drummond[9] and Morrison,[9] and, the limit of time being so short, I will in conclusion very briefly allude to a few points of special interest in connection with this case.

The absence of blood in the ascitic fluid and its comparatively low specific gravity,—1010, were factors in diagnosis against the possibility of malignant disease, causing the ascites.

As regards the cause of the thickened parietal peritoneum, we should take into consideration the irritation produced by the accumulating fluid through a period of seventeen months prior to operation, and the probable result of the frequent tappings.

As regards the manner of operative procedure, in this case it was desirable to obtain quite extensive and vascular adhesions in view of the rapidly accumulating fluid.

With a thickened parietal peritoneum the question arises, would it interfere with vascularization of the adhesions? Although unable to demonstrate it, I believe that it would, and also that the probability of obtaining adhesions is lessened and that these dangers can be overcome by the method pursued in this case. There is no doubt that, in a normal peritoneum, adhesions and vascularization occur quite readily and that, in such cases, careful suturing of the omentum to the same would be sufficient.

The decided improvement, as already indicated, was to me quite remarkable, considering the outlook and condition of the patient at time of operation. When she again reverted to a similar condition, she only survived about two months, and I think it quite reasonable to presume that that would have been about the limit had she not been operated upon. Therefore, it is fair to claim that the operation prolonged her life six months.

Willems[10] calls attention to the danger of intestinal obstruction which may arise from the adhesions. Although there was no clinical evidence of obstruction in this case previous to death, we found at autopsy considerable accumulation of hardened feces in the transverse colon, which evidently resulted from the interference with peristalsis and her greatly exhausted condition during the last few weeks. The accidental bands of adhesions with the intestines were certainly a source of danger.

I was unable to account for the paroxysmal pain in the left side of the abdomen above the ilium, of which she had complained during her illness, until we found the presence of the horseshoe kidney at autopsy. The question then arose: Was the kidney in any way a contributory factor to the ascites? I had this in view during my dissection of the specimen and was unable in any way to demonstrate that the kidney was an associated factor.

From being contraindicated, as applied by Drs. LeConte and Packard:—"On the other hand, it would seem that the operation is scarcely indicated, if not contraindicated, in cases of ascites associated with other kinds of cirrhosis, ("Hanots, syphilitic, mixed, &c., &c.) or with peritonitis".

I certainly believe that the results indicate that operative interference in such cases is justified, and had I a similar case, I would advise operation very much earlier, believing that the results would be much more gratifying.

Supplementing Doctors LeConte and Packard's most complete table, I have collected five cases, including my own, which are as follows:

TABLE No II.

No.	Date	Operator.	Age and Sex.	Diagnosis.	Etiology.	Tappings prior to operation.	Operation.	Anesthetic	Drainage.	Tappings subsequent to operation	Result.	Autopsy.	Urine contained.
1	Sept. 2, 1899	F. Tilden Brown	53 M.	Atrophic Cirrhosis	Alcohol	10	Surface of liver, spleen, omentum and peritoneum rubbed with gauze. Omentum sutured to peritoneum by 1 tra s verse line of 8 or 10 sutures.	Chloroform	By glass tube and gauze	None	Reported Dec. 13, 1899 Then in good condition.		Albumin and casts.
2	July 31, 1900	W. J. Roe	42 F.	Atrophic Cirrhosis	Syphilis	31	Omentum tra spl and sutured between parietal perition. a l abdom. wall Orient border of stomach and colo sutured to mar gins of artificial pocket	Ether	None	21	Quantity of ascitic fluid was decreased by two- thirds. Ge eral health greatly improved. 8 mos. 6 days after ope tation.	Death 6 wks. after ope tation. Adhesions found but believed not to be factor in case	No albumin or casts
3	Dec. 4, 1900	Jno. B. Roberts	49 M.	Atrophic Cirrhosis	Alcohol	Explora tory incision	Surface of omentum and peritoneum rubbed with gauze and omentum sutured transversely by 4 chromicized cat gut sutures.	Schleich's solution No. 2	None	None	A month later patient had less ascites and ex tended veins of abdomen and anterior surface of chest seemed much more dilated than before operat	Omentum attached to belly wall for about 3 in Nodule taken from omen resembled spindle celled sarcoma. Death 6 wks. after operat	Albumin and casts
4	Dec. 4, 1900	Jno. B. Roberts	51 M.	Atrophic Cirrhosis	Alcohol	9	(Same as above).	(Same)	None	None	Patient died in uremic coma day after operation	Yes	Albumin and casts
5	Dec. 22, 1900	Jas. J. Jilks.	50 M.	Atrophic Cirrhosis		2	Surface of liver rubbed with gauze. Surface of peri. rubbed with gauze and curetted. One tum sutured to perito eum a d it to the wou d		None				

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THE PROGRESS OF KNOWLEDGE CONCERNING VENOM AND ANTIVENENE. A SYNOPTICAL REVIEW OF THE LITERATURE OF THE PAST FIFTEEN YEARS.

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(Continued from Page 372).

From these observations it was but a step to determine the nature of the blood of venomous serpents, and Phisalix and Bertrand next contribute a paper upon the "Toxicité du Sang de la Vipère" (Compt. rendu de la Soc. de Biol. de Paris, Dec. 9, 1893, 10 Series, Tome V, p. 997; also in the Compt. rendu de l'Acad. des Sciences de Paris, Dec. 26, 1893, Tome 117, p. 1099), in which they prove that the physiological action of the venom and blood serum of the viper are identical. This leads them to conclude that the poison in the blood is but venom absorbed into the circulation from the poison glands. This opinion receives a chemical corroboration from the fact that, while the poisonous substances found in the blood of salamanders and toads are, like the poison of the cutaneous glands, soluble nine) of the viper's venom, as well as the poison in its blood, is entirely insoluble in alcohol. They believe that the immunity of the viper to its venom depends upon the constant presence of absorbed venom in the blood, and an immunity thus established. Having satisfied themselves concerning the truth of this internal secretion in the viper, they dropped the subject, which, however, was further investigated by Calmette, "Sur la Toxicité du Sang de Cobra Capel" (Compt. rendu de la Soc. de Biol. de Paris, Jan. 13, 1894, 10 Series, Tome I, p. 11) who was able to confirm the observations of Phisalix and Bertrand. He found that 2 cc. of cobra blood injected into the peritoneal cavity of a rabbit weighing 1½ kg. caused death in six hours, the same dose given in the ear vein in three minutes. Subcutaneous injections of the blood were also fatal, the symptoms being in all points identical with those following injections of the venom itself. It had, however, been known from the time of Fontana's writings (1767) that certain of the non-venomous snakes were also immune to venom, and the question at once arose how this was possible if the immunity depended upon an absorbed internal secretion of the venom glands. Phisalix and Bertrand investigated this point carefully, and in a paper, "Sur la présence de glandes veniminines chez les couleuvres, et la toxicité du sang de ces animaux" (Compt. rendu de la Soc. de Biol. de Paris, 1894, Jan. 13, 10 Series, Tome I, p. 8, and the Compt. rendu de

l'Acad. des Sciences de Paris, 1894, Jan. 13th, Tome 118, p. 7) have shown that while adders (couleuvres) have no venom apparatus by which it is possible to produce a poisonous wound, the secretion of the parotid gland resembles venom in the effects it produces when artificially introduced into animals. Extracts of various of the organs were used experimentally, but only those of the major maxillary glands were found to possess the poisonous action described. The blood of these snakes was also found to be poisonous, and from it a precipitate was secured which behaved exactly like the active principle secured from the blood of vipers. From this they conclude that the immunity of such snakes as can successfully resist venom, depends upon the absorption of the saliva of those glands which correspond to the venom glands of the truly venomous snakes.

Phisalix and Bertrand—"Vaccination et accoutumance du cobaye contre le venim de vipère." Atti. d. XI Cong. Med. internaz, Roma, 1894, 11 patol. gen. ed anat. patol. 200-202—found that it was possible to immunize guinea pigs to the action of serpent's venom.

The subject of immunity and immunization to venom from this time becomes important, and many of the succeeding papers are devoted to it and the accompanying phenomena.

Phisalix and Bertrand studied the "Attenuation du venin de vipère par la chaleur et vaccination du cobaye contre ce venin" (Compt. rendu de l'Acad. des Sciences de Paris, 1894, Feb. 5, Tome 118, p. 285). They quote Gautier and Calmette as showing that venom is attenuated by heating to the boiling point. They think, however, that this is a mistake and that heating alters the nature of the venom and changes it to a vaccine. Only a part of the venom undergoes this change, however, enough remaining unchanged to cause the typical poisoning if large doses are given. From experiments made they conclude that venoms contain two distinct principles, one of "phlogogenic action," comparable to certain diastases, for which they suggest the name *Echidnase* (Prince Louis Bonaparte first applied the name Echidnine to the poisonous principle of venom of vipers), the other of general action, actively impressing the nervous system, and described as *Echidnotoxin*. They found that after guinea pigs were injected with heated venom, they acquired the power to resist a minimum fatal dose of venom—i. e., were vaccinated against venom. This protection they ascribe to the echidnase.

The first observation upon the autotoxic power of the blood of animals immunized to venom was made by Phisalix and Bertrand and recorded in their paper, "Sur la propriété antitoxique du sang des animaux vaccinés contra le venin de vipère (Compt. rendu de l'Acad. des Sciences de Paris, 1894, Feb. 5, Tome 118, p. 356; Compt. rendu de la Société de Biol. de Paris, 1894, Feb. 10, 10 Series, Tome 1, p. 111; also *Semaine Medicale*, Feb. 7, 1894). They found that when guinea pigs were killed 48 hours after vaccination with the echidno-vaccine, their serum or defibrinated blood mixed with the venom and injected into the peritoneal cavity of other guinea pigs enabled them perfectly to resist the action of the venom.

It seems that Calmette had been working upon the same subject simultaneously, for on Feb. 10, 1894, he published in the Compt. rendu de la Soc. de Biol. de Paris, 10 Series, Tome 1, p. 120, a paper entitled "L'Immunisation artificielle des animaux contre le venin des serpents, et la thérapeutique expérimentale des morsures venimeuses." He investigated the venoms of four serpents finding the minimum fatal dose as follows:

Cobra, 0.25 mg.; 1 kg. of rabbit.
Holocephalus, 0.29 mg.; 1 kg. of rabbit.
Pseudechis, 1.25 mg.; 1 kg. of rabbit.
Viper, 4.00 mg.; 1 kg. of rabbit.

These venoms were all modified by temperatures approximating 100° C. Cobra venom loses its virulence after five minutes exposure to a temperature between 97° and 98° C. Holocephalus venom is better able to resist heat and after being exposed to 100°-102° C. for 10 minutes is still alive. Pseudechis venom is destroyed between 99°-100° C. He found that exposure of viper venom to +75° C. for five minutes did not alter it and change its nature as said by Phisalix and Bertrand, but that its fatal action was simply delayed by the manipulation. All the animals which he attempted to immunize according to the method of Phisalix and Bertrand died in from 24-40 hours. The principles of immunization which he determined upon are:

(1). Accustoming the animal to frequently repeated, gradually increased doses of diluted venom.

(2). The administration of a fatal dose of venom, followed by immediate curative therapeutic treatment with chloride of calcium or chloride of gold.

(3). The administration of repeated increasing doses of venom mixed with the chloride of gold or calcium.

Of these methods he prefers the first. The immunized serum is curative in its effects upon invenimated animals, and numerous experiments are cited showing its successful operation.

Phisalix and Bertrand (Compt. rendu de la Soc. de Biol. de Paris, 1894, Feb. 10th, 10th Series, Tome 1, p. 126) in answer to Calmette's failure to find the same effects which they had experienced follow the heating of the venom point out that it may have been due to the differences in the venoms used which were secured and prepared in so different a manner that those used by Calmette were approximately 50 times as strong as their own.

In another paper, covering pretty much the same ground as that mentioned above, Calmette (Compt. rendu l'Acad. des Sciences de Paris, 1894, March 27, Tome 118, p. 720; also Atti. d. XI. Congress Med. internaz. Roma, 1894, 11 Patol. gen. ed anat. patol., p. 109 discusses "Propriétés du serum des animaux immunisés contre le venin des serpents. thérapeutique de l'evenimation." He points out what does not seem to have been recognized before, i. e., that the serum of animals immunized against cobra venom protects against the venoms of vipers, holocephalus and pseudechis.

Speaking of the source and preparation of the immunized serum and its antitoxic properties, he

makes the following statement which does not seem to be in accord with facts usually recognized—"Elles peuvent se developper également sous l'influence des injections repétées d'hypochlorites alkalins en solutions faibles, san mclange de venin."

The serum is recommended for treatment of snake-bite supplemented by the use of the chloride of gold, or hypochloride of sodium or chloride of calcium (chlorure de choux) previously recommended.

Bancroft—"Some further observations on the Physiological action of snake venom, together with a reference to the strychnia cure of snake bites" (Australian Med. Gazette, 1894, XIII, 228-230) points out that the venomous snaker are unaffected by venom, and that numerous harmless snakes share this peculiarity, while large frogs and lizards require enormous doses to kill them. The resisting power of the iguana is considered, and the relative resisting power of various animals discussed. The paper closes with a doubt as to the importance of strychnia in the treatment of venom-poisoning.

These opinions are quite the opposite of those of Waddell.

Kaufmann, "Sur le Venin du Vipère" (Bull. Soc. Centr. de Mid. vet. Par., 1889, n. s., VI, 187, Compt. rendu de la Soc. de Biol. de Paris, Feb. 10, 1894, 10 Series, Vol. I, p. 113) notes that it is possible to separate the locally irritative substances from the general poison in venom by the addition of potassium permanganate and chromic acid in proportion 1 :100. By this treatment the local effects are entirely destroyed. The conclusions of a paper which he publishes in the Revue Scientifique, 1890, p. 180, are:

(1). Permanganate of potassium and chromic acid in solutions, 1 : 100, completely destroy the local effects of venom.

(2). Neither of the substances so completely destroys the venom as to prevent general action upon the body, but attenuate it.

(3). The venom probably contains two active principles, one of local and one of general effect, the former destroyed by the chemical agents, the other not, though attenuated.

In his experiments the heated venom was not as useful for the production of immunity as the unaltered venom.

In lieu of the suggestion of Fayrer, quoted by Lauder-Brunton, and mentioned before, it is interesting to see the results obtained by Phisalix and Bertrand (Compt. rendu de l'Acad. de Sciences de Paris, Nov. 26, 1894, Tome 119, p. 919, and Compt. rendu de la Soc. de Biol. de Par., Dec. 1st, 1894, 10 Series, Tome 1, p. 747) "Sur les effects de l'ablation des glands à venin chez la vipère." Should the poisonous property of the blood of vipers depend upon absorption of venom from the specific glands, then the ablation of these glands should be followed by the disappearance of that poisonous property from the blood. The experiment was difficult to perform, because vipers die so rapidly in captivity that scarcely time enough elapsed to determine the question. Forty-six vipers were used and the glands removed from one-half of them on May 18th. They were then kept until Nov. 2d, chloroformed, the heart's blood removed and injected into the peritoneal cavity of guinea pigs. The guinea pigs lived, hence the poison had disappeared from the blood.

Calmette, in an elaboration of the recent investigations—"Contribution à l' étude du Venin des Serpents" (Annales de l'Inst. Pasteur, May, 1894, Tome VIII, p. 275) takes up the subject of variation in different venoms, the minimum fatal dose of different venoms, the effect of venoms upon different animals and their varying susceptibility, the effects of chemical agents upon venom and the methods of producing immunity. He finds the best and safest method of immunizing animals is to inject them every few days with small doses of venom modified by heat, gradually increasing the dosage. After about 48 hours the animals readily endured a fatal dose of venom, and at the end of a month have quite a high immunity.

The antitoxic properties of the immune serum are discussed. Its employment for the treatment of snake-bite is not thought feasible, though theoretically its value ought to be considerable.

The treatment of snake-bite which he recommends is as follows:

(1). If possible, place an elastic ligature tightly above the seat of bite so as to prevent absorption of the venom into the circulation.

(2). Inject immediately into the place of inoculation, and in several places about the bite and at no great distance from it, 20-30 cc. of a 1 per cent. solution of chloride of gold or chloride of calcium (chlorure de choux).

(3). Remove the ligature and wash the part with a large quantity of concentrated solution of hypochlorite of sodium or chloride of calcium. (We shall find that this treatment becomes supplementary to the use of antivenene in a subsequent paper.)

G. B. Halford, in a small volume upon "Thoughts, Observations and Experiments in the Action of Snake Venom on the Blood" (See *British Medical Journal*, 1894, Nov. 24, 11, p. 1252) maintains that the venom of the Australian snakes is as virulent relatively as that of the cobra, the minimum fatal dose per pound being considerably less than that given for the cobra by the Indian Snake Commission. He claims for the poison the rank of a powerful ferment, here differing from Dr. Martin, and repeats his original statement that it acts primarily upon the blood, and secondarily upon the nervous system. The post mortem effects of the poison on the blood are seen in the prevention of coagulation and in the production of large cells. Dr. Calmette's researches upon the effect of chloride of lime are regarded with favor, though he had no opportunity of personally investigating their merits.

J. W. Barrett (Meeting of the Medical Society of Victoria, *Lancet*, Aug. 11th, 1894, 11, p. 347) discusses "The Action of Snake Venom on the Blood" and confirms the observation of Martin (*Jour. of Physiology*, 1893) that the rapid injection of venom into the blood of living rabbits is followed by a prompt coagulation. He found that 0.000432 gr. per kg. of rabbit caused intravascular coagulation of blood, the respirations ceased, but the heart continued to beat for some time. On the other hand,

when the poison is slowly injected, or injected into the subcutaneous tissue instead of into the circulation, although the same dose is given, no coagulation of the blood occurs in the body, and the blood coagulates very slowly when withdrawn. He believes that this supports the belief of Halford that venom acts primarily as a blood poison. He also thinks that the action depends upon the formation of some nucleo-albumin that is formed or that is contained in the venom.

Calmette's most important work appears as "Contributions à l'étude des Venins" in the *Annales de l'Inst. Pasteur*, April, 1895, Vol. IX, No. 4, p. 225. It deals chiefly with antivenene which he prepares by immunizing asses to venom. Small animals are immunized by inoculating them every two or three days for four or five weeks with doses of venom varying from 1-20 to 1-10 of the fatal dose. Careful attention must be paid to their weights, and if they emaciate, or become ill, the treatment must be suspended. As the immunity increases, larger doses can be given every 8-10 days. At the end of a year he had succeeded in securing tolerance in rabbits to 40 mg. of cobra venom, this being sufficient to destroy 80 rabbits of 2 kg. weight. Five drops of the serum of this animal neutralized *in vitro* 1 mg. of venom.

Larger animals, as asses, were immunized by the same method, one receiving 220 mg. of cobra venom between September 25th and December 31st, 1894; another 160 mg. between October 15th and December 31st. The serum of the first was of such antitoxic value that 0.5 cc. destroyed or neutralized 1 mg. of venom; 4 cc. of the serum injected 4 hours before the venom protected against two fatal doses. If one inoculated a rabbit with enough venom to kill a control rabbit in 3 hours, and one hour subsequently administered 4-5 cc. of the serum, the animal recovered. The later the therapeutic serum is administered, however, the less certain is recovery to take place, so that in his experiments he placed 1½ hours as the limit of certain cure.

He observed that the local action of the highly irritative venoms of crotalus, cerastes, trigonocephalus, etc., occurred in immunized animals. From the terminal caudal segments of 28 scorpions he secured 46 mg. of venom, which killed white mice in doses of 0.05 mg. in about two hours, with bloody edema at the seat of inoculation, convulsive spasms and symptoms of palsy and asphyxia closely resembling the bites of serpents. A dose of 0.05 mg. was fatal to guinea pigs of 500 grammes weight. When mixed with hypochlorite of sodium or calcium, chloride of gold or Gram's solution, the venom was destroyed. A mixture of 3 cc. of antivenene and 1 mg. of the scorpion venom failed to kill guinea pigs though the control animal died.

Guinea pigs immunized to the venom of French vipers were able to resist the effects of scorpion venom.

The toxic nature of the blood of snakes, toads, salamanders, etc., is considered in detail, and the conclusion is reached that the immunity to venoms enjoyed by animals with this peculiar quality of blood depends upon the presence of some constituent of the venom in the blood. When the poisonous bloods are mixed with antivenomous serum, they become inactive. He inoculated a large cobra upon several occasions with 12-20 and 24 cc. of antivenomous serum, and found that its blood, which should have been fatal for guinea pigs in doses of 0.5 cc., had lost all of its poisonous powers.

Experiments made with the bloods of mongooses and hogs failed to show that their blood contained any antitoxic properties, although the animals enjoyed some natural immunity. Of a large number of normal sera from various animals he failed to find that any were at all antivenomous except in the case of two dogs. In these cases the peculiarity was referable to bites of serpents from which the dogs had previously suffered.

The paper is comprehensive in scope and most instructive; it should be carefully read by all who are interested in the subject of antivenene. It closes with the following:

"En résumé, we have seen *à propos* of venoms that certain animals, like the mongoose, possess a relative but very manifest immunity and that their serum is slightly antitoxic. We have also seen that among the animals not possessed of resisting powers (the dog) one can find individuals whose sera are active *in vitro*. Enlarging the field of our experiences we have established the observations of other experimenters, that the normal serum of man is sometimes slightly antitoxic against diphtheria, and that a good many sera of immunized animals—immunized against pathogenic viruses, and against toxins—acquire by the vaccinal treatment a certain antitoxic power with regard to toxins and other viruses."

"Animals vaccinated against venom become resistant to intoxication by abrin; those immunized to abrin acquire a considerable degree of immunity to venom, against diphtheria, against ricin, and even against infection by the 'bacteride charboneuse.'"

"Animals immunized to erysipelas or against rabies have sera active upon venom, and in certain cases, even protective. All these facts show that the sera of animals immunized against certain viruses or certain poisons are capable of showing immunity against other viruses and other poisons. They show also that the degree of resistance of an animal is not always correlative to the antitoxic power of its serum against the virus of the poison with which it has been immunized. Can we conclude that the antitoxic sera are not really specific, and have we the right to hope that perhaps some day an ideal serum conferring immunity upon all the microbian powers will be discovered?"

"This hypothesis, seductive as it may seem, is not admissible, because we do not know a single serum capable of modifying, with the same energy, several toxins reciprocally. The antivenene, for example, is a great deal more active upon venom than any other antivenom, and we see that it is the same in regard to abrin, diphtheria and tetanus."

"But we come to consider as very probable that the antitoxic sera do not modify the toxin with which they are mixed, but that they limit themselves to exercising towards the cells a contrary

action of some sort by which their noxious effects cease to be produced."

There is appended to this paper a single experiment, made at the suggestion of Roux to support the pet theory above propounded and believed by the French school of biologists, that immunity is only partly specific and that the toxin-antitoxin reaction is not chemical, as thought by the Germans, but biologic in kind. This experiment becomes of importance in association with the work of Martin and Cherry, which follows later. Mixtures of venom and antivenene were made, so as to be "neutral" or harmless for rabbits. Part of the mixture was at once injected into an animal and did no harm. The other portion was heated to 68° C, by which the antivenomous serum was destroyed by coagulation, then injected into a rabbit, which died.

From this experiment it is concluded that the antivenene does not destroy the venom *in vitro* as the heat, which affects the serum but not the venom, was able to effect the separation of the two, which it could scarcely have done, had the reaction been chemical.

(To be Continued.)

THE RECOGNITION AND TRAINING OF MENTAL DEFECTIVES.*

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I am glad to meet you to-day in this discussion of the feeble-minded, and to feel it a subject in which you and I have a mutual interest. A most absorbing one it has proved to me from the very inception of my life work, while you will find yourselves brought in touch with it at almost every step in yours, so wide-spread is this evil of degeneracy.

The two points, as I understand, which you wish made clear are first, how to recognize these defectives, and next, what to do with them.

For the first, it will be well for you to carry with you always the two broad divisions of the race—for a race it is as distinct and apart as Negro or Malay—namely Idiot and Imbecile; which will mean to you simply Untrainable and Trainable; or those needing perpetual asylum care whether in the home or out of it, as distinct from those who may, through training, become in a measure aids in the work of redeeming themselves and their fellows from vice and pauperism.

The idiot you will have no difficulty in recognizing as the lesser evil. With the senses poorly if at all developed, no power of articulate language, which with them is but a cry; frequently epileptic or crippled, locomotion if possible at all is but a shuffling or lurching forward. Incapable of any of the softer emotions, a mother, whom they often do not recognize, is to them nothing more than any other nurse; the home which they burden simply an abiding place. A well ordered asylum, where rich and poor alike receive the same tender care and guardianship, is therefore the only proper provision for this class; and here, too, his brother, only one degree less helpless, although physically stronger, whom for convenience we designate the idio-imbecile, may not only find the only happiness he is capable of in caring for these "babies," but may in time become a useful aid in this large nursery of perpetual infancy.

You will have from time to time presented to you children described as "odd, dumb, incorrigible". You will hear the mother say: "This child is so different from my others—so different from my neighbors." These at a superficial glance you will not recognize; but observing closely, you will find that all the so-called "odd" children are really imbecile. You will note in one or another the furtive glance, the drooling mouth, the muttering, the mirthless laugh, the malformed head, mouth or ear, the imperative movements of fingers, hands or body, and the singular twist of head or features. A phenomenal memory, or some special talent unduly developed, is a not infrequent characteristic. These, signs sometimes but rarely, of an inherited defect purely physical are still the mark of the beast and almost certain in one or two generations to meet its dread associate either mental or moral, or to unite with both, making degeneration complete.

Again you may find both mental and moral defect associated with physical perfection, so manifold are the phases of hereditary transmission; all the more dangerous is moral obliquity under an engaging exterior—a devil in the disguise of an angel—the rounded perfection of form and feature masking a brain incapable of logical conclusions. These constitute the class of trainable defectives, and are, as you see, of various grades and conditions. Nearly approaching normal in the higher, you may perhaps confound the lower grade with the untrainable idio-imbecile, for like him, he never learns to read and write, and is capable of being trained only in the minor occupations of farm and household service. A mere hewer of wood or drawer of water, he must be forever under guardianship and kept apart from those who would victimize or use him as a tool for ill, for he is absolutely wanting in will-power, and will follow blindly any suggestion. Even his brother, the sharp and cunning moral imbecile of a higher grade of mentality, could easily use him for murder, arson, or any other plot he himself would be fully capable of devising. Here is the danger to society, as well as to the individual, in attempting to care for him in the home; for an innocent, in his carelessness and ignorance, may often wreak more ill than the knave, who is restrained somewhat by fear of consequences. Then in the matter of training, while he might at home learn to do something in house, farm or garden, there is not enough in the ordinary home to keep him occupied; and, creatures of habit, these children lose in a day what they learn in a week, and once sunk in sloth will not rouse under coercion alone. Occupation, if it is to insure real benefit, must therefore be daily, and constant—becoming under kind but firm direction almost automatic—with the added stimulus of companionship with those of similar capacity, giving a sense of community of labor. They need, too, entertainment and amusement when work is done; in fact, there must be a constant inter-

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change of work and play, coupled with never-ceasing sympathy, lest they sink into apathetic idiocy or break out into insanity.

Now I would not wish to be misunderstood as saying that defectives may not be developed and cared for in the home; but I do say, that it can only be at tremendous expenditure of vital force with a minimum of profit to the individual. The attention to mere physical wants; the regular bathing, dressing, dieting and exercising—a simple matter in an asylum—would with the poor, or even the better working class, fall heavily upon the mother; while training, which must be persistent and unremitting, with, as I have said, every accessory of stimulus, control and emulation, should not be even attempted by one not possessed of many acquirements and also endowed with that most inestimable gift—the power of imparting. You see, dormant faculties are to be aroused without awakening that obstinacy which is always lurking; while intense indolence must be overcome and weariness avoided by attractive and varied occupations. Music, drawing and color-work, modelling in clay and cardboard, sloyd and wood-carving, basket, hammock and hat making, mending and sewing, lace and embroidery, offer endless opportunity for selection in fitting the work to the child; but what one person can attempt the half of it and attend to home duties? Granted that it were possible, I would still say that constant association with one person would become in time as dwarfing to the pupil as it would prove wearing to the teacher; each would act unfavorably upon the other, and we must remember, the defective does not have the avenues for varied social intercourse, even with members of his own family, that a normal child educated by a governess has. His aptitude for imitation causes him to gain most readily in association with his fellows; whereas placed in competition with normal children his self-esteem is constantly wounded, his self-respect blunted, and he becomes shy, sullen and discouraged.

The movement for the establishment of special classes at various centres in connection with the public schools in some of our large cities, profiting by the successful experiment in London, is a great step towards solving the problem of relief equally for the normal and the defective; but to be really effective, these must employ attendants as well as teachers. When such classes are out of reach the cooperative plan might be feasible. Two or more families engaging the services of a good kindergärtner who is also a good musician, might thus secure variety, freshness and vivacity, coupled with the healthful companionship and association which is so essential This, however, would doubtless be too expensive for the family of ordinary means, and after all were done, the veriest pauper in a well appointed institution would be better off than he. For, even under the most favorable conditions, the home is not the best place for the imbecile; one by the very nature of his infirmity forever set apart, a blight upon the social life that he himself is unable to appreciate, or to miss when he loses. Lonely and consequently fretful and intractable when debarred from companionship with his fellows, neither is he so comfortable in an environment not suited to his physical needs; a regular regimen is for him there well nigh impossible, and this, added to irregular hours, undue excitement, lack of entertainment and the daily watchful care of the physician, must result sooner or later in certain deterioration.

Not only the defective, but the family is to be considered. An axiom, dictated by experience, is that for every defective sequestrated, the energy of two if not three normal persons is released to society. You should, therefore, advise unhesitatingly: "Rather place your afflicted one where he can receive better attention than you are able to give, even if to do this it be necessary for you yourself to seek employment; for thus you will not only benefit the child and remove a cloud from your home, but you economize your strength instead of wasting it in fruitless endeavor." More than one mother has come to me with the bitter cry: "I have devoted my life to this child to find only failure at last."

Children of middle grade, judged by the common school standard of reading and writing, would be deemed utter incapables; for they have facility in neither. Some knowledge of the three "Rs" laboriously attained, serves only to put his name on his work or to aid in measurements; for children of this grade find their development, their happiness and present usefulness, in manual training, and their life work in the handicrafts to which this training is the open door for both sexes.

The high-grade imbecile, to which class are closely allied all those feebly-gifted and backward ones whose difficulties may not be traced to causes purely physical, is the one least recognizable, and whose future must therefore always be a subject for anxiety. Special methods may enable one of this class to advance as far as the first intermediate or grammar school, if not deterred by individual idiosyncrasies; and one would think that given an ordinary school course under exceptional surroundings, intercourse with refined, cultured people, together with drawing, modeling, manual and musical training, and actual practice in one or another of the trades, that success was assured to a young man or woman, at least for a start in life, but our experience has been directly the contrary. One and another going out returns to us with the same experience to relate: "They don't understand me." "They don't want me." "Somehow I can't get along with people." They are unable to adjust themselves to social conditions, to accept rebuffs, to endure hardships, to live without sympathy and a sense of protection, and are glad to come back and take up work in familiar surroundings. They represent the incapables, the ne'er-do-wells who, unrecognized as abnormal, are causing the heartaches of the world. Working with us, where they are understood, are not over-taxed, and have no responsibility, they come in time to make useful members of our communities; as attendants, printers, typewriters, indeed, in any of those trades that demand automatic skill coupled with a certain amount of mental ability, they do well. At Elwyn our corps of printers for months at a time manage their office unassisted, including the general printing of the household and the issuing of their semi-monthly paper. The editor and manager is also a

musician, doing so well with both brass and stringed instruments that we gave him a course on the violin at the conservatory, and shall try him another year as teacher of the orchestra; yet he himself is satisfied to remain with us, feeling that he cannot afford to lose the sense of protection here. We have, too, a rare caricaturist who is also a musician—a member of our band—yet he, unprotected and uncared for, would simply starve.

People often say to me: "What is the matter with that one?" "He looks all right". "He does well". "Why is he here?" Yes, why? That is the question! It is not what he lacks so much as what he is. His general make-up—poor material, which, in spite of apparent brilliancy or talent, will never stand wear or tear, must always be taken care of. Children we call them, and children they are from the cradle to the grave. Age does not count with them.

The moral imbecile—one who does indeed lack the moral sense—is found in all grades. A firebrand in society, with us always under custodial care, he of all irresponsibles needs most and gets least because most misunderstood. This is the material that most criminals are made of. Truly they know not what they do, for they are not immoral but ammoral; they have not lost the moral sense, they never have possessed it. Yet how many are condemned for deeds of which they have been the innocent perpetrators. His mental defect, taking often the bent of extreme precocity or cleverness in certain lines, is never grasped by the ordinary layman, and not infrequently in crminal trials proves the surest weapon in the hands of the prosecuting attorney. You will sometimes hear a juryman exclaim: "That smart fellow not know what he is doing! You will never convince me of that". Yet he would be amazed to see that same "smart fellow" absorbed in childish sports or watching with smiling complacency the amputation of his own fingers; for he is often as insensible to pain himself as for others—excepting always a wound to his egotism. Nothing gives him so much delight as notoriety, and to this end he early distinguishes himself as the bully of the schools, the terror of the neighborhood, and the frequenter of police courts, graduating rapidly into criminal ranks, often feeding upon sensational literature and lending his hand to obscene writing. Far better that he be early recognized, and in permanent sequestration find his healthful development in manual training—even without a knowledge of reading and writing, which he would only use for evil purposes—his active propensities satisfied with abundant opportunities for varied and congenial employment, together with military and calisthenic exercises, games and athletic sports. Such cases excepting always those which border too closely on insanity, might form a separate department of training schools more properly than do asylums for the helpless and untrainable idiot class; but this would involve, of course, facilities for control greater than at present provided. In custodial buildings, with spacious but well guarded verandas and playgrounds, all could find space for work and free play, while those making a good record might have the privilege of attending the entertainments—theatrical, musical and dancing—of the school.

Such homes of prevention would cost the State less than criminal trials, penitentiary or capital punishment; while the gain socially and morally would be incalculable; not to speak of the cessation of those object lessons in vice and crime which have an inciting, rather than a deterrent effect upon the rising generation. Think of the beneficence of the withdrawal of this turbid stream, permitting it no more to mingle with the life-blood of the nation! Without this, the stringency of marriage laws, to the necessity of which the attention of legislators is already being directed, will be completely nullified—they will simply come too late. If not recognized and sequestrated while yet minors, who shall say that this young man or woman is unfit for conjugal or parental responsibilities. Just now they not infrequently say it of one another, and the divorce courts confirm the declaration—but too late for themselves and for society. We know not what evil may not be averted by the early withdrawal of this class now both defective and delinquent, which must sooner or later come to be altogether dependent. For, believe me, of all the various kinds of defect, nothings clings and is transmitted like this. With the blind or deaf mute we may find all other faculties and attributes more generally normal, but with the mental and moral defective there is that general perversion—one-sidedness,amounting in many cases to monstrosity, often associated with physical deformity; or else there is a certain poverty of the whole being from general malnutrition through successive generations of degenerates; all of which goes to form what we term "bad stock." Such imbreeding we do not permit in our domestic animals, and is it not suicidal in a wise nation to accord such license—I will not say liberty—to its citizens? To promulgate this doctrine is the work to which all who labor in the cause of social well-being are undoubtedly called.

Of the imperative need for the permanent sequestration of all classes of mental defectives, there can be no doubt; equally apparent is it that this, for the helpless should be affected elsewhere than either in the almhouses, which have no facilities for their proper safe-guarding, or in the training schools which they burden. I cannot urge upon you therefore too strongly that each in his respective sphere advocate and inflence the erection of asylums to meet this pressing need; for the helpless idiot and epileptic, and also for the adult imbecile and idio-imbecile who may aid in ministering to their weaker brethren. Not only this, but it is greatly to be desired that through the endeavors of your own and similar organizations may come such a sifting that in providing for such a mass of helpless and helpful, untrainable and trainable, guileless and vicious irresponsibles, each by going to his own place may better insure the well-being and safety of all, and the training schools, then relieved of the burden as well as the obloquy of idiocy, may be free to deal with the large numbers of trainables tested by probation in the special classes before alluded to, and there proven and adjudged defective by competent authority. Here, *received under conditions which science, experience and humanitarianism dictate—conditions sanctioned and promoted by wise legislation*—these life-long children

would then have an ensured home and future; either in the institution where they have been trained, or better still, in separate colonies or reservations, as may be provided. By such transference the natural longing for change, the eager desire to test new-found powers would be gratified, the self-respect implanted with such care would be sustained by appreciation in a somewhat broadened field; and labor, no longer regarded as childish attempts, would find its recognition in a reasonable compensation. Thus, satisfied with a certain amount of freedom—protected from license on the one hand, and from the burden of responsibility on the other—these perpetual defectives might each by his labor contribute his quota to the good of the whole.

There is yet one other point I would call your attention to—one which you will often be called to combat. People labor under the delusion that asylums and training schools are hospitals of cure; and you will probably finds cranks—both medical and educational—who stand ready to accept large amounts, affirming that they can take even a profound idiot, and after a few years of "treatment" send out such a one ready to prepare for a college examination, or to make his way successfully in the commercial world. Charlatans, each and every one! and I say to you emphatically, believe them not. You may have to repeat more than once what I say again and again to weeping mothers: "There is no cure for that which is not disease, but defect. We cannot replace what has never been placed. Modify and arrest what is evil; encourage and draw out and exercise what is good, yes—but bring to perfection—never; the limit is soon reached." No, there is no cure. For the imbecile as for the epileptic, that which the cradle rocks the spade will cover, and well it is, if the spade early do its work cutting short transmission; for of this, as of many another sorrow, "the sooner it is over, the sooner to sleep".

Recapitulating, you will see that I have striven to make clear to you the different classes and grades of mental defect, together with an outline of present methods of dealing with each. The impossibility of carrying out these methods in the home, I trust I have also impressed upon you—the impossibility of cure; the evils of atavism, the certain transmission of inherited taint, being intensified in this class of defectives above all others, and therefore the absolute necessity for permanent sequestration in order to secure the greatest good to the greatest number; good to the individual, to the family, to the community and to the nation.

A FURTHER REPORT ON CASES OF TUBERCULOSIS TREATED BY INTRAVENOUS INJECTIONS OF SODIUM CINNAMATE.*

By ALFRED MANN, M. D.,

of Denver, Colorado.

The buoyant hopefulness that was the consequence of the first publications of Robert Koch concerning tuberculin, has been followed by a period of reaction which is as far wrong in its distrust of new methods for the treatment of tuberculosis as was the early uncritical attitude toward Koch's great discovery. The lessons taught by Koch's work on tuberculins were the foundation upon which were based Behring's researches on diphtheria antitoxine and much besides of great value. Because as yet none of the methods of treatment based on the theories of antitoxines and immunity have been proved effectual cures for consumption, a widespread distrust of all special methods of treatment, as applied to this plague, has taken hold of the majority of the profession.

The rules of logic are the same as they have been in the past in spite of the failure of Koch's tuberculin and most of the numerous remedies patterned after it. Each remedy and mode of treatment will have to be judged for itself and criticised in the light of its theory and its practical results after trial. Because injections of modified horse serum are found ineffectual in stopping the ravages of the tubercle bacillus, it is not safe to refuse the consideration of every method which employs the injection of medicaments, for the mode of action of the particular drug considered may have absolutely no similarity to that of the much mistrusted serum.

Landerer's sodium cinnamate increases the number of the white corpuscles in the circulation to more than double their normal number, and it is probably a secondary result of this change that the healing process in the tubercular areas is made much more active and therefore complete. Neither this nor any other method will ever be found to restore to normal condition lung tissue which has once been profoundly altered by the action of the tubercular poison. It is therefore to be expected that early and light cases will show more evidently the beneficent effect of any influence exerted by the treatment.

Since the report at a meeting of this society a year ago on the cases that I had subjected to Landerer's treatment, I have had occasion to employ it in a few light cases as well as in several severe ones; I therefore thought it might be interesting to report the further progress of those cases spoken of in my former paper so far as data are available, and to give the results of my further experience. For details in regard to the theory of the method advocated by Landerer and for the details of his technic, I will refer any one interested to that paper, which was published in the Transactions of this Society for 1900, as well as in the Tuberculosis Number of the **Philadelphia Medical Journal,** of December 1st, 1900, and the *Zeitschrift f. Tuberculose u Heilstättenwesen*, Vol. 1, Nos. 5 and 6.

Beside those cases classed as hopeless in my former paper, there were enumerated two classed as light and eight severe ones. The first of the two light cases, which had been made worse by an intercurrent attack of influenza, was that of a dentist; he left Denver for Baltimore after a treatment of only three months and has been actively practicing his profession and leading an in-door life for more than two years since. He has gained eight pounds additional in weight, although he weighed more

*Read at the annual meeting of the Colorado State Medical Society, Denver, Colo., June 20, 1901.

when he left Denver than he ever did before. There are no physical signs; his general health and strength continue excellent.

The second light case was a favorable one in a young woman with moderate disease in both lungs. After a stay of only five months in Denver under this treatment, the patient returned to her home in the East where she stayed the whole summer and fall—seven months—and then returned to Denver without having lost ground. Another course of fifty injections followed, at the end of which there was apparently complete recovery with nothing but the physical signs of dry scars in both apices. She has returned to the East.

The first and second of the severe cases are still in excellent physical condition and show absolutely no tendency to return of trouble after five years. One of them has spent more than half the time near the Eastern seacoast, the other spent several months during very bad weather in the East and went through an attack of influenza without any return of trouble.

The fourth case in this group finally developed tubercular laryngitis of a severe type and will not recover. The fifth case is still in the same condition as a year ago, not improving, but remaining about the same. The next case, contrary to expectation, has not only held his own but was apparently much improved the last time I saw him several months ago. The seventh case has been living East for the past year and has not, from all I can learn, deteriorated. The eighth case is about the same as when last reported on.

It will be remembered that these eight cases were not only very severe ones but that a majority of them were encompassed by financial difficulties and other causes for worry which added to the gravity of the situation. On the whole they have done considerably better during the past year than could have been expected.

Of the new cases I have seven to report to-day.

CASE 1.—A tall young woman who has never been strong and who has apparently contracted tuberculosis in nursing her sister, who died of consumption a few months ago. The patient had been coughing for a year. During the last three months she had had daily afternoon fever; after 31 injections given during three months the physical signs were reduced to slightly high-pitched and prolonged expiration in the right apex. At this time an attack of typhoid of moderate severity occurred, lasting about 4 weeks, at the end of which the lungs showed no change. Recovery from the typhoid as well as the tubercular condition was apparently complete.

CASE 2.—The second case is a woman of middle age with signs of active disease in the left lung down to the fourth rib in front and to below the spine of the scapula in the back. During three months of out-door life under good conditions, there was no improvement in weight or general condition. One hundred injections in the course of eight months have caused the disappearance of all rales; there is moderate dulness in the left apex down to the third rib and above the scapula in the back, prolonged high-pitched expiration in the same area; slight mucoid expectoration still exists in which no bacilli can be found; weight during treatment advanced from 105½ to 123 pounds, the highest she ever weighed. She has returned to her home in Delaware, apparently quite recovered.

CASE 3.—A man, thirty years old, who, a year before he came to me, had a series of severe hemorrhages followed by persistent cough and expectoration. Owing to several very severe attacks of acute disease in the last few years (Asiatic cholera, typhoid, etc.) his general condition was very much depressed—in truth he presented a severe case of neurasthenia. The physical signs of tubercular invasion extended down to the fourth rib on the right side and to the third rib on the left side. The condition of the digestive organs was very much disturbed. One hundred injections of sodium cinnamate given in the course of a year have been accompanied by the disappearance of all physical signs, with the exception of slight dulness in the right apex down to the second rib, higher-pitched and prolonged expiration in the same area and an occasional click. The general health has improved very materially, cough and expectoration have ceased completely.

This was one of the cases in which progress, even in this climate, is certain to be extremely slow if it occurs at all, and the result under this treatment has been highly gratifying.

CASE 4.—A young woman with chronic pleurisy in the left side and an area of tubercular trouble in the right upper lobe. The illness dates from March, 1900, when the pleurisy came on acutely with high fever. The fever continued, slowly growing less for fourteen weeks. From two to three quarts of clear serum were withdrawn by aspiration every two months or so until at the beginning of November the patient came to Colorado; aspiration was done shortly after her arrival here; she was then put on the sodium cinnamate injections. Two months later another aspiration was found necessary, but this proved to be the last. Since then the pleurisy has subsided, leaving only massive adhesions in the lower portion of the left chest. The rales in the right upper lobe have almost entirely disappeared, the cough and expectoration entirely so several months ago. The weight has increased from 105 to 116 pounds, the normal weight. This patient has had 67 injections in seven months and the improvement has been continuous.

CASE 5.—A man fifty years old; he has had tuberculosis for twenty years, with a history of numerous ups and downs. During the winter of 1899 to 1900 he had several severe colds and attacks of fever sufficient to put him to bed. Instead of recovering, as usual, he continued to lose flesh and strength, had a daily afternoon temperature and a very profuse purulent expectoration. Physical examination showed extensive involvement of the right lung with dulness to the fourth rib in front and to 2½ inches below the spine of the scapula in the back, and numerous rales almost everywhere. There were unmistakable signs of a very large cavity in the upper lobe. Rales and coarse clicks were present above and below the left clavicle. 4½ months of injections cleared up all the rales except those in and immediately about the large cavity in the right lung; expectoration was somewhat diminished; the weight had increased from 128 to 149 pounds. Since then, with continued treatment, the still purulent expectoration has diminished considerably; the weight has continued to advance until now it is stationary at 165 pounds; general health and strength are perfect, but the signs of the cavity persist as before. Whether continued treatment will cause healing of as large a cavity as this is very doubtful.

CASE 6.—A young man, a physician, of good physique and good family history. His illness dates from an attack of grip at the end of February, 1899, since which time he has had continuous trouble. There were several hemorrhages. In spite of great increase in weight and several long periods of improvement in all the symptoms, there were occasional relapses, apparently from very slight causes, with the result that a year after he came to Colorado his lungs were in much worse condition than at first. On his arrival there were the physical signs of infiltration in the left apex down to the third interspace; a year and a quarter afterward a hemorrhage scattered infection throughout the left lung, and the right lung also became affected. Sodium cinnamate was used at this time with beneficial effect, but was not sufficient to stay the advance of the disease. In the middle of January, 1901, this patient was exposed to smallpox and a very severe attack of that disease followed. The palms of the hands and soles of the feet were covered with pustules, as was the whole body. Where before the smallpox he had had a daily temperature of 100° and over, after the attack his temperature remained normal. It was evident that the smallpox has destroyed the virulence of the tubercular poison. Three months later,

the sodium cinnamate injections having been continued, the rales and other evidences of disease in both lungs had largely disappeared.

There was no reason to expect anything but a fatal outcome in this case until its whole aspect had changed after the attack of smallpox.

CASE 7.—Acute tubercular swelling of lymph glands in a girl 24 years of age. On the right side of the neck are several scars, the remains of former operations for similar glands that had broken down. She had had several attacks of this kind at intervals six or eight years back. Two years ago she had pneumonia and after recovering from this she came to Colorado, where she has been ever since. April 23d she consulted me because of the recent swelling of glands in the right axilla and below the right clavicle. The mass in the axilla could be plainly felt, it was about the size of a small hen's egg and quite sensitive. There was apparently no softening, and intravenous injections of sodium cinnamate were advised. Improvement was noticeable in about two weeks, the soreness having rapidly disappeared, and a week later the swelling was noticeably diminished in size. The glands have steadily grown smaller and harder, until now, after less than two months treatment, it is easily apparent to the touch that there are four separate glands, the largest about the size of an almond, and the swelling below the clavicle is no longer to be detected.

As before, I used in most of the cases treated by this method strychnin, iron and other general tonics wherever they seemed indicated. The action of the sodium cinnamate used is to cause an immediate leukocytosis followed by greater activity in the healing process in the diseased areas. As Landerer has put it, the whole process may be summed up by saying that the treatment substitutes an active, aseptic inflammation for an inactive one, and the result is rapid cicatrization. The sensatons of the patient undergoing this treatment are those of increased well-being commonly observed in persons improving under general hygienic and climatic treatment, except that the favorable signs appear more quickly.

For the details of the mode of action of sodium cinnamate and the pathological changes that it causes in tuberculous areas and which have been carefully followed step by step in rabbits by Landerer and others, I again refer to my former paper.

The reason for treating light or early cases by Landerer's method was usually the expected early return of the patients to the unfavorable climate in which the disease was contracted. The results, so far as my experience goes, now covering six years, as to permanency of the cure as well as its rapidity, are very satisfactory. There has been no return of trouble as yet in any of my cases that were well enough advanced to be called cured, though several have gone East to live. Even in the very severe cases the improvement that has been obtained has shown itself to be more permanent than was anticipated.

Within the last three or four years there has appeared a considerable literature upon this subject, chiefly in Germany. Favorable reports of the use of hetol, as it is called, are more and more numerous, and unfavorable opinions are comparatively rare. Landerer himself published in 1898 a volume of over 300 pages discussing the subject in all its bearings and giving in detail his very large experience in its use. In March, 1901, Ewald read a paper before the Berlin Medical Society giving his impressions after the employment of sodium cinnamate in 25 cases of tuberculosis of the lungs. In the discussion which followed a number of other observers reported favorable results from its use. Several publications have appeared in Germany and Russia giving details of its action in animal experiment, bearing out completely Landerer's own investigations. To the writer, who has taken a deep interest in the progress of this method, it is gratifying to note the steadily growing interest which it has excited.

THE ICE-PACK, AND ITS DEFINITE THERAPEUTIC ADVANTAGES OVER OTHER METHODS.

By LESTER L. ROOS, M. D.,
of New York.

In my first paper* mentioning the ice-pack I wrote but a few words showing its therapeutic advantages. In this paper I intend to show by the experience gained in its use in a great many grave cases of typhoid fever, that it is the most useful mode of treatment that can be employed in this serious condition.

It has been demonstrated by autopsy by some of our most prominent pathologists that at more than 90 per cent. of the necropsies performed in cases of this character there have been found definite pulmonary lesions, showing conclusively that the typhoid alone did not cause death, but that the presence of pneumonia has really been the primary cause of death by its action on the heart.

Why do we have pneumonia so frequently with our typhoid cases, not only in private practice, but also in best equipped hospitals? Why do we have it both in the cases in which baths are used, and those in which only the sponging of the patient with either iced water alone, or the combination of water and alcohol and sometimes ether is applied?

The solution of these questions is not difficult:

Thus in both private practice and in hospitals, where do we find a room or ward in which there is no draught? In my investigation of the matter I have not been able to find such a room or ward. There is always present, though not always perceptible to the well-gowned and dressed physician and nurse, a draught which invariably blows beneath and around the bed of the patient. A patient is prepared for a tub, for instance, and has, up to that time, been lying in a bed well covered and protected. He is suddenly deprived of these coverings and allowed to be exposed to these draughts, sometimes only for a few seconds, but long enough, however, for the draught to accomplish its injurious effect. Again, we have the patient prepared for a sponge bath. I have never as yet seen the nurses in charge have everything ready so that the patient has not been allowed to rest on the cold rubber sheeting for a length of time varying according to the agility and dexterity of the nurse. In the use of the pack a nurse can be dispensed with and the ordinary layman can give it just as well as a graduated nurse. Exposure to the air is entirely done away with.

It may not perhaps be out of place to mention a

*Medical Record, July 27, 1901.

few words in explanation of the technique of the ice pack as I advocate it.

The patient has had his temperature taken every four hours, and if at these times it has been found to be above 102.2° he is made ready for the pack. A thorough urinary analysis and report must at this time be in the hands of the attending physician, as by it he will determine an important move. If the urine has been shown to be negative, the patient can be given ℥ii of spiritus frumenti before and after pack. If, however, any trace of renal disorder has been found by the tests employed, this should be discarded, and plain hot milk used instead, ℥iv being given before, ℥iv at each change of sheets, and ℥iv at the conclusion of the pack.

The mattress is covered with a couple of blankets, on top of which is placed a piece of rubber sheeting covered by another blanket, thus doing away with the contact of the body and the rubber.

A sheet and a blanket that have been soaked in water at 70° F. are brought to the side of the bed and as the patient is rolled out of his warm sheets he is rolled into the wet one. One-half an hour later, another sheet and blanket soaked in water at 60° F. is substituted for the first one, again doing this without any exposure at all. At the expiration of another half-hour the first sheets and blanket are put in water at 50° F. and applied to the patient. At this time the axillary spaces, the arms and the legs from the middle of the femur down, are covered with cracked ice, packed outside the sheets. This is repeated for the last time with water at 40° F. and the ice, the entire pack consuming two hours. The temperature is taken one-half hour later and there is always found a drop varying from 2 to 5 degrees.

During these two hours the patient has been receiving treatment which is beneficial to the entire system. It has acted as a sedative, as sleep generally follows it, and as a general stimulant, the pulse always being improved.

We thus do away with the sudden shock and rough handling of the tub bath or sponge bath, the latter being at its best but a slow means of combating hyperpyrexia and its accompanying symptoms.

There is no cyanosis of the patient as is frequently seen in the tub bath and there has never yet been a case in which owing to the distress of the patient the pack was ordered curtailed.

Furthermore, we have hemorrhage and perforation to consider. In the largest number of cases the fatal hemorrhage and perforation have occurred within a short while after the application of the tub or sponge baths. Is it not the most natural thing in the world that an abdominal cavity full of intestines, whose walls have been subjected to the ravages of the bacillus typhosus should give way after a rubbing and shaking of the body such as we see given every day by our nurses and orderlies? The harsh treatment ought to be relegated to the past, and should be given up by advanced practitioners of medicine.

Hemorrhage and perforation will never be seen as a result of the pack.

We have in the pack a great means of quieting the high-strung nerves of our patients, and especially in women. When patients have once had a tub bath, they frequently work themselves into a perfect frenzy of fear, as hospital internes know, and resist, as much as is possible for them, another application of the tub. In the pack this also is avoided, and I have yet to see the patient that has not been quieted by it, and who would make the least resistance.

In children, as in adults, the pack is given in the same manner, and quick response to this means will surprise those employing other methods.

The lasting effect of the pack is another point that demands our consideration. We are all aware that in tubs and in sponges the time in which the temperature remains down is short, and that sometimes within an hour, or an hour and a half the temperature has again reached its previously high level.

Following the pack, one will find that the temperature not only goes down lower than when other methods are employed, but that it continues to fall after the pack, and remains down for a length of time varying from 4 to 6 and 8 hours. This feature alone is of paramount importance in this form of treatment.

The cardiac stimulation by the pack also demands consideration. We all know of cases in which the heart requires constant stimulation, and in which when finally a quick response is needed, the heart long accustomed to drugs fails to reach, and we accordingly have the death of the patient to record.

In the pack, the use of drugs for the stimulation can in most cases be dispensed with until the heart shows absolutely that such is necessary, as I have always noticed that the pulse after a pack, and for a long time following, is stronger, fuller, and generally better than before.

Among the poor and the ignorant, and where in tenements there is hardly room to move, there the the pack will give the greatest satisfaction. He will find in this method a way entirely within the ability of any one of the patient's family to carry out. The necessity of holding the pulse and watching the patient, as must be done by skilled attendants in the case of the tub baths, and the avoiding of rubbing near the abdomen in both the tub and sponge baths, is done away with entirely.

The presence of a trained nurse, which is always a serious consideration among people of limited means, need not figure in the combat of the physician against the disease.

A few words to the lay attendant, and once showing how to apply a sheet and blanket will make that person as experienced in that way of treating the disease as the most highly educated and skilled nurse turned out of any of our hospital training schools.

One can easily see where the objection of sending a dear one to the hospital is raised. The practitioner in attendance has in his hands, and can put the same into the patients' hands, a better method than is used in most hospitals and one in which the mortality is already greatly reduced.

This being done, one source of great worry is taken from his shoulders, and he can leave his patient, and be as well satisfied as though the patient was quietly (?) resting in a great hospital ward.

Not only will this be the case, but he will also

find that no matter how serious a case of typhoid fever may appear, he, and he alone, can do as much for his patient as though he transferred him to the care of one of the nearby institutions, and into the hands of its attending and house staff.

Summing this entire matter up, we have only to think a few times, and one can quickly come to the conclusion that no matter how much good the Brandt method of baths has done in the past, it will soon be obsolete, and be only a memory.

I can almost see now the time when all the hospitals and most practitioners will adopt this method, and then, from the works of compilers of statistics, we will find the mortality of typhoid fever cut down to about one-quarter of its present number."

JOURNAL DE MEDECINE DE BORDEAUX.

November 3, 1901. (31me. Année, No. 44.)

1. Neurasthenia. A. PITRES.
2. Carbonated Waters. P. CARLES.

1.—Pitres describes the mental state of the neurasthenic according to the ideas of Dr. de Fleury, of Paris. The patient is continually lamenting, watching himself minutely, trying to analyze and to explain each trifling change noted. He is affected by his present ills, fears those to come, is sad, timid, discouraged, and at times melancholic. The cause of this condition is fatigue, either from overwork or from some previous illness. These cases show a loss of will power and of action. Both muscular exercise and prolonged thought or attention are impossible. Lassitude and pessimism result. Suggestion has no influence upon his state of mind, but the weather, stimulants, time of day, etc., show their effects. De Fleury considers this a condition of true fatigue, due to a diminution of vital force. The gray matter, from excessive sensation or some intoxication, shows hypovitality and a marked decrease in functional power. The neurons are but half awake to stimuli. The psychial state of the neurasthenic is but the expression of the reduced physical condition. Thus the distinction from hysteria is plain, for in hysteria the idea, purely psychical, is diseased, the body remaining unaffected. So in the treatment of hysteria hypnotism works wonders, while rest, tonics, and hygiene will cure neurasthenia. [M. O.]

2.—Carles believes that all carbonated waters, such as those of Néris-les-Bains, should only be taken at their sources. They do not keep well, when decanted, and they become spoiled when carried through pipes or kept in large pools. [M. O.]

November 10, 1901. (31me. Année, No. 45.)

1. A Case of Croup without Angina. J. VERGELY.

1.—Vergely reports the case of a girl of 6 and a half years, who, after playing for a day with a child who had recovered from a sore throat a month before developed constitutional symptoms, pain all over, and sore throat. The tonsils were slightly swollen and reddened, and the submaxillary glands a trifle enlarged, but not painful. In spite of the absence of membrane, antidiphtheritic serum was at once injected. Later Klebs-Löffler bacilli were found, and another injection of diphtheria antitoxin was given. She quickly recovered. The child was examined from time to time, and diphtheria bacilli were discovered in her throat for a whole month afterward. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine Hospital Service, during the week ended February 21, 1902:

SMALLPOX—United States.

			Cases.	Deaths.
CALIFORNIA:	Eureka.	Jan. 27. 1 case imported.		
	Humboldt County	Jan. 27. 5 cases in lumber camps.		
	Los Angeles.	Feb. 1-8.	3	
	Sacramento.	Feb. 1-8.	1	
	San Diego.	Feb. 1-8.	1	
	San Francisco.	Feb. 1-8.	4	
COLORADO:	Denver.	Jan. 28-Feb. 8.	12	
ILLINOIS.	Belleville.	Feb. 8-15.	2	
INDIANA:	Evansville.	Feb. 8-15.	5	
IOWA.	Clinton.	Feb. 8-15.	1	
KENTUCKY:	Covington.	Feb. 8-15.	11	
	Lexington.	Feb. 8-15.	2	
LOUISIANA:	New Orleans.	Feb. 8-15.	1	
MAINE.	Portland.	Feb. 1-15.	6	
MARYLAND:	Baltimore.	Feb. 8-15.	1	
MASSACHUSETTS.	Boston.	Feb. 8-15.	38	6
	Cambridge	Feb. 8-15.	3	1
	Everett.	Feb. 8-15.	3	
	Malden.	Feb. 8-15.		1
	Medford.	Feb. 8-15.	1	
	New Bedford.	Feb. 8-15.	1	
	Somerville.	Feb. 8-15.	1	
	Taunton.	Feb. 8-15.	3	
	Weymouth.	Feb. 1-8.	1	
MICHIGAN:	Bay City.	Feb. 8-15.	3	
	Detroit.	Feb. 8-15.	2	
	Grand Rapids	Jan. 26-Feb. 15.	3	
	Lexington.	Feb. 8-15.	2	
	Winona.	Feb. 1-8.	1	
NEBRASKA:	Omaha.	Feb. 8-15.	4	1
	South Omaha.	Feb. 1-17.	61	
NEW HAMPSHIRE	Nashua.	Feb. 8-15.	2	
NEW JERSEY.	Camden.	Feb. 8-15.	3	1
	Jersey City	Feb. 8-15.	11	
	Newark.	Feb. 8-15.	29	7
NEW YORK.	Binghamton.	Feb. 8-15.	4	
	Mount Vernon City	Feb. 8-15.	1	
	New York.	Feb. 8-15.	78	14
OHIO:	Cincinnati.	Feb. 7-13.	13	
	Cleveland.	Feb. 8-15.	2	
	Hamilton.	Feb. 8-15.	2	
	Youngstown.	Feb. 8-15.	3	3
PENNSYLVANIA:	Allentown.	Feb. 8-15.	1	
	Norristown.	Feb. 8-15.	2	2
	Philadelphia.	Feb. 8-15.	74	19
	Pittsburg.	Feb. 8-15.	1	
	Reading.	Feb. 8-17.	2	
	Scranton.	Feb. 8-15.	2	
	Williamsport.	Feb. 8-16.	5	
RHODE ISLAND	Providence.	Feb. 8-15.	1	1
SOUTH CAROLINA	Charleston.	Feb. 8-15.	1	
TENNESSEE:	Memphis.	Feb. 8-15.	2	
	Nashville.	Feb. 8-15.	1	
TEXAS	Houston.	Feb. 8-15.	21	1
WASHINGTON:	Spokane.	Feb. 1-8.	9	
	Tacoma.	Feb. 8-15.	4	
WISCONSIN:	Fond du Lac.	Feb. 8-15.	2	
	Green Bay.	Feb. 9-22.	16	1

SMALLPOX—Foreign.

AUSTRIA:	Prague.	Jan. 18-27.	15	
BELGIUM:	Ghent.	Jan. 26-Feb. 2.		2
CANADA:	Ghent.	Feb. 8-15.	1	2
	Winnipeg.	Feb. 1-8.	4	
COLOMBIA:	Cartagena.	Jan. 27-Feb. 2.		3
	Panama.	Feb. 8-15.	50	
FRANCE:	Paris.	Jan. 18-Feb. 1.		11
GREAT BRITAIN:	Belfast.	Jan. 25-Feb. 1.	1	
	Glasgow.	Jan. 31-Feb. 7.	1	1
	Liverpool.	Jan. 26-Feb. 1.	3	
	London.	Jan. 18-Feb. 1.	87	41
	London.	Jan. 25-Feb. 1.	200	49
INDIA:	Bombay.	Jan. 7-14.		1
	Calcutta.	Jan. 4-11.		3
	Karachi.	Jan. 4-11.	13	1
	Madras.	Jan. 18-Feb. 3.		2
ITALY.	Naples.	Jan. 26-Feb. 1.	5	
MEXICO	City of Mexico.	Jan. 26-Feb. 1.	1	

YELLOW FEVER.

MEXICO.	Vera Cruz.	Feb. 1-8.	4	4

CHOLERA.

INDIA:	Bombay.	Jan. 7-14.		1
	Calcutta.	Jan. 4-11.		31
	Madras.	Jan. 18-Jan. 31.		4

PLAGUE.

CHINA:	Hongkong.	Jan. 28-Jan. 31.	1	1
INDIA	Bombay.	Jan. 7-14.		200
	Calcutta.	Jan. 4-11.		36
	Karachi.	Jan. 4-11.	28	28

The Philadelphia Medical Journal

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See Advertising Page 8.

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X-Ray Burns.—We called attention last week to some peculiar effects of the X-Ray as experimentally shown by Kienböck of Vienna in the case of pigeons. That observer found that the feathers of these birds fall out after exposure to the rays, and that the effects are in direct proportion to the strength of the rays and the duration of exposure. In the case of the human subject many instances are recorded of persistent burns and grave ulcers, and it has been claimed that there is often something mysterious —something in the nature of an idiosyncrasy—in such cases.

Dr. Codman of Boston has taken great pains to hunt up and tabulate all such recorded cases, and we have pleasure in presenting the first instalment of his paper in this issue of the Journal.

The subject is a most important practical and medico-legal one. Suits for damages have already been instituted in some cases. If Kienböck is correct, these cases can no longer be defended on the plea of idiosyncrasy, for they are definite and determinable. It goes without saying that the subject is one that calls for most earnest study and consideration; and that experts alone should be entrusted with the use of this agent. Dr. Codman's paper is therefore one of first importance in the comparatively recent literature of this whole subject.

Is there a Fourth Disease?—Dr. C. B. Ker discusses, in the February number of the *Practitioner*, Dr. Clements Dukes' claims for the existence of a fourth disease. Every one recognizes the difficulty confronting the practitioner in the diagnosis of the various rashes in childhood. This paper deals only with those which are likely to be confused with scarlatina or measles. The evidence of a third disease, rubella, usually called German measles, is admitted. Dr. Dukes holds that he has discovered a fourth disease, which has previously been included under either scarlatina, rubella, or rubeola. Ker approaches this subject by considering the main distinctions between scarlatina and measles and then differentiating these from rubella, and before inquiring whether there is a fourth disease, he takes into consideration the various skin eruptions not associated with any epidemic features which are liable to be confused with the infections which the profession acknowledges do exist. Among these rashes simulating the above diseases we may mention the eruptions following the use of certain drugs, septic rashes and the eruption due to the use of antitoxin. Physicians are now well aware that our onetime notion that one attack of a given infection protects the patient for life, is unfortunately not the case; and previous to admitting the existence of a fourth disease we must satisfy ourselves that the patient is not suffering from some infection for a second time. We are well aware that second attacks of measles are a great rarity, and that most of the supposed second attacks occur in patients who have previously suffered only from rubella. The possibility of a fourth disease is placed before us as existing either between measles and rubella, or between the latter disease and scarlatina. In making such an hypothesis the polymorphous character of the rubella rash must be thoroughly recognized. Dr. Dukes' paper appeared in the *Lancet*, in July 1900, and has awakened considerable discussion. The symptoms of the fourth disease, as Dr. Dukes lays them down, may be summarized as follows: the incubation approximates that of rubella, that is to say nine to twenty-one days. As a rule there are no premonitory symptoms, although sore throat and malaise are sometimes present before the rash appears. In the thirty-five cases of this series only one child vomited. Dr. Dukes (we are following Ker in this description) makes no mention of the eruption appearing on the face. It covers the whole body in a few hours and appears to be brighter than the rash of scarlatina. The throat is swollen, the conjunctivae are pink, the glands are enlarged as in rubella, but not to the same extent; desquamation varies in degree. It may be very slight or may equal that of scarlatina. The kidneys are involved but rarely. The tongue may be clean or slightly coated but does not peal as in scarlatina. The temperature averages 101°: in only one case did it reach as high as 104°. The duration of the disease is not longer than twenty-one days and the sequelae are not common or serious, and recovery usually

follows. Dr. Dukes draws the important conclusion that this disease affords no protection against scarlet fever or rubella. The strongest corroborative evidence clinically has been given by Dr. Weaver in the *Dublin Medical Journal* for June, 1901. Weaver mentions particularly that the rash in his series appeared on the face, and he believes that Dukes' fourth disease is an entity. So eminent an authority as Sir William Broadbent coincides also in this opinion. Dr. Ker considers in his paper the various evidences, corroborative and critical, for the existence of Dukes' disease, and he states that Dukes places far too much reliance on "the established law of Cullen", that one attack of an infectious disease always confers immunity, and goes too far when he claims that relapses of scarlatina are an additional evidence of its existence. He further states that Dr. Dukes' position would have been stronger if in the first outbreak reported he had discovered from what diseases his cases suffered previously. It would have been interesting to know how many had had rubella before. Ker's conviction is that while we cannot be positive that such a disease does not exist, there is not sufficient evidence at hand to prove it. Dukes believes that rubella manifests itself in two distinct forms, the morbilliform and scarlatiniform, and his claim is that a new disease lies between rubella, as he has so well described it, and scarlatina. Ker concludes with the statement that with our present knowledge we can do no better than give the Scotch verdict of "not proven", on this question.

Conditions of Psychiatrical Research.—In no department of medical research are there such vague unrest and such a demand for new methods and new results as in psychiatry. There seems to have arisen recently a feeling that this science has been in a measure derelict, and that the fault is to be detected in a lack of proper enthusiasm and proper methods on the part of those who should be its supporters. The asylums especially have fallen under reproach for having devoted themselves too exclusively to administrative affairs and having neglected the science of insanity. We think we have detected a somewhat too optimistic tone of criticism which claims that what is needed is to be found in improved laboratories and more up-to-date psychiatrical clinics. Let the critics have the proper swing and they will straightway proceed to solve the problems of insanity. With this optimism we confess to only a limited feeling of sympathy.

We think that the enthusiasts are face to face with a hard proposition when they attempt to solve the problems of insanity by any methods now known to scientists. The microscope has egregiously failed in many places, and nothing is gained by ignoring that fact. To those students who are at all conversant with the demands of this problem, it must seem clear that the microscope is a somewhat defective instrument with which to disclose the mental functions of cytoplasm, and that the mysteries of life are not all to be solved by studying dead matter.

There seems to remain only a more searching clinical, personal and psychological method; and this thought seems to be in the minds of those who demand the establishment of better endowed psychiatrical clinics and hospitals. It must be by the old methods, after all, of interrogating the patient, and weighing all the factors in his antecedents, that a further advance is to be made. Neuropathology must yield somewhat to the demands of clinical psychiatry. With this feeling we are more in sympathy.

On a recent occasion Dr. Adolf Meyer, who represents in a measure the advance movement which has been heralded so ardently in New York, addressed the Philadelphia Neurological Society on this important topic. Dr. Meyer can hardly be said to have illuminated the subject beyond a statement of the conditions as they exist and the requirements as they are felt. His paper was apparently designed to be instructive rather than constructive; but instruction as to the difficulties of a theme which all students recognize, is not so much needed as a clear light that points us to further advance. It is this light which we await from the champions of the new movement.

The Health of Havana.—Major Gorgas' last report (January 1902) shows what extraordinary success continues to attend the sanitary work of our government in Cuba. During the last nine years of Spanish rule (1890-1898) the minimum number of deaths for December occurred in 1893, when there were 517 deaths, with a rate of 28.32. The maximum was 1924 in 1897—a rate of 100.08 per thousand citizens.

During the three years of American occupancy there were 534 deaths in December 1899, 485 deaths in December 1900, and 463 deaths in December 1901, showing a progressive decrease, and placing Havana in the class of healthy cities of the civilized world, having an equal population. The city, it must be remembered, has been increasing in population.

Not a case of either yellow fever or small-pox occurred last December. The last case of yellow fever occurred in September, 1901.

Major Gorgas considers the likelihood of yellow fever occurring this season about over. Still, the mosquito work is to be kept up. For this purpose a

"Stegomyia brigade" works in the city, and an "Anopheles brigade" works in the suburbs. Thus an official war is maintained against the pests. The matter most deserving of comment is the entire disappearance of yellow fever during the three months, October, November, and December. This has never occurred before in the history of Havana. Major Gorgas is evidently convinced that the mosquito is responsible for the disease.

What a record is this to the credit of our government! And how it transcends in importance even the tariff on sugar and the other problems that vex our statesmen in Washington!

The Surgical Treatment of Mitral Stenosis.—After all there is nothing like imagination, no matter the occupation to which it is applied. It was imagination that made possible the telephone, the phonograph, even the steam-engine, and the lightning-rod. Why then should we suppose that it is necessary to restrict it to literature and art? If it is admitted to engineering and other of the mechanical branches, surgery should certainly have the opportunity to benefit by its suggestions, and surgery certainly has so benefited. Dr. Lauder Brunton is a man of imagination no matter what other qualities he may lack; his brain is ever full of extraordinary ideas, ever fertile in amazing suggestions. The internal medical man has hitherto been thrust back and ever back from citadel to citadel in his struggle with the surgeon. The man who formerly eked out a scanty income by shaving and hair-cutting whilst practising his surgery under the stern eyes of the physician, has in the course of time so asserted himself, that now the poor physician must wait upon his pleasure, and if the medical man does not call him in soon enough, he is obliged to submit to a most severe scolding. And this whilome barber has thrust him back from dominion over the abdominal cavity, from dominion over the thoracic cavity, from the supposed impenetrability of the cranium or the inaccessibility of the spinal column. One place remained: the interior of the heart has hitherto been held sacred from the surgeon's knife. The pericardial cavity has long since been conquered. Bold men have taken a stitch now and then in a wounded heart muscle, but Dr. Lauder Brunton, although a physician himself, would deny the physician even this last place of refuge. He suggests that the most excellent method of curing mitral stenosis is not, as we have fondly believed, by rest and digitalis, but nothing less than by the insertion of a bistoury through the ventricular wall and the division of the adherent mitral leaflets. Alas, poor physician! The glorious cases of chronic heart disease that never got well and always needed the doctor, will be no more. When a person finds that he has palpitation, shortness of breath and swelling of the feet he will pass by the wistful sign in the physician's window, and walk blithely up the steps to the surgeon's office. And then a little dextrous manipulation of the knife, and he goes again on his way rejoicing, perchance to play foot-ball, to row, or to climb mountains. In the meantime, now that there is nothing left but vengeance, physicians should band themselves together to suppress the irrepressible Lauder Brunton, and if they must succumb, at least go down with this final oppressor in their clutches.

The Medical Director of the St. Louis World's Fair.—We are pleased to learn that Dr. Leonidas H. Laidley has been appointed to this important post. Dr. Laidley is a well known and widely esteemed practitioner and surgeon of St. Louis; and one, moreover, who has the personal qualities and training that admirably fit him for the duties to which he has been called. He has always been a public spirited citizen, fond of organizing and directing, and is identified with some of St. Louis' most useful public institutions. At present he holds the chair of surgical diseases of women in the Marion Sims and Beaumont College of Medicine. Dr. Laidley is a native of Pennsylvania and a graduate of Jefferson Medical College.

The post of medical director of a great world's fair is no sinecure. The experience at Buffalo sufficiently proved that. The world now expects and demands in such fairs a thoroughly organized medical service and a vigilant and efficient sanitation. There is always room, moreover, for wise innovation and not a little originality. The medical plant itself can be made an interesting and instructive exhibit. For this responsible service we believe Dr. Laidley to be capable and reliable, and we congratulate both the managers and Dr. Laidley himself upon his appointment.

The Formation of Hydrochloric Acid in the Animal Organism.—In a communication from the Research Laboratory of the Connecticut Agricultural Station, Thomas B. Osborne (*Jour. Amer. Chem Soc.*, Feb., 1902) describes an experiment which has an important bearing upon the above question. Osborne has done much valuable work on the vegetable proteids, and has obtained, among many others, a globulin, termed edestin, from hempseed. A quantity of this body, nearly pure, was suspended in water and was made exactly neutral by potassium hydroxide. The material was then washed with water, dissolved in sodium chloride solution, diluted with water until slightly turbid, and carbon dioxide passed until all edestin appeared to be precipi-

tated. This was filtered out and washed with a 1 per cent. solution of sodium chloride and further treated with alcohol until all chloride was removed. After washing and thoroughly drying, the material was found to be slightly acid from the presence of about 0.07 per cent. of hydrochloric acid. An equivalent quantity of sodium carbonate must have been formed. Sodium chloride, carbonic acid and proteid matters are constantly present in the tisssues, and the formation of hydrochloric acid and sodium carbonate might easily occur.

In another paper in the same issue, Osborne gives the results of extended studies of the sulphur in proteid bodies, showing that important suggestions as to formula may be derived from the data so obtained. The molecular weight of many proteids is over 15,000; that of casein, the principal proteid of milk, may be 30,000. These data show the extreme complexity of the bodies concerned in vital action.

Professor Adolf Kussmaul.—On the 22 of February, 1902, Professor Adolf Kussmaul celebrated his eightieth birthday. The entire medical profession owes much to Kussmaul for his many epoch-making researches. From his latest work "Jugenderinnerungen eines alten Arztes" many a practitioner and especially the young physician may gain courage and inspiration. Kussmaul was the son of a physician, and was probably inspired by the work of his father to adopt the calling which he has graced for so many years. Kussmaul's early researches were in the fields of physiology and pathology. His main labors, however, were in the domain of clinical medicine. We do not exaggerate when we say that the entire medical profession hopes that Professor Kussmaul will be spared to us many years, as an example and ornament to the entire profession.

Athletics By Proxy.—The critics of college athletics are rather fond of saying that the tendency in our universities is to develop a few athletes at the expense of the whole student body. In other words, the modern college student takes his athletics by proxy. He sits on the bleechers and whoops up the game, which is played by only a small minority. The "flannelled fools at the wickets and the muddled oafs at the goals" (to quote Mr. Kipling's screaming verse) are only a set of selected gladiators, and the average student is merely a spectator and a loafer. So runs the criticism.

The *Princeton Alumni Weekly* comes to meet these critics, and in a luminous and intelligent way shows that there is nothing in their strictures. The spectacle of a great intercollegiate contest does not reflect the whole of college athletics. To see the latter in its pristine state one must visit the college between times and see not only the amateur football and base-ball of the undergraduates, but also the tennis, the golfing, the cross-country running, the hockey, and the gymnastics. These amateurish and informal sports do not get into the newspapers, but they are very much in evidence, and they supply the true background for the picture of which the big games are only the striking incidents. It is safe to say, however, that they derive their stimulus from the athletic fervor which the big games create. At Princeton (and we doubt not at other universities) a large proportion of the students engage constantly in these informal sports. If there are exceptions to this rule, it is because, as the *Alumni Weekly* says, there are always some men who are too lazy or too stupid to take physical exercise and who will always prefer to take their athletics by proxy. But these hopeless ones do not fix the standard by which all are to be judged.

Crime and Finger-Prints.—We print elsewhere a statement from a contemporary showing the value to be attached to the Bertillon anthropometric system for identifying criminals. This system, as is well known, is based upon a set of measurements of the body. Its utility has often been proved. The system of Mr. Francis Galton, however, has not been so extensively exploited. This consists of taking an impression of the fingers in India ink on white foolscap paper. Mr. Galton claims that the chance of two finger-prints being identical is less than one in 64,000,000,000—a very small margin indeed. If therefore two such prints are compared and found to be identical, no doubt can exist that they are the prints of the same person, while if they are not identical, the inference is that they are of different persons. In other words, the chance of identical finger-prints belonging to different persons is infinitesimal. The sources of error are still further eliminated if prints of three or more fingers are taken. The only requisite seems to be that the prints be taken clearly enough to bring out all the lines.

It is claimed that these lines and patterns are more enduring than any other marks of the body. They do not vary from youth to age, and even persist after death, at least until decomposition has advanced. Injury alone changes them. Mr. Tighe Hopkins has recently discoursed on this subject in *Cassell's Magazine*. The government of Bengal has adopted the Galton in preference to the Bertillon system.

We hear every once in a while about "transplanting" rabbits' eyes; and the medical world has become rather too prone to accept such yarns without

a protest. Our news columns were victimized recently with the latest of these fables (from Clinton, Iowa) and we are glad now to make amends, and, on the authority of a subscriber, to announce that the story is a fake.

The *British Medical Journal* makes merry over the New Jersey mosquito, and the scheme of State Entomologist Smith to eradicate the pests by legislative enactment. It says the mosquito is good for rheumatism. If the British editor and his rheumatic friends wish to take a course of New Jersey mosquito, we think we can give them the post office address of some of the insects.

Current Comment.

AN OUTRAGEOUS VERDICT AGAINST A PHYSICIAN.

We learn from the **Philadelphia Medical Journal** for February 22d that a physician of that city recently vaccinated a child with, as he alleged, all aseptic precautions, and that, four weeks later, the vaccination lesion having healed in the mean time, the child was attacked with impetigo contagiosa, a trivial affection, and subsequently with diphtheria, of which it died. The physician was sued for damages, and the jury found against him. "If such a verdict is to stand," says our contemporary—and we quite agree with it—"it means that every physician is in jeopardy, and that such cases are not to be determined according to the known facts of medical science."

—*The New York Medical Journal.*

Reviews.

A Text-Book of Bacteriology. By George M. Sternberg, M. D., LL. D., Surgeon-General U. S. Army, Ex-President of the American Medical Association and of the American Public Health Association; Honorary Member of the Epidemiological Society of London, of the Royal Academy of Medicine of Rome, of the Academy of Medicine of Rio De Janeiro, of the Société Francaise D'Hygiène, etc., etc. Illustrated by Heliotype and Chromo-lithographic plates and two hundred engravings. Second revised edition, New York, William Wood & Company, MDCCCCI, 672 pages and index.

At the time the first edition of Sternberg's Bacteriology was published, and later, when the author somewhat altered its scope and presented it in the shape of a text-book, the profession, including laboratory workers and investigators in bacteriology, hailed the work as the most important contribution in English if not in any language. Had the distinguished author persuaded his publishers to destroy the plates and had he prepared a new edition—really new—there could be no doubt that the new work would have been as far superior to the present edition as was the original to the publications of its kind. The tendency of publishers and to a certain extent of authors, to reprint from altered plates rather than recast a book and bring it fully up to date, has led in many instances to the issuing of succeeding editions, the most conspicuous changes being upon the title page. This, only in a very general way, applies to the book before us, but that it applies at all is to be regretted.

The book is divided, as in the previous edition, into 4 parts: (I) dealing with classification, morphology and general bacteriologic technic; (II) with general biologic characters; (III) with pathogenic bacteria; (IV) with saprophytes. The historical summary, as in the previous edition, fails to give credit to Agostino Bassi, who, as has been shown by Calandruccio, conceived with most remarkable detail the general scheme of the micro-organismal origin of many diseases and did not hesitate to state that variola and syphilis were due to vegetable or animal parasites. The chapter on classification presents no important changes.

The chapter on staining methods needs revision and bringing down to date more than any other part of the book. The method of Claudius, McCrorie's flagella stain, Smith's modification of the same, and William's modification of van Ermengen's method, etc., should, in the reviewer's estimation, have been incorporated. The hot water funnel, figured on page 42, is probably never used in laboratories at the present time. Wright's methods for securing anaerobic cultures are not mentioned, and the admirable apparatus of Novy, that so generally has superceded cruder appliances, receives no notice. The coloring of bacteria by tinting the media with anilin dyes, a valuable method of study, is not mentioned.

The reader will gather that formaldehyde, formal, and formalin are one substance, and not that the last two are solutions of the former; the instructions given for the use of formaldehyde in disinfection are totally inadequate. In chapter XIII (dealing with practical disinfection) the fifteen year old recommendations of the American Public Health Association are endorsed.

The articles on immunity and protective inoculation have been most extensively revised; the added 100 pages on the latter, containing an extremely satisfactory review of the literature of the subject, probably constitute the most important addition to the work.

The space given to organisms is not, in all instances, consistently apportioned, as shown by the fact that the pneumococcus receives nearly 11 pages and the meningococcus a little over one-half a page, being more briefly considered than the micrococcus tetragenus. Recent observations have shown that the typhoid bacillus is not infrequently present in the blood, and reiteration of the statement contained in the second edition that the finding of the bacillus in the blood is to be attributed to contamination and imperfect methods of research, seems in the light of recent observations to be without justification. In view of the more recent work by Pearce, Frosch and a number of observers, the unqualified acceptance of Löffler's statement that the diphtheria bacillus is found only at the point of inoculation, is not justified. Certainly a more recent and fuller description of the bacillus pestis could have been given than that taken from Kitasato's preliminary report; nothing is said of the stalactite-like growth of this organism described by Haffkine as occurring in bouillon. The date, 1890, given for the report of the Board of Medical Officers engaged in the study of tropical disease in the Philippines is evidently a typographical error. It seems to the reviewer that a chapter on anaerobic bacilli could not be complete without reference to the work of Rist.

The foregoing criticism of parts of the work leaves still to be said that, even admitting the defects cited, Sternberg's Bacteriology will remain the best book of reference available to the student whose linguistic limitations restrict him to the English language. It was from its beginning a store-house of valuable information and that the author has not brought the new edition completely up to date is probably to be explained by the fact that he is arduously engaged with exacting administrative duties, or that ideal revision implied the destruction of existing plates from which the book was printed—something to which publishers commonly object.

The book is printed on good paper and well bound. The color work is of two kinds—very good and very bad. The plates printed as inserts are unusually satisfactory while the color printing in the text is frequently atrocious. In some instances the copy in the reviewer's hands shows blurring and loss of all detail, while in others the color is clearly inappropriate. Giant cells in black, heaped with

red tubercle bacilli, but with centers represented by white paper certainly convey to the reader anything but a correct idea. [W. M. L. C.]

Lectures on Chemical Pathology in its Relation to Practical Medicine. By C. A. Herter, M. D., small 8vo. 452 pages and index. Lea Brothers & Co., Philadelphia.

The text of this book comprises, with a few omissions, the lectures delivered by Dr. Herter at medical schools in New York. The lecture form has been retained, and is frequently exemplified. It has the advantage of securing the use of the first person, instead of the awkward "author" or "writer," but it is a question whether, on the whole, the lecture style is not out of place in a text-book. This, however, is a minor point. The matter of the book is good. It presents with much fulness of detail, yet clearly, the many interesting data in the chemistry of disease that have been elucidated of late years. The subject is one of considerable intricacy, and the full comprehension of these lectures will surely require minds better trained in chemistry than is usual with medical students. The information furnished is very extensive; in addition to which many theories are discussed and abstruse chemical reactions set forth. Some idea of the thorough treatment of topics will be given by the statement that twenty-one pages are devoted to alcoholic beverages, thirty three pages to gastric digestion, and thirty pages to jaundice.

The book is a valuable contribution to a most important phase of medical chemistry, and is interesting to chemists as exemplifying the imperialistic strides of the science, constantly claiming new regions for its own. The literary quality is commendable. Care has evidently been taken in the phraseology and arrangement of the matter. The retention of the lecture form has not been attended with loss of dignity, for loose colloquialisms have been wholly avoided. Each lecture is represented by a separate chapter, preceded by an analytic summary and followed by a good bibliography with brief explanatory comments as to the scope or value of some of the references.

Chemical tests are occasionally mentioned, but the plan of the book does not involve the description of analytic methods. A specially commendable feature is the correct nomenclature of chemical compounds. In spite of the many commendable features of the book, we feel obliged to say that it is somewhat diffuse on certain topics. It seems to us, for example, that the portion devoted to alcohol might be reduced one-half with advantage. It is not necessary in a work of this character to review so much of the controverted data.

The typography is of moderate quality. The type is closely set and the impression is not entirely regular. There are no illustrations, but the subject does not require any. [H. L.]

A Manual of Clinical Diagnosis, by Means of Microscopical and Chemical Methods. For Students, Hospital Physicians and Practitioners. By Charles E. Simon, M. D., fourth edition, thoroughly revised. Illustrated with 139 Engravings and 19 plates in colors. Lea Brothers & Co., Philadelphia and New York, 1902.

The fact that the present work has run through four editions within the past five years is an obvious proof that Dr. Simon's book has fulfilled the purposes of its author, and that it has been thoroughly appreciated by those who seek to correlate the important findings of the laboratory with the more familiar manifestations of disease observed in the clinic and at the bedside.

The present edition contains some fifty pages more than the last one, issued less than two years ago, and it shows evidence of careful, systematic revision and of the inclusion of much new matter of real utility to the practising physician. It is an especial satisfaction to note that in this edition numerous references to the literature have been added; this innovation, while it does not attempt to represent a complete bibliography, furnishes accurate references to articles treating exhaustively of the individual subjects under discussion. The chapter on The Blood, covering 117 pages, has been considerably enlarged and brought up to date to conform with Ehrlich's latest views; it gives, without doubt, the best general account of hematology to be found outside of works especially devoted to this subject. It does not seem hypercritical, however, to add that one is compelled to look in vain for a description of Dare's hemoglobinometer, and that reference to the new precipitation test for the identification of various bloods is omitted. The other more important chapters—those dealing with the gastric contents, the urine, and the sputum—are written in a style that bears the stamp of an authority, gained by virtue of personal experience, long laboratory training, and accurate bedside observation. The author's well-known views on the relation between the amount of free hydrochloric acid in the gastric juice and the quanity of indican in the urine are judiciously summarized on page 206. The differentiation of the tubercle, leprosy, and smegma bacilli is clearly described (page 285), and proper emphasis is given to Pappenheim's method of staining the first-named bacterium.

This latest revision of Dr. Simon's book cannot but add to the reputation made by his former editions, which has rendered the work a close companion of the hospital physician and of the clinician in their routine medical investigations. [J. C. DaC., Jr.]

A Brief Manual of Prescription-Writing in Latin or English for the use of Physicians, Pharmacists, and Medical and Pharmacal Students. By M. L. Neff, A. M., M. D., Cedar Rapids, Ia. Pages v-152. Size, 8x5¾ inches. Extra Cloth, 75 cents net, delivered. Philadelphia, Pa., F. A. Davis Co., Publishers, 1914-16 Cherry Street.

This little book, according to its author, is the outgrowth of his experience in teaching medical students. It would no doubt serve as a syllabus of a course of lectures on Prescription Writing provided that the lecturer supplemented largely each subject discussed. As a work for students its elementary character would scarcely justify its employment. [H. L. C.]

The Diseases of the Nose.—Aristide Malherbe divides the diseases of the nares into four groups, deformities of the septum, injuries to the nose, foreign bodies and rhinoliths, and epistaxis. Some amount of deviation of the septum is normal. But this may become pathological, with a thickening in the upper or lower part of the septum. The sense of smell may disappear, or post-nasal catarrh result. Rhino-salpingitis and anemia follow. Headache is a common symptom. Surgical treatment is necessary when the deformity is marked. Cauterization is applicable to a few cases. The septum may be fractured, when care must be taken to prevent later deviation; hematoma or abscess may follow injuries, when antiseptics and drainage are needed. Foreign bodies, rhinoliths, and insects should be removed as soon as they are found. Epistaxis may be traumatic or spontaneous. The hemorrhage is easily controlled by cauterization or tamponing. (*Bulletin Medical*, September 7, 1901, 15me. Année, No. 710). [M. O.]

Gouty Albuminuria.—By gouty albuminuria de Grandmaison does not mean interstitial nephritis, but simply the presence of serum albumin in the urine of a lithemic individual. The amount of albumin is always small, sometimes permanent, often intermittent or cyclic, and is generally found with a decreased quantity of urine and increased urates. Soon after the appearance of the albuminuria, the gouty attacks develop. In the three cases reported, there was oliguria with the albuminuria. For, in the lithemic individual, the blood serum contains uric acid, the vascular tension is lowered, and the glomerular epithelium permits the albumin to pass through. To combat this condition, large draughts of warm water are prescribed. No alcohol is to be permitted, and a restricted diet must be followed. Good attention to hygiene will also help to cure gouty albuminuria. (*Médecine Moderne*, September 11, 1901, 12me. Année, No. 37). [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Dr. J. T. Eskridge.—The following minute and brief memoir of the late Dr. J. T. Eskridge was prepared by a committee consisting of Drs. Mills, Dercum and Burr, appointed at the meeting of the Philadelphia Neurological Society held January 28, 1902. It is fitting that the Philadelphia Neurological Society should take special action regarding the late Dr. J. T. Eskridge. Dr. Eskridge was one of several physicians who held a preliminary meeting and later signed a call to members of the profession requesting a meeting of those interested in forming a Philadelphia neurological society, the others signing this call being Drs. Sinkler, Dercum and Mills. In response to this call the first formal meeting of the society was held in the College of Physicians December 13, 1883, Dr. Eskridge being present. Dr. I. N. Kerlin was made chairman and Dr. Eskridge temporary secretary. Drs. Mills, Chase, Eskridge, Brubaker, and Sinkler were appointed a committee on organization, and at a meeting held January 28, 1884, Drs. Sinkler, Jones and Eskridge were elected councillors. Dr. J. Hendrie Lloyd, who was also one of the organizers of the society, was elected the first permanent secretary. It will thus be seen that Dr. Eskridge was one of the most active spirits in the organization of this Society, and doubtless would have taken a continuous and meritorious part in its proceedings, had not ill health compelled him to leave Philadelphia in 1884, less than a year after its organization. Although not able to be present, he never ceased to be interested in the Society, and on several occasions contributed through others to its proceedings. Dr. Eskridge was fifty-four years old at the time of his death. He was born in Sussex County, Delaware, in June, 1848, and died at Denver, Colorado, January 17, 1902. His early education was received at a classical institute at Laurel, Delaware. He graduated at the Jefferson Medical College in 1875. Soon after his graduation he became a quiz master, doing excellent work in this capacity. Dr. Mills was associated with him in this work, and speaks from personal knowledge of his ability and energy as an examiner and teacher of students even at that early date. He remained in Philadelphia from the date of his graduation until 1884, and during this short period of nine years made a strong impression upon the medical profession and the community. He was an earnest and active worker in several Philadelphia medical societies, having joined the Pathological Society in 1876; the Philadelphia Clinical Society in 1877, and the Philadelphia County Medical Society in 1879. He became fellow of the College of Physicians in 1880. Reference to the published proceedings of these societies shows that his contributions, both in character and in number hold a high place. The general index of the Pathological Society of Philadelphia shows that to the volumes of transactions from the seventh to the eleventh inclusive he made no less than fourteen valuable contributions. The transactions both of the County Medical Society and of the College of Physicians also contain noteworthy contributions. He was a member, and in 1883 was elected President, of the Northern Medical Association of Philadelphia, relinquishing this position in May, 1884. Dr. Eskridge lectured for several years on anatomy and physiology at the Wagner Free Institute of Science, of Philadelphia, and was for a time a member of the Institute Board of Trust. As a lecturer at the Wagner Institute and also as a medical instructor he attained even at this early period an enviable reputation as a clear and earnest teacher. He held a number of important positions in hospitals and medical institutions during his stay in Philadelphia. He was physician to the Eye and Ear Department of the Philadelphia Dispensary, 1876-1877; to the Catharine Street Dispensary, 1876-1883; to the Howard Hospital, 1881-1883; to St. Mary's Hospital, 1882-1884; and to the Jefferson Medical College Hospital, 1883-1884. He was instructor in nervous diseases in the Post Graduate Course of the Jefferson Medical College, about 1883. He was elected a member of the Neurological Staff of the Philadelphia Hospital, but did not accept the position, leaving the city soon after his election. Up to the time of the first impairment of his health, Dr. Eskridge seemed possessed of great physical strength and endurance; he was energetic in his movements, and never wearied of work. His time was fully occupied with teaching, writing, hospital work, and private practice, of which latter he obtained a considerable share soon after his graduation. He gave but little time to amusement or recreation. He developed serious trouble with his lungs, and on the advice of his physicians went to Colorado in 1884. On first going west he went to Colorado Springs, where he remained two years, then moving to Denver. His health was greatly improved, although never fully restored. His medical work was resumed there with enthusiasm and energy. He soon restricted his work to neurology, and may truly be said to have been the pioneer of scientific neurology in the far west. His neurological practice became one of the largest in the United States, and he was a leading authority in the medical jurisprudence of neurology, being frequently called into court as an expert, and also frequently employed as advisor in medico-legal cases. Some of his most valuable contributions were to medical jurisprudence. In Colorado he filled various important positions, most of them in some way connected with neurology. He was Professor of Neurology in the Denver University and in the University of Colorado, and was Dean of the Medical Faculty of the latter institution. Among other positions held by him were those of Consulting Alienist and Neurologist to the Arapahoe County Hospital, and Neurologist to St. Luke's Hospital. He was a member and at one time president of the Colorado State Medical Society, and also an active member of other local and state societies. Among national societies of which he was a member were the American Neurological Association, the American Medical Association, the American Medico-Legal Association, the American Academy of Railway Surgeons, and the American Medico-Psychological Association. Although unable to attend the meetings of the American Neurological Association, he contributed important papers to its transactions. At the meeting of the Association in Boston in June, 1901, he was elected first vice-president. In 1901 he was elected chairman of the section on nervous and mental diseases of the American Medical Association, and just prior to his last illness had begun the work of preparation for the meeting of this section. Dr. Eskridge was a man of integrity and of great earnestness of purpose. He was persevering almost to a fault, and of an enthusiastic temperament. Having chosen medicine, and especially neurology, for his life work, he strove ceaselessly amid failing health and physical suffering that would have discouraged one of less heroic character for the attainment of his ideals.

CHARLES K. MILLS,
F. X. DERCUM,
C. W. BURR.

Temple College Medical School.—Dr. Edmund W. Holmes, demonstrator of anatomy and instructor in surgery in the University of Pennsylvania Medical School for the past nineteen years, has been elected professor of surgery and clinical surgery in the Temple College Medical School.

Pennsylvania Hospital for the Insane.—During the storm of last week 50 feet of the high wall surrounding the grounds of the Pennsylvania Hospital for the Insane, on Market street between Forty-fifth and Forty-sixth, collapsed. A retaining wall 10 feet high fell first, followed by the upper wall, which was also 10 feet high. No one was hurt, and no patient escaped. The wall was built 50 years ago.

Society Meetings Next Week.—The following societies will hold meetings next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening, March 10, Section on Medicine, College of Physicians; Tuesday evening, March 11, Pediatric Society; Wednesday evening, March 12, County Medical Society; and Thursday evening, March 13, Pathological Society.

Episcopal Hospital.—Dr. David L. Edsall has just been appointed visiting physician in the place of Dr. Henry M. Fisher, who recently resigned.

The Health of Philadelphia.—During the week ending March 1, 62 new cases of smallpox with 17 deaths were reported. 101 new cases of typhoid fever were also reported, with but 7 deaths. This is a slight increase in the number of deaths from smallpox, and a marked decrease in those

due to typhoid fever. Since January 1, 743 cases of smallpox have been reported in this city with 150 deaths.

Cerebro-spinal Meningitis in Hazleton.—It is reported that cerebro-spinal meningitis has become epidemic in Hazleton, where a number of deaths have already resulted. Many children are ill with the disease.

Typhoid Fever Near Pittsburg.—The village of Hamnet Place, near Homestead, which contains but sixty families, has 32 cases of typhoid fever. Two deaths have already occurred, and many of the patients are severely ill. The cause of the epidemic is said to be impure water.

Death of Dr. Williams.—The body of Dr. E. Newlin Williams, who was lost in the mountains in New Hampshire, January 31, was found buried in the snow, frozen stiff, near Warren, February 28. Dr. Williams was a graduate of Swarthmore College and of the University of Pennsylvania. He was 28 years old.

WESTERN STATES.

St. Louis Exposition.—The surgical department of the Army, which has a most extensive museum in Washington, will send to the military exhibit everything that would be appropriate for the establishment of a field hospital in a camp, composed of U. S. Regulars. In this hospital the most perfect and rigid sanitary measures will be enforced as an object lesson against the accidents in the volunteer camps during the Spanish-American War.

School Examinations.—A Milwaukee physician has discovered that American children are less affected physically by the anxiety and mental strain attending examination than those of France or Germany. According to figures obtained by careful weighing, the average amount of flesh lost by each pupil during the mid-winter examinations conducted in the public schools is one and one-quarter pounds. Some lost four or five pounds, while others were not at all affected. A small percentage gained instead of losing flesh. The conclusion to be reached from this preliminary experiment is that the American educational system is less severe in its demands and more humane than the systems of Europe.

Mortality in a Nevada Mining Camp.—Dr. L. R. Smith, of Tonopah, Nevada, has brought post-mortem specimens from the bodies of men who died in mining camps which are to be carefully examined at the Marine Hospital, San Francisco. 42 deaths occurred, only four of the men not being of dissipated habits. Dr. Smith believes the cause of death was influenza.

The Cigarette Habit.—The superintendent of the public schools of Kokomo, Ind., reports that out of 1500 boys 400 smoke cigarettes, and are consequently two years behind the non-smokers in their studies.

A Good Consumption Cure.—Major Appel, chief surgeon of the Government Soldiers Sanatorium at Fort Bayard, New Mexico, has recently published the results of his careful investigations in consumption. The main features of the treatment that has proved so successful in the pure air of this elevated region are life out of doors, a carefully selected nutritious diet and absolute rest for reduced patients. General McArthur was astonished and pleased with the good results obtained at Fort Bayard.

A Typhoid Epidemic.—An alarming epidemic of typhoid fever prevails at Michigan City, Ind., over 200 cases having been reported. The cause of the disease, as usual, is contaminated water.

Stanford University.—Dr. Charles H. Gilbert, head of the zoology department of Stanford University, has sailed on the United States steamer *Albatross* on a six months' scientific expedition to Hawaii, where he will take charge of the United States Fish Commission that was conducted last year by Dr. D. S. Jordan and Dr. O. P. Jenkins. Dr. Gilbert will be accompanied by Professor C. C. Nutting, head of the zoology department of the University of Iowa.

Methodist Hospital, Indianapolis.—It is announced that members of the Methodist Episcopal Church will soon build a hospital at Indianapolis to cost $200,000, with an endowment of half a million dollars.

A Mountain of Arsenic has been discovered fifty miles south-east of Tacoma, Wash. This is claimed to be the first important body of arsenic ever found in America. The supply heretofore has come from Cornwall. The United States now imports nearly $1,000,000 worth yearly.

Medical Society of the Missouri Valley.—The semi-annual meeting of the Medical Society of the Missouri Valley will be held at Lincoln, Neb., March 20.

Swedish Hospital, Minneapolis.—The new Swedish Hospital building was dedicated February 23, in the presence of the majority of the Swedish inhabitants of Minneapolis. The furnishing of the hospital has been undertaken by a number of Swedish churches in the city. Patients were moved from the temporary hospital building into their new quarters on February 26.

SOUTHERN STATES.

Teachers Oppose Vaccination Census.—The women school teachers of Wilmington, Del., are causing physicians connected with the Board of Health trouble by refusing to allow them to make an examination to determine if they have been vaccinated. In view of the threatened prevalence of smallpox the Board of Health decided to make a thorough examination of every school in the city limits in order to see what percentage of the pupils and teachers had been vaccinated. The pupils submitted to the examination without comment, but the teachers made stormy objections.

The Florida State Board of Health has adopted a memorial asking Congress to retain control of the quarantine and inspection service of the ports of the island of Cuba for a term of years.

The Scope of Carnegie's Gift.—President Gilman, of the Carnegie Institute, states that no part of the $10,000,000, or the income therefrom, donated by Mr. Carnegie, is to be used in the erection of buildings or the acquirement of real estate. The Carnegie Institution is merely to exist in Washington in offices. There will be no corps of instructors and no college buildings. If a scientist at Yale, Harvard, Princeton or any other university reaches a point where he is unable to continue for lack of funds, the money necessary to complete his work will be supplied. Washington will be merely the headquarters of the institution, where the board of trustees and officials hold their meetings.

In the Interest of Science.—A lady in Knoxville, Tenn., has written the Tennesee Medical College, offering to sell them her body for use after death. She is a member of one of the oldest families in the State, and no apparent reasons exist why she should be in need of money. It is therefore inferred that she makes the offer in the interest of science.

Marine Hospital at Savannah, Ga.—The bill for the establishment of a Marine Hospital at Savannah, introduced in the House December 3rd last, has been amended so as to allow the Secretary of the Treasury either to exchange or sell any Government land not needed by the Government, to procure a suitable site for such buildings as may be necessary for the Marine Hospital Service. The cost of such buildings, exclusive of site, is limited to $125,000. As the necessity for these buildings is apparent, and the appropriation approved by the Surgeon-General, the measure will most likely become a law.

Smallpox in Washington.—Consternation prevails in the census bureau, City Hall and district court house over two cases of smallpox. The first patient was a clerk in the office of the register of wills. A census bureau employé was removed to the smallpox hospital February 17. There are, however, more than 15 cases of smallpox in Washington. All but three are white men.

A Bill for the Promotion of Physical Culture.—A bill introduced February 21 by Senator Mason, of Illinois, provides for the creation of a Department of Physical Culture, whose head is to be a member of the Cabinet. For each State a Commissioner of Physical Culture, at a salary of $4000, is to prepare plans for playgrounds, gymnasia, parks, public baths and other facilities for physical culture, compatible with public health, and to have general charge of such matters within the state limits.

Merchants' Marine Hospital.—Drs. S. O. Heiskell, quarantine officer of the port of Baltimore has been appointed agent of the Merchants' Marine Hospital Service of which Dr. W. T. Jenkins, of New York, is the head. We have already published the details of Dr. Jenkins' recently organized Merchant Marine Hospital Service.

MISCELLANY.

Second International Conference of the American States.—At the recent conference of the American States held in the City of Mexico the early adoption of the following resolutions by the republics represented was urged. All measures relating to the subject of international quarantine, the prevention of the introduction of contagious diseases, and the establishment and control of maritime and international land detention or health stations shall be wholly within the control of the national governments; there shall be established in the ports of each country detention for inspection or observation, and detention for disinfection; prohibitive quarantine or manufacture and merchandise shall be abolished: the governments represented shall co-operate, notifying one another of the occurrence of cholera, yellow fever, bubonic plague, smallpox, or other serious outbreaks; another conference of the American States shall be held at Washington, D. C., within one year, where an international sanitary bureau shall be elected; the said republics shall promptly and regularly transmit to this bureau all data relative to the sanitary condition of their ports and territories; and finally, the salaries and expenses of the delegates to the convention and of the members of the International Sanitary Bureau shall be paid by their respective governments. In the interest of economy, the Bureau of American Republics shall be utilized by these conventions to the fullest extent possible.

Smallpox in the United States.—The Marine Hospital Service reports show, March 2, 19,164 cases of smallpox throughout the United States, while at the same time last year there were but 7,454 cases.

Obituary.—Dr. Henry Baker, at New York City, February 14, aged 62 years.—Dr. Levi Cooper Lane, at San Francisco., Cal., February 20, aged 69 years.—Dr. Louis Lewis, at New York City, February 19, aged 63 years.—Dr. George Zabriskie Hunter, at Glen Ellen, Cal., February 16, aged 54 years.—Dr. Cornelius H. Buckley, at Newburyport, Mass., February 20, aged 33 years.—Dr. William Walters, at Lynn, Mass., February 8, aged 58 years.—Dr. John Burbank Andrews, at Lynn, Mass., February 10, aged 61 years.—Dr. H. T. Ford, at Wheeling, W. Va., February 13, aged 61 years.—Dr. James Hine, at New Milford, Conn., February 10, aged 79 years.—Dr. Milton E. Lovejoy, at Mount Morris, N. Y., February 12, aged 41 years.—Dr. John P. Stack, at East St. Louis, Ill., February 10, aged 32 years.—Dr. A. S. Atkinson, at Baltimore, Md., February 24, aged 31 years.—Dr. J. A. Fife, at Peterboro, Ont., February 12.—Dr. Loxla Edwards, at Baltimore, Md., February 26, aged 27 years.—Dr. Francis H. Russell, at Farmington, Me., February 24, aged 54 years.—Dr. J. W. Winslow, at Enfield, N. Y., February 24, aged 81 years.—Dr. Leander Wachter, at Ellerton, Md., February 24, aged 71 years.—Dr. Francis W. Lewis, at Philadelphia, Pa., March 2, aged 76 years.—Dr. E. B. Wakely, at Orange, N. J., February 27, aged 70 years.—Dr. Nathaniel Greene, at Jamaica Plain, Mass., February 27, aged 71 years.—Dr. A. Ewing, at Kenosha, Wis., February 26, aged 52 years. —Dr. Conrad Mund, in Great South Bay, L. I., March 2, aged 28 years.—Dr. Daniel S. Young, at Cincinnati, Onio, February 20, aged 75 years.

Death of Dr. Bucke.—Dr. Richard M. Bucke died in London, Ont., February 20, aged 65 years. He was a graduate of McGill University. After further professional study in London and Paris he returned to Canada, and in 1876 was appointed medical superintendent of the Asylum for the Insane at Hamilton, Ont., and in 1878 medical superintendent of the London Asylum for the Insane.

GREAT BRITAIN, ETC.

Clinical Instruction in Smallpox.—The Local Government Board of London has been requested by the Hospitals Committee of the Metropolitan Asylums Board to modify the regulations relative to clinical instruction in smallpox, so that only students who have had three years of medical education be admitted to the courses of 12 demonstrations, no student to receive a certificate who has not attended eight of them; that the cost be four guineas, that the board provide steamboats to and from the smallpox hospital; that overalls be worn by the students; that physicians may also attend; that extra demonstrations be given from time to time especially for physicians; and that disinfection and vaccination shall apply equally to medical men and students.

To Investigate Cancer.—The official heads of the medical profession of Great Britain are determined to unite for a systematic investigation into the cause, prevention and treatment of cancer. The councils of the Royal College of Surgeons and the Royal College of Physicians have adopted a joint resolution empowering delegates to draw up a detailed scheme of work. Sir William Church and Sir William Broadbent are on the committee. A sum of £100,000 is needed to further this cancer investigation scheme.

Revaccination.—During the past year not a single case of smallpox has occurred among the staff of the London smallpox hospitals, indicating that careful revaccination is an absolute safeguard against that disease.

Foreign Physicians in London.—Out of 4801 physicians in London, 92 of whom are females, 169 men and 6 women are foreigners. Eleven of these are Russians, 10 Swedes, 2 Norwegians, 3 Danes, 4 Dutch, 1 Belgian, 12 French, 33 German, 3 Austrian, 8 Swiss, 3 Spanish, 1 Portuguese, 13 Italians, 2 Greek, 3 Turks, 2 Japanese, 1 Asiatic, and 63 Americans. 16,107 persons living in London follow the trade of nursing, 15,844 of them women. 266 midwives practice in London. There are also 62 female dentists.

The Essential Oil that forms the base of all perfumes is a powerful antiseptic, and possesses disinfecting properties equal to those of carbolic acid. A perfumed handkerchief, therefore, may not only please the sense of smell, but prove a guard against infection.—*Lancet.*

Vaccination and Conscience.—A futile attempt was made in the House of Lords February 18 to obtain an earnest hearing for a bill abolishing the "conscientious objector" clause in the vaccination law, but, even with a grave smallpox epidemic threatened, the Government is determined not to retreat from its present position, intimating that the clause will be abolished when the time-limit expires next year. It is only fair to say that the conscience clause did not originate with the Lords, who were forced to take it up by the Commons. The worst effect of the clause is the widespread belief among half-educated folks all over the country that there must be some lurking evil in vaccination when their rulers deliberately permit the relaxation of the compulsory law. The Government declares that renewed vigilance and closer attention to the quality of the lymph have gone hand in hand with the "conscientious objector" amendment, that vaccination has rather increased than decreased lately, and that people are beginning to learn that vaccination is necessary to the public health. The Lord Chancellor reiterated his determination not to permit unvaccinated employés to enter the law courts. Both he and Lord Balfour, of Burleigh, declared that in their opinion absolutely compulsory vaccination was impossible. *Baltimore Sun.*

Obituary.—Thomas White, of the staff of the Children's Hospital, Dublin, died suddenly February 5.—Robert P. Ritchie, a graduate of the University of Edinburgh, formerly physician to the Royal Hospital for Sick Children, died in Edinburgh, February 10.—Walter Wykesmith, a graduate of King's College, London, died at Poole, Dorsetshire, February 3, in his 60th year.—Cecil Latter, a graduate of St. Thomas Hospital, a member of the staff of the Folkestone Hospital and St. Andrew's Convalescent Home, died suddenly in London, January 29, aged 36 years.—Thomas Lewis, consulting physician to the Carmarthenshire Infirmary, a graduate of London University, died February 7, at Carmarthen, aged 88.

CONTINENTAL EUROPE.

University Notes.—Amsterdam: Dr. Otto Lanz, of Berne, has been appointed professor of surgery, replacing Dr. Korteweg, who recently moved to Leyden.—**Angers:** Dr. Legludic, professor of physiology, has been appointed director of the Medical School for three years.—**Berlin:** Dr. G. R. König, professor of surgery, celebrated his seventieth birthday February 16.—The next holiday courses, especially designed for foreign physicians, will be held from March 1st to 29th. Physicians expecting to take these courses may register, at any time,

at the Langenbeckhaus.—Dr. Moritz Elsner, assistant in the Institute for Infectious Diseases has been made professor, as has also Dr. Julius Schwalbe, editor of the *Deutsche medicinische Wochenschrift*.—**Berne:** Dr. L. Ascher has been appointed professor of physiology, and Dr. M. Howald professor of pathological anatomy.—**Brussels:** Dr. V. Jacques has been appointed professor of therapeutics and pharmacology.—Dr. P. van der Velde has become director of the Second Medical Clinic in the place of the late Professor Destrée.—**Budapest:** Dr. Ernst Emil Moravcsik has been made professor of psychiatry in the place of the late Prof. Laufenauer, and Dr. Leo Liebermann, director of the Chemical Institute, has succeeded the late Prof. von Fodor as director of the Institute for Hygiene.—**Clermont-Ferrand:** Dr. Dieulafé has been appointed substitute professor of anatomy.—**Freiburg:** Dr. Hugo Sellheim has been appointed professor of medicine.—**Giessen:** Dr. Leutert, of Königsberg, has been appointed professor of otology in the place of the late Professor Steinbrügge.—**Greifswald:** Dr. Otto Busse has been made professor of pathological anatomy, and Dr. Rudolf Rosemann professor of physiology.—**Marseilles:** Dr. d'Astros has recently been appointed professor of pediatrics in the Medical School, being the first incumbent of the new chair for the diseases of children, just created.—**Moscow:** Dr. L. Lewschin, professor of surgery, has been retired, Dr. Djakonow having been appointed professor of operative surgery in his place—Dr. Krjukow has been appointed professor of ophthalmology.—**Munich:** Dr. Adolph Schmidt has been made professor of surgery, and Dr. Rudolph Sendtner professor of diseases of the stomach.—**Nantes:** Dr. Herteaux, professor of clinical surgery, will be retired April 1st, becoming honorary professor.—**Paris:** Dr. V. Galippe has just been elected member of the Academy of Medicine.—**Pisa:** Dr. E. Pinzani has been made professor of obstetrics.—**Prague:** The committee of the medical congress to be held in Cairo, Egypt, December, 1902, have elected Professor von Jaksch honorary president.—Dr. H. Huppert, professor of medical chemistry, celebrated his seventieth birthday January 26, when he received many congratulations and presents. He became professor in 1871, in Leipsic, and came to Prague in 1872. Many well known medical men have been his pupils.—**Strassburg:** Dr. Manasse has been appointed director of the otological clinic and professor of otology and rhinology.—**Valencia:** Dr. J. Bartrina y Capella has been appointed professor of topographical anatomy.—**Vienna:** It is announced that Dr. Gabriel Anton, professor of psychiatry in Graz, is to become head of the psychiatrical clinic in the Lower Austrian Insane Asylum in the place of Dr. Wagner von Jauregg, soon to take Krafft-Ebing's place as professor at Vienna, as we announced some time ago. Dr. Karl Mayer will become professor at the University of Graz in Anton's place, while Dr. Friedrich von Sölder of Vienna will replace Dr. Mayer as assistant in the psychiatrical clinic at Innsbruck.—Dr. Ernst M. Ludwig, professor of medical chemistry, celebrated his 60th birthday on January 19.—The new Rothschild Pavilion for gynecology was opened January 11, under the direction of Drs. Oser, Fleischmann, and Zuckerkandl.—Dr. Victor Ebner von Rofenstein, professor of histology and director of the Histological Institute, celebrated his 60th birthday, February 4th.—The new bacteriological laboratory will soon be opened for the use of Dr. Max Gruber, chief of the Institute for Hygiene.—**Wiesbaden:** Dr. Wilhelm Otto Weintraud, physician in chief of the Wiesbaden Municipal Hospital, has been made professor.

Congress on Internal Medicine.—The Twentieth Congress on Internal Medicine will be held April 15th to 18th at Wiesbaden, under the direction of Professor Naunyn, of Strassburg.

To Exterminate Rats.—The destruction of rats throughout Germany is under consideration by the Imperial Health Department. The object of the Health Department is to mitigate the danger of contagious diseases. Dr. Robert Koch, the eminent bacteriologist, has been commissioned to devise the tactics of the campaign to this end, which will be begun in the seaports.

The New Nose, Throat and Ear Clinic, St. Petersburg.—On January 9, the new building for the treatment of diseases of the nose, throat and ear was opened in the presence of the Czar and Czarina. Dr. Ssimanowski delivered an address. The dispensary will be held on the first floor, while the second story contains wards for officers and soldiers.

A Statue of Professor Haeckel.—An admirer of Dr. Haeckel, professor of zoology and comparative anatomy in the University of Jena, has given an order to the sculptor Harro Magnussen for a statue of the German Darwin. It is to be chiseled from life, but will not be put into place until after Haeckel's death.

The Death-rate of Madrid.—Recently published statistics show that the death-rate in Madrid from 1887 to 1902 was very high. It appears that Madrid is the least healthy of all the cities of Europe.

Pasteur Institute, Budapest.—During 1901 the Pasteur Institute at Budapest treated 2490 patients. 91% of these were bitten by mad dogs, 6% by mad cats, and the rest by other animals. The average length of treatment was 18 days. Of the total number treated, .28% only contracted hydrophobia. The Servian Government has sent a commission to Budapest to study the methods and installation of the institute.

Smallpox on the Riviera.—Though the fact is kept very quiet, nevertheless rumors of the prevalence of smallpox along the Mediterranean, considerably more serious than anything of the kind in America at present, continue to arrive. On this account the hotels along the Mediterranean have not been filled this winter, yet the steamers both from New York and Boston continue taking out crowds of people.

Chloroform a Safe Anesthetic.—Dr. Henri Huchard, at the meeting of the Academy of Medicine, Paris, held February 13th, stated that he considered heart disease no contraindication to the use of chloroform as an anesthetic. He reported a number of statistics supporting this statement. Professor Berger agreed with Dr. Huchard that chloroform, prudently used, was still the safest anesthetic.

Austrian Balneological Congress.—The third congress of the Austrian Balneological Society will be held in Vienna March 20th to 23d. There will be discussions upon diabetes and chronic rheumatism, beside many other subjects.

The First Lady Doctor in Germany.—Hildegarde von Beckelsheim, also called Hildegarde von Bingen, abbess of the cloister on the Ruprechtsberg at Bingen, who lived from 1098 until 1170, is said to have been the first lady physician, who not only practiced medicine, but wrote her experiences and her teaching in works which are still extant.—*Leipziger*

A Society for Preventing Excessive Infantile Mortality.—An association has been formed in Paris for the study, means, and methods of action against the excessive mortality among infants. The executive committee is composed of Drs. Rousel, Strauss, Budin, Josias, Variot, and Henri de Rothschild.

Obituary.—The death is announced of Spirido Mavroyeni Pasha, a graduate of the University of Vienna, formerly professor in the Constantinople Medical School, physician to the Sultan of Turkey.—Eugenio Fazio, professor of [illegible] in the University of Naples, recently in Naples.—The death is also announced of Dr. A. Kosh [illegible] professor of [illegible] in Moscow, aged 66 years. His connection with the University of Moscow has dated since 1865—Julius Wolff, the well-known osteologist, professor of orthopedic surgery in the University of Berlin, for years editor of the *Zeitschrift für* [illegible], died in Berlin February 18 aged 41 years.—Dr. Elias Blix, professor of otology in Christiania, died recently, aged 65 years.—Dr. Arthur Geissler, director of the Bureau of Statistics of Saxony, died in Dresden, February 5.—Dr. Anton Padiaur died in Eger, Bohemia, February [illegible] aged 70 years. He was well known as a specialist for diseases of the eye, ear and nose. His death was due to blood poisoning.—The death is also announced of Dr. Chedevergne, director of the medical school and vice-president of the Council of the University of Poitiers, France, chevalier of the Legion of Honor.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

February 15, 1902.

1. Remarks on Felt Hat Making; its Process and Hygiene. CHARLES PORTER.
2. Typhoid Fever in South Africa; Its Cause and Prevention. GEORGE TURNER.
3. Airborne Typhoid. R. H. QUILL.
4. So-Called "Remittent" or "Pretoria" Fever. WENTWORTH TYNDALE.
5. The Prevention of Enteric Fever in Armies. GEORGE D. N. LEAKE.
6. The Disinfection of New Clothes. CHARLES A. CAMERON.
7. On Diphtheria Antitoxin Eruptions. A. STANLEY.
8. Treatment of Chronic Eczema. ALFRED EDWARDS

1.—**In felt hat making** there are 2 distinct parts; the dressing of the fur, and the manufacture of hats from the prepared fur. The work of dressing the fur includes (1) cleaning the skins, (2) mixing the acid nitrate of mercury solution, (3) carotting, (4) drying, (5) tying up and damping, (6) cutting, (7) locking and (8) pelt-shaking. In the process of carotting the skin is spread out on a stone bench and brushed or sprinkled with an acid nitrate of mercury solution; the workers usually wearing rubber gloves or finger-stalls. In some places the carotting is done mechanically, the skin being drawn in between rollers, and thrown out dressed with nitrate of mercury. Each skin is, however, removed wet by hand, so that there is still direct contact of the operator with the mercury solution. The manufacture of hats from the prepared fur includes (1) mixing and blowing, (2) forming, (3) hardening, (4) planking, (5) proofing or stiffening, (6) stoving, (7) scouring and dyeing, (8) blocking, (9) pressing, (10) finishing, (11) curling, (12) shaping and (13) trimming. Possibilities of **injury to health** arise in connection with the following: (1) The various processes connected with the dressing of the skins with acid nitrate of mercury (carotting). (2) The dust evolved during the blowing process. (3) The forming process. (4) The hot steam-laden atmosphere in which the plankers work. (5) The effect of hand-planking and blocking on the hands. (6) The process of spirit-proofing and the subsequent drying of the proofed hats. (7) The fine dust evolved during the process of finishing. Operatives engaged in carotting often present marked symptoms of mercurial poisoning. Salivation and intestinal irritation are rare, but, amongst those who actually brush the skins, stomatitis (hatters' sore mouth), and marked dental erosion are common and Legge has further noticed that muscular tremors (hatters' shakes) are often observed in those engaged in dusty post-carotting processes. Injury to the eyes from splashing of the nitrate of mercury solution has been recorded in more than one case. The dust evolved during fur-blowing is impregnated with nitrate of mercury, and, if inhaled, is obviously likely to cause mercurialism in addition to the respiratory mischief which dusty occupations often entail. The hot steam-laden atmosphere in which the plankers labor is said to favor the development of lung trouble, and to impart a washed-out, pale and languid appearance Hand-planking and blocking gives a more or less pronounced polish to the whole of the palmar surface of the hands; the dorsal surfaces are deprived of hair; the nails have the color of ivory, have rugged borders, are foreshortened, and are loosened or discolored in their terminal portions. The terminal phalanges are short, thick and bulbous; callosities develop on the thenar and hypothenar eminences. Cases are on record in which almost complete loss of power has resulted. The evaporation of the spirit in the spirit-proofing process occasionally causes headache and slight iritation of the eyes. The work of "finishing" is probably the least healthy of any of the processes of hat-making proper. Notwithstanding the exhaust fan with which each lathe is provided, there can be little doubt that an appreciable quantity of the dust resulting from the application of sandpaper to the hat is inhaled by the workers, and the mortality from phthisis and other lung diseases is much greater than amongst any other class of hat operatives. The use by these workers of suitable respirators ought to have a good effect. [J. M. S.]

2.—Turner feels that the growing tendency to attribute **enteric fever** to wind and flies is becoming a source of danger. During 6 years' experience he has found that the **causation of epidemics of enteric fever** in South Africa is practically similar to that of the majority of cases in England, namely, a polluted water supply. There is no intention on the part of the writer to deny absolutely the possibility of typhoid infection by means of windborne dust. But if dust infection is the predominating or an important cause of typhoid fever, one would expect to find the disease commence soon after the dusty season begins and cease soon after it finishes. As a matter of fact, typhoid fever is least frequent at the period during which dust storms prevail, and is most numerous when, on account of heavy rain, dust is less troublesome. This, to the mind of the author, is conclusive proof that dust does not exert much injurious influence. The possibility of the conveyance of typhoid fever by flies is undeniable; but in this instance also the flies begin to be troublesome long before typhoid prevails, and continue to annoy us long after it has subsided. Emphatically, typhoid in South Africa is almost entirely due to polluted water. It has been said that filters were sent out with the troops, and that typhoid prevailed notwithstanding. Turner knows that the filters were not generally used. There is ample evidence that where the commanding officer of a regiment had a "fad about water" the case incidence of typhoid was insignificant. The writer does not believe that disregard of ordinary sanitary precautions such as have been described cannot be prevented, or that it is necessary in a military sense. [J. M. S.]

3.—Quill holds that **epidemics of typhoid fever** are chiefly waterborne. It is to the water supply that we should first turn our attention when investigating the origin of typhoid cases, which have occurred sporadically or epidemically. A large camp was formed at Diyatalawa, in the hills of Ceylon, for Boer prisoners of war. In this camp an epidemic of typhoid developed among the prisoners, and 600 cases were treated. This epidemic of typhoid among the prisoners had undoubtedly been imported from South Africa. On the other hand, the guard for the prisoners remained in a thoroughly satisfactory healthy condition over 2 months after its arrival at Diyatalawa, and for a month after the first case of typhoid occurred among the prisoners. The water supply was subjected to a weekly chemical analysis and frequent bacteriological examinations. No fresh milk was allowed within the camp precincts. All aerated water used in the camp came from the Ceylon Brewery at Newera Eliza, and were identical with those used at that sanatorium. There has been no enteric fever at Newera Eliza. No uncooked food or uncooked vegetables were used in camp. No native hawkers of any kind were allowed to enter the camp. Within the camp there were 5 or 6 native shops, which were under strict military supervision. All men leaving the camp for purposes of duty or pleasure were obliged to take with them a water-bottle filled with filtered water The camp was situated in an isolated position in the hills far removed from habitations of any kind. Quill is convinced, on account of these sanitary conditions, that the **infection was airborne**, being derived from the adjoining prisoners-of-war camp, where there was an epidemic of typhoid fever. The

diffusion of the infection, he believes, resulted from emanations from specifically infected latrines, infected dust, or bacilli-laden flies. [J. M. S.]

4.—A great many soldiers who stay for any length of time in Pretoria or its neighborhood suffer from attacks of fever of a remittent type which is of short duration, and has been called **Pretoria fever.** To ally this complaint with malaria, however, is distinctly wrong, as it has no connection whatever with it. True malaria does not exist in Pretoria and its neighborhood among the soldiers, except as imported cases. The onset of fever is, as a rule, sudden; the patient has been feeling out of sorts probably for a day or two previously, but not sufficiently so to cease work. The attack commences with acute frontal headache, pains in the back and legs; sometimes acute pain in the lower part of the occipital region, which occasionally occurs in enteric fever and is rather a characteristic symptom when present; sensations as of cold water being poured down the back; often vomiting; loss of appetite and malaise. In 24 hours the temperature may reach 104°, rarely higher. A history of diarrhea previous to admission to hospital is often given. The condition is generally much more characteristic of an intestinal lesion than of malaria. Sweating is not at all a constant feature towards the termination of the fever, and is not profuse when present. Tyndale believes that these cases are almost invariably abortive attacks of enteric fever. The treatment includes absolute rest. Prolonged fluid diet, after the temperature is normal, is both unnecessary and debilitating. He uses the following mixture: Tincture of iron, 8-10 minims; solution of perchloride of mercury 15-30 minims in water, three times a day. [J. M. S.]

5.—After being in Bermuda a year or so Leake arrived at the conclusion that the dry-earth latrines were responsible for nearly all the cases of **typhoid fever** that occurred in **barracks** and, consequently, advocated their total abolition from all the barracks in the island, and the introduction of the water-carriage system. Before the dry-earth latrines could be done away with, it was necessary to render them as little pernicious as possible. This was done by disinfecting every portion of the latrines and urinals with a 10% solution of carbolic acid applied in large quantities by means of a watering pot once or twice a week. From 1895 to 1900 the admissions for enteric fever were reduced from 107 to 8. [J. M. S.]

6.—Cameron has been able to satisfy himself that **new clothes** are the vehicle for the infective matter of **scarlet fever.** It would, therefore, be desirable to have all clothes made by tailors and dressmakers, sterilized, and certificates given that they had been subjected to that process before the articles are sent home. [J. M. S.]

7.—Stanley reports a series of 500 cases of diphtheria, all of which were treated with antitoxin. The deaths in the series were 80, or 16%. No constant relation between the quantity of antitoxin given and frequency of eruption was noted, but in one case in which antitoxins from 2 different sources were injected at the same time, two separate antitoxin rashes were observed; the first occurring 10 days and the second 14 days after giving the antitoxins. Out of the 500 cases treated with antitoxin there were 112 cases of antitoxin rash. The typical **diphtheria antitoxin eruption** is a marginate erythema on the psoriasis regions tending to run into arcs of a circle. It lasts about 3 days and is accompanied by slight malaise and a rise in temperature of about 3° F. [J. M. S.]

8.—In the **treatment of chronic eczema** it is necessary to discover the cause if we would permanently relieve or cure the disease. If a patch of eczema is chronic and dry, it must be moistened and greased; if it is too wet, it must be dried; if it is swollen the part must be raised or supported; if it is hot, it must be cooled; if it is painful, it must be soothed; if it is due primarily to micro-organisms they must then be killed or checked. Care must be taken, however, that antiseptics do not become a source of aggravation afterwards to parts already prone to congestion. If there is great cell infiltration, absorption should be excited; if dead scales cover the surface and prevent the remedies reaching as deeply as necessary, and possibly form a nidus for the growth of micro-organisms, they must be removed or at least saturated with suitable remedies, and converted into a harmless and perhaps a useful protective material for an irritable surface. If injury is being done by scratching or other form of friction, the part must be soothed and protected or otherwise treatment may be almost useless. [J. M. S.]

LANCET.

February 15, 1902.

1. The Erasmus Wilson Lectures on the General Pathology of Tumors. CHARLES POWELL WHITE.
2. On Cleft Palate. W. ARBUTHNOT LANE.
3. A Note on the Methods of Conducting Hemolytic Experiments. G. F. PETRIE.
4. Primary Sarcoma of the Vagina. H. MacNAUGHTON-JONES
5. On Hemolysis Produced by Certain Bacteria. ALDO CASTELLANI
6. A Case of Perforating Gastric Ulcer Simulating Appendicitis. C. A. B. HORSFORD.
7. The Medical Use of the Pressor Substance of the Pituitary Body. F. GOLLA.

1.—White delivered the Erasmus Wilson lectures **"on the general pathology of tumors"** before the Royal College of Surgeons of England, on February 10th, 12th, and 14th, 1902. He is not in accord with those who believe that histological studies have reached their highest state of development. The study of serial sections and minute cytological studies, which have been left mainly, up to the present time, to biologists, constitutes an immense field for original research. He cites the various theories regarding the causes of tumors and emphasizes that at the present day this subject still remains obscure. In discussing the classification of tumors, he believes that the embryological division is unsatisfactory because an arbitrary period of development is chosen as the starting point and it is unscientific, because at least a large portion of the genito-urinary tract is derived from the mesoblast, it is, therefore, impossible for any epithelial tumors to spring from any one of the three layers. The histological classification is not open to these objections and by an examination of any particular tumor we can determine the class to which it belongs. He contends that, as yet, no satisfactory terminology is used to express the various kinds of cells and that the cumbersome expressions, "connective tissue cells," etc., are usually employed. He suggests that we should make use of the term "cyte" to express the "meaning cell" for example, "fibrocyte, chondrocyte, epicyte" (meaning epithelial cell). From the view-point of development, cells may be grouped into two classes. (1) Those which remain in contact with each other in the course of proliferation and (2) those which become separated from each other by an intercellular substance during the course of their multiplication. In the former may be classed epithelial cells and with the latter muscle or nerve cells. In order that cells may perform their proper functions, they are arranged in an orderly and definite manner and grouped into "organs and tissues." Upon such a basis a satisfactory classification of tumors can be arranged and these may be divided into (1) organ tumors or organomata, such as dermoid cysts, (2) tissue tumors or histomata such as fibromata and, lastly, tumors which may be called "cell tumors" or cytomata. Carcinomata and sarcomata belong to this class. Combinations of some of these groups may be termed "teratomata." The following scheme of classification of tumors is mentioned:

Classification of Tumors.

"A. Organomata or organ tumors.
Teratoma (dermoid cyst).

(a) Connective tissue tumors (desmomata.—Fibrous tissue, gliroma, fat lipoma, mucous tissue, myxoma, [illegible]

chordal tissue, chordoma, (of Ribbert); cartilage, chondroma; bone, osteoma, and neuroglia, glioma.

(b) Lymphoid tissue tumors, (lymphomata.—Lymphadenoid tissue, lymphadenoma (lymphoma); and bone marrow, myeloma.

(c) Muscle tumors (myomata).—Smooth muscle, leiomyoma and striated muscle, rhabdomyoma.

(d) Nerve-tissue tumors (neuromata).—Medullated nerve tissue myelinic neuroma; and non-medullated nerve-tissue, amyelinic neuroma.

(e) Epithelial tissue tumors (epitheliomata).—Squamous epithelium, squamous adenoma and squamous papilloma; columnar epithelium, columnar adenoma and columnar papilloma; spheroidal epithelium, spheroidal adenoma; and endothelium, angeioma and endothelial papilloma.

B. Cytoma or Cell Tumors.

(a) Tumors of indifferent cells (blastomata).

(b) Tumors of connective tissue cells, also of lymphoid tissue and muscle cells (sarcomata).—(1) Pure sarcomata; round cells, round celled sarcoma; spindle cells, spindle celled sarcoma; and giant cells, giant-celled sarcoma. (2) Compound sarcomata: fibrous tissue-cells, fibro-sarcoma; cartilage cells, chondro-sarcoma, etc

(c) Tumors of epithelial cells, (carcinomata).—Squamous cells, squamous carcinoma; columnar cells, columnar carcinoma; spheroidal cells, spheroidal carcinoma; and endothelial cells, endothelial carcinoma." In discussing the life-tumors or rudiment of origin, he concludes that they may consist of first "(a) of a sequestrated collection of embryonic cells, such as described by Cohnheim; (b) of the tissues normally present at the point of origin; and (c) of tissues of new formation, either of inflammatory origin or the result of previous tumor growth. Second, it is not always necessary to presuppose a rudiment consisting of the same kind of tissue as that of which the tumor is composed. It is evident, therefore, that the common factor in tumor formation is not to be found in the rudiment from which the tumor originates." He discusses the centripetal and peripheral characters of growths and considers in detail the method of growth of the organomata, histiomata, and the cytomata. Tumors may continue to grow indefinitely or in some instances, under certain conditions which are imperfectly understood, be stationary, remain the same size, or disappear suddenly. The physiologic character of tumors is next considered. Tumor cells, as a rule, proliferate rapidly. We should not expect to find them very active in the performance of any function and when their arrangement is atypical there is no mechanism by which the performance of a function can be initiated and any action that may be performed is incapable of being utilized. Such tumors have the property of storing up enormous quantities of glycogen. This occurs in carcinomata and sarcomata. Various pathological changes are encountered in tumors, which are similar to those met with in tissues. An outline of clinical manifestation of tumors is next given, and he discusses, in detail, the cell structure and methods of cell division, and, finally, the exciting cause of tumors.

[F. J. K.]

2.—W. Arbuthnot Lane in beginning the discussion of the subject of **cleft palate** refers to the function of the various bones of the face and to their development. It is shown that, unless the cavities and organs of the face perform their proper functions during early life, the bones about them do not become properly developed. This principle is not only applicable to the face but to all parts of the body. The lower jaw during its development is moulded upon the upper jaw and anything that interferes with the free movement of this bone impairs to a corresponding extent the development of it. Reference is made to the want of development in the bones of the nose and face noticeable in childhood and produced by mouth breathing. The nasal cavity and the cavities adjacent to it require, in order that a proper development should take place, the free passage of air during both inspiration and expiration. Lane suggests that if the nasal and adjacent cavities were made to perform their functions during early life there would be much less need for the nose and throat specialist. It is shown that that protrusion of the upper jaw results from a want of development of the naso-pharynx. It is remarkable how frequently an acquired deformity is transmitted from parent to child. The great frequency of inflammatory conditions of the naso pharynx such as adenoids, etc., is, in most part, due to mouth breathing. A number of illustrations are produced showing the "attitude of rest" habitually assumed by mouth breathers. The respiration of such subjects is shallow and almost entirely diaphragmatic, the thoracic respiratory muscles are poorly developed, the shoulders droop and the angles of the scapulae stand out prominently. The chest expansion of these patients is very small. The changes noted in the face are a partly open mouth showing the upper teeth and sometimes the gum, the nose compressed laterally, its tip frequently tilted up, and the face below the orbits hollowed. Such non-use of the nasal cavities results, as has been said before, in hypertrophies of the mucous membrane of the naso-pharynx. It is a mistake to suppose that the removal of such hypertrophies will alone result in a cure. The operation must be followed by measures which improve the method of respiration and properly ventilate the naso-pharynx. (To be continued).

3.—A note **"on the methods of conducting hemolytic experiments"** is presented by Petrie. Evidence was accumulated in the course of his experiments to show that hemolytic tests present a wide margin of possible fallacy in the conclusions arrived at from positive results. He remarks that not only do bacterial products or specific complex bodies found in cultures of various micro-organisms possess hemolytic properties, but such simple agents as water, and solutions of certain salts, are capable of producing blood destruction. He writes that simple methods should always be employed and the following rules are suggested: "(1) Use absolutely fresh unclotted blood; (2) prepare in test-tubes of equal size known percentages of the hemolysin in isotonic oxalate solution; (3) add to each of the tubes exactly the same amount of blood and mix well; (4) incubate tubes for the same length of time 37°; (5) centrifugalise till all the corpuscles settle at the bottom of the tube, forming a sharp line of demarcation between the blood and the supernatant liquid; (6) in every experiment have control tubes containing isotonic salt solution alone; (7) in doubtful cases examine microscopically." [F. J. K.]

4.—MacNaughton-Jones reports a case of **primary sarcoma of the vagina** and gives a synopsis of the literature of the subject. Of 8,287 cases of malignant disease in Paris, only 14 were primary vaginal carcinomata, and it would appear that vaginal sarcoma is still more rare. From 1872 to 1899 there were but 32 cases recorded. In 25 cases, the tumor was located on the anterior wall in 15, and on the posterior wall in ten. The disease is more common under the age of 50 years. MacNaughton-Jones' case occurred in a woman of 44 years of age and was composed of spindle cells. It was removed by the écraseur and the site cauterized.

[W. A. N. D.]

5.—Castellani contributes an article **"on hemolysis produced by certain bacteria."** This author has conducted experiments with cultures of the typhoid bacillus, dysentery bacillus, colon bacillus number one, and colon bacillis number two, in order to determine their hemolytic properties. He follows the technic outlined by Neisser and Wechsberg. His results are summarized in a table and he writes "that the typhoid bacillus is capable of forming a hemolysin which produces complete solution of the erythrocytes of the dog's blood." Cultures two weeks old showed a maximum amount of hemolysin. Equally positive results were obtained with the dysentery bacillus. The colon bacillus did not exhibit hemolytic properties either on the red corpuscles of the dog or on those of other animals. He was successful in producing anti-hemolytic substances to the typhoid hemolysin. [F. J. K.]

6.—C. A. B. Horsford reports an interesting case of **perforated gastric ulcer** in which the gastric contents escaped and accumulated in the right iliac fossa, presenting **all the symptoms of appendicitis.** The patient did not have the typical symptoms accompanying perforation: the pain was not severe, the abdomen was not generally distended, and the symptoms giving rise to a diagnosis of appendicitis did not arise until several days after the perforation took place. The patient was not operated upon, but the condition was discovered post-mortem. [J. H. G.]

7.—Golla discusses **"the medicinal use of the pressor substance of the pituitary body."** Oliver and Schafer demonstrated that an extract of the pituitary body causes a marked rise of blood pressure when intravenously injected. This condition is due to the contraction of the

blood vessels and augmentation of the cardiac contraction which persists after the destruction of the central nerve system. More recently Schafer and Vincent have demonstrated that the infundibular part of the pituitary body contains two substances which have distinct physiologic properties, one of these is capable of producing a rise, and the other, a fall in the blood pressure. They are designated as the pressor and depressor substances. Salt solution will dissolve the pressor substance. It, however, is insoluble in alcohol and ether. The action of the pressor substance is prolonged and exerted on the heart and peripheral arteries. The depressor substance is soluble in salt solution, alcohol and ether. Schafer and Magnus do not regard the pressor action of alcoholic extracts of the pituitary body unlike suprarenal extract, as it causes no decrease in the volume of the kidneys when injected intravenously, but it is followed by a diminution in the size of the spleen, intestines, and extremities, with an increase in the volume of the kidneys in prolonged pronounced diuresis. The author's experiments with the pressor substance on the human subject demonstrated "that its slowing action on the heart beat, like that of digitalis, appears to be due to a prolongation of the systole rather than the diastole." Injections of three minims of a saline salt solution of the pressor substance (formula of which is mentioned) was followed by a blanching of the mucous membrane due to vasoconstriction which persisted for about three-quarters of an hour. Subcutaneous injection was followed by a rise in the blood pressure and a spasmodic contraction of the muscles near the site of the injection. This condition remained for some hours. Some pain was induced near the site of the injection. Diuresis also occurred after the injection with a lowering of the urine specific gravity. When the drug was taken by the mouth no results seemed to follow. The author thinks that the substance decomposes by prolonged tryptic digestion. He concludes that the cardiac, vascular and diuretic action would indicate that it may be of service in cases of heart disease." [F. J. K.]

MEDICAL NEWS.

March 1, 1902. (Vol. 80, No. 9).

1. Suturing the Head of the Humerus to the Acromion in Old Subcoracoid Dislocation. CARL BECK.
2. Diphtheria; With Special Reference to the Symptoms and Treatment. LAWRENCE T. ROYSTER.
3. Acute Pelvic Suppuration; Its Conservative Treatment. JOHN O. POLAK.
4. Ventrofixation; A Suggestion. VICTOR C. PEDERSEN.
5. A Case of Leukemia, Preceded by Mucosanguinolent Colitis and Physiological Leukocytosis. G. W. McCASKEY.

1.—Carl Beck recommends the **suturing of the head of the humerus to the acromion in old subcoracoid dislocations.** In the case reported he made a nearly semilunar incision which began at the acromion and extended over to the intermuscular sulcus and ran vertically alongside the anterior surface of the arm. Thus the joint and the acromion were exposed. After dissection of adhesions he succeeded in rotating the head of the numerus in its glenoid cavity. On account of the tendency to forward displacement he fastened the head of the humerus in the cavity by suturing it to the acromion after having drilled a hole through the acromion as well as through the head of the humerus. A skiagram two weeks after showed the humerus in good position. The author believes that this procedure is far preferable to the resection of the head of the humerus. No force being required laceration of muscles, blood vessels and nerves is easily avoided. [T. M. T.]

2.—Lawrence T. Royster divides the **treatment of diphtheria** into two heads: (1) Local, (2) general. The only thing left of the local treatment at the present day is systematic irrigation with salt solution. The object of this is: (a) To remove the loose pieces of detached membrane as it exfoliates in the process of repair; (b) the heat of the irrigating fluid generally alleviates the accompanying inflammation of the pharynx and reduces the consequent swelling. There are two important factors necessary to treat diphtheria successfully. (1) Early diagnosis; (2) sufficiently large doses of antitoxin. Careful watching will give the first, and as to the doses of antitoxin, nothing less than 2000 units should be the initial dose. If no improvement appears in twenty-four hours, this dose may be repeated. In severe cases the initial dose should be 3000 units in children to 4000 or 5000 in adults. Improvement should appear 36 hours after the initial dose. The first indication is shown in the arrest of a spreading membrane and almost at once the edges of the exudate begin to exfoliate, the constitutional symptoms subside, the temperature, if high, drops, and the patient's condition is generally improved. The pulse is somewhat slower to improve, but this improvement is gradual and steady. Morphine is to be used where the patient is especially restless. Next to antitoxin is the importance of stimulants. Whiskey is certainly best in the earlier stages; later, and particularly when there are paralyses strychnine is of value. Forced nutrition may be necessary as the patient frequently refuses food. The complications should be treated as if they were primary conditions. In the treatment of croup early diagnosis and a sufficient dose of antitoxin go a long way toward the prevention of operative interference. Steam inhalations when the breathing becomes labored are advised. Poultices work well at times, but should be kept hot continuously. Emesis is too depressing and is seldom followed by the expulsion of the membrane. The author prefers intubation and says there is only one condition in which a cutting operation is superior and that is when the membrane has extended lower than the intubation tube will reach. In post-diphtheritic paralysis, when it is general, systemic and general tonic treatment, including strychnine, is about all that can be done. When the paralysis is limited to single muscles or groups of muscles, the faradic current is beneficial. [T. M. T.]

3.—John O. Polak, in his article on **pelvic suppuration** states: (1) Early diagnosis in pelvic suppuration is imperative. (2) When the diagnosis is made, operate. (3) The vaginal operation is the one of choice. (4) When it is done early with strict asepsis it is curative and may preserve the function of the woman's organ. (5) It improves the patient's condition, makes subsequent operation easy, prevents rather than causes adhesions. (6) It may be used for diagnosis in obscure cases without shock or injury to the patient (if aseptically performed). (7) The operation may be applied to every acute suppurative condition within the pelvis. [T. M. T.]

4.—Victor C. Pedersen gives the details of ventrofixation as follows: (1) Exposure of the sheath of the rectus through a median cutaneous incision two or three inches long. (2) Strong retraction of the skin to one or the other side. (3) Opening the sheath of the rectus about three-quarters of an inch from the median line. (4) Liberal loosening of the rectus from its sheath and retraction of it as far outward as possible. (5) Opening of the peritoneal cavity. (6) Loosening of the peritoneum behind the linea alba. (7) Search for large vessels at this point. (8) Passage of the sutures as follows: The median edge of the peritoneal wound is seized with forceps and the needle is introduced half an inch away from the middle line; it is next carried through the uterus, emerging beyond the median line on the opposite side; it is then passed forward through the peritoneum, previously as described and then through the linea alba sufficiently deep to secure a firm hold; the two ends are then seized in an artery clamp, the other suture is passed in the same way and both are tied so that the knot is extraperitoneal. (9) Suture of peritoneum. (10) Restoration of the rectus to its sheath. (11) Ordinary layer sutures close the rest of the wound. The result of this operation is that the uterus is suspended in the median line, while the scar is lateral to the point of fixation and is itself protected by the healthy rectus muscle. [T. M. T.]

MEDICAL RECORD.

March 1, 1902.

1. Some Varieties, Complications and Sequelæ of Smallpox as Noted in the Norfolk Epidemic of 1900-02. LEMUEL C. SHEPHERD.
2. Follicular Tonsillitis. ROBERT CURTIS BROWN.
3. A Case of Presumable Angioscleroth Gangrene Precipitated by Influenza. THEODORE B. BARRINGER.

4. Discoveries in Pathology. MARY DIXON JONES.
5. Report of Five Cases of Ulcer of the Esophagus, Diagnosed as Pulmonary Tuberculosis. MARK I. KNAPP.

1.—L. C. Shepherd deals with some **varieties complications and sequelae of smallpox** as observed in the Norfolk epidemic of 1898 and 1899. In describing the varieties of smallpox he emphasizes the fact that malignant cases may be contracted from the lightest, and that the various forms are merely modifications of one and the same disease. **Varioloid** may be divided into several forms, in the abortive forms the pocks fail to pass through the later stages of their development, stopping short at the papular stage, or if reaching the vesicular stage drying up and shrivelling on the 5th or 6th day of the eruption. In other instances the eruption passes rapidly and imperfectly through all phases of its development producing more or less dwarfed forms of the pustules. In still other instances the eruption is perfect in its development, passing through each stage naturally, but is extremely discrete. He gives illustrative cases of these varieties. [T. L. C.]

2.—R. C. Brown presents a paper on **follicular tonsillitis.** He concludes: (1) That follicular tonsillitis is not caused by a single microbe, but that many well-known micro-organisms are capable of causing it: (2) that the symptoms of tonsilitis are partly caused by an exaggeration of the function of the tonsil; (3) that under the stimulus of infection, the lymph corpuscles in the adenoid structure of the tonsil produce an antitoxin that is antagonistic to invading germs; (4) that the characteristic symptom is an exudate having no texture and which is non-adherent; (5) that the presence of the Klebs-Löffler bacillus is not positive evidence that the disease is not a simple follicular tonsillitis; (6) lastly, that there seems to be some relation between follicular tonsillitis and the infectious diseases which is not yet properly understood; that whatever the function of the tonsil, it seems in disease to endeavor by its activity to assist nature in eliminating infection. [T. L. C.]

3.—T. B. Barringer reports a case of **presenile or angiosclerotic gangrene precipitated by influenza.** During the fall of 1900, the patient, a woman of 38 years, suffered from neuralgic pains of a transient character in the right arm and forearm. The finger tips of both hands, especially the right, frequently felt hot. Early in January the patient suffered from an attack of influenza of moderate severity which continued for one week. During convalescence all of the fingers felt frost-bitten and tingled, especially the fourth and fifth of the right hand. The pain grew steadily worse and localized itself in the latter fingers and the ulnar surfaces of the palm. The fingers of the right hand were uniformly swollen, slightly reddened about the joints and tender. The palmar surfaces of the last phalanges of the fourth and fifth fingers presented a small purplish area exquisitely tender. The patient was delirious with pain which was partly controlled by morphine. The pulse was of medium size, fair tension, and intermitting every fifth beat. The radials were soft and pulsation was felt in both ulnar arteries. Urinalysis was negative and there was no leukocytosis. The purple spots became an area of dried gangrene which finally involved the terminal phalanx of the fourth and the terminal and half of the middle phalanx of the fifth fingers. The line of demarcation formed in February and the involved areas were amputated. The wound healed by first intention and the patient was placed upon potassium iodide in 5 grain doses t. d. and hot dry sand baths locally. The disease returned in May and a second operation was necessary. In the 8 months succeeding the last operation there has been no recurrence. The pathological examination of the amputated parts shows advanced panarthritis with complete occlusion of the large vessels and advanced chronic productive interstitial neuritis resulting in nearly complete sclerosis of many nerve trunks. [T. L. C.]

4.—Mary D. Jones discusses the discoveries in the pathology of the ovaries and tubes. She presents the results of her own studies as well as a brief résumé of the literature of the subject. [T. L. C.]

5.—M. I. Knapp reports 5 cases of **ulcer of the esophagus** diagnosed as pulmonary tuberculosis. From his experience he believes that the condition is by no means a rare one and that the physician must be careful before he pronounces a hemorrhage bright red in appearance and issuing from the mouth as coming from the lungs: That the physician must never positively assume pulmonary hemorrhage until the condition of the esophagus has been fully determined. [T. L. C.]

NEW YORK MEDICAL JOURNAL.

March 1, 1902. (Vol. LXXV, No. 9).

1. Cholelithiasis, Choleycystitis, and Cholangeitis. WILLIAM H. THOMPSON.
2. Some Notes on the Early Diagnosis and Treatment of Pulmonary Tuberculosis. J. EDWARD STUBBERT.
3. A Bougie Removed from the Abdominal Cavity; Ruptured Umbilical Hernia. JOSEPH TABER JOHNSON.
4. Traumatic Rupture of the Gall-Bladder Without Injury to the Liver; Sixty-four Ounces of Bile in the Abdominal Cavity; Recovery. De FOREST WILLARD.
5. The Value of the Eosinophile Count in the Differential Diagnosis of Human Blood. ORRIN S. WIGHTMAN.

2.—J. Edward Stubbert, in his article on the **early treatment of pulmonary tuberculosis,** gives Cabot's views as to the value of diagnostic information in incipient cases by examination of the blood. Cabot believes: (1) That pure tuberculous disease itself has no effect upon the blood. (2) Experiments with 60 cases showed that the diplococcus lanceolatus associated with the tubercle bacillus, is the primary cause of the severe anemia. (3) That in 12 cases of tubercular diarrhea it was the drain upon the body albuminoids, and not the tuberculosis which was the cause of the severe chloranemia. (4) That the slight rise of temperature often found in pure tuberculosis had not the slightest effect upon the hemoglobin. (5) That the temperature we get in mixed infection drains the red corpuscles of their vitality and lowers their number. (6) That in mixed infection with cavity, moist rales and secondary anemia with leukocytosis three-fourths show the polymorphonuclear cells increased at the expense of the lymphocytes, these cells being of the large variety. But when the moist rales disappear and the cavity dries up, leukocytosis disappears. (7) The blood of pulmonary hemorrhage does not show any nucleated red cells. The treatment consists of climatic influences, hygienic and dietetic. The author does not believe that climate alone will cure even cases of the incipient type. [T. M. T.]

3.—Joseph T. Johnson emphasizes: (1) That no matter how many hours, (even up to the end of five days) the omentum and several feet of the intestine have been outside of the body, recovery is possible through their replacement and retention by operation. (2) Recovery, in the cases reported, at least, resulted most frequently when only the skin was sutured together and the operation for permanent cure postponed for further consideration. [T. M. T.]

4.—De Forest Willard reports a case of the above and says that rupture of the gall-bladder alone or of the biliary ducts is apt to be followed by speedy death from peritonitis. Experiments show that the fatal termination is brought about not so much by the sudden escape of bile as by the continual pouring out of fresh quantities. The treatment, of course, would be absolute rest with laparotomy, suture, and drainage. Sir Benjamin Brodie's experiments by ligation of the ductus choledochus show that the inflammatory adhesions thrown about such a ligature not only shut off the peritoneal cavity, but within two or three weeks result in a new route for the bile being established into the bowel. Winni states that normal bile has no septic action, but that small amounts are readily absorbed. Large effusion would be liable to give rise to fatal sero-fibrinous peritonitis, unless removed surgically. The indication for operation would be the extent of bile pigment in the urine, absorption of the bile occurring immediately after its effusion into the peritoneal cavity. A few favorable cases have been reported in which the continued escape of bile was prevented. [T. M. T.]

5.—Orrin S. Wightman gives the normal percentage of eosinophile cells in healthy human blood from one-fourth to four per cent. The conditions causing an increase in the number are: (1) Diseases of the bone involving the medullary structures. (2) Diseases of the skin. (3) Dis-

cases involving the genito-urinary system. (4) Certain parasitic conditions of the intestines. (5) Malignant tumors. (6) In post-febrile conditions after pneumonia, articular rheumatism and malaria. (7) Asthma, of which they are a constant accompaniment. (8) The use of certain drugs, such as camphor, antipyrin, etc., in connection with which they are usually present. The author, in summing up his article, says: (1) That in the series examined eosinophilia may occur in higher percentage in animals than that in human blood. (2) That the physical condition of the animal whose blood is to be compared may play an important part in the increase or decrease of eosinophilic percent. (3) That in the specimens examined the polymorphonuclear counts were low and the lymphocytes high, exactly contrary to conditions present in normal human blood. (4) That the eosinophile count is not a constant or trustworthy factor in diagnosis but, on the other hand, is very unreliable and unsatisfactory. As a comparative test the eosinophile count is a negative quantity. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

February 23, 1905.

1. Five Maine "Murders." ADDISON S. PHAYER.
2. The Significance, Pathological and Clinical, of Abdominal Pain. MAURICE H. RICHARDSON.
3. Some Points of Value in the Diagnosis of Disease of the Abdominal Organs. HENRY JACKSON.

2.—Maurice H. Richardson, in classifying and discussing abdominal lesions, commensurate with the rapidity with which they cause death, divides them also according to the urgency for the operative interference. He considers, first, those lesions which, unrelieved, cause death within a few hours, such as rapid hemorrhages with or without complications, penetrating wounds with hemorrhage, rupture of solid viscera, extrauterine pregnancies with rupture, postoperative hemorrhages, excessive hemorrhage from gastric and duodenal ulcers and hemorrhages into ovarian cysts with twisted pedicles. Second, those fatal in a few days, such as those cases of fulminating and extensive peritonitis dependent upon rapid extravasations of septic material into the peritoneal cavity. This class comprises a great variety of lesions: perforations of gastric and duodenal ulcers; perforation of intestinal ulcers, typhoidal, tubercular, cancerous; perforations of appendices, especially of those of large lumen freely communicating with the intestines; stabs and gunshot wounds of the intestines; rupture of abscess of great variety into the abdominal cavity; wounds and ruptures—traumatic and ulcerative—of the gall bladder, urinary bladder and kidney; rupture of a septic and friable spleen; acute intestinal necroses due to volvulus, intussusception, internal strangulation; mesenteric embolism and thrombosis; and to other causes,—acute hemorrhagic pancreatitis and fat necroses; torsion of tumors about their pedicles,—in a word, all lesions causing rapid and extensive general peritoneal infections, and directly or indirectly rapidly fatal. Third, those which when unrelieved become fatal in weeks or months, like slow infections of the abdominal cavity, and, fourth, those in which there is no urgency, as abdominal tumors, impaction of gall stones in cystic duct, etc. The following conclusions are arrived at, when a patient has been seized with sudden severe abdominal pain: (1) The pain should not be masked by opiates before the surgeon has an opporunity to see the case. (2) The previous history, accompanying symptoms, and physical signs must be carefully considered. (3) Careful examination of the thorax and abdomen in all cases of pain should never be omitted. (4) When hemorrhage is suspected, the abdomen should always be explored. If the patient is in collapse and the pulse apparently too weak to allow the patient to undergo exploration preliminary infusion of salt solution should be made into the veins or under the skin. (5) When the pain is excruciating and the abdomen shows signs of infection, exploration should be made at the earliest possible moment. (6) The seat of the initial pain, as described by the patient and his friends, is a good guide to the incision, when, from other symptoms, the surgeon is in doubt. (7) The history and signs other than pain must be relied upon for exact or reasonably positive diagnosis. (8) When some of the rarer abdominal lesions are suspected, exploration should nevertheless be made. Such an exploration may be useless, but if resorted to as a routine procedure in all cases, the greatest possible number of lives would be saved. (9) When there is the least question the genuineness of the pain should be tested as thoroughly as possible. (10) The pain of an atypical typhoid, of a pleurisy, of a pneumonia, must be guarded against. When typhoid is prevalent in a community the greatest care must be taken lest the surgeon be misled by the pain of such a case. (11) The physician must be on his guard lest he confuse the pain of simple functional disturbances with that of organic disease; he must rely upon the accessory signs of the organic lesion. (12) When in grave doubt as to the significance of pain and other symptoms, the benefit of the doubt should be given the patient by surgical exploration. (13) Finally, when no exploration is regarded as justifiable, pain should be controlled by morphine, by hypnotics, or, if necessary, by general anesthesia. With very few exceptions, however,—chiefly cases of renal and biliary colic—the pain that demands general anesthesia demands operation.

3.—Henry Jackson, in view of the fact that in acute abdominal disease accurate diagnosis of the underlying pathological condition is so frequently of the utmost importance to the life of the patient, quotes several cases as illustrative of some points of value in the diagnosis of disease of the abdominal organs. There is no symptom less reliable than the history of pain. Nausea and vomiting are of the great importance. Inspection reveals anamalous and pulsation vidual whose bowels have been regular previously. The general appearance of the patient may be of the greatest importance. Inspection reveals anomalies and pulsation, peristalsis in cases of intestinal obstruction. Tenderness should be considered as an individual symptom and may be an especial evidence, and of clinching diagnostic importance in appendicitis. The author states that in all cases of colic and abdominal pain the absence of localized spasm and tenderness are convincing factors that an inflammatory process is not responsible: this is of especial importance in children. Accurate percussion should not be neglected. Particular attention is called to the importance of an empty rectum as suggestive of intestinal obstruction when the bowels have not moved for several days. Hematological examination should never be omitted when the opportunity presents itself, especially for the purpose of demonstrating or excluding malarial infection. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 1, 1905.

1. The History of the Invention and of the Development of the Ophthalmoscope. HARRY FRIEDENWALD.
2. Hermann von Helmholtz—the Inventor of the Ophthalmoscope. CASEY A. WOOD.
3. A Few Personal Recollections of Helmholtz. HERMAN KNAPP.
4. The Contributions of Helmholtz to Physiology and Psychology. WINFIELD HALL.
5. The Debt of Otology to Helmholtz. B. ALEX. RANDALL.
6. Contribution of Helmholtz to Physical Science. ARTHUR W. GOODSPEED.
7. Examination of a Genito-Urinary Patient by the General Practitioner. FRED. C. VALENTINE.
8. The Unveiling of the Cell. LEWELLYS F. BARKER.

1.—Friedenwald contributes a most interesting paper on the history of the invention and development of the ophthalmoscope. He writes that, before the invention of the ophthalmoscope, important observations were made in regard to the luminous appearance of the pupil in animals by the Arabians and in the Persian, such mention of the luminous appearance of the pupils of the Ethiopian. Other important observations are noted in his article. He writes that, in 1851, Helmholtz demonstrated the fundamental facts that the rays sent out of the eye in the same line in which they entered and that they must be made to form a distinct image in the observer's eye. Helmholtz's ophthalmoscope is briefly de-

scribed. The author then discusses the many modifications of this instrument. [F. J. K.]

2.—Wood contributes "a sketch of the life of Hermann von Helmholtz, who was born at Potsdam, near Berlin, on August 31, 1821. A most interesting account is given of Helmholtz's life. [F. J. K.]

3.—Knapp contributes **a few personal recollections of Helmholtz.** In this article Knapp, who was one of Helmholtz's pupils, furnishes some personal notes about his character, his working methods, industry, etc. [F. J. K.]

4.—**The contributions of Helmholtz to physiology and psychology** are mentioned by Hall. He writes that his greatest work next to his Physiological Optics, was on Physiologica Acustica. His study in this line began in researches in the minute study of the anatomy of the organs in question which was followed by a searching inquiry into the physical properties and relations of the mode of motion (sound, light). Hall contends that "it is doubtful if the world has ever produced a man who combined greater breadth of knowledge and greater depth of wisdom, with keenness of vision, presistency and patience of pursuit, and modesty of claim. The debt of physiology to Helmholtz is inestimable." Regarding psychology he thinks that "up to the present time the psychologists have not seemed to accord to Helmholtz the credit due him for the initial impulses which he undoubtedly gave to their department of physiology. Perhaps the physiologist tends to overestimate the importance of the work of their confrère Helmholtz; but it seems impossible that work such as his, lying on the border line of pure psychology and quite within the field of physiological psychology, should not have exerted a profound and far reaching influence on all subsequent work in psychology." [F. J. K.]

5.—**The debt of otology to Helmholtz** is discussed by Randall. He thinks that the influence of this author upon otology is almost incalculable. Randall writes that he made "the tuning-forks and other tone-producing apparatus the practical instruments in medical hands which they now are. He made clear the function and mechanism of the drumhead and ossicles in a way that forbids any undue regard for them as essential to useful hearing or an equally unscientific indifference which would needlessly remove them as unimportant. Many aurists do not recognize their debt to von Helmholtz and shortsightedly preach or practice in contravention of the principles which he has discovered or formulated; but the inevitable result is a fall and the ruin of any structures they may have fondly reared and their own heads have often suffered in the collapse. His treatises will never make light reading for beginners, but the ophthalmologist and otologist who hopes to take and hold rank among his colleagues must always count as essential to his education a close study of the writings of Hermann von Helmholtz." [F. J. K.]

6.—The contributions of Helmholtz to physical science are considered by Goodspeed. They relate to his researches in physical and physiological optics, color sensation and ocular movements. [F. J. K.]

7.—See Philadelphia Medical Journal, June 15, 1901. Page 1126.

8.—Barker discusses the **unveiling of the cell** in a paper read before the British Academy of Medicine, November 19, 1901. In his article he outlines the researches which have been made up to the present time, with regard to the cell. He first discusses the cell doctrine, then considers morphological investigations and the progress made by physiologists and chemists in this line. "From the various observations touched upon three points seem especially noteworthy. 1. The extraordinary variety and complexity of the chemical substances given off by the cells to the lymph and blood. 2. The chemical specialization of the various tissues of the body. The value of chemical and physical conceptions as working hypotheses in the interpretation of life phenomena." [F. J. K.]

9.—A. H. Cordier describes the **conditions found six years after a gastro-jejunostomy.** The operation was performed upon a young man suffering from benign pyloric obstruction. Anastomosis was made by means of a Murphy button and the point of attachment of the bowel to the stomach was near the pyloric extremity and on the anterior surface. Prior to operation the patient weighed 115 pounds, was in wretched health and addicted to morphine, taking 20 grains per day; after the operation his health was entirely restored, his weight increasing to 180 pounds. He returned to his work, used no more morphine and was in perfect health six and a half years after operation, when he developed an acute pneumonia from which he died. An autopsy showed absolute occlusion of the pylorus and a free opening at the site of anastomosis and the Murphy button in the stomach, where it remained since the time of operation without giving rise to the slightest symptom. [J. H. G.]

AMERICAN MEDICINE.

March 1, 1902.

1. Remarks on the Diagnosis of Pancreatic Disease. WILLIAM SYDNEY THAYER.
2. A Case of Very Persistent Laryngeal Stenosis. J. P. CROZER GRIFFITH.
3. The Treatment of Acute General Peritonitis. EUGENE A. SMITH.
4. Preliminary Statement of the Alkalinity of the Blood in Infections and the Infusions of Salts Derived from Horse's Blood-Ash as a Therapeutic Measure. A. EMIL SCHMIDT.
5. Respiratory Gymnastics, etc. ALBERT ABRAMS.
6. Suggestions to Anesthetizers. FRANK E. SIMPSON.
7. Some Remarks on the Use of Adrenalin as an Addition to Solution for Local Anesthesia. CHARLES A. ELSBERG.

1.—W. S. Thayer discussing the **diagnosis of pancreatic disease** concludes by stating that while we possess as yet no diagnostic symptom of pancreatic disease, clinical and pathological experience have taught us a certain combination of symptoms which justify a diagnosis. **Acute pancreatitis** should be recognized in many instances. The importance of an early recognition of those cases which go on to extensive necrosis and to suppurative parapancreatitis is easily appreciable. **Chronic interstitial pancreatitis** is to be suspected under the following conditions: (1) Instances in which glycosuria develops in an individual with chronic cholelithiasis; (2) in cases of glycosuria in association with cirrhosis of the liver; (3) in glycosuria in the course of hemochromatosis; (4) in glycosuria following attacks suggestive of pancreatic colic. Pancreatic lithiasis is recognizable only when calculi are found in the stools. **Cysts of the pancreas** are usually to be recognized on account of their location. Primary cancer of the pancreas is often latent. Fatty stools in the absence of diarrhea or jaundice, together with indications of interference with the digestion of albuminoids, are valuable confirmatory evidence of deficiency or absence of the pancreatic secretion. [T. L. C.]

2.—J. P. C. Griffith reports a case of **very persistent laryngeal stenosis** in a child of 20 months. The main interest in the case centers in the diagnosis. The child appeared to suffer from an acute or sub-acute laryngitis with which there was associated a remarkable personal and family tendency to laryngeal spasm. [T. L. C.]

3.—E. A. Smith presents a paper on the treatment of **acute general peritonitis.** He advises surgical treatment of the condition and flushing of the abdomen with sterile normal salt solution. In draining the abdomen after irrigation he recommends the use of Price's aluminum tubes. In postoperative treatment he uses strychnine hypodermically, in severe cases, in 1/30 grain doses every few hours for a few doses, then every 3, 4 or 6 hours. Salt solution is given in all cases by the rectum in 6 or 8 oz. quantities every 4, 6 or 8 hours. Morphine is employed if the patient is restless, hiccoughing, delirious, in great pain, or if

respiration is above 25. Whiskey may be given as soon as it can be borne by the stomach. On the third, fourth or fifth day calomel may be given in divided doses. Rochelle salts may follow this. Nourishment by the mouth is forbidden for from 3 to 6 days after operation. [T. L. C.]

4.—A. E. Schmidt discusses the **alkalinity of the blood in infections** and the use of infusions of salts derived from horse's blood-ash as a therapeutic measure. This writer holds the opinion that the rarity of infection of the horse, dog and cat as compared with man depends upon the higher degree of alkalinity in lower animals, and that in the infections the alkalinity is reduced. Therefore it appears logical to conclude that if the alkalinity of the blood be increased either to correspond to that of normal human blood, or even stronger as in lower animals, by the introduction of alkaline solutions, the growth of bacteria would be checked and thus the infection overcome. [T. L. C.]

5.—Albert Abrams presents a paper on respiratory gymnastics: emphysema and atelectasis and discusses the condition of the heart in diseases of the lungs. [T. L. C.]

6.—F. E. Simpson gives some practical suggestions to anesthetizers. [T. L. C.]

VRATCH.

[illegible] 1901. (Vol. XXII, No. 51.)

1. On the Peripheral Reflex of the Gastric Glands. L. B. POPELSKI.
2. The Early Infant Mortality in Connection with the Birth in the St. Petersburg Maternity Establishment. V. P. ZSHUKOVSKI.
3. The Application of the Mathematical Theory of Probabilities to the Question of Infectiousness of Eclampsia. G. V. KOLOSOFF.
4. A Case of Cystericus Cellulosæ Under the Retina. V. P. KALASHNIKOFF.
5. A Case of Cesarian Section in Multiple Incised Wounds of the Uterus. S. A. MIKONOFF.
6. A Case of Fracture of the Penis. N. A. IVANOFF.
7. Atropine in Obstruction of the Bowels. N. M. FEINBERG.
8. On the Question of the Treatment of Intestinal Obstruction with Injections of Atropine (By Batsch's Method). A. S. MEDEM.

1.—Popelski, in a preliminary communication, describes briefly his experiments undertaken with a view of establishing by exclusion **the exact location of the center for the secretion of gastric juice.** In a dog with a gastric fistula, the esophagus was severed and then both pneumogastric nerves were cut, one after the other. Meat bouillon was then injected into the large intestine, but **no secretion of gastric juice took place,** although absorption of the bouillon occurred. Another dog, similarly prepared, received an intravenous injection of bouillon, but **no secretion of gastric juice followed,** although the same bouillon introduced directly into the stomach caused a flow of gastric juice. In another dog the small intestines were severed from the large in addition to the other operations. Injection of the bouillon into the large intestine caused no secretion of gastric juice, but **secretion did not occur when the bouillon was introduced into the small intestine.** That the center for gastric secretion is not in the brain was proved by the fact that section of both pneumogastric and sympathetic nerves did not prevent the secretion of gastric juice. To find whether the center is located in the **spinal cord,** the latter was removed beginning from the eleventh dorsal vertebra. On the following day meat was introduced into the stomach with the result that **it was completely digested.** In another dog the **celiac plexus** was removed and 23 months later a gastric fistula made and the cord removed from the eleventh dorsal vertebra down. Shortly afterwards the pneumogastric and sympathetic nerves were severed. Meat introduced into the stomach of this dog **was digested completely.** All these experiments prove that **the gastric center lies in the walls of the stomach,** where histologists have already found a number of ganglia. They also prove the author's proposition advanced in 1896, namely, that the peripheral nerve-cells may play the role of independent centers. [A. R.]

2.—Zshukovski collated statistics on the **infant-mortality** at the St. Petersburg Maternity Hospital, covering a period of [illegible] years and embracing 16[illegible] births. He shows that of [illegible] died during their intra- [illegible] after birth giving a total [illegible] Of the deaths before birth 4.4[illegible] miscarriages and 4.14% still-births. The deaths after birth occurred during the first week of life. Of 1301 pre- [illegible] were still-births, while of the infants born at term 2.09% were dead. Thus, the mortality among the premature births was 50% greater than among the infants born at term. A comparative table of the prenatal mortality among the legitimate and illegitimate offsprings develops the interesting fact that the latter fare better than the former. Thus, among the legitimate there were 6.8% miscarriages and 7.9% premature births, while [illegible] were only 2.3[illegible] miscarriages and 6.4% premature births. The author finds a possible explanation of this fact in the unfavorable material conditions of the legitimate mothers, frequent child-bearing, debility, and the methods resorted to by the married women to prevent or terminate pregnancy. On the other hand, the conditions of the illegitimate mother have improved considerably of late, both as to the favorable change in public opinion and the material aid rendered to the mother at the time of the confinement and after the child is born. [A. R.]

4.—Kalashnikoff reports a rare case of **cystericus cellulosae in the right eye** of a man 47 years old. The parasite could be seen through the ophthalmoscope as a distinct roundish body, possessing a bright golden-yellow appearance, a thin neck and a thicker head, the whole resembling a minute electric lamp made of frosted glass. At subsequent examinations the movement of the head as well as the entire parasite could be well discerned. The patient **suffered from gradual loss of vision but no pain,** although at the time of writing **the parasite has been in the eye for 2 years.** The patient refused an operation. As to the etiologic factor in this case, it was probably the ingestion of **raw pork of** which the patient was very fond. No tape worm was found in the feces. The bibliography of the subject is given and the cases reported by Russian authors especially noted. Of the latter Liutkevitch collected 37 cases prior to 1897 and the author collected 13 up to date. The history of these 13 cases is briefly given. [A. R.]

5.—Mikonoff reports a case of a girl, 16 years old, who was [illegible] in a [illegible] state with **11 incised wounds.** 2 of them penetrated the **lungs** and 3 the **abdominal cavity.** One of the thoracic wounds was above the right clavicle, the other above the [illegible] mammary gland between the third and the fourth ribs. Both wounds communicated with the [illegible] air. The largest wound of the abdomen was 12 cm. long and on the median line below the umbilicus. Through it protruded the **wounded pregnant uterus,** and through the latter **the shoulder of the child.** To the right, above the anterior superior spine of the ilium, there was another horizontal wound 7-8 cm. long. Through it protruded **several loops** of the **small intestines** and between them the arm of the child. The **intestines were scattered on the extremely dirty shirt.** The third wound, 2½ to 3 cm. long was under the right hypochondrium and through it protruded a considerable piece of the **omentum.** The other wounds were [illegible] parts of the body. [illegible] was [illegible] to be under the [illegible] to save the [illegible] A laparotomy, [illegible] was performed at once and the wounds closed. The only **antiseptic cleansing done was by means of pledgets of cotton immersed in alcohol.** The [illegible] lasted for 2 hours, during which time she received 1 liter of normal salt solution. She was [illegible] from the table, [illegible] and treated with subcutaneous injections of camphor oil and hot bottles. The girl made an uninterrupted recovery, save a pleurisy which lasted 8 days and was accompanied by a slight temperature elevation. This case illustrates what can be accomplished by timely surgical aid even in hopeless cases, and the author emphasizes the necessity under such conditions of operating at once without paying much attention to

the details of antisepsis or asepsis. If he had delayed the operation by antiseptic preparations, the patient no doubt would have died on the table. [A. R.]

6.—Ivanoff reports a case of **fracture of the penis** in a married man who, during a fit of sexual excitement which he considered sinful to satisfy on account of holiday, was forcibly shaking his organ from side to side, when suddenly he heard a "crash" and experienced a violent pain which rendered him unconscious. He fell asleep and upon awakening in the morning found his organ greatly swollen and discolored. On examination **a rupture of the cavernous bodies at the middle third** was found. Rest in bed and cold applications brought about a complete restitution. [A. R.]

7.—Feinberg reports a case of a woman, 67 years old, who was suffering from **complete intestinal obstruction** for 5 days, without any apparent cause (there were no indications of mechanical obstruction). The condition of the patient was very serious, but she refused an operation and even an hypodermic injection. Rectal injections, calomel, applications of iodine and hot compresses were of no avail. The author left without having relieved the woman, and was called again only on the third day, when he found the patient in a precarious condition. The vomiting had a fecal odor, the pulse was 120 and irregular, and the other symptoms correspondingly worse. 3 injections of **atropine** (0.002 grms.) during the day, followed by rectal enemata, brought no relief. On the following day, however, 5 profuse evacuations occurred, and the woman recovered. The author considers atropine indicated in cases of obstruction due to **atony**, the beneficial effect of the drug being probably due to its action on the center of defecation. However, in view of the comparative harmlessness of the treatment, it should be employed in all obscure cases. Failing to obtain results with atropine, surgical intervention should be resorted to. [A. R.]

8.—Medem reports a case of **complete obstruction of the bowels** of 4 days' duration. The patient, a man, was found with a painful and distended abdomen, a pinched face and a small and frequent pulse. A high rectal injection brought no relief. A hypodermic injection of 0.002 grms. of **atropine** was made, followed by a high enema. A few small pieces of feces were evacuated, but the patient felt considerably relieved. A second injection of **atropine** was followed by several profuse evacuations, and the patient recovered. [A. R.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

November 21, 1901.

1. Medicine and Sea Travel. CURSCHMANN.
2. Concerning the Parasitic Nature of Carcinoma. H. RIBBERT.
3. Investigations Concerning Heredity in Tuberculosis. F. F. FRIEDMANN.
4. Contribution to the Question of the Value of Tetanus Antitoxin. MOELLERS.
5. The Bacteriologic Diagnosis of Actinomycosis. W. SILBERSCHMIDT.
6. A Contribution Concerning the Local Treatment of the Ulcers of the Larynx following Intubation. J. v. BOKAY.
7. The Coincident Therapeutic Use of Mercury and Iodin Preparations. LESSER.

1.—Curschmann gives a general discussion of the relations of sea travel to medicine, mentioning the greater frequency of tropical diseases, the wide spread of epidemic diseases, etc., since the amount of sea travel has become so great, as it has in the past century. The marked hygienic improvements in ships have made diseases, that are dependent upon sea travel itself, much less frequent and decidedly less severe. This is particularly true of scurvy, enteric fever, and dysentery. Another reason that these diseases are so much less frequent than they used to be is that the journeys themselves are shorter, and that there is less time for the development of nutritive diseases or for the occurrence of infection. The **diseases which are due to sea travel may be divided into two classes:** (1) Those that merely break out during the journey or after landing, that are of epidemic nature, and that are due to infection during the course of the journey; (2) those that are particularly due to the conditions of sea travel itself—rheumatism and rheumatic diseases, catarrh and inflammations of the respiratory organs, seasickness itself, scurvy, tuberculosis, and certain diseases which are seen with especial frequency in those engaged in work on the sea, more particularly in those who work about the furnaces of steamships. As to scurvy, this disease has become very much less frequent than it was earlier, owing to the improvement in hygienic conditions of ships and in diet. **Tuberculosis is of an importance on the sea that is not often recognized.** It plays even a greater role, and is less readily cured on the sea than on the land. In the Hamburg and Bremen Hospitals, for instance, **38 per cent. of the deaths which occur in sailors are due to tuberculosis;** and about the same percentage is seen in the sailors' hospitals in France. Undoubtedly, also, the number of deaths from tuberculosis is even greater than this; for many more tuberculous persons die at home than in hospitals. [D. L. E.]

2.—Ribbert gives a general discussion of the question as to the parasitic nature of cancer. It is generally accepted that the cause of cancer is something which produces an irritation and thereby leads the epithelium to undergo excessive growth. The parasites, which are, by some authors, said to produce cancer, are thought not only to cause this excessive tendency to growth, but to be responsible for the metastases of cancer. One thought that has fascinated a number of authors is the possibility that the parasites may be included within the cells themselves, and thus directly lead to a tendency to excessive growth. Ribbert, however, thinks that the existence of the parasites in the cell would tend to reduce the function of the cell and thus cause its destruction, rather than lead to its excessive growth. As to the tendency to produce metastasis, it is often believed that this cannot be explained except through parasites: for normal cells that are set free from their normal surroundings and lodged elsewhere have no tendency to produce metastatic tumors. Ribbert, on the contrary, thinks that this is not sufficient evidence of the necessity for the presence of parasites: because the cancer cells are cells whose natural conditions have all been altered before they were set free; they may, therefore, be considered to have abnormal tendency to growth, even without having carried any parasites with them. Another fact that he believes he has demonstrated and that he thinks speaks against the parasitic origin of carcinoma is that the **growth takes place solely through an increase in the cells already composing the carcinoma;** *i. e.*, that the carcinoma growth is a growth of the cancer, and not of the surrounding epithelium. The fact that, as a rule, carcinoma develops in places that are subject to irritation does not necessitate the acceptance of parasites as the cause. Czerny calls attention to the similarity between certain tumors known to be produced by parasites and true new-growths. The differentiation, however, is easily made. The inflammatory new-growths are composed of granulation tissue and enlarge by growth of the neighboring parts, while tumors are composed of well-characterized tissues and grow only from increase of their own cells. Czerny also states that the increase of the growth makes the impression of an autoinfection, which, Ribbert admits, may be considered true, although it does not prove the presence of parasites. There may be an autointoxication without there being any parasites present. The possibility of transplanting carcinoma from one organ to another is an additional suggestive fact. Cases of this kind are, however, so extraordinarily rare as to speak against the parasitic origin; and even if they were more common, this might be due merely to the transmission from person to person of some cause of irritation, which would then only secondarily produce carcinoma. The fact that cancer has apparently been on the increase, Ribbert considers of but little importance, as **statistics are not to be trusted very far,** and the changes in the records are probably more directly dependent upon improvement in diagnosis than upon any other conditions. [D. L. E.]

3.—Friedmann has made some statistics from the cases of tuberculosis seen in the Charité Hospital between October, 1885, and July, 1901, including cases of pulmonary tuberculosis and tuberculosis of the meninges. The cases from the years 1890 and 1891 were excluded, because the histories had largely disappeared. In all, **the cases numbered 2984.** In 33 per cent. of these there was definite parental heredity; in 25 per cent. there was apparently no parental heredity; and there were doubtful statements con-

cerning heredity in 41.8 per cent. Of the 983 cases with positive parental heredity, **51 per cent. showed disease in the father; nearly 32 per cent. disease in the mother; and about 16 per cent. disease on both sides.** Of the 157 cases with disease in both parents, 35 per cent. showed also disease of brothers or sisters; this history was obtained in 25 per cent. of the cases with disease of the father, and in 22 per cent. of those with disease of the mother. Of the 1250 cases with doubtful heredity, 15 per cent. showed disease in brothers or sisters; of the 751 cases with apparently negative parental history, 14 per cent. showed disease in brothers or sisters. In a great many cases in which no distinct history of family tuberculosis could be obtained, there was doubtful history that made it seem very probable that the disease existed in parents or in brothers or sisters. These cases, however, were always excluded. Friedmann then describes a number of cases illustrating the history frequently obtained. [D. L. E.]

4.—Möllers reports **four cases of tetanus treated with antitoxin, it having been given in each case within thirty hours** after the recognition of the first symptoms, and in large doses. In none of the cases was any result of the treatment observable, and **all the patients died.** In some of the cases, indeed, there seemed to be rather an increase of symptoms than a decrease after the use of the antitoxin. He does not draw the conclusion that the antitoxin caused the patients to grow worse, but considers the observation rather accidental. The cases were all severe ones, but all were free from fever. Möllers thinks that only severe cases are of importance in deciding as to the value of antitoxin, for mild ones have a very distinct tendency to get well of themselves. He believes that while the value of this treatment cannot be stated very definitely as yet, there can be no real question that conscientious physicians should, whenever possible, use antitoxin as a prophylactic measure, when there are very early signs of tetanus or when wounds have occurred that are likely to be followed by that disease; for there is no danger in using the antitoxin, and, if used early in this way, it would be given with the best chance of accomplishing good results. [D. L. E.]

5.—Silberschmidt believes that under the name actinomycosis there are included various diseases which are caused by different microorganisms. In referring to the difficulty of diagnosis, he mentions a case in which **macroscopically there was no appearance of the ray fungus in the fresh pus, and yet microscopical examination showed the presence of the fungus at once.** The absence of the typical grouping of the microorganisms is not sufficient to exclude the diagnosis of actinomycosis, as the microorganisms tend to arrange themselves in different ways at different times. The most satisfactory method of looking for the microorganisms is to make smear preparations from the tissues, and then stain with Weigert's gentian violet, decolorizing according to Weigert or Gram. Marked pleomorphism is a very decided characteristic of the actinomyces. **One of the most frequent dangers is confusion of the microorganisms with diphtheria bacilli, as they closely resemble the latter.** He recommends the more frequent use of cultures of the actinomyces. Cultures are not commonly carried out, but the author claims that they are not difficult to make. He uses glycerin-agar and glucose-bouillon. [D. L. E.]

6.—Bokay reports five cases in which the tube was removed after having been left in from 107 to 294 hours, and in which it was necessary to reintroduce the tube because of the rapid occurrence of dyspnea as a result of the extubation. He used bronze tubes covered with a gelatin alum preparation and with narrower necks. He was then able to remove the tube after a certain number of hours, with complete success. He believes that this method of O'Dwyer's is a very simple, easily carried out, and successful way of managing this troublesome condition; and that in all cases in which the tube has been left in for more than 100 hours and in which the extubation awakens the suspicion that ulcers are present the gelatin alum preparation should be used. [D. L. E.]

7.—To be continued.

ARCHIVES OF PEDIATRICS.

December, 1901. (18th year. No. 12.)

1. Primary Intestinal Tuberculosis in Children; Its Frequency and the Evidence of its Relation to Bovine Tuberculosis. DAVID BOVAIRD, JR.
2. A Case of Primary Intestinal Tuberculosis. DAVID BOVAIRD, JR.
3. Great Fluctuations in Temperature in the Terminal Stage of Pulmonary Tuberculosis. SAMUEL S. ADAMS.
4. Treatment of Tuberculosis in Infancy and Childhood with Special Reference to the Use of Guaiacol. B. K. RACHFORD.
5. A Note on the Little Finger of the Mongolian Idiot and of Normal Children. J. PARK WEST.
6. A Case of Myotonia Congenita. CHARLES FOX GARDINER.

1.—Bovaird has contributed a paper bearing upon the question of the **relations between human and bovine tuberculosis.** His conclusions, which he gives after a study of the literature upon the subject, and after a review of his own work upon tuberculous children in New York, are as follows: (1) English reports alone show any considerable number of cases of primary intestinal tuberculosis. (2) In New York, on the contrary, primary intestinal tuberculosis is a very rare affection, little more than 1% of the cases of tuberculosis having this origin. Indeed, the proportion of tuberculous cases that have the primary lesion in the intestinal tract as demonstrated by autopsy, is lower than that recorded by European observers. (3) The evidence connecting tuberculosis among children with the consumption of milk of tuberculous cows is very scant. The author ranges himself on the side of those who believe that only such animals as have tuberculous lesions of the udder and which, on that account, give milk that contains tubercle bacilli are dangerous. It does not follow, however, that all milk containing tubercle bacilli is capable of producing tuberculosis either in man or in animals. The digestive fluids undoubtedly serve to protect from infection by milk, unless the milk contains large numbers of bacilli. But it must be admitted that the milk of tuberculous cattle is capable of producing tuberculosis in susceptible animals. There are 22 cases on record in which the causal relation between milk and tuberculous disease in children is fairly clear. The problem in a given case is whether the tubercle bacillus entered the body by way of the lungs and the bronchial lymph-nodes or by the intestine and the mesenteric lymph-nodes; because, in the great majority of cases, lesions are found in both tracts. [J. M. S.]

2.—The author of the preceding paper, in the second number, reports a case of **primary intestinal tuberculosis.** The patient was a male, aged 3 years, who had always been weak and sickly. In October, 1899, he had an attack of measles, which was complicated, toward the end of its course, by an attack of bronchopneumonia, with severe, ulcerative stomatitis, and an eruption of boils on many parts of the body. The pulmonary signs cleared up and the condition of the mouth improved, but subsequently the gangrenous process extended and signs of bronchitis appeared. During the process of the gangrenous stomatitis the patient had from 4 to 6 semifluid stools daily which contained mucous and undigested food, but no blood. The patient died, and the autopsy showed tuberculous lesions on the intestine, the peritoneum and the mesentery and the bronchial lymph-nodes that leave no doubt that the primary infection was in the mesenteric lymphatics. The involvement of the pleura and of the bronchial lymph-nodes was evidently secondary. The tuberculous disease probably began after the attack of measles. If so, it occurred at a time when the nourishment of the patient consisted entirely of fresh milk, which was supplied by a city milk dealer. It was not possible, therefore, thoroughly to investigate the possibility of the infection from this source. [J. M. S.]

3.—Adams reports 8 cases of **pulmonary tuberculosis in**

children that illustrate the apparent harmlessness of **wide fluctuations of temperature** in the terminal stages of the disease. In some patients the temperature may reach 108° F., and in a few hours drop to 95° F. without apparent effect upon the child, either mentally or physically. It is not unusual to see a child enjoying his breakfast with a rectal temperature too low to be registered by the thermometer, and later in the day to find him sitting in bed eating his evening meal with relish in spite of the fact that his rectal temperature is 106° or 107°. The absence of evidence of collapse, in the first instance, and of the usual phenomena of hyperpyrexia, in the second, can only be explained on the assumption that some irritant acts upon the heat centers in a different manner from that present in purely septic condition. [J. M. S.]

4.—In hospital practice Rachford has been in the habit of using from ¼ to ½ mg. of tuberculin for the purpose of confirming a diagnosis of lymphatic tuberculosis. If no reaction is obtained from the smaller doses he uses as large doses as 2 mg. before excluding tuberculosis from the case. He has never witnessed bad results from this practice. The keynote to the **treatment of tuberculosis in infancy and childhood** is to maintain nutrition by proper diet. If the child is under one year of age, a wet nurse is almost absolutely necessary, but when a suitable wet nurse cannot be obtained certain proprietary foods may be used, if the use of cow's milk fails to keep up the nutrition. Later, codliver oil may be added to several of the feedings. In older children, milk and codliver oil remain the foundation stones of the treatment. Next to diet, fresh air and sunshine are the most important agents in the treatment of this disease. In the opinion of the writer, guaiacol far outclasses all other drugs in the treatment of tuberculosis in the young. He directs that a teaspoonful of the following ointment shall be rubbed into the chest of the patient every night at bedtime: Guaiacol, 1 dram; lanolin, 2 drams; lard 5 drams. This form of treatment, while of great value in infancy and childhood, is of comparatively little value in the adult. In acute tuberculous conditions marked by fever and other active symptoms, the inunction should be made twice daily. After the treatment has been continued from one to two weeks, one inunction daily may be continued indefinitely. In tuberculous peritonitis the good results that follow this treatment commence at once and the patient, as a rule, slowly but steadily recovers. In those cases in which active symptoms do not exist the author substitutes the internal administration of the carbonate of guaiacol for the inunctions. This method is especially valuable in the treatment of intestinal and mesenteric tuberculosis. Creosote, iodide of iron, arsenic and malt containing diastase are also of value in the treatment of tuberculosis in infancy and childhood. [J. M. S.]

5.—See Philadelphia Medical Journal, Vol. VII, No. 23. Page 1071.

6.—Gardner reports the case of a boy, aged 6 years, whose mother, during her pregnancies, suffered from extreme slowness of muscular action which, at times, caused her to fall. During her first pregnancy she fell on account of this condition of the muscular system, and as the result, had an abortion. The child, whose case is reported, was born after pregnancy in which this condition of the muscular system was present from the sixth month. Almost from birth it was noticed that any voluntary motions were performed much more slowly than normal, but always with increasing speed when repeated many times. The general muscular system was developed much beyond that of a boy of his age and the hypertrophy was pronounced. Fright or anger or any other emotion increased the muscular difficulty. The condition is considered to be one of **myotonia congenita**. The author believes that the case shows the possibility of imperfect metabolism existing as a cause of the condition. [J. M. S.]

JOURNAL DES PRATICIENS.

November 16, 1901. (15me. Année. No. 46.)

1. Nasal Sinusitis. A. CASTEX.
2. Clinical Lectures on Therapeutics. HENRI HUCHARD.

1.—About the nasal fossae are the maxillary, frontal, sphenoidal, and ethmoidal sinuses, and either **polysinusitis or pansinusitis** may occur. The main causes are nasal and dental infection. The microbes commonly found are streptococci, staphylococci, pneumococci, and influenza bacilli. The symptoms are neuralgic pain, coryza, and severe attacks of headache, increasing when the head is bent forward, or when the patient sneezes, if the frontal sinus is affected. When the sphenoidal sinus is affected, vertigo and ocular troubles are the main symptoms. Complications may appear in the orbit and cerebrum, while bronchitis, dyspepsia, and neurasthenia may follow sinusitis. The prognosis may be grave, and the diagnosis can be settled by Heryng's method of transillumination. The condition should be distinguished from neuralgia, dental periostitis, tumors, and naso-pharyngeal catarrh. While a few cases recover spontaneously, surgical incision with evacuation is generally necessary. Menthol inhalations may be tried, and phenacetin and antipyrin calm the pain. When maxillary, the incision should be alveolar; when frontal, it may be hidden in the eye-brow. Castex concludes that nasal sinusitis is often latent, that it may be followed by grave complications, and that operation causes a permanent cure. [M. O.]

2.—Huchard believes that **chloroform is not contraindicated in** patients with **heart disease, aortitis, or angina pectoris,** but that precautions should be taken and the operation only performed when anesthesia is complete. He advises two new cardiac stimulants, field narcissus and **cactus grandiflora.** The latter is especially useful **in aortic insufficiency,** while digitalis is better, in regular doses for three or four days every three weeks, in mitral stenosis. He advises cherries, strawberries, and grapes for patients with symptoms of uric acid or gravel. In gout with permanent hypertension, Huchard gives lithinated theobromin twenty days every month, for five or six months at a time; or extract of convallaria majalis in pill form. [M. O.]

LA PRESSE MEDICALE.

December 7, 1901. (No. 98.)

1. Prepyloric Ulcero-Cancer. G. HAYEM.
2. Borrel's Views upon the Parasitic Theory of Cancer. V. GRIFFON.

1.—Hayem gives the histories of three cases **of prepyloric cancer** occurring upon chronic gastric ulcer. In all cases the ulcer was prepyloric in position, semilunar in shape, and prolonged upon the lesser curvature. A minute pathological description follows. Because of the resemblance of these cases to true peptic ulcer, Hayem proposes the name of **"prepyloric or juxtapyloric ulcero-cancer"** for this condition. Four such cases came to autopsy in one year, all in men ranging from 45 to 55 years of age. Alcoholism seems an important factor in etiology. The symptoms are those of gastric ulcer until the terminal stage appears. The early stages may not give any symptoms at all, or simply those of a gastritis. Hematemesis and melena are noted in the terminal stage, with vomiting, anemia, emaciation, etc. Hypochlorhydria replaces hyperchlorhydria. The diagnosis is exceedingly difficult and the prognosis is always unfavorable. Surgical intervention may delay the end, but cannot cure. Pyloroctomy is the operation of choice, yet only gastro-enterostomy will be possible in most cases. [M. O.]

2.—Borel, who has recently reviewed the **theories of the cause of cancer,** states that there is as yet **no proof of the existence of sporoza, bacteria, or yeast** in the cancer cells of tumors examined. Griffon agrees with Borrel that no single demonstration of the parasitic cause of cancer has been able to withstand criticism. [M. O.]

Society Reports.

THE NEW YORK OBSTETRICAL SOCIETY.

Meeting held January 14, Dr. Malcolm McLean in the Chair.

Dr. H. J. Boldt presented a specimen of **gonorrheal pyosalpinx resembling tubal pregnancy,** in a woman of 34, 14 years married, with two children, the younger two years old. Her last menstrual period was very scanty and lasted one day. Severe pains in the left inguinal region followed with nausea and constipation, and the uterus was soft and large. On the left, above the vaginal vault, a thick, soft, very painful sausage-shaped mass was felt. Under anesthesia a tubal tumor was found on the right side, high in the pelvis. Abdominal section revealed bilateral pyosalpinx, the pus from which showed gonococci. Dr. Boldt also reported another case of **gonorrheal salpingitis,** in a woman, aged 30. The tubes alone were removed. Dr. Clement Cleveland said that he knew of a case in which a testicle had been removed for supposed sarcoma in a man of 70. The microscope revealed gonococci though he had not had gonorrhea for twenty years. Dr. H. N. Vineberg referred to a case he had seen in a woman of 23, who had one child. She had severe pain on the right side, and examination showed an irregular mass in the pelvis. On opening the abdomen a tubercular condition of the adnexa was found, with many adhesions. Dr. A. Dudley thought the question of gonorrhea was often one of veracity.

Dr. Vineberg reported a case of **inflammatory growth of the cecum and ascending colon,** necessitating resection of eight inches of the intestine. A woman of 27 had a large ventral hernia along the outer border of the right rectus, following abdominal hysterectomy. Just before opening the peritoneum the sarcoma appeared, involving the cecum and ascending colon; about eight inches were resected, the ends being united by a Murphy button. The patient ultimately made a good recovery. Dr. F. S. Mandelbaum pronounced the mass to be of inflammatory nature. Dr. Vineberg also reported a case of **very early recurrence of carcinoma in the vaginal scar,** following abdominal hysterectomy for adeno-carcinoma of the fundus uteri. A woman of 61, mother of two children, who had her menopause 12 years before, was suddenly seized with hemorrhage. Two weeks later total abdominal hysterectomy was performed for cancer of the fundus. Three months afterward she noticed a bloody vaginal discharge. On examination a friable mass was found occupying the scar in the vagina, and there was bleeding when the mass was touched. This was removed and Dr. Mandelbaum pronounced it epithelial carcinoma. The patient died 5 months later, 8 months after the original operation. Dr. Joseph E. Janvrin said that he had had a case of carcinoma of the uterus for which he did a vaginal hysterectomy. The patient was 55 years of age, and the operation was thoroughly done. Yet in eight months the disease recurred in the vaginal cicatrix, and the pelvic cavity was involved to such an extent that the patient died within the year.

Dr. J. Riddle Goffe presented a **ring celluloid pessary,** which was found buried in the mucous membrane of a vagina. The patient suffered from procidentia uteri, and 3 years ago had a pessary applied. She had not consulted a doctor until ten days ago. She then noted pain in the pelvis and a small section of pessary was found in the vagina. There was a foul discharge and it was impossible to remove the ring by force. Under anesthesia the ring was dissected out. Dr. Goffe also presented a specimen of **fibroid sarcoma of the uterus** weighing nearly four pounds. The tumor had been removed by supravaginal hysterectomy, one ovary and tube being left in situ. The patient, aged 54, passed the menopause at 50 and had no vaginal discharge until four months ago. Bleeding began then and continued daily. There were constant pain in the lower abdomen, backache, and upon examination the tumor was found. After removal, Professor F. M. Jeffries pronounced it fibroid sarcoma. The lymph-glands of the groins, axillae, and neck were enlarged. Dr. A. F. Currier had seen a patient who was curetted several years ago, who was operated upon recently for laceration of the cervix. Within a few months she had had considerable bleeding with pain and enlargement of the uterus. Tissue removed by curetting was pronounced round-celled sarcoma. Dr. R. H. Wylie said that it was rare to have sarcomatous glands in the groins, axillae, and neck, when the disease begins in the uterus. Dr. Boldt said he had operated upon a patient for a tumor which proved to be melanotic sarcoma. The inguinal glands were involved, and after the diagnosis had been made, he operated again and thoroughly removed the glands which were also sarcomatous.

Dr. Malcolm McLean presented a specimen of **long mucous polyp,** in a woman of 52, married, a multipara, with dragging pains in the back and frequent bearing down sensations and irregular metrorrhagia for the past four years. Examination showed a uterus slightly enlarged by an interstitial fibroid. Protruding into the vagina was a long soft polypoid growth. It was attached by a rather narrow base (½ inch) to the left horn of the fundus. Under anesthesia it was easily detached by dissecting it off. It measured 5½ by 2¼ inches. The patient recovered. Dr. Vineberg reported 2 or 3 polypi which were attached to the fundus, yet protruded through the cervix. Dr. LeRoy Broun said that he had removed from a patient a mucous polyp about 1½ inches in diameter. The pathologist reported it to be adenomatous. Dr. Goffe remembered a similar case. Dr. Joseph Brettauer had seen a number of cases like those already reported but he would call them submucous fibroids. He had never seen a mucous polyp the size of the one presented. Dr. McLean said that the tumor did not resemble a fibroid polyp. He believed mucous polypi of this size and implantation to be very rare.

Dr. Dudley reported a case of **extra-uterine pregnancy with rupture.** The patient knew herself to be pregnant for some months, but realized that something was abnormal. A diagnosis of extrauterine pregnancy was made, and operation performed, though the patient was dying. When the abdomen was opened, a stream of blood as thick as a finger spurted across the room, indicating the amount of intra-abdominal tension. The abdomen was rapidly evacuated. In spite of intravenous infusion the patient died some hours later.

Dr. Dudley read the paper of the evening on **Dudley's operation for the relief of severe cases of recto-vaginal fistula.** The operation, devised last year, is an original and unique procedure. The patient, 41 years old, mother of three children, suffered from hemorrhoids, laceration of the peritoneum, recto-vaginal fistula, laceration of the cervix and retrodisplacement. Fecal matter and gas constantly escaped through the recto-vaginal fistula. Operation had been performed twice without success. In the Sims position a quadrivalve speculum was introduced and the sphincter ani divulsed. Whitehead's operation for hemorrhoids followed and the mucous membrane of the rectum as high as the upper edge of the opening in the bowel was dissected, carefully separating the mucous membrane of the rectum from around the edge of the fistula. He then drew the mucous membrane, including the fistulous opening, down to the anus. The mucous membrane of the anus was cut away, including the hemorrhoidal vessels, and the mucous membrane of the rectum was sewed to the skin of the anus. The patient was then placed upon her back, the uterus curetted, the fistulous opening through the vaginal coats denuded and sewed up. The peritoneum was then restored by the operator's method with cat gut. A small abdominal incision was made, adhesions about the uterine opening broken up, and the uterus brought for-

ward and fastened by ventral suspension. Each of the wounds healed by first intention and the patient left the hospital four weeks after the operation, with good control of the sphincter ani, the fistula gone, and the uterus in good suspension. Dr. Dougal Bissell stated that he would prefer to make free incision through the peritoneum in order to dissect out the diseased tract. Dr. Goffe said that in principle the operation described by Dr. Dudley was excellent, but that the procedure was too radical for ordinary cases. Dr. Boldt said that he had found the methods advocated by the last two gentlemen by no means always followed by cure. He considered Dr. Dudley's operation of great value. Dr. A. F. Currier thought the procedure severe, for there was the risk of non-union between mucous membrane and skin. Dr. Cleveland said that he had been in the habit of cutting through into the fistula and, after making the proper perineal denudation, of sewing up the mucous membrane with interrupted sutures of silk-worm gut, and then sewing the perineum. He had had a large experience in such cases and had never failed. Dr. Vineberg stated that he had performed a similar operation for a fistula not as high as in Dr. Dudley's case, the patient making a good recovery. Dr. Dudley emphasized the fact that his operation was for severe cases, and is not applicable in cases in which there is a great deal of cicatrized tissue. He was led to do the operation because a patient came to him with the history of seven operations in San Francisco; he had operated five times, and only by this operation had he achieved success.

MANHATTAN DERMATOLOGICAL SOCIETY.

Meeting held February 7, Dr. W. S. Gottheil in the chair.

Dr. J. Sobel presented a patient with a morbilliform eruption covering the chest, abdomen and back, with fever, malaise and headache. Dr. Sobel thought of rötheln, erythema multiforme, or a dermatitis complicating influenza. Dr. Bleiman said that while the initial symptoms spoke for measles as well as grippe, the history and the eruption favored the diagnosis of measles. Dr. Gottheil believed measles could not be positively excluded. The presence of the eruption before medication excluded dermatitis medicamentosa. Dr. Sobel said that the absence of involvement of the face, of catarrhal symptoms, and of Koplik's spots spoke against measles. He believed that the **dermatitis was due to influenza.**

Dr. Abraham presented a boy of 11, who had had eczema of the head and face during infancy. At 6 he had measles, and later a scaly eruption appeared on the forearms extending until the entire body was involved. There is no itching, but it grows worse in winter. He thought it **ichthyosis** following measles. Drs. Cox and Sobel did not think the eruption due to measles. In places it resembles **keratosis follicularis.** Dr. Gottheil believed both conditions to be present.

Dr. Gottheil presented a woman with **folliculitis decalvans** of 6 months' duration. The scalp was red and infiltrated, showing considerable alopecia. Dr. Oberndorfer spoke of two somewhat similar cases; one following psoriasis, the other due to ringworm. He advised evacuation of the pus cavities and the use of parasiticides. Dr. Abrahams has observed the condition frequently in children, but regards it as uncommon in adults. Dr. Bleiman said it resembles sycosis barbae. Suppuration was due to secondary infection; he advised complete epilation and the use of parasiticides. Dr. Gottheil also presented a girl of 13, with two lesions. One consisted of scaly oval patches on the hyperemic, though apparently normal skin of the left chest, abdomen, and flanks, resembling psoriasis. The second eruption was a macular, very dark, mottled eruption on the back and abdomen, which lasted for two years. The general opinion was that the first eruption was **psoriasis** in an unusual location, and that the second was a degeneration of epithelium with consequent discoloration. Dr. Obern-dorfer suggested that arsenic might have produced the discoloration.

Dr. Bleiman presented a married woman of 21 with an eruption since birth. Her face was red and hyperemic, the entire body showing marked scaling. She had a child born at 8½ months, which was also affected. It lived only 14 days. Dr. Bleiman thought it might be **dermatitis exfoliativa.** Drs. Obendorfer, Gottheil and Abrahams regarded it as **ichthyosis.**

Dr. Abrahams presented a man with **inguinal buboes.** They were as large as an orange, without fever or fluctuation. There was no history of chancre or gonorrhea. On antisyphilitic medication he improved. Dr. Gottheil said unilateral gumma in this region was rare, when bilateral, extremely so. The source of infection may have been a urethral chancre, the secondary symptoms being overlooked. Dr. Oberndorfer looked upon these as late secondary manifestations. Dr. Abrahams believed that the case was one of gumma. Dr. Bleiman mentioned a case of traumatic bubo which did well under antisyphilitic treatment, wherein syphilis was postively excluded.

EASTERN MEDICAL SOCIETY OF THE CITY OF NEW YORK.

Meeting held February 14, Dr. R. Abrahams in the chair.

Cases of **progressive muscular atrophy and pseudo-hypertrophy** were presented by Dr. M. Neustadter, and Dr. M. Toeplitz showed a case of **carcinoma of the esophagus.**

Dr. E. A. Ayers opened a discussion on the **limitation of obstetrical operations,** speaking of the management of disproportion of the pelvis and the presenting part. The majority of contracted pelves can be detected before labor, and appropriate preparations and treatment applied. Dr. Ayers said that most of the cases suitable for operation are seen too late, after labor has progressed. Under such circumstances version or craniotomy is the only thing left. In cases of early loss of the amnionic fluid, version is dangerous for the mother and forceps dangerous for the child. Abdominal section in a dwelling, particularly in tenement houses, is both difficult and dangerous The technique of his subcutaneous method of symphyseotomy is carefully described. The brilliant results of Cesarean section at the present time are due, not to improved technique, but to early operation. Still symphyseotomy has a mortality of but 2½ to 5% when done by skillful hands. Dr. C. A. von Ramdohr discussed the indications for forceps, the important requisites for a successful forceps operation are a normal head, a normal presentation, rupture of the membranes, and a head engaged in a dilated cervix. He said that a pelvis with conjugate diameter below three inches contraindicates successful version. Dr. S. Marx thinks that in every case of labor the interests of the mother are most important. Viewed from this standpoint, the cranioclast is a conservative instrument. Dr. Charles Jewett spoke of the indications for Cesarean section. When the pelvis has a conjugate diameter of about 7 cm., Cesarean section, symphyseotomy, premature labor, and craniotomy are considered. Craniotomy is indicated when the mother is exhausted, or when the uterus is infected. Premature labor does not offer a brilliant prognosis as to fetal mortality, but is much better for the inexperienced operator. Symphyseotomy has been crowded out by the low mortality of Cesarean section, which is now the favorite operation. Hysterectomy is indicated, when the uterus is infected or when the mother is exhausted. Dr. H. J. Garrigues said that indications vary with the personal aptitudes of the operator. Symphyseotomy ought to be more often performed, particularly when infection has occurred before operation. Craniotomy ought not to be performed on a living child. Dr. J. Barsky cannot find any use for symphyseotomy among poor patients. The discussion was continued by Drs. R. Gordon, E. K. Brown, J. Rosenberg and others.

Original Articles.

A STUDY OF THE CASES OF ACCIDENTAL X-RAY BURNS HITHERTO RECORDED.

By E. A. CODMAN, M. D.,

of Boston.

Surgeon to Out-Patients, Massachusetts General Hospital, and Assistant in Clinical and Operative Surgery, Harvard Medical School.

In the *Medical Record* for 1900, No. LVII, p. 180, Dr. Patrick Cassidy has given an excellent account of the unfortunate case of Dr. Weldon, of Willimantic, Conn. On March 18, 1899, Dr. Weldon exposed himself for an X-Ray picture of the hip-joint for forty-five minutes, with the Crookes tube but five inches from the skin of his groin. A most intractable burn resulted, necessitating a severe operation, and producing disability for a year and a half. Since he alleged that the makers of his X-Ray apparatus, Otis Clapp and Son, of Boston, had warranted that the apparatus would not burn, he entered suit for $20,000.00 damages, and in the United States District Court, November 8, 1901, was awarded $6,750,00. The writer, with other X-ray experts* was called to testify by the defence. It is not intended to discuss here the evidence offered in this case, but rather to endeavor to answer the questions suggsted by it. The facts on which these answers can be based must come from one of two sources —from the literature of the subject or from the writer's personal experience. The personal experience of a single man, in cases which are as rare as the lesions in question, is inconsiderable as compared with the recorded experience of the profession in general. For instance the writer** might be expected to have some personal knowledge of the cases occurring in the large hospitals in his city, where the X-Ray is daily used, or of cases occurring in the practices of colleagues, or of cases coming to hospitals from the outlying towns in his neighborhood, but for the larger part of his information he must have the authority of record. The writer therefore found it necessary to search the literature for other cases to compare with his own, and his desire is to record the results of his search in the hope that they may be of service to others. Beside the medico-legal interest of this investigation he assumes that general practitioners may desire to know what the danger is of a patient receiving a burn when they send him for an X-Ray, and that those who are entering on the therapeutic use of this agent will be glad to hear of the unfortunate experiences of others in order to determine the proper distances and times for exposure.

The Literature.

Gilchrist and N. S. Scott, in America, Barthelemy, Oudin and Darier, in France, and Kienböck, in Germany have already made collections of X-Ray injuries, and the writer has been greatly aided by their articles. The reduplication of reported cases is especially evident in this subject, and the publicity which was given to many of the early cases is striking. The profession may be congratulated upon the promptness with which the warning was spread. The cases of Apostoli, Crocker, Drury, Freund, Gilchrist, King, Marceuse, Thompson and many others have been published over and over again. When these published cases are reduced to their lowest terms, they turn out to be comparatively few, even including many which are merely spoken of in reports of medical meetings. Most of these latter are given even if they have practically no data. A few cases voluntarily produced for experimental purposes are excluded, as are those in which the burning has been intentionally used for therapeutic purposes, since in these the skin is presumably already in an abnormal condition. A few cases occurring when the X-Ray has been used as a depilatory with no intention of burning have been included. The bibliography of Gilchrist (*Johns Hopkins Hospital Bulletin*, March, 1899) has not been at the disposal of the writer, nor has the article by Albers-Schönberg, (*Fortschritte a. d. Gebiete der Röntgen-Strahlen*, '98. Bd. 1, Heft 2). Both of these, however, antedate Kienböck. In most of the other cases the writer has read the original reports and has taken great pains to get every possible reference which the unusual collection of periodicals in the Boston Medical Library furnishes. It was a matter of great surprise to find the number of recorded cases so small, and that each was so often copied in other journals.

Value of the Reported Cases.

The question of whether the reports which are here analyzed are accurate and truthful may reasonably be raised. It may be said that the operator to shield himself from the law, or to recover damages may falsely represent the data. The writer wishes to point out that most of these cases are records of early mistakes in which the patient took the risk as well as the skiagrapher; many are reported by others than the skiagrapher or the patient and many were in the persons of the operators themselves. It may also be said that men would endeavor not to let such mistakes come into public notice on account of the damage to their reputation. This as

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*Max W. C. Borden, U. S. A.; Dr. W. M. Gray, U. S. A.; Dr. W. H. Merrill, of Washington, Dr. L. A. Weigel, of Rochester, N. Y., and Dr. C. A. Porter of Boston.

**X-Ray Injuries in Boston.

No case of accidental burn due to the X-ray has occurred in Boston to my knowledge with one possible exception. I was told by another physician of a case of dermatitis of the foot in a lady who had an X-Ray at the Massachusetts General Hospital. I am unable to get the details of this case, but was impressed at the time that the diagnosis was not correct. I also heard of a case of a child burned in the hands of a [illegible] who was examined with a fluoroscope in Jamaica Plains. These cases are not included in my series.

The first six of the following cases have come to Boston from other states.

Daisy M. Operation No. 87, treated by Dr. H. L. Burnett. Burn occurred in New York.

George D., No. 12, treated by Dr. Farrell. Burn occurred in New York.

M. L. H., No. 156, reported by Dr. White. Burn occurred at Oberlin College.

E. E., No. 66, probably reported by Prof. Hoffa. Burn occurred in Germany.

Henry Allard, No. 35, at Massachusetts General Hospital for one day. Burn occurred in Lawrence, Mass.

Dr. Weldon, No. 33, scar seen in court by writer. Burn occurred in Willimantic, Conn.

W. J. D., No. 36, Skiagrapher's dermatitis, very severe. Burn occurred at Massachusetts General Hospital.

Another case of burn of knee. Hearsay evidence that such a case came to O. P. D. of Massachusetts General Hospital. Did not occur in Boston. This case is not included.

Eight other cases, Nos. [illegible] of dermatitis of the hands (five in doctors, two in workers of apparatus, one in an apothecary), have been seen by writer.

undoubtedly so to a certain extent, but it is also true that bad news travels faster than good news, and other men or the patients themselves would make them public. This is particularly so with the bad injuries. It is therefore the writer's opinion that most of the bad injuries, at least, are included in these tables, and that the value of the statistics is considerable. Many cases of skiagraphers' dermatitis have probably not been recorded.

Relative Number of Cases.

The total number of cases herewith presented is less than 200. The question naturally occurs how many cases of X-Ray exposures does this figure represent? The author knows of over 20,000 exposures in the hospitals of Boston, a city of approximately 500,000 inhabitants. The sum of the populations of the ten principal cities in England, France, Germany, Austria and the United States in 1891 was about 25,500,000. Since X-Ray injuries occurring in these cities would probably be recorded in the journals examined, it is fair to consider that these statistics would be drawn from over 1,000,000 exposures. This means that even at a minimum of the probable number of exposures and including the early experimental work, only one case in 5,000 has been injured, and less than a half of these seriously. This figure falls in with the experience in the Boston Hospitals where in 20,000 cases there have been no burns in patients, and but four cases of dermatitis in skiagraphers, one being serious. This is also equivalent to one case in 5,000. These figures are arrived at by taking a minimum on the side of exposures (i. e. there have probably been many more than 20,000 cases taken in Boston; only 10 cities in each country are included and the population of these cities is in the figures of 1891), and a maximum on the side of reported cases of injury. If to make assurance doubly sure we admit that five times as many burns have occurred as have been reported, we find that only one case in a thousand has been injured. Again if we exclude past years and take only the cases occurring in the current year, we find only one or two in 200,000. We may safely tell a patient to-day that there is not one chance in 10,000 of his receiving injury from an ordinary X-Ray exposure. Obviously, this makes the case against a physician charged with causing such an injury very hard.

Chronology of the Reported Cases.

The dates of certain cases are not given at all. Of others only the dates on which they were reported. The first cases reported were those of Daniel, in America, April 10, 1896; Leppin, in Germany, July 9, 1896; Stevens, in England, April 18, 1896.

55	cases	occurred	in	'96.
12	"	"	"	'97.
6	"	"	"	'98.
9	"	"	"	'99.
3	"	"	"	'00.
1	"	"	"	'01.
86				

Of the remaining cases whose dates are not given

27	cases	were	reported	in '97.
4	"	"	"	'98.
6	"	"	"	'99.
23	"	"	"	'00.
1	"	"	"	'01.
61				
147				

The reason that 23 cases are reported in 1900 is that the collections of Butler and Barthelemy appeared in that year and in many instances the authors have neglected to give dates. The injuries presumably occurred in '96 or '97.

The main reasons for such a decrease have been the bitter teachings of experience and the fact that the introduction of better apparatus has done away with long exposures and the close approximation of the tube.

Cause of X-Ray Injuries.

The cause of X-Ray injuries is not known. It could not, of course, be determined by such a study as this. Since the author, in the course of his reading, has unavoidably reviewed the explanations of different writers on this subject, the reader may demand an expression of opinion. Most writers agree that the active cause is not heat, nor the brush discharge, nor the photographically active X-Ray itself, but some form of energy radiating from the platinum terminal together with the X-Ray, and probably closely related to it, on the one hand, and to ultra-violet light, on the other.

Classification of X-Ray Injuries.

The injurious effects of the X-Ray fall naturally in five classes. The first (a) I will call skiagrapher's dermatitis. It occurs chiefly on the hands or faces of X-Ray workers—in those who are frequently exposed to the action of the rays, in tube-makers, experimenters, exhibitors and professional skiagraphers. It results from repeated short exposures, usually in the use of the fluoroscope or from demonstration of the bones of the hands to an audience. It is most often of a mild degree, but with continued exposure may go on to ulceration and gangrene of the skin, even to involvement of the tendon sheaths and joints. In the less pronounced forms the skin appears chapped and roughened and the normal markings are destroyed; at the knuckles the folds of skin are swollen and stiff, while between there is a peculiar dotting resembling small capillary hemorrhages. The nutrition of the nails is affected so that the longitudinal striations become marked and the substance becomes brittle. If the process is more severe there is a formation of blebs, exfoliation of epidermis and loss of the nails. In the worst form the skin is entirely destroyed in places, the nails do not reappear and the tendons and joints are damaged.

The next three classes of cases occur accidently in patients who are exposed one or several times at short intervals for skiagraphs. They vary in intensity and may be directly compared with burns of the 1st, 2nd and 3rd degree. They are essentially the same as the forms occurring in skiagraphers spoken of above.

(b) The mild cases are simply a transient ery-

thema lasting perhaps a few days, followed by an exfoliation of superficial epidermis. There may be hyperesthesia of the skin and a slight burning sensation, but no real pain. In the hairy portions depilation may occur without inflammatory signs.

(c) In cases of the 2nd degree there is a formation of blisters following the erythema; these may be serous or purulent; the condition resembles a scald, but is slower in healing and less acute in character.

(d) In the worst cases the process, instead of disappearing in a few weeks, seems to extend to the deeper layers of the skin and subcutaneous tissues. There is a formation of a leathery slough, surrounded by a brawny indurated swelling with ill-defined limits. The process is exceedingly slow and obstinate and possesses an almost malignant tendency to progress. It is very painful at times and resists treatment in a remarkable way. The reader is referred to the case of Dr. Weldon and to the report of Orleman which are typical cases of this kind.

(e) The fifth group of cases is composed of those in which some internal lesion is attributed to the X-Ray. There have been few such cases recorded and these have been in such an inexact and hypothetical way with the exception of that of Gilchrist, that they seem to the writer to be undeserving of record. Dr. N. Stone Scott, in his excellent discussion of this subject, finds no adequate evidence of the existence of such lesions; and the writer fully agrees with him. In the author's opinion Dr. Scott's explanation of the case reported by Gilchrist is amply sufficient.

Pathology.

The writer coincides with the balance of opinion which attributes these lesions to a primary action on the trophic nerves of the blood vessels and skin. The delay in the appearance of the lesions after the exposure, their progressive character, and their failure to react to stimulating treatment are the strongest reasons for this view. The reports of microscopical examination of the excised tissue agree in stating that the smaller arterial branches are occluded, and the appearances are not unlike those of necrosis and inflammation due to other causes. The severe lesions are rather atrophic ulcers than burns.

Numerical Classification.

In cases in which the kind of lesion is recorded;

53 were skiagrapher's dermatitis.	(a)
14 were of the 1st degree.	(b)
29 were of the 2nd degree.	(c)
71 were of the 3rd degree.	(d)

167

Factors Contributing to the Production of X-Ray Injuries.

Apparatus.

Many assertions have been made that the static machine is less liable to cause serious injury than other forms of apparatus, because of the low amperage of its output. This statement is not entirely borne out by the present analysis. In the cases in which the kind of apparatus is recorded.

11 were caused by static machines, of these 3 were severe.

11 were caused by Tesla coils, of these 5 were severe.

42 were caused by forms of induction coils, of these 18 were severe.

On the other hand, coils have been far more commonly used than static machines or the Tesla apparatus, probably more than three times as much. In the other cases in which the apparatus is not spoken of, it is improbable that a static machine would have been used and not mentioned. The writer believes that it is a general impression among experts that the static machine is less dangerous and it is therefore less recommended for therapeutic purposes. However, it certainly is not free from danger.

Spark Length.

The voltage as measured by the spark length of the apparatus used is another factor of importance. Its actual share in the production of these injuries is very difficult to determine, for in the early days of the X-Ray work long exposures with very weak apparatus were used. The relation of this factor to time and distance will be discussed later, but in general it may be said *a priori* that, other conditions remaining the same, the greater the spark length the greater the probability of danger. But 16 of my series have the spark length with other data recorded. It varies from 4 to 12 inches.

Primary Current.

In many cases the quality of the primary current is recorded; but since the tube is actuated by the secondary current, the intensity of which depends largely on the winding of the coil and the efficiency of the interrupter, these figures have little value. However, *a priori* the greater the amperage of the secondary current, the greater would be the chance of danger, provided the voltage was also considerable.

Quality of the Tube.

Unfortunately the quality of the tube is not recorded often enough to give us effective data. Where it is recorded it is usually stated to be "soft". It is the general impression of skiagraphers that soft tubes have more therapeutic influence than hard. Kienböck devotes much attention to this point. It is probable that the distance from the skin and time of exposure are more important factors.

Distance and Time.

Maximum recorded distance from tube to skin at which injury has occurred, 50 cm. (statement of patient).

Minimum recorded distance from tube to skin, 1 cm.

Maximum recorded time of exposure to skin, 20 hours. (in 10 exposures).

Minimum reported time of exposure, 5 min. (other data not given).

Considerable inaccuracy probably exists in the accompanying reports of times and distances. One writer speaks of "distance from tube to skin."

Another "from tube to plate"; another from "platinum terminal to skin"; still others say the tube was "x inches distant" or perhaps neglect the entire data. The writer has therefore endeavored not to be too particular and has accepted the distance given without asking questions. The platinum terminal was seldom more than an inch from the glass in the days when most of these cases occurred. This inch or more has been disregarded and the figure given accepted as being distances from the terminal to the skin. This, of course would make a considerable difference in the exposures at short distances. It might perhaps have been more accurate to add an inch to each given distance, but since the distance was probably more often guessed than measured the two factors may balance, for guesses are usually greater than measurements.

From a consideration of these figures it is evident that we need some standard of comparison which will represent the total exposure in a given case, expressing both time and distance. In general we may say that the danger like the intensity of the X-Rays varies directly as the time, and inversely as the square of the distance. This is the simple law for light or any other energy radiating from a point. It may be geometrically thus.



If *a* is the focal point, and 2 is twice the distance of 1, then 2 will be four times as large as 1, and the intensity of radiant energy reaching it will be one fourth as great per square inch.

Using this law and assuming that other conditions remain the same, we may express all the recorded exposures in terms of minutes at one inch, i. e:

If T=Time in minutes and

D=Distance from skin to tube

then T÷D2=equivalent exposure in minutes at 1 inch distance.

For purposes of comparison I have arranged the definitely recorded cases in the following table. It is assumed that repeated exposures at short intervals are equivalent to added exposures. Only cases in which a fair amount of detail has been given are included.

TABLE I.

No.	Inches from tube.	Exposure in minutes	Days of incubation	Severity	Comparative time at 1 inch.
102	19.68	30	1	severe	.08
72	15.00	30	14	mild	.13
66	11.81	25		severe	.18
113	10.00	20	7	medium	.20
97	10.00	21	21	severe	.21
112	8.00	15	3 hours	medium	.23
124	6.00	20	2 hours	medium	.55
16	10.00	60	6	severe	.60
87	3-4	10	14	severe	1.11 or .63
38	8.00	45		severe	.70
96	3.94	17	8	medium	1.11
75	7.88	78		severe	1.27
19	(patient 6 in.)	(oper. 15.32)			1.43 or 8.88
49	5.46	45	14	severe	1.50
45	5.85	52		severe	1.51
57	6.24	60	during	medium	1.54
62	6.00	60	14	severe	1.66
33	5.00	45	7	severe	1.80
156	6.00	75	2	severe	2.08
39	5.00	60	1	severe	2.40
52	4.29	45	2	severe	2.44
85	11.00	300		severe	2.48
63	8.00	180	10	medium	2.81
53	3.94	50	5	mild	3.28
41	3.00	30	28	medium	3.33
127	2.00 or 1.00	15	10	medium	3.75 15.00
139	4.00	60	10	severe	3.75
132	2-8 in.	300	at once	severe	75.00 or 4.69
148	1.5 cm.	25	1	severe	162.50 or 5.32
125	6.00	270	21	severe	7.50
126	6.00	270	28	severe	7.50
54	3.94	120	3	mild	7.89
1	15 cm. for 9 cm. for	40 90	2	severe	8.51
143	3.00	1.50	1.20 2	severe	16.66 11.11
71	3.94	2.10		severe	13.80
149	1.25	30	9	severe	19.20
59	1.96	80		severe	21.05
105	3.00	200	during	medium	22.22
15	1 (?)	30	5	severe	30.00
153	0.625	12	11	medium	30.23
47	2.00	150	2	severe	37.50
55	3.94	1200		mild	78.90
141	0.39	20	6	severe	129.00
40	0.50	60	21	mild	240.00

Note.—The writer is fully aware that these figures are far from accurate, owing to the lack of proper data in distance from the platinum or the glass wall. For instance, in the last two numbers, if we allow an inch for the radius of the tube, we find that the time in minutes at one inch would read 10.53 and 26.60 instead of 129 and 240. In the cases in which the distance is considerable the change would not be so great. The figures are poor at best and serve more to suggest a method of comparison for the future, than as absolute figures for the past.

The minimum recorded exposure which has produced injury is then (case 102) equivalent to an exposure of only .08 of a minute or 5 seconds at one inch. Since this figure may be assumed to represent the extreme grade of idiosyncrasy on the part of any patient hitherto examined—one case in a million, we may consider that an exposure less than that is perfectly safe for use, e. g., .05 of a minute at one inch. Using this as a starting point and the same formula we arrive at the following times which may be considered perfectly safe for the given distances. We may say that no injury is recorded with

an exposure equivalent	to	or	less	than	.05	minutes	at	a distance	of 1 in.
"	"	"	"		.02	"	"	"	2 "
"	"	"	"		.45	"	"	"	3 "
"	"	"	"		.80	"	"	"	4 "
"	"	"	"		1.25	"	"	"	5 "
"	"	"	"		1.80	"	"	"	6 "
"	"	"	"		2.45	"	"	"	7 "
"	"	"	"		3.20	"	"	"	8 "
"	"	"	"		4.05	"	"	"	9 "
"	"	"	"		5.00	"	"	"	10 "
"	"	"	"		7.20	"	"	"	12 "
"	"	"	"		16.20	"	"	"	18 "
"	"	"	"		28.80	"	"	"	24 "

As a matter of fact, and fortunately for the human race, these exposures are amply sufficient for good skiagraphs and are about the same as the average exposures in common use. It is also true that with most forms of apparatus we could not get on with much shorter ones. To be sure, if the tube was high or the spark length small, we might safely use longer ones. The reader must bear in mind that these are minimum figures and might be doubled or tripled *in time*, without any practical risk. When

changing the *distance*, however, more discretion must be used.

The following is a table showing the relations of spark length to exposures, etc., as far as recorded. This seems to show that there is no constant relation between the voltage and the severity of the lesion, even when the time and distance are relatively equal.

TABLE II.

No.	Exposure in minutes at 1 inch.	Spark length	Distance	Time.	Severity
40	240.00	6 in.	0.5 in.	60 min.	mild
141	129.00	3.9 "	0.39 "	20 "	severe
55	78.90	9.8 "	3.9 "	1200 "	mild
153	30.23	4 "	63 "	12 "	medium
105	22.22	10 "	3 "	200 "	medium
140	18.22	4 "	1.25 "	30 "	severe
121*	6.66	12 "	3 "	60 "	medium
132	4.69	75.00	6-8 "	2-8 "	300 "	severe
127	3.75	15.00	6-8 "	1-2 "	15 "	medium
130	3.75	9 "	4 "	60 "	severe
63	2.81	6 "	8 "	180 "	medium
136*	1.50	2.35 "	5.5 "	45 "	severe
96	1.11	5.9 "	3.9 "	17 "	medium
87	1.11	.66	11-13 "	3-4 "	10 "	severe
124	.55	8 "	6 "	20 "	medium
97	.21	8 "	10 "	21 "	severe

Idiosyncrasy.

The factors which we have so far considered as tending to produce or favor injury have been:

Apparatus.
Spark length and voltage.
Primary current.
Quality of the tube.
Distance and time of exposure.

These are the factors which we have under our control; they are mechanical, inanimate and capable of being altered to suit our will, and if the cause of injury lies in their relative adjustment we may hope to avoid accident by proper technique. In fact we have learned by practical experience to keep at a safe limit. But in the future we ask more than to know what exposures are *safe*. To have the apparatus under control for therapeutic purposes we need to know the technique of *unsafe* exposures as well. To gain this knowledge we must take other factors into consideration. The recorded cases show a minimum limit for safe exposure, but they also show a tremendous variation in the reaction of individuals to apparently the same conditions. Most of the exposures which are mentioned in the accompanying tables have probably been endured by other individuals with no harmful results. Conditions which produce a severe lesion in one case, cause only a slight reaction in others. Most X-Ray workers will confess that in their early cases they used much longer and closer exposures than many of those mentioned in these tables. We find Freund reporting a mild dermatitis with an exposure which amounted to 240 minutes at one inch, while Plonski reports a severe case at 20 inches with only a half hour exposure. To be sure, in Plonski's case the statement is made by the patient, but its likelihood is increased when we read the carefully written statements of Orleman, Cassidy and Borden. To account for this discrepancy we must suppose that the important element of difference lies in the apparatus and its adjustment or in the idiosyncrasy of the patient. Kienböck and others consider that the important factor is the degree of vacuum in the tube—its softness or hardness. The writer is still strongly of the opinion that this element of variation lies in the susceptibility of the patient, in the dryness or dampness of his skin; in his electrical resistance; in his anemia or plethora; in the acidity or alkalinity of his sweat; in his vasomotor irritability or in some other of the multiplicity of conditions which make a living organism different from a glass tube stimulated by a current of electricity. If Kienböck is right in dismissing this subject with "Eine nennenswerthe Indiosyncrasie, durch welche eine für den normalen Menschen wirkungslose Bestrahlung ein Geschwür aquiriren würde, ist bisher nicht bekannt geworden und dürfte auch kaum existiren", Röntgen therapy may soon be free from danger—at present it is not.

We must confess that our known limits of danger are wide, and, by individual experiment and a careful record of the technique of therapeutic cases, we must narrow these limits until they become those of the individual. It would be well to adopt a standard of intensity of exposure which, so far as the inches and minutes are concerned, should represent the unit of dose, as it were. The other factors e. g., the quality of the tube, could then (as nearly as possible) be arranged to agree; this would leave the idiosyncrasy more directly to be measured by the number of times it would be necessary to repeat the exposure. For example, so few burns have occurred at exposures equivalent to five times the safe exposure (i. e. 5x.5=.25), that the writer proposes to adopt 10 minutes at six inches as a standard therapeutic exposure. This is equivalent to 0.28 at one inch. If ten exposures were made, the total intensity would be 2.8, which would carry us well into the danger limit, as seen by reference to the table. It would not however insure a burn, for many such exposures have undoubtedly not caused trouble. Again, 100 such exposures=an intensity of 28.00, which is greater than that of nearly all the injuries reported, would probably be the limit for idiosyncrasy. The intervals at which exposures should be made we must gain from the following data.

(To be concluded.)

AN OUTBREAK OF CHICKEN-POX AMONG CHILDREN CONVALESCENT FROM SMALLPOX. WITH REMARKS UPON THE RELATIONSHIP OF THESE TWO DISEASES.

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With every lapse of a quarter of a century comes a differentiation of diseases previously regarded as identical. Present-day practitioners of medicine are provided with differential data which enable them to trenchantly distinguish diseases which, within the memory of living men, were the subject of heated controversy.

According to Dr. Samuel J. Gee the non-identity of smallpox and chicken-pox was first asserted in 1730. We read that "the pestilence can never breed

the smallpox, nor the smallpox the measles, nor they the crystals or chicken-pox, any more than a hen can breed a duck, a wolf a sheep, or a thistle figs, and consequently one sort cannot be preservative against another sort."

In 1776 Heberden emphatically proclaimed the duality of these two diseases. A century later the controversy was again opened and the identity of variola and varicella warmly championed by the eminent Viennese dermatologist Ferdinand Hebra. Hebra, in 1866, wrote: "It will have escaped no medical man who has had much opportunity of observing smallpox, that when several persons fall ill at the same time in one family, or even in one locality, the severity of the disease and the extent of the eruption vary greatly in different cases. In fact, we see in every epidemic instances of varioloid and varicella as well as true variola. Hence, the question may be fairly raised, 'what contagious principle is it which, in these cases, generates the disease?' To be consistent, it would be necessary to admit the existence of more than one epidemic, to assume, in fact, the prevalence of varicella at the same time with smallpox and its modification, the varioloid. No experienced practical physician, however, would entertain this notion. Indeed, there is positive proof that varicella may generate variola or varioloid, and that, conversely, variola may produce, in another individual, varicella independently of any influence due to previous vaccination."

"In the General Hospital of Vienna it sometimes happens that a person affected with variola or varicella is placed by accident among other patients in a room not specially devoted to these cases. Under these circumstances we often see several bad cases of variola vera generated by a patient affected only with a mild varicella. We have a still more striking proof of this same fact when the smallpox contagion is introduced among newly born infants and children at the breast in the Foundling Hospital of this city. For we find that when this occurs cases of varicella and of variola vera make their appearance simultaneously, the former running a favorable, and the latter an unfavorable course. I apply, then, the name of *variola vera* to the most severe form of this disease, that in which the eruption is abundant and the fever intense and in which a fatal result is often observed. On the other hand, I use the term *varicella* for cases in which the rash is very scanty and which run a favorable course, and always terminate in recovery. Between these extremes lies the varioloid as a middle term, presenting an eruption, moderate in amount, a course which is generally mild, and a successful issue." Hebra's large experience in smallpox and his fame as a teacher led to the acceptance of his views in many quarters.

Curschmann, writing in 1875 says:—

Concerning the relation of varicella to variola, no perfect unity of opinion has yet been reached. While Hebra's view of the close connection of the processes was universally respected until a short time since, and has its supporters even at the present day, authoritative voices are again raised in favor of their separation."

Remarkable as it may seem, Hebra's views are still taught in Vienna at the present day. Hebra's successor, Kaposi, who is one of the foremost dermatologists of the world, and a man of large experience in smallpox, tenaciously adheres to the theory of the unity of these two diseases. Kassowitz also is a firm believer in the teachings of Hebra. The following is quoted from Kaposi's latest treatise on skin diseases:—

"With regard to varioloid, all opinions agree. This term is applied to mild variola, whether it occurs in the vaccinated or the non-vaccinated subject. With regard to varicella, however, opinions differ greatly. The arguments advanced by Thomas, Steiner, Monti, Henoch, etc., have been opposed by Hebra, Kassowitz and myself with arguments which appear to me sufficiently strong to deny the existence of a varicella distinct from variola. I recognize only a single form of variola, derived from a single virus, which may occur with more or less severe, even fatal symptoms and, at other times, runs its course as an insignificant disease. With Hebra I regard it as practicable to distinguish three classes of variola according to their degree of severity—viz., variola vera, varioloid and varicella. It must be remembered, however, that these forms are identical and that one form may give rise to another in another individual. Varicella runs its course in fourteen days or less, varioloid in three to four weeks, and variola vera in four weeks or more."

Were it not for the acknowledged eminence of the teachers proclaiming these views, they would be regarded as the immature conclusions of inaccurate observers. The statements of Hebra and Kaposi would be quite inexplicable, did we not comprehend that their conception and definition of varicella are quite different from the rest of the medical world. By varicella they mean a very mild form of smallpox: this accounts for the observation that the worst forms of smallpox may be contracted from cases of varicella. But they go to the inconceivable extreme of denying the existence of a varicella distinct from smallpox. Either they have never seen true chicken-pox, or their observation has been erroneous.

At the present day it would appear an act of supererogation to attempt to prove the non-identity of chicken-pox and smallpox. The following report of an outbreak of varicella among children convalescent from smallpox is of interest in this connection.

In November, 1900, a child suffering from chicken-pox was sent into the Municipal Hospital of Philadelphia, under the erroneous diagnosis of smallpox. The true character of the disease was recognized and the child vaccinated. This patient did not contract smallpox, but succeeded in transmitting varicella to a number of other children in the ward. These in turn infected new patients as they arrived, and in this manner varicella remained in the children's ward for a period of three months. In all, thirty-three children suffering from smallpox were attacked. It should be stated that a much larger number of children escaped infection. Whether this was due to temporary insusceptibility or to their having previously had chicken-pox, it is impossible to say. The attacks were in the main

mild and the accompanying eruption moderate in extent. Inasmuch as the patients were exposed during the eruptive period of smallpox, the chicken-pox-eruption did not appear until after the variolous lesions had become crusted or were disappearing. The earliest onset of varicella was in a girl of seven years who developed chicken-pox on the seventeenth day of the variolous outbreak. In this patient the firm, compact, crusted lesions of smallpox appeared in strange contrast with the recent dew-drop-like vesicles of chicken-pox. The patient's temperature had not yet reached normal, but was hovering about 100° at the time of the appearance of the chicken-pox eruption. It then rose to 102°, subsiding rapidly to 100° and, in a few days, again rising to 103°, owing to the development of an abcess. In this child the two diseases may be said to have existed simultaneously.

The chicken-pox efflorescence appeared in most of the patients from the twentieth to the thirty-fifth days of their smallpox eruption. As the majority of these children entered the hospital on the third or fourth day of the variolous eruption, it is seen that many of the patients did not contract chicken-pox for about a month after they were exposed. Inasmuch as the period of incubation of varicella is about fourteen to eighteen days, seldom longer than three weeks, this observation would suggest that during the early eruptive period of smallpox many of the children were not susceptible to the infection of chicken-pox. To generalize, I should say that most of the little patients received the infection of varicella during the desiccative stage of smallpox or at about the end of two weeks of the smallpox eruption.

Whilst certain acute exanthemata may exist simultaneously in the same subject, it is much more common for the second infection to develop during the convalescence from the first. Curschmann states that, during a smallpox epidemic of Mayence, he treated a large number of cases of variola in a hospital, upon whose grounds typhoid fever patients were also cared for. He did not observe a single acute typhoid case contract the disease, although typhoid convalescents were by no means so fortunate.

He furthermore says that it can be asserted with certainty that for an individual suffering from scarlet fever, measles or typhoid fever, there is, during the entire duration of the affection only a very slight liability to an attack of variola.

Curschmann makes no reference whatever to the concurrent association of variola and varicella.

That such an outbreak as the one just described should occur is not in the least surprising. Nearly all medical writers are agreed at the present time that not only are variola and varicella distinct and separate diseases but that they bear no relationship to each other whatsoever. The one does not grant any measure of immunity against the other. Cases of chicken-pox sent into smallpox hospitals will, unless protected by vaccination, contract smallpox.

The only relationship that chicken-pox and smallpox may possess is an occasional strong resemblance. Whilst varicella and variola are as a rule easily distinguishable, they may in rare cases so closely resemble each other as to render differentiation for a time extremely difficult. This, however, does not alter the statement that in essence they are totally different.

Occasionally adults with chicken-pox have been sent into the hospital under erroneous diagnosis. I do not remember any adult smallpox patient to have contracted the disease from such arrivals. In view of the extremely contagious character of varicella it may be presumed that most of the adult patients had been rendered immune by antecedent attacks of chicken-pox. Varicella in adults is not as rare as some authors would have us believe. The writer can recall at least ten cases which he has observed within the past twelve months. The infrequency of chicken-pox in individuals beyond the age of puberty may I think be accounted for by the rarity with which children escape varicella.

MICROCHEMICAL REACTIONS OF TUBE CASTS*

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Having recently been interested in the microchemic reactions of certain necrotic productions, it occurred to me to study tube casts by some recent methods. It is not my purpose at the present time to take up the chemistry of renal casts, only to call your attention to certain reactions microchemic in character and directed toward a determination of the chemistry of these bodies. Various views have been held as to the origin and composition of renal casts.

Rovida[1] investigated the origin of these bodies, and looks upon them as secretion products arising from the epithelial cells; this view is adopted by Key[2]; Bayer[3] recognizes their origin from the epithelial cells of the tubules but looks upon them not as secretion products but the results of destructive metamorphosis. Mayer's[4] conclusions antedating the work of Rovida, are practically identical with those of the last named writer.

Langhans[5] adopted both suggestions, believing that certain casts resulted from changes in the epithelial cells and that others were true secretion products. Knoll[6] concluded that chemically, and probably structurally, tube casts were composed of elements whose nature did not correspond with other known urinary constituents. Traube, Rindfleisch, Klebs, Bartels[7] and others have taught that the cylinders were really solidified exudates and Burkart[8] would have us believe that tube casts are invariably essentially of inflammatory origin. Posner[9], Torok and Pollak,[10] Neubauer and Vogel

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*Read before the Philadelphia Pathological Society, Feb. 18, 1898.

**From the Laboratories of the Jefferson Medical College Hospital.

1. Cited by v. Jaksch.
2. Schmidt's Jahrbuch, CXIV, 1867, p. 171.
3. Archiv d. Heilkunde, 1868, p. 136.
4. Virchow's Arch., V, 1853.
5. Virchow's Arch., LXXVI, 1879, p. 128.
6. Zeit. f. Heilkunde, V, 1884.
7. Arch. f. exp. Pathol. u. Pharm., VI, 1877, p. 291.
8. Die Harnsedimente, 1874.
9. Virchow's Arch., LXXIX, 1880, p. 87.
10. Arch. f. exp. Pathol. u. Pharm., XXV, 1889.

in common with a number of authorities believe that they are altered albumin that, under the influence of the urine, has solidified in the tubules, and Ribbert[11] came to the conclusion from experimental studies that hyalin casts might result from transformation of albuminous exudates. The repeated suggestion that they are fibrin more or less modified has generally met with disfavor.

Of recent years I am not aware that anything of importance has been added to our knowledge of the origin, structure and chemistry of these bodies; it has not been my good fortune to add anything startling, but the following experiments have been conducted for the purpose of demonstrating something of the micro-chemistry of casts.

Technic:—Urine obtained as fresh as possible, often withing two or three hours after being voided, was rapidly sedimented in the centrifuge, the sediment repeatedly washed with normal salt solution, and fixed in the centrifuge tubes by the following methods:*

(1) Increasing alcohol, (2) Zenker, (3) Marchi, (4) Müller. The fixed sediment was then stained by a number of methods, hematoxylin alone and with eosin and also with picric acid; saffranin in various combinations, and by a number of mucin stains among which being that of Paul Mayer[12]. This reagent,—muchematein—as originally suggested by Mayer, is probably one of the purest mucin stains that we possess; lately Harris[13] has corroborated this opinion.

Sudan III and osmic acid have been used for demonstrating fat. The former reagent was applied as follows:—

Casts fixed in non-alcoholic fixation were thoroughly freed from the reagent and treated with a solution of Sudan III in 70 per cent. alcohol, washed in water and mounted in glycerin jelly. Osmic acid yielded much better results, beautiful examples of fat-bearing casts having been obtained by the following technic:—Sediment obtained as already directed is washed in Müller's fluid and transferred to Marchi's fluid, using the regulation formula of 1 part of one per cent. solution of osmic acid and two parts of Müller's fluid. The reaction usually reaches its height within four or five days and the casts may be left indefinitely in the fluid.

The muchematein is used according to directions given by Mayer, the watery solution being preferred. It stains more rapidly than hematoxylin and practically all of my specimens appear to be overstained although some of them were subjected but a few moments to the action of the stain.

Results:—All hyaline casts may be divided into two groups. (1) Hyaline casts that stain faintly with the mucin stain. These casts are usually small, smooth and free from cells and fat. (2) Hyaline casts that stain intensely giving the mucin reaction to a degree that renders them almost opaque.

All granular casts in my collection, that are not fatty, give an intense mucin reaction. Sections of such casts show that the mucin reaction is not restricted to the periphery but is present in the matrix.

Epithelial casts commonly give a decided mucin reaction, the intensity of which seems to be directly proportionate to the granularity of the cells,—the more granular the cells the more evident the mucin stain. Casts of this group are not infrequently found in which one end may show a most intense mucin reaction and cells at the other end give the reaction but faintly,—the histologic element (epithelium), staining quite clearly. It would appear the more advanced the degenerative or necrotic change, the more evident the mucin reaction; the mucin reaction commonly quite disappears before the advent of fat, as the two reactions have not been observed in the same cast nor has one been obtained with even the appearance of the second body in another part of the cast.

The origin of the mucin in casts has been considered but it can not be said definitely to be determined. Its presence in the epithelial elements of casts and its apparent increase in those undergoing fragmentation and disintegration would seem to indicate that in some way it, at least in part, is a product of necrosis or degeneration—probably both—arising in the cellular elements cast off from the renal tubules. The possibility of cells imbibing mucin from urine rich in some form of the substance has been considered but does not seem likely. The exact nature of the mucin found in the casts is still undetermined; of the many mucins and pseudomucins known to chemists it is impossible for me to say just which responds to the microchemic tests applied.

Fatty casts are found composed of masses and groups of fat globules possessing slightly different characters depending upon the quantity of fat and the grouping, and held in position by some matrix the exact microchemic nature of which has not been possible to determine.

(1) Some fatty casts are made up almost exclusively of small globular black masses evidently fat, fairly distributed throughout the length of the cast: in such casts no cellular structure can usually be identified. (2) Casts that contain aggregations of fat usually in the shape of variously sized globules, some of them practically amounting to granules, others nearly the size of nuclei or of epithelial cells. (3) In still another group of casts epithelial cells can be seen the protoplasm of which contains fat. In such cells the fat is usually finely distributed through the perinuclear protoplasm, although I feel quite sure that in some of them it was possible to detect the intra-nuclear presence of fat.

Observers seem to have agreed that fatty casts result from fatty metamorphosis of renal epithelium and to this view the observations here recorded offer no contradiction. It seems equally probable that other casts are also the result of necrosis or degeneration of renal epithelium and that during the progress of the retrograde change mucin becomes

11. Centralbl. f. d. med. Wissensch., XIX, 305, 1880.

*There is no difficulty in fixing, washing, staining, dehydrating (when permissible), clearing, etc., directly in the centrifuge. There is astonishingly little fragmentation of the casts. Staining methods that permit of their being followed by alcohol and appropriate clearing agent, out of which the drop for a balsam mount is taken, methods that require glycerin jelly are simpler but the results are not permanent.

12. Zeit. f. wiss. Mik., XIII, 1896, p. 38, also, Mitth. Zool. Stat. Neapel. XII, 2, 1896, p. 303.

13. On the Alterations Produced in the Large Intestines of Dogs by the Amœba Coli by Heat and by Various Chemical Substances etc. Hatfield Prize Essay. Philadelphia College of Physicians, 1901.

a conspicuous constituent. As mucin and fat do not appear to be coincident bodies in the same cast it would seem reasonable to assume that the presence of one or the other is determined by some condition the exact nature of which is not apparent. Both may be present in the same urine but it has not been possible to say why they do not occur strictly together.

THE IDENTIFICATION OF THE COLON BACILLUS BY REACTIONS PRODUCED IN CULTURE MEDIA CONTAINING NEUTRAL RED.—OBSERVATIONS ON REACTIONS OF OTHER BACTERIA ON THE SAME MEDIA.*

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It has been stated by several authorities that neutral red agar is a good medium for differentiating the bacillus coli communis from the bacillus typhosus. Furthermore, it has been claimed by Rothberger and Hunter, that the bacillus coli communis upon this medium produces a fluorescence and that the medium is turned to a yellowish color—nearly a canary yellow.

Neutral red (neutral roth) according to Lee[1] is a basic color. The term "neutral" refers to the hue of its solution and not to its chemical composition. Its neutral red tint is turned bright red by acids, and yellow by alkalies.

From the above apparently specific reaction Hunter[2] claims that he has been able to detect the presence of the colon bacillus in water supplies, by simply inoculating the water upon this medium and obtaining the above reaction. If the test can be relied upon, one can readily see the importance of such a medium for the detection and identification of an organism so closely resembling the bacillus typhosus. As the reaction of the colon bacillus was alleged to be characteristic, the writer undertook experiments with other organisms with the object of determining if the colored media yielded any other important differentiating test.

Savage[3] uses a 0.5 per cent. glucose neutral red bouillon for the routine examination of water where the bacillus coli is suspected. His method is to add 10 cc. of water to a tube of ½ per cent. glucose neutral red bouillon, then to 40 cc. of water add the contents of a second tube of neutral red bouillon. Incubate at 37° C. and examine daily up to 72 hours. Of 50 waters examined, he is said to have obtained 39 positive results that is, fluorescence and the red color reduced to yellow or orange.

Of 34 waters especially examined for the bacillus coli communis, a positive result occurred in 31 and the organism was isolated therefrom in 31 samples.

Pakes[4] claims that the same reaction takes place with the proteus vulgaris, bacillus prodigiosus, bacillus kiliense, lactis aërogenes, and all the members of the enteritidis of Gärtner and Friedländer groups.

Hunter claims that the bacillus edematis maligni, bacillus proteus vulgaris, bacillus prodigiosus, bacillus tetani, also give the same reaction. He draws the following conclusions:

1. That the bacillus coli communis and a few other micro-organisms possess the power of reducing neutral red to a canary yellow fluorescent color.

2. That the bacillus typhosus never possesses this power of reduction.

3. That it is possible within twelve to twenty-four hours to diagnose with accuracy, by means of neutral red, the typhoid group of micro-organisms from the true colon group.

In the experiments detailed below, the medium was made by using ordinary peptone agar and adding 5 drops of a saturated watery solution of the dye to each tube containing 15 cc. of neutral agar. No definite formula for preparing the medium has been published. The medium was then sterilized and allowed to "set" as ordinary slant agar. Inoculations were made upon the medium and the reaction was noticed in the tubes from 24 hours to 5 days. The cultures and controls, with the exception of the bacillus of tetanus, were incubated at 37° C.

The cultures of the bacillus coli communis were as nearly typical as could be desired, and as every one knows that all reactions or characters of a certain bacterium are not constantly obtainable, so one or two characters of this bacterium failed to develop.

In the cultures *a* to *g* the bacilli were all motile: their growth on agar was of a grayish-white color, they all possessed an acid reaction, turning blue litmus milk red, and in cultures *a*, *b*, *c*, *d*, *e* and *f* producing firm coagula, while in culture *g* no coagula were observed.

In bouillon they all clouded the medium and in cultures *a*, *c*, *e* and *f* a delicate pellicle was observed

Upon potato the growth of all the cultures was of a yellowish-brown color. Gas developed in cultures *c*, *d* and *e*; no gas was demonstrable in the other cultures. Indol was produced in cultures *b*, *c*, *d*, *e* and *f*, but was absent in cultures *a* and *g*.

In series 1, 2 and 3 the bacilli were motile; the growth upon agar was of a grayish-white color, and all possessed iridescence. They all possessed slight acid properties, evidenced by rendering blue litmus milk, pink; coagulation was observed only in tube 1. In bouillon they all clouded the medium and formed a delicate pellicle upon the surface of the medium. Upon potato the growth was of a brownish color. Abundant gas production was present in culture 1, none was present in the other two tubes. Indol was produced in all three cultures.

The bacillus obtained from Dr. Wayne Babcock was motile; the growth upon agar was at first grayish-white in color, and later, light brown. It coagulated milk; in bouillon it clouded the medium, without formation of a pellicle. Upon potato the growth was of a brownish color. Gas formation and indol production were present.

In two cultures of the writer's the growth upon agar was of a grayish white color; milk was coagu-

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*Read before the Philadelphia Pathological Society, October 25th, 1901.

**From the Laboratories of the Jefferson Medical College Hospital.

(1) Microtomist's Vade Mecum, 5th ed., 1900, pp. 220 and 221.
(2) London Lancet, March 2, 1901.
(3) British Medical Journal, Aug. 17, 1901.
(4) British Medical Journal, Aug. 17, 1901.

lated, bouillon was clouded, and a pellicle formed on the surface of the medium. Upon potato the growth was brownish in color. Gas formation was present in both cultures. Indol production was present in one and absent in the other. All the bacilli used were negative to Widal's reaction.

Seven cultures of the bacillus coli communis were obtained from Dr. N. Gildersleeve, and lettered from *a* to *g*. These were inoculated upon the neutral red medium and gave the following results:

Bacillus coli communis *a*: The growth is of a pinkish color, with fading of the color, and a deposit of small red crystals throughout the medium.

Bacillus coli communis *b*: The growth is of a dark red color, with fading of the color, and the deposit of small red crystals throughout the medium.

Bacillus coli communis *c*: The growth is of a dark yellowish brown color, with slight fading of the color of the medium and the deposit of small red crystals throughout.

Bacillus coli communis *d*: The growth is of a light pinkish color, with slight fading of the color of, and the deposit of small red crystals throughout, the medium.

Bacillus coli communis *e*: The growth is of a very light pinkish red color, with fading of the color of the medium and the deposit of small red crystals throughout.

Bacillus coli communis *f*: The growth is of a pinkish color, with fading of the color of, and the deposit of small red crystals throughout, the medium.

Bacillus coli communis *g*: The growth is of a light gray color, with no appreciable fading of the color of the medium.

Another culture obtained from Dr. Wayne Babcock was tried upon the medium. The growth was of a reddish color and a slight fluorescence developed; there was no fading of the color of the medium. Iridescence was noticed upon ordinary agar.

Three cultures, 1, 2 and 3, of the colon bacillus obtained from Dr. Gilliland (Laboratory of Veterinary Medicine, University of Pennsylvania) were also inoculated into neutral red agar.

Bacillus 1: The growth is of a dark red color, with fading of the color of the medium, and the deposit of small red crystals throughout.

Bacillus 2: The growth is pinkish in color, with slight fading of the color of the medium, and the deposit of small red crystals throughout; later the medium turned to a brownish color, but no fluorescence was observed.

Bacillus 3: The growth is reddish in color, with marked fading of the color of the medium, and the deposit of small reddish crystals throughout.

Iridescence was observed in all three cultures upon glycerin agar. In the series of cultures obtained from Dr. Gildersleeve, *b* and *c*, after 14 days' growth, turned to a yellowish brown color, but no fluorescence was demonstrable.

A second series of experiments was carried out, with the bacillus coli communis and the other organisms named, by melting agar and adding five drops of a saturated watery solution of neutral red, re-sterilizing, and when sufficiently cool, inoculating and incubating at 37° C.

These tubes were not slanted. Plates were also made of the bacillus coli communis and bacillus typhosus with neutral red agar, but there was no essential difference in the behavior of the growths. Each was attended by complete decolorization of the medium, as Hunter has observed, hence there is no differentiating point in plate cultures between the two organisms in question.

In the one series of cultures, lettered *a* to *g* inclusive, the following reactions were noticed after 24 hours:

Culture *c* presented a more or less brownish color, with slight fluorescence. It resembles the reaction observed when powdered eosin is dropped in water.

Culture *d* presented a dark brown color of the medium, especially at the bottom of the tube; no fluorescence was demonstrable.

In the other cultures, *a*, *b*, *e*, *f* and *g*, no reaction was demonstrable, neither changing of the color of the medium nor fluorescence was seen.

In the series numbered 1 to 3 inclusive the color of the medium 2 had faded; no further reaction was observed.

In 3 a brownish color took the place of the dark red and there was a slight fluorescence observed.

In 1 no reaction was demonstrable.

In still another culture no reaction was observed.

In a culture that was obtained from the feces, a greenish yellow color of the medium was observed at the bottom of the tube, which also possessed the fluorescence mentioned above, but more marked.

In 72 hours the following observations were made:

Culture *c*, mentioned above, presents quite a marked fluorescence, while the color of the medium was more or less reddish yellow.

Culture *f*, while not showing any change in the color of the medium, shows fluorescence upon the surface.

Culture *d* shows very slight fluorescence together with the dark brown color of the medium above mentioned.

In the other cultures, *a*, *b*, *e* and *g*, no reaction was demonstrable.

In 72 hours, in the series 1, 2 and 3, 2 shows a slight fluorescence upon the surface of the medium, 3 shows a marked fluorescence upon the surface and slight fluorescence throughout the medium.

There is no reaction seen in 1.

In Dr. Babcock's specimen no reaction was demonstrable; in the culture obtained from the feces no reaction was obtained; neither fluorescence nor turning of the color of the medium from a red to a yellow color after 72 hours' observation.

It will be seen from the latter experiments that 13 different cultures of the bacillus coli communis were used.

The reactions were noticed after 24 hours, and up to 5 days. In but 7 of the cultures was fluorescence demonstrable, while not one of the cultures showed the canary yellow color described by Rothberger and Hunter. In only one case was marked fluorescence seen.

In 4 cultures the fluorescence was demonstrable in 24 hours, while in the other three this reaction was not observed until 72 hours had elapsed. The reaction is said to take place in 24 hours, and while

some did react in this time, many of the cultures did not. Even after 5 days' observation no other changes occurred.

Why this reaction (fluorescence) should take place in the latter experiments and not in the experiments undertaken with slant tubes of agar, is hard to explain. It may be accounted for by the partly anaerobic atmosphere in which the organism is compelled to grow. Supposing this to be the case, the writer then placed the cultures in a Novy jar and subjected them to an atmosphere of hydrogen for 48 hours. No further reaction occurred.

In the experiments with the other organisms the reaction was similar to that obtained in ordinary slant tubes. No fluorescence was demonstrable in any of the tubes.

A third series of experiments was conducted with 0.5 per cent. glucose neutral red bouillon, with 13 different cultures of the bacillus coli communis, and the other organisms named below. The inoculated tubes were placed in the incubator at 37° C. and observed daily for 5 days. In only one tube of bacillus coli communis was fluorescence observed. This reaction and the yellow color described were quite marked.

Not one of the other cultures of bacillus coli communis nor the other organisms mentioned gave the fluorescence or the reduction of the red color to yellow or orange up to 5 days.

Fading of the color of the medium from red to pink was noticed in 4 cultures of bacillus coli communis and 2 cultures each of bacillus typhosus, bacillus prodigiosus and vibrio Schuylkilliensis. After 13 days had elapsed slight fluorescence was present in one culture of bacillus prodigiosus and bacillus fluorescens.

The following are experiments made upon the same media with other bacteria.

The growth of the bacillus typhosus is of a very delicate pink color, with fading of the color of the medium.

Bacillus dysenteriæ (Flexner) grows as light reddish colored colonies attended by a slight fading of the color of the medium.

The growth of the bacillus megatherium is of a dark red color and attended by fading of the color of the medium.

The bacillus putrificus coli also grows as dark red colonies and the color of the medium fades slightly.

The bacillus figurans grows as reddish colonies with no appreciably fading of the color of the medium.

The colonies of the bacillus capsulatus (Pfeiffer) are of a reddish color, with marked fading of the color of the medium.

The colonies of the bacillus subtilis are reddish in color and there is marked fading of the dye, with a deposit of small red crystals throughout the medium.

The growth of the bacillus prodigiosus is of a dull pinkish color, with fading, and the deposit of small red crystals throughout the medium.

Monilla conidia grows as reddish colored colonies, with no perceptible fading of the color of the medium.

The growth of the bacillus of swine plague is of a pinkish color, with slight fading of the color of the medium and the deposit of small red crystals throughout.

The growth of the bacillus of tetanus is of a faint pink color; slight fading of the color of the medium occurs. A sterile tube of neutral red agar was placed in an anaerobic condition; there was no fading of the color demonstrable up to 10 days.

The growth of sarcina aurantiaca is of a reddish color with slight fading of the color of the medium.

The growth of sarcina lutea is of a dark reddish color, with marked fading of the color of the medium.

Sanarelli's bacillus grows as light reddish colored colonies and shows very slight change in the color of the medium.

The growth of the bacillus pyocyaneus is of a grayish white color or slightly yellowish; the red color gradually faded from the medium and there was no appearance of any greenish color.

The growth of the bacillus anthracis is pink; the medium fades until it becomes colorless in 72 hours.

The growth of the bacillus mallei is also of a pinkish color; the color of the medium fades, especially where the growth is marked and piled up.

The growth of the micrococcus roseus is of a deep pink color; the color of the medium fades especially where the growth is most marked.

The growth of the bacillus janthinus is entirely colorless with fading of the color of the medium.

The growth of the bacillus diphtheriæ is of a reddish tint with fading of the color of the medium.

The growth of the pseudo-diphtheria bacillus presents no essential difference from the true diphtheria bacillus.

The growth of the bacillus mesentericus vulgatus is deep pink with fading of the color of the medium.

The growth of the bacillus fluorescens liquefaciens (water) is of a deep pink color, the medium does not fade; a slight fluorescence appears.

The growth of the leptothrix epidermidis is pinkish and the color of the medium fades.

The growth of a pink diplococcus (obtained from water) is of a deep red color and the fading of the color of the medium is marked.

The growth of the bacillus Havaniensis (Sternberg) is deep red and the color of the medium fades but slightly.

The growth of the bacillus of fowl enteritis is pinkish and the color of the medium fades.

The growths of the staphylococci pyogenes albus and aureus were of pinkish color and the color of the medium faded in each case.

The growth of the bacillus hematoides is deep pink or almost reddish while fading of the color of the medium is conspicuous.

The growth of the vibrio Schuylkilliensis is of a light pinkish color, with slight fading of the color of the medium.

The growth of the spirillum of Asiatic cholera is of a light pinkish color, with marked fading of the color of the medium.

The growth of the vibrio Metchnikovi is light yellow and the medium fades slightly.

Table of Reactions of Bacillus Coli Communis and Other Organisms upon Neutral Red Agar and One-Half Per Cent. Glucose Neutral Red Bouillon.

Organisms.	Neutral red agar.	One-half percent. glucose neutral red bouillon.
Bacillus coli communis (a)	——	—
Bacillus coli communis (b)	——	——
Bacillus coli communis (c)	X	——
Bacillus coli communis (d)	X	——
Bacillus coli communis (e)	——	——
Bacillus coli communis (f)	X	——
Bacillus coli communis (g)	——	——
Bacillus coli communis (1)	——	——
Bacillus coli communis (2)	X	—
Bacillus coli communis (3)	X	——
Bacillus coli communis (B.	X	X
Bacillus coli commun s X		——
Bacillus coli communis Y	X	—
Bacillus anthracis	—	—
Bacillus Mallei	——	——
Micrococcus roseus	——	—
Bacillus janthinus		——
Bacillus diphtheriæ	—	——
Pseudo-diphtheria bacillus	——	——
Bacillus mesentericus vulgatus		—
Bacillus fluorescens liquefaciens	X	X
Leptothrix epidermidis	—	—
Diplococcus (pink)	—	——
Bacillus Havaniensis (Sternberg)	——	——
Bacillus of fowl enteritis	——	——
Staphylococcus pyogenes aureus	—	——
Staphylococcus pyogenes albus	——	——
Bacillus hematoides	——	——
Spirillum of Asiatic cholera		——
Vibrio Metchnikovi	——	——
Spirillum of Finkler and Prior	—	—
Bacillus typhosus		
Bacillus dysenteriæ (Flexner)	——	—
Bacillus tetani	—	——
Sarcina aurantiaca	—	——
Sarcina lutea	——	——
Sanarelli's bacillus	—	
Bacillus megatherium	—	——
Bacillus putrificus coli	——	——
Bacillus figuratus	—	——
Bacillus capsulatus (Pfeiffer	——	——
Bacillus subtilis		——
Bacillus prodigiosus	—	X
Bacillus of swine plague		
Bacillus pyocyaneus	——	——
Proteus vulgaris	—	——
Vibrio Schuylkilliensis		—
Bacillus alcaligenes	——	X

X Fluorescence. —— No fluorescence. Fading of color of the medium

The writer's conclusions are:

1. That, while not affording a specific reaction in the case of the bacillus coli communis, neutral red agar should be classed as a valuable differentiating medium.

2. The typhoid bacillus, while it does not cause a fading of the color of the medium, never gives rise to the fluorescence noticed in some cultures of the bacillus coli communis.

3. Further, the test medium should not be depended upon as the only differentiating one in the examination of water, as several very common bacteria found in water give the same reaction.

The writer wishes to express his thanks to Drs. N. Gildersleeve, Gilliland and Babcock for cultures of the bacillus coli communis used in the experiments. The writer also wishes to thank Dr. Bergey for several cultures of other bacteria.*

INTESTINAL OBSTRUCTION CAUSED BY A CICATRICIAL BAND COMPRESSING THE ILEUM.

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of Telluride, Colorado.

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In this paper, I shall (1) report a case of intestinal obstruction caused by a cicatricial band compressing the ileum; and, (2) shall say a few words concerning the frequency, cause, clinical history and treatment of such cases.

On March 3rd, 1901, Edward K., aged 22, laborer, came to me (walked into the hospital) complaining of "pain in the stomach and of vomiting." Six days previous to this, he was suddenly seized with a sharp pain in the abdomen. This happened about 4 P. M., while he was working in a printing office—setting type. The pain was diffuse ("whole abdomen pained him") and came on in paroxysms during the first four days of his illness. The paroxysms became more severe and more frequent, till two days ago, when the pain became continuous and became definitely located in the right lower quadrant of the abdomen. He had been nauseated since the beginning of his illness; and had taken no nourishment except a little milk and coffee. During the twenty-four hours previous to entering the hospital, patient vomited continuously. The vomitus was green, but had no offensive odor. Patient stated that he had no chills; that he did not believe he had fever; that urination was normal and that he had had a small, but normal, bowel movement each day since his sickness began. Further questioning elicited that the patient had never been sick previous to the present illness—except that he had had measles and whooping cough when he was seven and ten years of age. He, also, stated that he knew no cause for his sickness; but that he had eaten two uncooked turnips about four hours before he had the attack of pain.

Family history was negative, as was his personal history concerning habits and use of drugs. Examination showed a well developed and well nourished young man. Face had an expression of distress. Tongue coated. Abdomen slightly distended and tympanitic. Left side not rigid nor tender, right side slightly rigid and markedly tender in the right iliac fossa. A firm, tender, non-movable, globular mass—about three and one-half inches in diameter could be plainly felt in the region of the appendix—its center—apparently—corresponding to McBurney's point. Percussion showed superficial and deep dullness over the mass. No peristalsis was felt or heard. Rectal examination showed a ballooning of the bowel; and the mass could be felt high on the right side. The remainder of the examination was negative. Pulse 84, Temp. 99°, Resp. 20, urine normal, except for a quite marked reaction for indican.

*Note: Since this paper was read the papers by Makgill and by Savage have appeared in the Journal of Hygiene, Vol. I, No. 4, pp. 430 and 437.

Leukocytes 14,800, mostly of the polymorphonuclear variety.

A diagnosis was not made. Appendicitis seemed the most probable explanation for his trouble. But the history was not that of appendicitis; and the symptoms did not correspond to the physical findings—it would be unusual for a patient to walk into a hospital with an abscess 3½ inches in diameter which had been but six days in developing. However, the condition was thought to be surgical and a laparotomy was done. Two and one-half inches from the ileo-cecal valve, a fibrous band was found which narrowed the lumen of the ileum. The band was about one-fourth of an inch wide and extended from the convex surface of the bowel to its mesenteric attachment narrowing the lumen to a diameter of about one-fourth or one-third of an inch. About twelve inches of the bowel—above the constricting band—were filled with solid angular masses—doubtless the turnips which he had eaten before the onset of his illness. This filled portion of bowel was reddened and edematous and curled upon itself so as to form the globular mass noted in the physical examination. The appendix was normal. I cut the constricting band and removed a portion of it for examination. After liberating the intestine, its lumen seemed to return to its natural size. I then forced the contents of the distended portion of the ileum through the ileo-cecal valve into the large intestine. I next removed the appendix—treating the stump according to Doyen's method—and, before closing the incision, injected one ounce of concentrated solution of magnesium sulphate into the ileum, and filled the abdominal cavity with warm normal saline solution. The bowels moved thirty hours after the operation, after which the patient's recovery was rapid and uneventful.

Obstruction of the bowels, due to bands of adhesion which compress the intestine and narrow its lumen, is an uncommon condition. In such cases the obstruction is usually found in the large bowel—in the regions of the most fixed segments of the intestine, that is, in the ascending colon or in the splenic and hepatic flexures. Treves says that he has found but few examples of this form of obstruction in the small intestines. And, in the few cases in which this variety of obstruction has occurred in the small bowel, the affected intestine has been adherent to the abdominal parietes or to the pelvic viscera. I am unable to say with what frequency such cases, as the one herein reported, occur. I have been unable to find the history of a case corresponding to it.

Concerning the cause of the obstruction I shall say that the fibrous band, which was responsible for the obstruction in the case reported, was the result of a localized inflammation. I make this statement solely from the appearance of the band. But against this theory stand the facts that the appendix and mesenteric glands showed no evidences of previous inflammatory changes and that the patient had never complained of symptoms that could be referred to inflammatory involvement of the peritoneum or intestines.

Partial obstruction of the bowel due to a fibrous band may give rise to no signs of intestinal obstruction. (Hudson, *Path. Soc. Trans.* Vol. XL, p. 98.) Rolleston has seen a case of three diaphragmatic obstructions in a man, aged twenty-five years, without any intestinal trouble. The liquid state of the feces in the small intestine accounts for the absence of symptoms when there is a considerable amount of narrowing of the bowel's lumen. Again, symptoms are more apt to be absent when the obstruction is situated in the lower part of the ileum on account of the slow movement of the intestinal contents in this portion of the bowel. However, when symptoms do occur—in cases of partial obstruction of the bowel due to compressing bands—they correspond, more or less closely, to those due to intestinal stricture. The symptoms in the case, herein reported, were due to the pieces of turnip which were too large to pass the obstruction; and, when a sufficient number of them had collected above the site of narrowing of the ileum, they caused complete obstruction of the distended bowel, with embarrassment of its circulation, which at the time of operation had progressed to edema and beginning inflammatory changes.

As to treatment, nothing need be said except that the condition is a mechanical one, and can only be properly remedied by surgical interference.

THE PROGRESS OF KNOWLEDGE CONCERNING VENOM AND ANTIVENENE. A SYNOPTICAL REVIEW OF THE LITERATURE OF THE PAST FIFTEEN YEARS.

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of Philadelphia.

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(Continued from Page 407).

At the meeting of the Medico-Chirurgical Society of Edinburgh (Trans. of the Medico-Chirurgical Society of Edinburgh, May 15th, 1895, Vol. XIV, p. 212) Professor T. R. Fraser showed a rabbit immunized to cobra venom, to about 50 times the fatal dose. The method was similar to if not the same as that of Calmette.

Phisalix and Bertrand (Compt. rendu de l'Acad. des Sciences de Paris, June 10, 1895, Tome, 120, p. 1296; also Compt. rendu de la Soc. de Biol. de Paris, June 8, 1895, 10th Series, 11, p. 443) discuss the mode of action of the chloride of calcium "Sur l'emploi et le mode d'action du chlorure de choux contre la morsure des serpents venimeux," recommended by Calmette for the cure of snake bite, and come to the conclusion that it does not act, as he thought, by destroying the venom itself, but by so cauterizing and mortifying the tissues as to prevent the absorption of the venom.

Fraser published an excellent paper upon "The Rendering of Animals Immune Against the Venom of the Cobra and Other Serpents, and on the Antidotal Properties of the Blood Serum of the Immunized Animals" (*British Medical Journal*, June 15, 1895, I. p. 1309). This paper seems to have appeared as well in the *Gior. de l'Acad. di Med. di Torino*, 1895, 3s., XLIII, 661-664. He found the minimum fatal does of cobra venom to be:

0.00018 gr. per kg. of guinea pig.
0.000245 gr. per kg. of rabbit.
0.0025 gr. per kg. of white rat.
0.005 gr. per kg. of cat.
0.002 gr. per kg. of 6 weeks kitten.
0.03 gr. per kg. of grass snake.

It is therefore one of the most poisonous substances known, exceeding strychnine, strophanthine, etc.

His immunization experiments were performed,

for the most part, with subcutaneous injections of the venom, though he also produced "immunity in cats" by its gastric administration.

Of different venoms he found the minimum fatal dose for the rabbit to be:

Diamanthia, 0.0015 gr. per kg.

Serpedon haemochates, 0.0025 gr. per kg.

Crotalus, 0.004 gr. per kg.

Cobra venom is, therefore, 16 times as strong as crotalus venom.

Fraser observed that when antivenomous serum is added to solutions of venom a distinct reaction takes place.

He gives the details of an interesting series of protection inoculations against once, twice and thrice the lethal doses of venom, as follows:

Series 1—One fatal dose of venom, 0.5, 0.25, 0.01, 0.05, 0.02, 0.01, 0.005, 0.004 ccm. of antivenomous serum. All these animals survived. When, however, the dose of serum was reduced to less than 0.0025, they died.

Series 2—Two fatal doses of venom, 0.75, 0.7 and 0.6 were followed by recovery, but 0.5 was insufficient to effect recovery.

Series 3—Three fatal doses of venom, 1.5, 1.0 cc. were followed by recovery, but 0.8 did not save the animal.

Series 4—Four fatal doses of venom, 2.0 cc. of serum was followed by death.

He found that when the venom and antivenene were given in opposite sides of the body, one immediately following the other, doses of 1.0, 2.0 and 3.0 cc. of serum failed to protect, but 2.5 and 3.0 cc. saved the animal; 4 cc. of the serum per kg. body weight was able to save the animal when given 30 minutes before a little more than the minimum fatal dose of venom. It was also shown that 1.5 and 0.8 cc. of antivenene injected 30 minutes after a lethal dose will save the animal, and that 5 cc. will save it from twice the fatal dose.

He found, as Calmette had done, that the antivenene made by using cobra venom was efficacious against the venoms. In regulating the dose of antivenene for man, Fraser urges that the dose be calculated by using cats and not herbivorous animals which are so highly susceptible.

In another paper upon "The Treatment of Snake Poisoning with Antivenene Derived from Animals Protected Against Serpent's Venom" (*British Med. Jour.*, Aug. 17, 1895, II, p. 416) Fraser brings out a number of interesting facts. He was able to immunize a cat by gradual alimentary administration of cobra venom until it could take 1 gramme at a dose, this being 80 times the calculated subcutaneous dose. Eight days after the larger dose mentioned it was injected with 1½ the subcutaneous fatal dose without harm.

The cat was pregnant, and on the fifty-fourth day of the administration gave birth to kittens, which continued to suck the immunized mother. On the fifty-seventh day after birth one of the kittens was given two minimum fatal doses of the venom and showed scarcely any symptoms. Another, on the sixty-ninth day after birth, received three minimum fatal doses, but died.

Little venom is absorbed from the stomach. To a series of white rats Fraser administered by the mouth, 10, 20, 40, 200, 300, 600 and 1,000 times the fatal subcutaneous dose, but all remained well except for slight drowsiness. The rat that received the 1,000 fatal doses was eight days later given two fatal doses subcutaneously, was seriously intoxicated in consequence, but recovered.

Experiments with the blood of "hamadryas" against cobra venom showed that 0.25 cc. of blood per kg. of animal protected against a fatal dose of the venom. Also that 0.5 cc. per kg., given 30 minutes before the fatal dose of venom, protected.

The same reaction was obtained with the blood of the pseudechis porphyriacus and its venom. He supposes that the antitoxic power of the blood depends upon the absorption of the venom from the mouth and stomach of the serpent.

Fraser says that in practice much larger doses of antivenene must be given than in the laboratory experiments, because the two substances are not mixed together. Thus, of an antivenene of which 0.6 cc. protected against two minimum fatal doses when mixed, 5 cc. per kg. were required to save the animal when the venom was injected 30 minutes before the antivenene.

The difference in susceptibility between carnivorous and herbivorous animals led Fraser to investigate the relation of diet to susceptibility. A number of white rats were placed upon a meat diet. At the end of several weeks one was given 1½ minimum fatal doses of venom and died. After seven weeks one was able to resist two minimum fatal doses.

Fraser, believing that antivenene acts directly upon the venom, recommends that it be injected into the bitten part before the ligature is removed. The dose of antivenene for use in human medicine is fixed at 20 cc.

Phisalix and Bertrand, "Recherches sur l'immunité du hérisson contre le venin de vipère" (Compt. rendu de la Soc. de Biol. de Paris, July 27, 1895, 10 Series, Tome II, p. 639) show in an interesting experimental work that hedgehogs are 30-40 times as immune to venom as guinea pigs of equal weight. The blood of the animals is itself poisonous, and until they found that its poisonous properties disappeared on heating, they were unable to test it. Subsequently it was found that 8 cc. of the heated blood was potent to save a guinea pig from a fatal dose of venom. Phisalix, "Propriétiés immunisantes du serum d'anguille contre le venin de vipère" (Compt. rendu de l'Acad. des Sciences de Paris, Dec. 28, 1896, Tome 123, p. 1305; also Compt. rendu de la Soc. de Biol. de Paris, Dec. 26, 1896, Series 10, III, p. 1128) remarking the resemblances pointed out by Masso between the symptoms of poisoning by the blood of eels and the venom of serpents, imagined that the serum of the eel might have protective or immunizing powers against venom. After heating, by which its poisonous character was destroyed, it was found that 1.5 cc. administered 24 hours before a fatal dose of venom, vaccinated against the venom, but that administered with the venom it had no action. The immunity conferred by the vaccination is equally great against viper's blood and viper's venom. He

thinks that the immunizing substance is a diastase, an albumin or a peptone of the blood.

Phisalix and Bertrand (Compt. rendu de l'Acad. des Sciences de Paris, Nov. 18, 1895, Tome 121, p. 754; also Compt. rendu de la Soc. de Biol., Nov. 23, 1895, 10. Series, II, p. 751) having shown in a previous paper that the blood of the hedgehog contains both toxic and antitoxic substances, endeavor to prove that the blood of the viper does the same. "Sur l'Emploi du Sang de vipère et de couleuvre comme substance antivenemeuse." Ordinarily 0.5 cc. of viper's serum, when injected into the abdominal cavity of a guinea pig produces death. After being heated to 68° C. for ten minutes it is so changed that 3 cc. produce no symptoms. The guinea pigs which received the heated serum were able, 24 hours afterward, to resist a fatal dose of viper's venom. They found that of the heated serum 0.25 cc. was sufficient to protect against a fatal dose of venom. The immunity disappeared after a few days. The blood of the adders had a similar but less intense protective power.

Phisalix (Compt. rendu de la Soc. de Biol. de Paris, Feb. 29, 1896, 10th Series, Vol. III, p. 233) in a paper entitled "Attenuation du venin de vipère par les courants à haute frequence; nouvelle methode de vaccination contre le venin," shows that alternating currents of high frequency attenuate the venom of the viper, and that venom so attenuated can act as a protective vaccine.

D. D. Cunningham (Scientific Memoirs of the Medical Officers, India, 1896) published a long investigation into the action of different venoms, coming to the conclusion that venoms are primarily blood poisons and cause death by an asphyxia depending upon loss of the oxygen-absorbing power of the red blood-corpuscles. The principal points of the theory which he defends by argument and experiment are as follows:

(1.) Cobra poison does produce important changes in the blood outside of the body.

(2.) There is clear evidence of the occurrence of similar changes in the blood within the body in cases in which large doses of venom are introduced directly into the circulation, or when life is artificially prolonged so as to give time for the ferment-action of smaller doses to be fully exerted.

(3.) The nervous phenomena which are present in cases of intoxication by cobra-venom are closely parallel to those occurring in cases of intoxication by CO, and the fact that the color of the blood does not undergo alteration on exposure to air is no proof that it has not sustained a lethal alteration in respiratory property.

(4.) The fact that, whilst the poison produces no appreciable effect upon the circulation, artificial respiration, although protecting life, is powerless to avert the ultimately fatal result, shows that the asphyxia which causes death cannot be simply dependent on defective exposure of blood to the air.

(5.) While minimal lethal doses of cobra poison are introduced into the system by direct intravenous injection, a prolonged latent period ensues before any specific symptoms manifest themselves, and when the latter do appear, they follow a gradually progressive cumulative cause, whereas whenever minimum lethal doses of primarily neurotic poisons have entered the circulation, they give rise to immediate effects.

(6.) Were the phenomena of nervous depression attending the intoxication by cobra venom dependent on a direct action upon the functional activity of the nervous centres, the administration of salts of strychnine ought to produce some appreciable effect on their progress, whereas, in fact, it produces none whatever.

(7.) Were the asphyxial terminations of ordinary cases of intoxication by cobra venom dependent on a gradual depression of the nervous centres leading to a paralytic cessation of respiratory movements, the injection of large quantities of venom directly into the circulation ought to be followed by sudden general paralysis, the quality of the blood remaining unaltered, whereas it is actually followed by sudden general convulsions and loss of coagulability of the blood.

(8.) The theory of the direct action of the venom upon the nervous system is quite incapable of affording any explanation whatever of susceptibility exhibited by different kinds of animals, whilst that which regards the action as primarily affecting the blood is capable of explaining them in a very satisfactory fashion. The neurotic theory might, of course, explain the phenomena of the coincidence of minor susceptibility with minor respiratory requirements, were the former indicated merely by minor mortality, which might be interpreted as owing to the fact that a paralytic decrease in respiratory movement which must necessarily prove fatal in animals with high respiratory requirement, will by no means suffice to do so when the latter is much less. But as a matter of fact, minor susceptibility is not evinced merely by minor mortality, but by a minor tendency to the development of nervous symptoms.

An "Address on Immunization Against Serpents' Venom and the Treatment of Snake Bite with Antivenene," by Thomas R. Fraser, is printed in the *British Medical Journal* for April 18, 1896, Vol. I, p. 957. It covers the topics discussed in his previous papers and discusses alimentary administration of venom for the production of immunity at some length. Several interesting cases, illustrating forcibly the fact that human beings can secure immunity in this way, are recorded in the paper. Like other observers already quoted, he found the blood serum of pseudechis porphyriacus antidotal to its own venom.

The estimated dosage of antivenene is such as to make it scarcely practicable in human therapeutics. Fraser now recommends 350 cc. as the quantity necessary to cure a man of 170 pounds. (This seems to differ from the opinion expressed in a former paper when the dose was placed at 20 cc., probably following the statement of Calmette.)

Phisalix and Bertrand discuss the "Action du filtre de porcelaine sur le venin de vipère, séparation des substances toxiques et des substances vaccinantes" (Compt. rendu de l'Acad. des Sciences de Paris, June 15, 1896, Tome 122, p. 1439; also Compt. rendu de la Soc. de Biol. de Paris, June 20, 1896, 10th Series, III, p. 656). Inasmuch as such physi-

cal agents as heat and electricity cause the disappearance of the toxic substance of the venom, and the retention of the immunizing substances, either the heat does not destroy the immunizing substance, or it causes its formation from toxic substances contained in the venom. If the first view be correct, we should be able to readily transform venom into antivenene by heat, but the venom of the viper when heated loses toxicity, but does not attain antitoxicity. This fact shows that the vaccinal action of heated venoms is due neither to attenuation nor to transformation of the toxic substances. If, however, both substances are contained in the venom, and one were found capable of penetrating porcelain and the other not, it would prove that the toxic and immunizing ingredients of vaccinal substances were not identical. A 1 :5000 solution of viper's venom was accordingly filtered through porcelain. Of the original solution 1 mg. was fatal to guinea pigs, but after filtration, 1 mg. produced only a slight elevation of temperature. It was found, however, that the filtrate contained the immunizing substance, as the guinea pigs which received it were able to endure twice the fatal dose of venom after 48 hours. This proves to the authors that there is an "echidno-vaccine" distinct from the venom.

"The Treatment of Animals Poisoned with Snake Venom, by the Injection of Antivenomous Serum," is the subject of a paper which Calmette read before the Laboratories of the Conjoint Board of the Royal College of Physicians and Surgeons, London (*British Medical Journal*, Aug. 15, 1896, and *Lancet*, Aug. 8, 1896, II, p. 449). The speaker summarized the general facts regarding antivenene and demonstrated its effects before the Society. The following very important suggestions were made for the protection of the public:

(1.) That there be instituted in London and in each British Colony, where there are found venomous snakes, a Sanitary Committee, to be intrusted with the duty of testing the efficiency of antivenomous sera offered for sale or sent out to be delivered gratuitously by druggists and others.

(2.) That no bottle shall be sold or distributed unless bearing the mark of such control.

(3.) That this control be effected according to the simple and rapid method which alone presents every guarantee of accuracy.

(4.) The method proposed is the following:

A standard solution of type venom will be placed at the disposal of the appointed experts. The toxic unit of this solution will be based upon the quantity of venom necessary to kill a rabbit of 2 kg. in 20 minutes by intravenous injection in the marginal vein of the ear; the above quantity corresponding on the average to 2 mg. of cobra venom, weighed dry, and 4 mg. of rattlesnake venom. An antivenomous serum, to be sufficiently active for therapeutic use, must be a preservative in a minimum fatal dose of 2 cc. on intravenous injection of the toxic unit of venom. The preventive inoculation must be made 15 minutes only before the injection of the venom. The testing of the serum is thus effected in less than one-half hour.

(5.) That stations provided with serum and all the necessary apparatus for its application be established in the principal centres of agriculture, and in the mining and forest districts of the colonies infested with venomous snakes, such as Australia, Burmah and India, so that every person bitten may be able to come at once and receive treatment.

Fraser reviews "The Limitations of the Antidotal Power of Antivenene" (*British Medical Journal*, Oct. 3, 1896, Vol. II, p. 910) in a paper read before the meeting of the British Medical Association at Carlisle, July, 1896). Much of the matter contained in the paper is a repetition of experimental work recorded in his earlier papers. He thinks that "if the therapeutic value of an antitoxine be estimated by determining its antidotal power when mixed *in vitro* with its toxin, it is apparent that exaggerated and fallacious conceptions may be formed of the antidotal value of the antitoxin. So important a fact, for example, is likely to be overlooked as that with even the most powerful antivenomous serum which has yet been prepared, so large a quantity as from 10-11 fluid oz. or 300 cc. injected subcutaneously, is probably necessary for the purpose of preventing death in a man after a minimum lethal dose of cobra venom has been received." [The size of this dose as compared with that which he formerly recommended, and which Calmette thinks sufficient, was commented upon in the abstract of his former paper.]

Fraser points out a very important fact concerning the venom-antivenene reaction, viz., that when 1.3 cm. of antivenene per kg. is mixed *in vitro* with 5 times the minimum fatal dose of venom, and the mixture allowed to stand 5-10 minutes, death follows its injection into animals, though when the mixture is allowed to stand 20 minutes or longer the animal recovers. This he thinks proves the chemical nature of the reaction. He denies the probability that the leukocytes are active in protecting the invenomated body against the poison, being stimulated by the antivenene, thinks the theory of vital tissue stimulation equally untenable, and expresses his belief that "protection or immunity is chiefly due to the accumulation in the blood of an antidotal substance, and that this substance originates, at least in part, from the venom itself and is normally a constituent of the venom."

In discussing Fraser's paper, Calmette (same reference) criticises his method of testing the serum, by showing that 1½ times the minimum fatal dose is too small a dose to be employed as a standard. He urges his own method of standardization as much more satisfactory (referred to before). Calmette also objects to Fraser's estimation of the therapeutic dose and calculates that 10-20 cc. of serum such as he prepares are ample for human treatment.

Calmette failed to confirm Fraser's observation that ingestion of the poison is followed by immunity, stating that in his own experiments the animals have always died. In refutation of Fraser's experiment of allowing the mixed venom and antivenene to stand until a reaction had occurred, Calmette reviews his experiment of heating the mixture of venom and antivenene (referred to before).

Calmette and Delarde, "Sur les Toxines non-microbines et le mécanisme de l'immunité par les serums antitoxiques (Annales de l'Inst. Pasteur,

Dec., 1896, X. 12, p. 675), in a lengthy paper replete with experiments and deserving of careful perusal, conclude:

(1). The serum of animals naturally refractory to the toxins studied, rarely possess antitoxic properties against these toxins. The hen and the tortoise, for example, resist considerable quantities of abrin, yet their serum is totally inactive towards abrin. Vaillard has also shown that the chicken is refractory to tetanus, yet its serum contains no antitoxin to tetanus.

(2). Cold blooded immune animals can produce antitoxin under the influence of repeated non-mortal doses of toxin.

(3). Cold blooded immune animals, like the frog, can acquire immunity to fatal doses of toxins, without the occurrence of antitoxin in their blood.

(4). Antitoxic sera (antiabric and antivenomous) can be utilized practically for the production of passive immunity in man and animals against abrin and venom and for the diagnosis of toxins by medico-legal experts. The antiabric serum possesses a very marked preventive action when applied locally to the mucous membranes, and this property permits its employment therapeutically in ophthalmology.

(5). The active substances of antitoxins are not modified by certain chemical reactions which destroy or profoundly alter the toxins. They do not alter toxins when mixed with them *in vitro*. They appear to exist normally in great abundance in the leukocytes of vaccinated animals, whence they diffuse through the blood serum and other body juices. They do not dialyze through the membranes. They act energetically upon the leukocytes of new animals, like the antimicrobic sera.

(6). Certain substances devoid of specific action upon toxins, such as beef bouillon, normal ox serum, and the sera of animals vaccinated against certain infections and intoxications, manifest in new animals, into which they are injected, preventive properties in regard to divers infections and intoxications.

"En résumé, nous pensons, que l'immunité des animaux naturellement refractaires, de meme que l'immuniteé acquite ne doit pas être attribuée à la présence, dans le serum des animaux refractaires ou vaccinés, d'une substance chimique *ayant* la propriété de détruire ou de modifier les toxines." "Il reste encore à faire la demonstration de l'existence réelle de ce que nous avons appelé jusqu'ici la substance preventive du serum des animaux vaccinés."

From their experiments they are forced to admit:

(1). That the function of antitoxin is independent of immunity since that can exist at the same time that the antitoxic function is not manifest.

(2). That the two forms of immunity, natural and acquired, are the result of a special property of the cells.

Calmette, in a paper entitled "Serpent's Venom and Antivenomous Serum" (*British Medical Journal*, Oct. 10, 1896, 11, p. 1025), shows that the venoms of all serpents are, in general, of identical nature, the local effects depending upon something that can be separated from the nervous poison by heat, as after heating the effects of all venoms are identical. He was unable successfully to repeat the work of Phisalix and Bertrand, who separated the constituents of the venom by filtration, simply finding that porcelain holds back most of the venom and that what passed through was 2½ times weaker than originally. If before filtering care was taken to precipitate the albumin from the venom, it nearly all passed through. The vaccination reported by Phisalix and Bertrand, he looks upon as merely an early stage of the usual form of experimental immunity.

He includes at the end of the paper a letter from Jay Gould and Hankin concerning a case of snakebite successfully treated with antivenene.

Phisalix (Compt. rendu. de la Soc. de Biol. de Paris, Nov. 28, 1896, 10th Series, 111, p. 963) discusses the "Antagonisme physiologique des glandes labiales superieures et des glandes venimeuses chez la vipère et la couleuvre; la secrétion des premiers vaccine contre le venin des secondes—corollaires relatif de la classification des ophidiens." The salivary glands, other than the venom glands, were studied with the result of finding that when a glycerine extract of the sub-maxillary gland was injected into a guinea pig, its temperature ascended a couple of degrees. After the lapse of 24 hours the animal was found immune to the fatal dose of venom.

Phisalix (Compt. rendu de l'Acad. des Sciences de Paris, July 12, 1897, Tome 125, p. 121; also Compt. rendu de la Soc. de Biol. de Paris, July 17, 1897, 10th Series, IV, p. 723) adds a further contribution upon the "Action physiologique de venin de Salamandre du Japan (Sieboldia maxima). Attenuation par la chaleur et vaccination de la Grenouille contre ce venin." The paper describes the venom, mode of obtaining it, its physiological action, and the immunization of frogs to it. In general it resembles the cutaneous venoms of the Salamander terrestre made the subject of previous contributions.

Kanthack's "Report on Snake Venom in its prophylactic relation with poisons of the same and other sorts (Rep. Med. Off. Local Gov. Bd., 1895-6, Lond., 1897, 235-266). In a lengthy and excellent paper, Kanthack discusses the matter of specificity of antitoxins with regard to venom. If, as Cunningham thinks, daboia venom is entirely different from other venoms, and antivenene does not protect against it, the specificity of antitoxins is supported, rather than diminished by the observations made upon the protection afforded against various venoms by antivenene made with cobra venom.

Kanthack points out that venomous snakes are not immune to the venoms of snakes of other species.

He fully confirms Fraser's observation that immunity can be secured by feeding the venoms to animals. If, however, the immunity of the snake to venom depends upon the venom which it swallows, then (a) venomous snakes should be more immune to venoms than non-venomous snakes, and (b) their blood should be antitoxic. He agrees with Waddell (Scientific Memoirs of the Med. Off. of the Army in India, 1889, IV, p. 59), however, that this is not so, as cobra venom is rapidly fatal to green tree vipers, and some of the innocent snakes

are highly immune. The blood of Varanus Bengalensis has a slight neutralizing power upon cobra venom, which power could not be referrable to swallowed venom. Kanthack, like Bertrand and Cunningham, could not succeed in producing immunity to venom by the use of solutions of chlorinated lime. Experiments upon the production of antivenomous serum are detailed, and a discussion is carried on at length concerning the specific action of the serum, and the specific antitoxic reaction in general. The effect of the digestive ferments upon venom is considered.

Fraser has made a most valuable contribution to our knowledge of venom and its fate in the body in a paper upon "The Antivenomous Properties of the Bile of Serpents and Other Animals" (*British Medical Journal*, July 19, 1897, Vol. I., 2 p. 125; also *Indian Med. Record*, Calcutta, 1897, Vol. XIII, p. 147, 152 and 39; *Indian Lancet*, Calcutta, 1898, 50, p. 1-4; "Bemerkungen über die antitoxischen Eigenschaften der Galle der Schlangen und anderer Thiere"; *Wiener med. Blätter*, 1897, XX, 481, 498).

Finding that 1000 minimum fatal doses of venom could be taken into the stomach with impunity, and that the digestive ferments did not alter it, Fraser was led to investigate the bile, using serpent's bile obtained from the African cobra, puff-adder, rattlesnake and grass-snake. Each bile was tested against the venoms of the African and Indian cobra. The bile was dried and weighed dry, mixed with a varying quantity of the venom, and introduced subcutaneously into the test animals, the mixture being permitted to remain together for ten minutes.

1. The bile of the African cobra, in doses of 0.0001 gramme, produced recovery from a little more than 1 minimum fatal dose.

2. The bile of the rattlesnake, in doses of 0.0003 grammes, protected against the minimum fatal dose.

3. Puff-adder, 0.001 gramme of bile destroyed the effect of the minimum fatal dose. The bile of the serpent was destructive in its action upon the venoms of other varieties. The bile of the ox in doses of 0.02 grammes destroyed a little more than the minimum fatal dose of venom. The bile of the harmless grass-snake is protective against the minimum fatal dose in 0.00025 grammes. Fraser says the bile of all serpents is "antivenomous." Bile is, itself, toxic, however, and caution must be exerted lest the dose of bile destroy the animal instead of protecting it against the venom. Fraser hopes that from the bile it may be possible to prepare some satisfactory antidotal substance. He surmises that various toxins which are eliminated by the alimentary canal meet with destruction in the bile, and that it is one of the special functions of the bile to destroy them.

Phisalix, "Du venin de Salamandre du Japan vis-à-vis du venin de vipère" (Compt. rendu de la Soc. de Biol. de Paris, July 31, 1897, 10 Series, IV, p. 822), discusses the resemblances in physiological action between the cutaneous venom of this salamander and the serum of the eel. These resemblances led him to investigate whether both had the same immunizing power against viper's venom.

He was able, by methods already given, to separate from the salamander's blood a substance which immunized against venom.

Fraser in a "Note on the Antivenomous and Antitoxic Qualities of the Bile of Serpents and of Other Animals" (*British Medical Journal*, Sept. 4, 1897, II, p. 595), points out that bile is not only antidotal to venom, but also to the toxins of diphtheria and tetanus; 0.05 grammes per kg. are sufficient to protect rabbits from fatal doses of diphtheria toxin.

Phisalix (Compt. rendu de l'Acad. des Sciences de Paris, Nov. 29, 1897, Tome 125, p. 977; also Compt. rendu de la Soc. de Biol. de Paris, Dec. 4, 1897, 10th Series, IV, p. 1031) studied the "Antagonisme entre le venin des vespidae et celui de la vipère; le premier vaccine contra le second." The fact that Bert and Sanger had killed small animals with the venoms of hymenopterous insects and observed symptoms resembling those of venom intoxication, led Phisalix to make a glycerine extract of the venom of 45 large wasps (vespa crabro) and experiment with it.

The venom of 15 hornets, placed in a guinea pig produced depression of temperature lasting 36 hours, with redness and edema of the abdomen at the point of inoculation and gangrene of the skin. Venom heated to 80° C. produced only a trifling swelling. The animals which received the wasp venom acquired resisting power against viper venom. The heated wasp venom also had a slight antitoxin power against viper venom, greatly retarding death from the minimum fatal dose.

Wasp venom filtered through porcelain also confers immunity. Alcoholic extracts produce much local edema. They readily yield their immunizing substance to chloroform water.

Phisalix, "La cholestrine et les sels biliaires, vaccins chimique du venin des Vipères" (Compt. rendu de la l'Acad. des Sciences de Paris, Dec. 27, 1897, Tome 125, p. 1153; also Compt. rendu de la Soc. de Biol. de Paris, Dec. 11, 1897, 10th Series, Tome 4, p. 1057), obtained the same results as Fraser concerning the action of bile upon venom. Persuing the investigation to the point of determining what constituent of the bile conferred this power upon it, Phisalix found that the glycocholate of sodium, taurocholate of sodium and cholesterin all possessed excellent vaccinal powers against venom.

S. Weir Mitchell and A. H. Stewart, in "A Contribution to the Study of the Action of the Venom of the Crotalus Adamanteus Upon the Blood" (Trans. College of Physicians of Phila., 1897, 3 s., XIX, 105-110) describe the changes in human, rabbits and serpents blood mixed with an equal quantity of venom. It was found that permanganate of potassium, injected subcutaneously into rabbits, had no counteracting effect upon the destruction of the corpuscles of the venom. Alcohol seemed to favor the corpuscular destruction. A saturated solution of permanganate of potassium mixed with the normal blood of a monkey, gives only a slight increase in the size of the erythrocytes. If the blood and venom be mixed so as to alter the corpuscles, and the mixture then be brought in contact with the permanganate of potassium solution under a cover slip, the erythrocytes can be seen again to

assume their normal size, the biconcavity returns, and the corpuscles are not broken down for weeks.

Calcium chloride had no inhibitory effect upon the action of the venom. Potassium permanganate also had the power of preserving the human corpuscles. The blood corpuscles of rabbits highly immunized to venom were not injured by venom as were those of normal rabbits.

Kenyon (*American Naturalist*, 1897, 21, p. 245) gives "The action of the venom of the Australian black-snake."

Calmette "Sur le Venin des Serpents et sur l'Emploi du Serum antivenimeux dans la Therapeutique des Morsures venimeuses chez l'homme et chez les animaux" (Annales de l'Inst. Pasteur, Mar. 18, 1897, Vol. II, p. 214), discusses experiences in healing after the injection of venom. Observations upon the use of antivenomous serum in the treatment of seven human beings are recorded. The snakes were of various species. All of the patients recovered. The measure of strength recommended above by Calmette is again described. If 1 cc. of serum suffices to preserve a rabbit of 2 kg. weight against a toxic unit of venom, he expresses the strength as 2000 antivenomous units per cc. No serum of less than 1000 units should be employed. Of the former strength the dose is 10 cc., of the latter 20 cc. Active immunity to venom is very fugacious and disappears in from two to four days. Hereditary immunity is of two months' duration. A discussion upon the active principles of venom is included. The general conclusions of the paper are:

(1.) 20,000 units of antivenene suffice for the treatment of ordinary cases.

(2.) The serum is efficacious against all venoms including those of scorpions.

(3.) It is useful in treating bitten domestic animals

Phisalix (*Revue Scientifique*, 1897, 4 Series, Vol. VIII, p. 97, 195 and 329, July 24, August 14, and Sept. 11) covers the whole subject of the biology of immunity and serum-therapy of venoms. The papers are long, constituting a series of lectures upon the subject. He adheres to his view that the toxic and immunizing substances in the venoms are different, and believes that the eel, frog, toad, hedgehog, mongoose and dog, all have antivenomous substances in their blood.

C. J. Martin, in a paper before the Royal Society of New South Wales, Aug. 5, 1896, brought out some points which are reiterated in a more important paper "Concerning the Curative Power of Antivenomous Serum on Animals Inoculated with Australian Snakes' Venom" (*Intercolonial Medical Journal of Australasia*, Aug. 20, 1897, p. 527).

An examination of all venoms convinced him that they contain two active principles varying in proportion in different snakes. He was able to separate these principles by filtration through a porcelain bougie covered with a film of gelatine. The element not precipitated by heat passes through, the other remains behind. It is this latter which destroys the red corpuscles of the blood and acts upon the cardiac muscle. The former acts upon the respiration. Cobra venom consists of 98.25% of uncoagulable proteid; daboia venom, 75% of uncoagulable principle. Martin found that when Australian venoms, rich in the coagulable principle, were injected into one flank of a rabbit, and antivenene into the other, the animals usually died in 24 hours. If, however, the venom solutions were filtered through gelatinized porcelain, they recovered. He concludes:

Calmette's serum is very useful in combating the one principle in venom, but practically ineffective against the other. Thus, if the two principles of venom are called A and B, A+B=fatality. Anything that will save the animal from A alone, or from B alone, will save the animal unless A or B is itself able to kill, when the neutralization of the other will not help matters. That Calmette's serum was so little effective in his experiments he attributes to the serum being possessed of only very feeble powers.

Martin and Cherry (*British Medical Journal*, Oct. 15, 1898, Vol. XI, p. 1120), in investigating "The Nature of the Antagonism Between Toxins and Antitoxins," mixed venom and antivenene together in proportions that effected complete neutrality, permitted the mixture to stand for a given length of time at 37° C., and then filtered it through a porcelain bougie covered with gelatine, as suggested by Brodie (*Jour. of Pathology*, 1897). The filtrate was harmless, showing that the venom, which should have passed through, had been previously destroyed. They found further that diphtheria toxin and antitoxin, after being permitted to stand mixed together for two hours, could not be separated by filtration

C. J. Martin and W. B. Halliburton, "Further Observations Concerning the Relation of the Toxin and Antitoxin of Snake-Venom" (Proceedings of the Royal Society of London, 1897, Aug. 20, 1897, Vol. LXIV, p. 88), observed the discrepancy between quantities of antivenene required to neutralize a given dose of venom when they are (1) previously mixed outside the body, and (2) simultaneously injected under the skin in different parts of the body, the latter requiring 10 to 20 times as much antivenene as the former. In one of Fraser's experiments it required 1000 times as much (*Nature*, April 23, 1896, p. 594). There is no constant ratio between the amounts necessary under the two conditions. The experiments, of which the paper contains full details, afford a reasonable interpretation of the very different efficacy of antitoxic serum under these two conditions, and also form additional confirmation of the conclusions regarding the direct chemical nature of the antagonism between the toxins and antitoxins of diphtheria and snake-poison respectively, which were previously drawn by Martin and Cherry (Proc. of the Royal Society, Vol. 68, p. 120, 1898).

The conclusions drawn from the experiments are:

(1). That about the same amount of antivenene necessary to neutralize the venom in vitro, is capable of doing so when the latter is injected into the blood stream and the former subcutaneously.

(2). At least ten to twenty times this quantity is required when they are both placed simultaneously under the skin, but in different parts of the body.

These results, as might be expected, show that the reaction is chemic, and in consideration

of this, together with other already collected evidence, the authors do not see how it could be otherwise.

The practical application of this in the treatment of snake-bite is to inject the serum intravenously, until the potency of the antivenomous serum, which is at the disposal of the public, is greatly enhanced.

C. J. Martin, "The Curative Value of Calmette's Serum in the Treatment of Inoculation with the Poisons of Australian Snakes" (*British Medical Journal*, Dec. 18, 1898, Vol. XI, p. 1805; also *International Medical Journal of Australasia*, April 20, 1898, III, 197-204), in answer to M. Calmette's statement that he had adopted an erroneous method of estimating the value of the antivenomous serum, states that in order to make reasonably sure the protective power of the serum, at least ten times the fatal quantity (as is done by Behring in estimating diphtheria antitoxin) should be used, and points out that Calmette fails to do this. He thinks that the difference in method, and the conclusions drawn from their experiments have underlying them the fundamental difference that Calmette believes the neutralization of the venom to be indirect and vital, while Martin thinks it direct and chemical.

In a paper upon the "Advisability of Administering Curative Serum by Intravenous Injection," Martin (*International Medical Journal of Australasia*, Aug. 20, 1897, Vol. XI, p. 537), concludes as the result of recorded experiments, that the antitoxic body is very slowly absorbed from the subcutaneous tissue, and that to secure its prompt action it should be injected directly into a vein.

In still another paper, C. J. Martin (*Intercolonial Medical Journal of Australasia*, Dec. 20, 1898, p. 713) found by experiment:

(1). That about the same quantity of antivenene necessary to neutralize venom *in vitro* is capable of doing so when the former is injected into the blood-stream, and the latter subcutaneously.

(2). At least ten or twenty times this quantity is required when they are both placed simultaneously under the skin, but in different parts of the body.

Wehrmann, "Sur les Propriétés Toxiques et Antitoxiques du Sang et de la Bile des Anguilles et des Vipères," (Ann. de l'Inst. Pasteur, XI, p. 810, Nov., 1897) concludes as follows:

A. The serum of the eel. The serum of the eel kills a guinea pig in doses of 0.1 on intraperitoneal injection, and kills rabbits in the same doses on intravenous injection. Heated to 58° C. it loses the greater part of its toxicity. Heated serum and diluted serum can produce immunity, and the immunity thus afforded persists about three days and is active against the serum of the eel and the viper, though not quite so long—24 hours. The action of the heated serum is not antitoxic and does not neutralize. Eels cannot resist serpents' venom. The serum of eels is attenuated by antivenomous serum given 24 hours before the poisonous blood. Antivenomous serum is both preventive and curative for eels' serum. Antidiphtheritic serum is active in preventing the effect of eels' serum, and neutralizes it *in vitro*. Antitetanic serum, normal horse serum and rabbits' serum are inactive. The serum of rabbits immunized to eels' blood and vipers' serum.

B. Serum of the Viper. This is three times as toxic as eels' serum. Injected preventively, it confers immunity against venom, but not against eels' serum. It vaccinates in the same manner. Antivenomous serum is preventive and curative in regard to it.

C. The action of the bile of cattle, eels and vipers on toxic sera and venoms. Beef bile destroys eels' serum and venom, but does not either prevent its action or cure animals against its effects when separately injected. Eels' bile neutralized venom and eels' serum when mixed *in vitro*. It has no curative or preventive value. The bile of the viper has a preventive or neutralizing action *in vitro* regarding venom, eels' blood and vipers' serum. Biles seem to exert a digestive effect by which they act. The sera of animals, immunized to any one of the poisons studied, are frequently active against others. The phenomena probably point toward the cellular theory of immunity. Wehrmann thinks his observations destructive to the specific action of sera.

(To be Continued.)

JOURNAL DE MEDECINE DE BORDEAUX.

November 17, 1901. (31me. Année, No. 46.)

1. The Value of Jacksonian Epilepsy in the Topographical Diagnosis of Cerebral Lesions. A. PITRES.
2. Cerebro-spinal Meningitis with Typhoid Fever. CHARLES MONGOUR and CHARRIER.

1.—Pitres reviews the literature upon the **value of Jacksonian epilepsy in the diagnosis of the topography of a cerebral lesion**, with special reference to a case reported recently by Professor Dieulafoy. Pitres believes that no constant relation can be claimed between any part of the cortex and attacks of partial epilepsy, though in the majority of cases the lesion is cortical, in the corresponding motor centres. But these attacks can often result from indirect compression of the centres, when the lesion may be near or far from them. [M. O.]

2.—Mongour and Charrier report a case of **cerebro-spinal meningitis and typhoid fever** in a man of 35. Kernig's sign was absent, the Widal reaction was positive and lumbar puncture showed polynuclear leukocytosis and meningococci. The patient recovered gradually. Mongour and Charrier believe that the two affections came on suddenly and simultaneously. [M. O.]

The Treatment of Tetanus.—E. Maragliano of Genoa reports a case of traumatic tetanus, in a man of 18, who, falling upon his head, wounded his scalp. (*Médicine Moderne*, September 4, 1901, 12me. Année, No. 36.) Two weeks later pain appeared in the muscles of the face, with trismus. The muscles of the neck were rigid, and occasional tonic convulsions occurred with opisthotonos. As so long a time had elapsed before the symptoms of tetanus developed, Maragliano thought that the case would be mild in character. Chloral is the favorite drug used in the treatment of tetanus, in doses of three to six drachms daily. The serum treatment has effected many cures, especially the serum prepared by Tizzoni, of Bologna. But the treatment which Maragliano adopted in this case was that recommended by Bacelli, subcutaneous injections of carbolic acid, from 9 to 15 grains a day. The latest treatment of tetanus, proposed by Wassermann, injections of an emulsion of the brain substance of a well animal, has been used successfully. Maragliano prefers carbolic acid and gave from 3 to 9 grains a day to this patient. In all, he had given 3.75 drams of carbolic acid. He left, cured, 45 days after his fall. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine-Hospital Service during the week ended February 28, 1902.

SMALLPOX—United States.

			Cases.	Deaths.
ALABAMA:	Birmingham.	Jan. 1-31.	5	
ALASKA:	Hooniah.	Jan. 29.	8	
CALIFORNIA:	Sacramento.	Feb. 8-15.	1	
	San Francisco.	Feb. 9-16.	20	
COLORADO:	Denver.	Feb. 8-15.	5	
ILLINOIS:	Belleville.	Feb. 15-22.	2	
	Chicago.	Feb. 15-22.	5	
	Danville.	Feb. 15-22.	7	
	Galesburg.	Feb. 15-22.	2	
INDIANA:	Elkhart.	Feb. 1-15.	20	
	Evansville.	Feb. 15-22.	14	
	Indianapolis.	Feb. 8-15.	8	
IOWA:	Clinton.	Feb. 15-22.	1	
KENTUCKY:	Covington.	Feb. 16-23.	6	
LOUISIANA:	New Orleans.	Feb. 15-22.	2	
MAINE:	Durham.	Feb. 15.	6	
	Freeport.	Feb. 15.	1	
	Portland.	Feb. 15.	2	
MARYLAND:	Baltimore.	Feb. 15-22.	3	
MASSACHUSETTS:	Boston.	Feb. 15-22.	19	4
	Cambridge.	Feb. 15-22.	4	
	Everett.	Feb. 14-21.	1	
	New Bedford.	Feb. 14-21.	3	
	Newburyport.	Feb. 15-22.	1	
	Quincy.	Feb. 15-22.	2	
	Waltham.	Feb. 15-22.	1	
MICHIGAN:	Detroit.	Feb. 15-22.	5	
	Ludington.	Feb. 15-22.	7	
MINNESOTA:	Minneapolis.	Feb. 8-22.	18	
MONTANA:	Butte.	Feb. 9-16.	4	
NEBRASKA:	Omaha.	Feb. 15-22.	10	
NEW HAMPSHIRE	Nashua.	Feb. 15-22.	1	
NEW JERSEY:	Camden.	Feb. 15-22.	3	
	Jersey City.	Feb. 15-22.	25	
	Newark.	Feb. 15-22.	29	5
NEW YORK:	Binghamton.	Feb. 15-22.	2	
	New York.	Feb. 15-22.	36	13
	Yonkers.	Feb. 14-21.	1	
OHIO:	Cincinnati.	Feb. 14-21.	19	
	Hamilton.	Feb. 15-22.	1	
	Middletown.	Feb. 8-15.	1	
	Youngstown.	Feb. 8-15.	1	
PENNSYLVANIA:	Allegheny.	Feb. 15-22.	2	
	Lebanon.	Feb. 15-22.		1
	Philadelphia.	Feb. 15-22.	62	15
	Pittsburg.	Feb. 15-22.	1	
	Reading.	Feb. 17-24.	1	
	Steelton.	Feb. 15-22.	1	
SOUTH CAROLINA	Charleston.	Feb. 15-22.	1	
TENNESSEE:	Memphis.	Feb. 15-22.	6	
TEXAS:	Fort Worth.	Jan. 1-31.	8	
	Houston.	Feb. 15-22.	12	
VERMONT:	Burlington.	Feb. 15-22.	17	
WASHINGTON:	Spokane.	Feb. 8-15.	25	
	Tacoma.	Feb. 8-16.	8	
WISCONSIN:	Green Bay.	Feb. 16-23.	9	
	Milwaukee.	Feb. 16-22.	2	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	Jan. 25-Feb. 8	12	
BELGIUM:	Antwerp.	Jan. 25-Feb. 8	16	3
BRAZIL:	Bahia.	Jan. 10-25	2	1
CANADA:	Halifax.	Feb. 15-22.	1	
	Victoria.	Jan. 4-11.	1	
COLOMBIA:	Cartagena.	Feb. 3-9.		2
	Panama.	Feb. 10-17.	20	10
FRANCE:	Nantes.	Jan. 1-31.	2	
	Paris.	Feb. 1-8.		3
GREAT BRITAIN:	Birmingham.	Feb. 1-8.	1	
	Glasgow.	Feb. 7-14.	6	1
	Liverpool.	Feb. 1-15.	26	
	London.	Feb. 1-8.	1102	82
	Plymouth.	Feb. 8-15.	1	1
INDIA:	Bombay.	Jan. 14-28.		9
	Karachi.	Jan. 12-19.	10	3
	Madras.	Jan. 17-24.		2
ITALY:	Naples.	Feb. 1-8.	11	
	Palermo.	Jan. 25-Feb. 1.		1
MALTA:		Feb. 1-8.	2	
RUSSIA:	Moscow.	Jan. 18-Feb. 1	32	12
	Odessa.	Jan. 25-Feb. 8	11	3
	St. Petersburg.	Jan. 25-Feb. 1	13	4
STRAITS SETTLEMENTS:	Singapore.	Jan. 4-11.	1	
URUGUAY.	Montevideo.	Jan. 4-11.	65	6

YELLOW FEVER.

MEXICO:	Vera Cruz.	Feb. 8-15.	2	2

CHOLERA.

INDIA:	Bombay.	Jan. 14-28.	7
	Madras.	Jan. 11-24.	3
STRAITS SETTLEMENTS:	Singapore.	Dec. 28-Jan. 11.	4

PLAGUE.

INDIA:	Bombay.	Jan. 14-28.	643
	Karachi.	Jan. 12-19.	25

JOURNAL DE CHIRURGIE.

November-December, 1901. (Première Année, No. 11).

1. Sudden Dislocation of the Hip in Acute Rheumatism. G. GEVAERT.
2. Fractures of the Skull Without External Wound. LEBRUN.
3. Tuberculous Adenitis of the Anterior Mediastinum. GALLET.
4. Partial Rhinoplasty. F. DEJARDIN.
5. A New Method of Performing Gastrostomy. A. DEPAGE.
6. Nephrectomy for Pyelonephritis. EUGENE BODDAERT.

1.—Gevaert reports the case of a girl of 13 who was sent to the Maritime Hospital at Middlekerke with the diagnosis of coxalgia. She had had pain in the hip, fever and enlarged glands four months before. All movements produced great pain. After the acute attack, dislocation of the left hip was first noted. On admission the diagnosis was made of **dislocation of the hip** downward and forward, toward the obturator foramen, occurring **in acute rheumatism.** She could only walk with crutches. Reduction was easily accomplished by the Lorenz method, under anesthesia, and a plaster bandage kept the reduced hip in place. After slight fever and pain, she left the hospital in good condition, walking well, as the photographs show. [M. O.]

2.—Lebrun reports a case of **fracture** of the arch **of the skull without external wound** in a small child who fell from a height of 12 feet, striking the top of her head. After a brief period of unconsciousness, she knew her parents and talked. Later epistaxis and vomiting occurred, followed by deep coma, dilated right pupil, and convulsive movements of the extremities. On resecting a temporal flap, a fissure was found in the right parietal bone, joining the tempo-parietal fissure. Trephining, without anesthesia, showed hemorrhage from the middle meningeal artery. Clots were removed and gauze left in 24 hours. A subcutaneous injection of normal salt solution was given, and she recovered in a few days. [M. O.]

3.—Gallet reports three cases of **tuberculous adenitis in the anterior mediastinal lymph-glands.** Secondary osteitis of the sternum follows in most cases. His first case, a man of 35, in whom the sternum and retrosternal abscess were incised and curetted, recovered slowly, the fistula healing from below. In a man of 26, the same procedure was followed, with recovery. The third case, however, died suddenly, three days after operation. Gallet advises seeking the retrosternal abscess in all cases and thoroughly draining it. [M. O.]

4.—Dejardin describes, with a series of photographs, **a partial rhinoplasty** performed upon a man of 71, for lupus. The technique follows in full. The result was excellent. [M. O.]

5.—Depage describes **a new method of performing gastrostomy,** which he has employed with success upon two patients in very poor physical condition. Incision is made to the left of the median line, part of the stomach is withdrawn from the abdominal cavity, and a longitudinal flap is cut from the stomach wall, its base above. The stomach walls are then attached with sutures of the mucous and serous coats separately, and these sutures are continued up the flap, making a long canal leading into the stomach. This canal is attached to the abdominal wall. The stomach is then replaced, and the abdominal incision closed. A sound can be left in the canal, to be removed at meal times. The operation takes at most a half hour. The details are shown in diagrams. [M. O.]

6.—Boddaert reports **a case of pyelonephritis in a woman** of 42, whose left kidney was removed by von Bergmann's lateral lumbar incision. She recovered rapidly. The tumor was very large, weighing 250 grams after the pus had been evacuated. A detailed histological examination of the kidney follows. [M. O.]

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The Crime Against Humanity.—Charles Darwin wrote to Pasteur in 1881: "I know that physiology can make no progress if experiments on living animals are suppressed, and I have an intimate conviction that to retard the progress of physiology is to commit a crime against humanity." These words of the eminent scientist apply even more pertinently in 1902 to experimental pathology and therapeutics.

Dr. Harold C. Ernst has conferred a favor on the medical world by publishing in book form the opinions of the distinguished citizens of Massachusetts who have recently remonstrated against the bill in that State to further restrict experimentation on animals. The list includes the names of such men as President Eliot, Bishop Lawrence, President Stanley Hall, Dr. Maurice H. Richardson, Dr. James J. Putnam, Dr. Bowditch, Dr. Councilman, Dr. Theobald Smith, and numerous other clergymen, physicians and laymen. It is deplorable that any necessity exists for such a remonstrance, but it is likewise most fortunate that the cause of humanity and science has secured such champions in Massachusetts. That State has the singular reputation of being the centre at once of a liberal culture and of extreme and fanatical opinion. It is therefore all the more desirable that this remonstrance of the Bay State's most eminent citizens should be spread abroad.

The arguments for and against vivisection are, to be sure, almost worn threadbare by this time. We might almost dismiss the subject with an expression of belief that this progressive country is not likely to turn the hands of the scientific clock back, and to take a permanent rear seat in science. So long as men go hunting and fishing and continue to maim and kill animals for sport or for food, just so long will the argument and the facts continue to be so clearly against the unlicensed antivivisectionists that their case will kill itself. We have no shadow of fear for science. Experimentation will continue in this country so long as a child is left to die of diphtheria or a beloved son or daughter to languish with tuberculosis. The carnivorous zoophiles who would rather hear a child choke with croup than a rat squeal with pain, are in the hopeless minority in this world and will remain so. We have no fear for the future. As the old anatomists triumphed over their oppressors, so will the modern pathologists triumph over the flesh-eating sentimentalists who would roast a chicken or a scientist with equal relish. Nevertheless, Dr. Ernst's book deserves to be widely distributed and read.

The Study of Snake Venom.—The progress of medicine in the last twenty years has been kaleidoscopic. No sooner has one series of investigations led to an apparently definite result, than the discovery of some new property of tissue or of some unexpected function has rendered an entire reconstruction necessary. Perhaps this is true of no substance so much as of the blood, particularly in its reaction to toxic substances. It will have impressed the reader of the valuable summary of the literature of venom and antivenene by Dr. McFarland, which is concluded in the present number of **The Journal,** that in regard to the action of the venom of poisonous serpents upon the organism as a whole, and upon the blood in particular, we are at present in possession of a considerable mass of facts, some of which appear to be contradictory, but all of which point in a certain general direction and to the existence of a toxic substance of hitherto undetected chemical composition. This toxin may cause to develop in the blood an anti-toxic substance the nature of which is equally unknown, which is capable under certain circumstances of counteracting the effects of the venom. There is also reason to believe that there are various forms of venoms and of antivenenes. The action of the antivenene upon the venom is not entirely elucidated, but appears to be rather biological than chemical. It has been only a few years since the investigations of Ehrlich upon ricin and anti-ricin in reference to the coagulation of blood corpuscles, caused a revolution in our methods of study of this subject, and the brilliant work of Bordet subsequently served to open an entirely new vista to experimental investigation. Venom and anti-

venene have been subjected to this method, and the results have been sufficiently surprising to cause us to suspend judgment, at least temporarily, in regard to all these questions. It is interesting to note that Dr. Weir Mitchell, whose long-continued studies on this subject make him easily first of American investigators of this branch, in his earliest paper with Reichert called particular attention to the colloid-like change that occurred in the red blood corpuscles, and in a subsequent paper, with Dr. Stewart, spoke of the hemolytic action of the serum. It is only recently that he has discussed the subject before the Philadelphia College of Physicians in reference to the influence upon it of the studies of Bordet. It is curious what a fascination the subject of snake poison seems to exert upon some men. Mitchell and McFarland, in this country; Physalix and Calmette, in France, and Fayer and Frazier, in England, have experimented and re-experimented, written and re-written, and it is to their knowledge of technique, and their familiarity with the work of other investigators, that we owe most of the progress that has been made.

We feel that Dr. MacFarland is entitled to the thanks and congratulations of all men interested in the subject of immunity, for his painstaking and thorough summary of the literature of snake venom.

The State Control of Trained Nurses.—Trained nursing is a profession, not a trade, because it involves the intelligent application of certain general principles rather than mere manual dexterity acquired by constant repetition. This will sound trite, and yet it is a necessary introduction to what we wish to say on the subject; and that is, that trained nursing is now passing through a crisis such as affects all professions at some time, whatsoever they may be. The crisis is that for purposes of profit or from motives of economy various persons and institutions are taking advantage of the desire of women to enter by easy routes a hitherto honorable calling, and thus causing a double injury—first, in providing a considerable number of unqualified persons with diplomas as trained nurses, and second, in so increasing the supply of nurses that the profession—just as has happened to the medical profession—is becoming cheapened in the eyes of the public. One of the subsidiary results of this is, that many women are applying for instruction in trained nursing, whose natural qualifications are inadequate to the task; and already the cry is heard from various training schools that a better quality of women for nurses is needed; that it is difficult to obtain enough for the needs of the hospitals from the candidates who apply for admission to the schools. Whether democracy has been a failure or not, is a question that may be difficult to answer. Whether under a minimum of government small communities may obtain their highest intellectual and moral development, is still an unsolved problem. It is certain, however, that in large communities much government is required, for the unscrupulous are ever willing to sacrifice the good of the community—often even their own good—for some temporary supposed advantage, or even for the pleasure of holding back a rival.

We have found it necessary to establish a State Medical Board, which, imperfect as it is, has nevertheless subserved a most useful purpose. We have found it necessary to prescribe a minimum term of medical instruction, because men who could perhaps in a short time acquire enough information to pass the examination of the State Board, would not be sufficiently familiar with disease, as such, to render them qualified to practise medicine, and this also has proved good. The question now arises whether, in view of the methods by which many so-called trained nurses are educated and let loose upon an unguarded public, the State should not intervene, and at least limit an abuse which is dangerous to the sick, and an injustice to women who have conscientiously prepared themselves for their chosen calling. We do not attempt to criticise a certain so-called college of nurses which is permitted to ply its trade in a building whose character, we should suppose, would render it unavailable for such a class of tenants; where, in a few weeks, a woman is given her diploma as a trained nurse without any practical, and with the most paltry theoretical, preparation. This is an abuse so glaring that it can almost be allowed to right itself. It is not exactly the same with small special hospitals, which from motives of economy have organized training-schools; hospitals for example devoted exclusively to obstetrics, exclusively to children's diseases, exclusively, even, to surgery. In none of these can a woman be supposed to acquire that well-rounded training, that familiarity with the needs of the sick-room, which can be attained only in the large general hospital. Moreover, by establishing training-schools under the leadership of one or two trained nurses, positions which might be filled by graduates of other hospitals are filled by student nurses, thus contributing to the over-crowding which is now so obvious. Moreover, the number of positions for student nurses is becoming so great that in order to obtain an adequate supply various hospitals are compelled—even the best of them—to accept women who on account of physical or other defects would otherwise have

been rejected. We believe, therefore, that at the present day the most satisfactory solution of this question is to be found in some State regulation of trained nurses. This regulation should involve three things. First, a minimum period of service as student nurses; second, a minimum degree of qualification on the part of the hospital that attempts to organize a training-school, and the rigid exclusion of all special hospitals from the privilege of having a training-school; third, a general examination of all candidates for diplomas before a State board. The question is one which needs deep consideration. We hope it will be agitated before the next session of the Legislature.

Trypanosoma.—This is the name of a parasite that infests the blood of horses, mules, and sometimes of rats. In India the disease caused by it is called "surra." In the *Indian Medical Gazette*, for February, 1902, there is an interesting account of this parasite written by Dr. E. D. W. Grieg, of the Indian Medical Service.

The symptoms of surra are described very briefly and consist very largely of fever and anemia. The fever is of a relapsing type. The anemia is shown by paleness of the mucous membranes and edema of the legs. The conjunctivæ frequently present minute hemorrhages. The internal organs apparently present few, if any, gross lesions.

Grieg describes this blood parasite and gives some excellent pictures of it. The trypanosoma is about the length of seven red blood corpuscles and derives its name from its twisting or boring movements. Its most prominent feature is a long flagellum at its anterior end. It contains a centrasome and nucleus and propagates by longitudinal division. It feeds upon the red blood corpuscles, and can be seen attacking them when examined in a fresh specimen.

The life history of the trypanosoma is not known. The parasite is supposed to be transmitted from animal to animal by some insect intermediary. But this is thus far problematical. A somewhat similar disease is known to be transmitted by the tsetse fly in South Africa.

A few weeks ago we called attention in these columns to a so-called new disease among horses that had just been reported by the health officers in the Philippine Islands. We have since been credibly informed that this disease was "surra." Those pathologists who are interested in this subject will find Dr. Grieg's paper of value.

The Death of Christian Fenger.—In the death from pneumonia of Christian Fenger, which took place Friday, March 7th, the medical profession not only of America but of the world has suffered a distinct loss. Next to the elder Gross he probably did more to advance surgical pathology than any other one man in this country. The West particularly owes him a lasting debt for what he has done to further surgical science and practice in that part of the country.

His writings show the thinker and the careful, painstaking student that he was. Probably his greatest work was done in the surgery of the kidney and common bile duct. Much of the conservative treatment of kidney and ureteral conditions practised by American surgeons can be traced to Fenger.

Christian Fenger was born in Copenhagen, Denmark, November 3, 1840. While still a student, in 1864, he served as surgeon in the war between Denmark and Germany. In 1867 he graduated and for two years was an assistant in Wilhelm Mayer's ear clinic in Copenhagen. He also enjoyed an extensive experience in military surgery during the Franco-German war. In 1877 he came to America and, settling in Chicago, rapidly rose to eminence. In 1895 he was Vice-President of the American Surgical Association, and at the time of his death he was the President of the Chicago Medical Society and Clinical Professor of Surgery in the Rush Medical College.

One of the honors of which he was proudest was the decoration of the Knight of the Danish Flag, conferred by Christian IX of Denmark.

Marat—Revolutionist and Physician.—Jean Paul Marat, the French revolutionist, has posed in history all these years as a doctor of medicine. Charlotte Corday, who stuck him under the fifth rib, has always posed as a heroine, and was apostrophised by Lamartine as the "angel of assassination;" but Lombroso, who has studied her alleged skull (for it is undoubtedly spurious), has tried to make her out a "degenerate." Now an attempt has recently been made to rehabilitate Marat, and to rescue his memory from the obloquy which history has flung upon it.

The life of the "People's Friend" has just been written by Ernest Belfort Bax. The author is an avowed socialist and an avowed apologist for Marat. His book chiefly interests us here as an attempt to vindicate Marat's claims to be a regularly graduated physician. About this question there has always been uncertainty. Carlyle, in his history of the French Revolution, calls Marat a "dog-leech" and a "horse-leech." The tendency has been to discredit his status as a physician.

Long before the Revolution it is certain that

Marat had practised medicine both in London and in Paris. He early became an author of a certain kind of medical brochures, which were intended to exploit electricity, light, and fire. In fact, physics rather than physic seemed to attract him, and he apparently wrote superficially on these themes with the aims of a charlatan rather than a true scientist. His books had no reputation among real men of science, and the French Academy would have nothing to do with him or with them. He enjoyed the unenviable distinction of having been ridiculed by Voltaire.

Marat was of Italian lineage; his true name was Mara, not Marat. He early displayed the savage and vindictive temper which afterwards made him the special exponent of the infamy of the French Revolution. On one occasion he drew a sword and rushed upon a public speaker who was criticising some of his scientific opinions. His writings abound with denunciations of his imaginary persecutors; in fact, he seems to have had, long before the Revolution, a veritable persecutory mania. So strongly marked was this that it would be a good subject for some student to work up as a contribution to the current literature of "degeneration." All men who differed with him or criticised him were his enemies. The man was clearly a charlatan and a paranoiac.

The most disingenuous part of Mr. Bax's book is the part in which he reproduces what he calls Marat's medical diploma from the Scotch University of St. Andrews. This diploma *may* be genuine, but Bax gives absolutely no proof of it. Where he obtained it, and where it has lain all these years, are questions that are neither raised nor answered. The diploma bears date 30 June, 1775. The obscurity which veils Marat's early life as a so-called practitioner of medicine, is but little relieved by the author of this book.

Marat seems to have been entirely devoid of constructive genius. He had a mania for pulling down —a genius for denunciation. Everything in the shape of authority was the object of his rage. He was the worst of the French revolutionists and the first of modern anarchists. It is in this character of anarchist that he receives the laudation of Bax. The medical profession may well disclaim the miscreant who was responsible for the September massacres. If anything were needed to complete the damnation of Marat, it would be just such a book as Mr. Bax has written in his defence.

The Liverpool School of Tropical Medicine.—We learn from the *Lancet* that Major Ronald Ross, late of the Indian Medical Service, has sailed to the West Coast of Africa to join in the sanitary and other scientific work now being done there by the Liverpool School. He will interest himself especially in the drainage operations now being carried on there. The British Government of Gambia is forwarding this work. Major Ross is quoted as expressing great confidence in the efficiency of this work as a prophylactic measure against malaria. With such a recognized expert on the ground the scientific world may feel confident that science will be in some way still further enriched. The work of this Liverpool School of Tropical Medicine is to be not only commended but also favorably, and in a friendly spirit of rivalry, compared with the splendid work being done by that other School of Tropical Medicine—the United States Government in Havana.

William Beaumont.—By the courtesy of the *Physician and Surgeon* we are able to print on another page of this issue a picture of the handsome monument which has recently been erected to the memory of Dr. William Beaumont near Fort Mackinac in Michigan. The name of Beaumont will always be an illustrious one in the annals of American medical science. By reason of the experiments and observations which he made on Alexis St. Martin, his work has long since become classical, and has placed him among that comparatively small group of professional men who have become immortal for the rare and unique service which they have rendered to their kind.

The story of Alexis St. Martin need not be repeated here. He was the Canadian voyageur who sustained a musket-shot wound which left him with a fistulous opening into the stomach. With rare judgment und unconquerable persistence Beaumont studied through this opening the action of the gastric juice. The interesting story has often been published, but never with more detail than in the Beaumont Memorial number of the *Physician and Surgeon*, published in December, 1900. The Upper Peninsula Medical Society of Michigan has honored itself and conferred a favor on the whole profession by erecting this appropriate monument.

The visit of Prince Henry to this country had absolutely no medical significance, whatever other significance it may have had; and yet it is not out of order to say that the relations of this country to Germany are not closer in any way than through the medical sciences. In view of this fact the recognition of the medical profession in the various festivities does not seem to have been general or even extensive. It is to be regretted that the

German Prince was not shown more of our educational institutions.

The case of Dr. William Oliver Moore, of New York, is worthy of special mention. Dr. Moore, according to the *New York Medical Journal*, is an ophthalmologist and has just been admitted to the bar. He expects to practise in both professions, with a special eye to medico-legal matters. This idea is not altogether novel, nor is it, we fear, altogether practical. There is such a gulf between the medico-legal expert and a cross-examining lawyer that even a graduate in both professions could not span it.

Current Comment.

TYPHOID FEVER AT PHILADELPHIA.

Following upon the winter rains, the disturbance of mud, and deposits by the torrental flow in the water-courses, another epidemic of typhoid fever has broken out in Philadelphia, and in the havoc achieved this disease is running a neck-to-neck race with diphtheria and smallpox. The city Bureau of Health reports that during January 334 cases of diphtheria, 433 cases of smallpox, and 432 cases of typhoid fever were notified. But during the week ending February 1st there were 201 cases of typhoid fever and this already outstrips last year's record. The worst weeks in 1901 were those ending on May 25th with 142 cases and on August 31st with 152 cases. The water-supply is considered to be the cause of the present as it was of the previous epidemic, and 600 men are now employed, working day and night, in the construction of new filtering beds which are to yield 6,000,000 gallons every 24 hours. But when the beds are completed the water must remain there for some time so as to press down the filtering materials and to impart sufficient compactness to ensure perfect filtration. Even when this is achieved the water can only be delivered at the low levels. Another filtering bed of the same capacity is in course of construction at a higher level, and it will be necessary to pump the water up to this point. These more extensive works will not be completed till the month of May at the earliest, so that there is still ample time for the epidemic to spread. Considering the emphatic warning given by the numerous epidemics of typhoid fever which have occurred at Philadelphia, it is difficult to explain why so important a city has been left for so long without a proper and safe water-supply.

—*The Lancet.*

INDECENT MEDICAL ADVERTISING IN DAILY PRESS.

There is such a general subversion of the ethical to the commercial by the editors of the newspapers of this country, that the action taken by Mr. Frank A. Munsey, who recently purchased and reorganized the *Washington Times*, is worthy of special commendation, and sets an example for good which it is much to be hoped may not be unheeded by other editors. In an announcement to the public, Mr. Munsey says: "There is another way of keeping a paper alive when it is not on sound business lines, and that is by running a lot of disreputable and shameful advertising—advertising that ought to put to shame any self-respecting publisher. I refer to a class of so-called medical advertisements that are carried by most of the newspapers of the country—even the respectable papers—but which advertisements are indecent and vile, and which the Post Office Department should compel publishers, regardless of their avarice, to drop."

Following out his ideas, Mr. Munsey has eliminated all advertising matter of this sort from his paper.

—*The Medical Record.*

INSURING AGAINST SMALLPOX.

There has been—since the epidemic of smallpox in London assumed alarming proportions—a great rush to insure against the dangers to health and life which might accrue from contracting the disease.

The New York *Sun*, February 9, referring to the matter, says that insurance firms which usually sign only 80 to 100 policies a day have recently found their output average 600 policies.

The rate of insurance varies from half a crown (62 cents) per £100 ($500) for vaccinated persons, and 40 pence (80 cents) for unvaccinated persons to 15 shillings (3.75) and 21 shillings ($5.25) per £100 ($500) for certain districts in the East End of London. Some insurance firms are sending circulars to their policy holders, offering to insure them against smallpox for 4 shillings ($1) per £100 ($500).

The British, notwithstanding reports to the contrary, still seem to be imbued with keen commercial instincts, and do not appear inclined to allow mere sentiment to overcome their inborn thrifty habits.

Although it is a novel departure to gamble against disease, the innovation has in its favor the fact that it is founded upon sound business principles.—*The Medical Record.*

THE BERTILLON SYSTEM EXEMPLIFIED.

An interesting exemplification of the value of the Bertillon system has just been shown in New York. An Englishman by the name of Burslem was recently convicted of grand larceny. The record and measurements of a criminal of the same name had been sent from England, but the prisoner pleaded for clemency on the ground that it was a case of mistaken identity. Judge Foster, in the Court of General Sessions, where he was tried, stated that clemency would be extended to him if he could show that he was not the criminal with the record in foreign cities, and accordingly suspended sentence until an examination of his person had been made. The examination was held in the Tombs on February 20, and it was then found that the man bore all the distinctive marks the description of which had been received from the English police authorities. The identification was all the more positive in this case from the fact that Burslem had had one of his legs amputated below the knee. While serving as a drummer boy in the British army his foot and leg had been crushed by the wheels of a cannon in the war against the Zulus, and on account of this he was granted a pension by the Government.—*The Boston Medical and Surgical Journal.*

Correspondence.

THE TALLEST MAN.

By E. A. CRAIN, M. D., Missoula, Montana.

To the Editor of the **Philadelphia Medical Journal:**

I see in a paragraph headed "The height of the tallest man," on page 309 of the **Philadelphia Medical Journal**, February 15, 1902, that the quotation, printed from the *Medical Examiner and Practitioner*, says the height of the tallest living man is 7 ft. 3 in., being the measurement of Chang-tu-Sing. Last Friday, February 21st, there was exhibited in this town, (Missoula, Mont.) a young man, 21 years old, who is 7 ft. 10.5 in. tall. He is a French Canadian named Beaupre. He has a brother 10 years old who is 6 ft. tall. Parents medium sized.

NO QUARANTINE IN COLORADO AGAINST TUBERCULOSIS.

To the Editor of the **Philadelphia Medical Journal:**

Owing to the fact that repeated statements have been made that Colorado has seriously considered quarantining against consumptives and owing to the further fact that an editorial in the *Journal of the American Medical Association* for January 25, 1902, page 254, repeats this assertion, despite an official denial by the Secretary of the

Colorado State Board of Health, published in the same Journal for June 2, 1900, page 1430, it is deemed but just and fair to request that the following statement be published in a conspicuous place in your next issue.

We hereby certify

1. That so far as we are aware, no member of the Colorado State Board of Health ever proposed the subject of preventing tubercular persons entering the State.

2. That so far as we are aware, no member of the legislative or executive branch of the State of Colorado ever suggested such a course.

3. That there is no law to that effect on the statute books of the State of Colorado, nor so far as we know has any such law ever been suggested by any responsible citizen of the State.

4. That so far as can be ascertained, there does not now exist, nor has there ever existed, any ordinance to that effect in any city or town in Colorado, nor has there been any suggestion by those in authority, or by any responsible citizen that such an ordinance be passed.

5. That so far as we can learn, there does not now exist nor has there ever existed, any regulation of any board of health in the State of Colorado covering the subject of quarantining consumptives, nor has any such regulation been suggested by any responsible citizen of the State.

6. That on the contrary, in February, 1900, the Colorado State Board of Health issued a circular containing the following:

"That this climate has saved the lives of many who have come early cannot be doubted. There is no need to talk of quarantining against consumption. Such a course is both unnecessary and impracticable. Doubtless, many persons with advanced tuberculosis should not be sent here, but for those who can be benefited by coming, Colorado should have nothing but a warm welcome."

7. That we know of no proposition of the sort mentioned by any one in Colorado, and that all of us who sign this paper have held responsible sanitary positions, and that we have persistently and constantly stated that no such measures are necessary.

G. E. TYLER M. D.,
Sec'y Colorado State Board of Health since 1899.

HUBERT WORK M. D.,
President Colorado State Board of Health since 1899. Member of said board since 1895.

J. N. HALL M. D.,
Treasurer and Vice-President Colorado State Board of Health since 1899. President Colorado State Medical Society, 1899-1900.

HENRY SEWALL, M. D.,
Sec'y Colorado State Board of Health, 1893-1899.

L. E. LEMON, M. D.,
Member Colorado State Board of Health 1899-1901. Health Commissioner of Denver, 1893-1895. President of Colorado State Medical Society, 1897-1898.

WM. P. MUNN M. D.,
Member Colorado State Board of Health 1893-1899. Health Commissioner of Denver, 1895-1899. President Colorado State Medical Society, 1900-1901.

LEONARD FREEMAN, M. D.,
Member and Treasurer Colorado State Board of Health since 1899.

A. A. CLOUGH, M. D.,
Health Commissioner of Denver since 1901.

W. H. CAMPBELL, M. D.,
Health Officer of Pueblo since 1901.

Reviews.

The Principles of Pathological Histology. By Harvey R. Gaylord, M. D., and Ludwig Aschoff, M. D., with an Introductory Note by William H. Welch, M. D., illustrated with 81 engravings in the text and 40 full page plates. Lea Brothers & Company, Philadelphia and New York. 1901.

That Professor William H. Welch could be persuaded to write an introductory note gives full assurance that there is something exceptionally meritorious about this book, and at once gives it the stamp of his approval. From his Introductory Note we quote: "This work is distinguished from the text-books on morbid histology of similar scope, especially by the extensive use which has been made of photographs to illustrate the lesions of disease. It is not necessary to discuss here the respective merits of drawings and of photographs for such illustrations. Each method has its special advantage and field of application. When such excellent results of the photographer's art are presented as will be found in the plates in this book, there can be no question of the material aid which they afford to the student, especially to one who has acquainted himself with the actual appearances of the corresponding lesions under the microscope. The subject matter of the text has an especial value as the presentation of the experience of the authors based upon the methods and teachings of Professor Orth's excellent laboratory in Göttingen. The section on the technique of photomicrography cannot fail to interest and aid practical workers in this important field."

There have been marvelous advances in photomicrography in recent years, and we remember having reviewed a somewhat similar work published a half dozen or more years ago, of which we were obliged to say that the most useful illustration it contained was the only one not a photograph. There can be no doubt that the photomicrographs illustrating the present work are the finest ever published and are a delight to those qualified to realize their excellence. The pictures are well chosen and fairly well illustrate the text, though one somehow receives the impression in looking over the book that the text was written more to explain the pictures than the pictures used to illustrate the text. However, the text is good. It is purely descriptive in style. Part I deals with microscopical technique and contains all the necessary methods well outlined. Part II at once enters the field of special pathological histology.

While the text of this part is good, its excellence falls far below that of the illustrations, but these are so extraordinary that it must, indeed, be a remarkable writing that could properly be considered their equivalent.

Part III, which ends the work, gives a most excellent synopsis of the art and science of photomicrography which, as Professor Welch has said, "cannot fail to interest and aid practical workers in this important field."

We feel that in this work of Gaylord and Aschoff we have a new and valuable addition to the library of as many students as can afford to buy it, and a work which must stand as the highest achievement of the practical utilization of the photomicrographic art. [J. McF.]

Neurological Technique. By Irving Hardesty, Ph. D. The University of Chicago Press, Chicago; William Wesley and Son, London, 1902.

This little book contains in a condensed form a description of most of the methods that are employed in the study of neuropathology. Dr. Hardesty has been an assistant in neurology at the University of Chicago, and seems to have gained much of his experience there. The descriptions are clear and will probably be easily understood by those making use of this book. It would be well if emphasis had been placed on the employment of a hardening fluid permitting the staining of tissue from the same block by the Nissl, Weigert and Marchi methods, and this fluid consists of a mixture of formalin and Müller's fluid. It seems strange that the Weigert method for medullary sheaths should be omitted, and only the more troublesome and less satisfactory Pal modification be given. The hematoxylin solution for the Weigert stain may be made up and kept for weeks, if the lithium carbonate is added only when the sections are stained. To the methods given might well be added the old fashioned but satisfactory ammonium carmine stain.

The recommendation is given to remove the brain from the cranium by beginning the detachment at the medulla oblongata. With a little care the cranial nerves need

never be torn off by beginning the removal at the frontal lobes and continuing backwards.

Every one who works much in a laboratory will employ his own modifications of well known methods, but this little book will be found useful, and will enable the investigator to inform himself rapidly concerning some of the newer and less often employed methods. [W. G. S.]

Infant-Feeding in its Relation to Health and Disease. By Louis Fischer, M. D., Visiting Physician to the Willard Parker and Reception Hospitals of New York City, Attending Physician to the Children's Service of the New York German Poliklinik; Former Instructor in Diseases of Children at the New York Post-Graduate Medical School and Hospital, etc., etc.; Fellow of the New York Academy of Medicine. Containing 52 illustrations, with 23 charts and tables, mostly original. Second Edition. Philadelphia, F. A. Davis Company, Publishers, 1901. Pp. viii., 343.

A book scarcely needs praise which goes to its second edition within six months after the appearance of the first edition and we may therefore waive a discussion of the merits of the book further than to say that a criticism which we made elsewhere with regard to the first edition, that it did not have enough of the expression of opinion by the author himself, holds to a less extent with regard to the edition before us. Among the additions is a chapter on "Infant Feeding in Summer Complaint." The changes throughout the book have increased its value, but we would commend to the author for consideration for future editions such changes as making the headings of the chapters correspond with the table of contents; the omission or completion of the chapter on Bacteria of the Intestine; and the condensation of Chapter XXXIV, General Rules for Rectal Feeding into a sentence which could be inserted in the preceding chapter. [A. H.]

The Baby. His Care and Training. By Marianna Wheeler, Supt. of The Babies' Hospital, New York, since 1891, Graduate of the Training Schools of the New York Hospital and Sloane Maternity Hospital. Illustrated. Harper and Brothers, Publishers. New York and London. MCMI. Pp. 189.

This is one of the best, if not the best, of the books on the subject extant. There need be no hesitation on the part of physicians to recommend its use in families under their care as it is not a family medicine book, but is only what its title indicates and as such it is not too extensive, but is full of common sense. There are but two points to which we object, one the giving of set formulas for infant feeding, and the other the statement that the administration of antitoxin late in diphtheria is "worse than useless;" in some cases it may prove to be useless, but we do not believe that it is worse than useless. [A. H.]

Transactions of the Medical Association of Georgia. Fifty-Second Annual Session, 1901. Atlanta, Ga., 1901.

The Transactions of the Medical Association of Georgia contain a paper by Virgil O. Hardon, in which the author advocates the use of an enema composed of one ounce of alum in one quart of water in cases of operations. He claims excellent results from this form of intestinal distention following abdominal enema in stimulating peristalsis and expelling flatus. He says that he has seen but one patient in nine years in whom the excellent effect was not found. J. Lawton Hiers contributes a paper on the Value of Protargol, which in his hands has given good results when used in the treatment of ophthalmia neonatorum and trachoma. T. Virgil Hubbard contributes a paper on the Antiseptic and Eliminative Treatment of Typhoid Fever, in which he makes out a good case for the usefulness of intestinal antiseptics in intestinal autointoxication, but in which he confounds the first symptoms of a gastro-intestinal infection with a definite disease. He refers in a sarcastic and unworthy manner to the epoch-making work of the investigators who are devoting their energies to the problems of the etiology of disease. J. Cheston King contributes a paper praising the Roberts-Horsley lymph compound in which he sets down as skeptics and as blind men those who have not hailed the advent of the new "specific." He forgets that secrecy in the composition of any therapeutic agent is fatal to the general acceptance of that agent by a profession that bases its actions on the code of ethics. Instead of assailing those who do not champion the new "specific," the author should spend his time in giving us the formula of "the ideal cell tonic." [J. M. S.]

The Pocket Gray, or Anatomist's Vade Mecum. By the late Edward Cotterell, F. R. C. S. Fifth edition revised and edited by C. H. Fagge, M. B., M. S., Lond., F. R. C. S., Senior Demonstrator of Anatomy, Guy's Hospital. William Wood & Co., New York, 1901.

This splendid little manual on anatomy fills a long felt want. The term "Pocket Gray" is a euphemistic one, as the author undoubtedly does not confine himself to the late Henry Gray. Such a publication coming from the pen of Dr. C. H. Fagge, who like his father, Dr. Milton Fagge, of Guy's Hospital, is also an eminent anatomist, cannot fail to excite interest and admiration wherever it is employed. One of the most commendable features of this little publication is that it embodies essential points of anatomy in a concise and compact manner. The little volume will prove of exceptional use to medical students, as a means of refreshing their memories before examination. [M. R. D.]

Contribution to the Study of the Operative Indications in the Insane.—Mallet (*Gaz. Heb. de Méd. et de Chirur.*, July 7, 1901, 48 me. Année, No. 54; *Paris Thesis*, 1900-1901) gives the following indications concerning the advisability of operating upon insane patients: (1) In patients possessed by a single fixed idea the surgeon may operate with some chance of seeing the fixed idea disappear, if a lesion or malformation suitable for operative interference exists. If, on the contrary, the somatic lesion is of slight importance and if the fears of the patient are multiple, the surgeon should not operate. (2) In a patient who presents a psychosis that bears a causal relation with a besieging idea due to an evident lesion, the indication for operation is absolute. (3) In melancholic hypochondriasis the surgeon should not operate even in case of evident lesions. However, experience has shown that during the period of convalescence an operation may benefit the mental condition in these patients. (4) In patients who are persecuted and in whom hypochondriacal ideas are present, the indications for operations are much more difficult to establish. In these patients the study of each particular case is necessary in order to determine whether or not operation is advisable. (5) In neurasthenic or hysterical conditions with hypochondriacal ideas, the general rule is to abstain from operation; since in these patients suggestion is all that is necessary. (6) In those who are persecuted or who are persecutors the rule is to avoid operation except in case of emergency. [J. M. S.]

Urethral and Peri-urethral Tuberculosis.—Bérard and Trillat discuss tuberculosis of the urethra in the *Bulletin Médical*, (August 21, 1901, No. 66). They describe three cases, after reviewing the literature. The first case was a child with tuberculous cystitis in whom urethritis followed. Ulceration of the meatus and glans penis resulted. This local tuberculosis was most painful. The second case was a man of 26, with adenitis, fistula in ano, etc. A peri-urethral abscess and stricture of the anterior urethra followed epididymitis of tubercular origin. The abscess was opened and freely evacuated. The third case was a man of 19, with perineal abscess. He had had tuberculous epididymitis at the age of 8 years. The abscess was very wide-spread. These cases of pure tuberculosis of the urethra are very rare. [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Philadelphia Pediatric Society. At the last meeting of the Philadelphia Pediatric Society, held March 11, Dr. John Lovett Morse, instructor in the diseases of children in the Harvard Medical School, delivered an address upon "Some Diseases of the Kidneys and Bladder in Infancy." After the meeting, a reception was given to Dr. Morse at the Aldine Hotel. During the day Dr. Morse visited the Jefferson, Pennsylvania and University Hospitals, and delivered a lecture at Jefferson Medical College at the invitation of Dr. E. E. Graham.

State and Municipal Tuberculosis Institutions.—Drs. H. L. Taylor and J. L. Camp, of St. Paul, commissioned by the Governor of Minnesota to report upon the State and municipal institutions for tuberculous patients, last week inspected the original and unique designs for the eight glass pavilions to be erected on the ground of the Philadelphia Hospital. They have visited Gravenhurst and St. Agathe in Canada and Rutland, Sharon, Saranac, Liberty and White Haven, in the United States.

Spring Medical Courses for Post Graduates.—The medical department of the University of Pennsylvania will establish a post-graduate medical school of medicine this spring, to correspond to the "Ferien-Curse" of the German Universities. Courses of from four to six weeks' duration will be offered in medical chemistry, anatomy, physiology, bacteriology, pathology, clinical medicine, surgery, gynecology, ophthalmology, otology, dermatology, laryngology, and the other specialties. They are designed especially for physicians who live at a distance from active medical centers, or those who find it difficult or even impossible to keep in touch with the progress of medicine. The work is to begin May 12, 1902.

Society Meetings Next Week.—The following sections of the College of Physicians, Philadelphia, will meet next week at 8.15 P. M., Tuesday evening, March 18, Section on Ophthalmology; Wednesday evening, March 19, Section on Otology; and Thursday evening, March 20, Section on Gynecology.

Dr. Welch Honored.—An address on "Immunity" was delivered March 7, before the students of Jefferson Medical College, Philadelphia, by Dr. W. H. Welch, of Johns Hopkins University, under the auspices of the J. C. Wilson Medical Society. Upon the same evening a large reception was given to Dr. Welch by Dr. J. C. Wilson, at the University Club, attended by the prominent medical men of the city.

Free Hospital for Poor Consumptives.—At the annual meeting, held March 10, Dr. L. F. Flick reported that 15 patients now in the sanatorium at White Haven have been practically cured, out of 76 patients so far admitted. Only the most promising cases are sent to the White Haven Sanatorium.

Death of Dr. Moore.—Dr. Edward Mott Moore, a nephew of the late Lucretia Mott, died in Rochester, N. Y., March 6, aged 88 years. He was graduated from the Medical Department of the University of Pennsylvania in 1835. After serving as resident physician at the Philadelphia Hospital and at the Friends' Asylum, Frankford, he moved to Rochester, N. Y. From 1842 to 1853 he was professor of surgery in the Medical School at Woodstock, Vt. Afterward he filled the same position in the Berkshire, Massachusetts, Medical College, Starling Medical College, Columbus, Ohio, and the Buffalo Medical College, where he remained 25 years. He was at one time president of the Medical Society of the State of New York, and was a founder of the American Surgical Association, succeeding Dr. Gross as president.

NEW YORK AND NEW JERSEY.

Smallpox Hospital, New York City.—A bill has been introduced authorizing the construction of a smallpox hospital in the Bronx. The building is to cost $300,000, the site to cost $200,000, the hospital to be devoted to cases of infectious and contagious diseases. Attempts are being made to procure a private hospital for contagious and infectious diseases. Large sums of money have already been offered for the purpose.

Scarlet Fever Epidemic.—An epidemic of scarlet fever is reported at Millville, N. J. The public schools have been closed on account of the number of cases of the disease.

New York Academy of Medicine.—At the next meeting, to be held March 20, the subject for discussion will be the operations for the relief of paralytic deformities, with special references to tendon transplantation. Dr. Royal Whitman will speak upon the indications for operation: Dr. W. R. Townsend, upon the method of production of deformities; Dr. V. G. Gibney, upon the technique of the operation, and Dr. Joseph Collins upon the neurological questions involved.

Ophthalmic and Oral Institute, New York City.—The new building for the New York Ophthalmic and Oral Institute will soon be erected at the northwest corner of Sixty-fourth street and Central Park. The price of the property was almost $225,000. The chief physician of the institute is Dr. Herman Knapp.

Scarlet Fever on the Hohenzollern.—One case of scarlet fever appeared among the crew of the German Imperial yacht "*Hohenzollern*," lately stationed in New York. The sailor affected was removed to the Roosevelt Hospital, and the quarters of the crew were disinfected. Prince Henry of Prussia, on his return to New York, March 7, did not return to the yacht on this account.

Smallpox in Camden.—Not only have no new cases of smallpox been reported in Camden during the past week, but the last quarantine of private residences was removed March 6. There remain but ten convalescent patients in the isolation hospital. In all, 165 cases occurred in Camden during the epidemic, with 15 deaths, 11 of which were caused directly by the disease. About 8000 people were vaccinated by the city physicians, and 20,000 by their own physicians. Nine-tenths of those attacked had never been vaccinated, none of them having been vaccinated within three years.

Compulsory Vaccination.—The compulsory vaccination bill, introduced by State Senator McCabe, will probably be compromised. The Medical Association of the City of New York is in favor of passing the bill as it stands, the State Department of Health wants it compromised, and the State Medical Society is absolutely against compulsory vaccination. The commissioner of the Department of Health of New York City believes compulsory vaccination to be unnecessary, since no serious difficulty has been encountered in persuading the people to submit to vaccination.

Smallpox on Shipboard. The Anchor Line steamship *Anchoria*, which arrived at New York from Glasgow March 9, was detained at quarantine on account of a number of smallpox cases on board.

NEW ENGLAND.

Compulsory Vaccination, Cambridge.—The city of Cambridge, Mass., has been divided into 17 sections, and 17 physicians with complete vaccination outfits started, March 7, to vaccinate all the unvaccinated citizens of the city. The board of health has decided to compel all residents to submit to this treatment. They have been instructed to make a list of those refusing to be vaccinated, and it is probable that continued refusal will result in prosecution. This compulsory vaccination also applies to the students of Harvard University.

Autopsies on the Insane.—Dr. A. H. Harrington, superintendent of the Danvers Insane Hospital, has asked the Massachusetts Legislature for an amendment to the law which will permit autopsies in State insane hospitals and asylums. It very often happens that clinical data in a case are recorded for many years. When death occurs it is very important that an autopsy be performed to explain the data taken and perhaps to open an entirely new line of inquiry. The hospitals spend $6,000 a year for pathological research pursued by their assistant physicians, while the law now requires that bodies be immediately sent to medical schools for dissection without autopsy. Professor Dwight, Dr. J. C. Warren and Dr. F. C. Shattuck opposed

the autopsy bill on the ground that it would interfere with dissection in the medical schools. No conclusion has as yet been reached.

Starvation and Measles.—From Portland comes the news of an epidemic of measles among the half-breed residents of Malago Island in Casco Bay, Maine. There are about 60 people on the island, living mainly on fish and clams, their only business being with the few fishermen who visit the island. Two fishermen report that they found great numbers of people sick and starving, without any medical care.

WESTERN STATES.

A Diphtheria Epidemic.—From Santa Fé, N. M., comes the report of an epidemic of diphtheria among the Pueblo Indians. 40 deaths are reported is two precincts alone. The superintendent of the U. S. Indian School has proclaimed a general quarantine among the Indians and has warned them from coming into any of the towns. He has telegraphed for antitoxin to be used in twenty or more Indian villages. The schools have been closed in northern Taos county.

California Health Resorts.—The highest of the noted health resorts of California are in the San Jacinto Mountains, at elevations of 8000 and 9000 feet.

German Citizens of Chicago.—It is said that the number of Germans resident in the city of Chicago, 490,000 in all, outnumber the citizens of every other nationality there. Statistics show that even the number of Americans is 2000 less.

Death of Dr. Fenger.—Dr. Christian Fenger died in Chicago March 7, of pleuropneumonia, in his sixty-second year. As a pathologist he had few equals. His reputation for skill in surgical operations was international. He was born is Copenhagen, Denmark, November 3, 1840, and was graduated from the University of Copenhagen in 1867. From 1871 to 1874 he was on duty at the Copenhagen Hospital. He then went to Egypt, and moved to Chicago in 1877. In 1878 he became a member of the attending staff of the Cook County Hospital, in 1880 curator of the Rush Medical College Museum, is 1884 professor of clinical surgery at the College of Physicians and Surgeons, and in 1899 he took the chair of clinical surgery in Rush Medical College, University of Chicago. On his sixtieth birthday, in 1900, a banquet was given in his honor at which 500 physicians were present. In 1895 he was vice-president of the American Surgical Association. He received many memorials and hon-



The William Beaumont Monument, Mackinac Island, Michigan.—Last fall the monument, a photograph of which we show here, was erected in honor of Dr. William Beaumont, the surgeon of the United States Army, whose experiments upon the gastric juices, in the well-known case of Alexis Saint Martin, were carried out on Mackinac Island from 1822 to 1825. The site for the monument, which was given by the Mackinac Island State Park Commission to the Upper Peninsula Medical Society in July, 1900, is located directly in front of Fort Mackinac. Saint Martin had been shot in the left side in 1822, his stomach being perforated. Dr. Beaumont, chief surgeon at the fort at that time, took charge of the case. One year after the accident all injured parts had firmly cicatrized with the exception of the aperture in the stomach. The results of his investigations were published in 1833. The diet table, constructed by Beaumont as a result of his observations upon the action of the gastric juice, is quoted as an authority to this day. As is seen from the photograph, for which we have to thank the *Physician and Surgeon*, the inscription upon the monument states that "Near this spot Dr. William Beaumont, U. S. A., made those experiments upon Alexis Saint Martin which brought fame to himself and honor to American medicine."

ors, among which the most prized was a decoration conferred by the King of Denmark. During his residence in Chicago, he was surgeon at some time to the Cook County, Presbyterian, Tabitha Norwegian, Passavant Memorial, Lutheran, Polyclinic, German and German-American Hospitals.

SOUTHERN STATES.

Springfield Insane Asylum, Maryland.—The superintendent and president of the Springfield Insane Asylum have asked the Senate Finance Committee for an increased appropriation of $6000 for maintenance, making $36,000 in all. This increase was recommended. Application was made for $25,000 for erecting a cottage for female epileptics. $6000 was also appropriated for building a good road from the railroad at Sykesville to the institution.

U. S. M. H. S.—The Senate report on the Legislative, Executive and Judicial Bill for expenses for the year ending June 30, 1903, recommends that the salary of the supervising surgeon-general, U. S. M. H. S., be increased from $4000 to $5000. This is a change made by the Senate Committee from the bill as passed by the House of Representatives.

Georgia Journal of Medicine and Surgery.—Dr. W. E. Fitch, founder, and for many years editor and business manager of *The Georgia Journal of Medicine and Surgery*, published at Savannah, has sold his interest in the publication to his former associate and co-editor, Dr. St. J. B. Graham, who becomes editor, and sole owner. The journal, under Dr. Fitch's editorial management, from the appearance of the first issue, merited the support of the profession, and gradually, year after year, made for itself a place among the best medical periodicals of this country. Dr. Fitch will devote his entire attention to the practice of his profession in Savannah.

County Insane Hospital, Weyauwega, W. Va.—The plans for the new county insane hospital have been approved, and contracts have been given for the erection of a building to accommodate 125 patients at the cost of about $80,000.

Aid for Medical Schools.—Much interest has been aroused by a bill, introduced March 4, for the appropriation of $15,000 a year for two years, the amount to be divided between the Baltimore Medical College, Maryland University and the College of Physicians and Surgeons. This bill has developed great opposition.

Cambridge Hospital, Dorchester County, Md.—Friends of the hospital are asking for an annual appropriation of $4000 a year with an additional $5000 this year. For this purpose a committee composed of representative citizens of Dorchester county appeared before the Ways and Means committee at Annapolis last week.

Johns Hopkins University.—At the 25th anniversary, February 22, not only was the degree of LL. D. conferred upon Dr. J. S. Billings, but the degree of A. M. was also given three medical men, Drs. W. T. Councilman, H. M. Thomas, and R. L. Randolph.

CANADA.

(From our Special Correspondent).

A New Hospital in New Brunswick.—A new hospital has lately been opened in New Brunswick, on the bank of the St. Croix River, a short distance below the town of St. Stephens, to which it has been presented by Lady Tilley, wife of the late Lieutenant-Governor of the province, and other heirs of the Chipman Estate. It has accommodation for twenty patients.

The Value of Vaccination.—According to Dr. J. E. Laberge, of Montreal, there have been in the hospital, since May, 1901, no less than 240 cases of smallpox. Not one of these had ever been vaccinated. Their attendants, 18 in number, have been in close contact with them daily and hourly, but not one of them has contracted the disease.

Montreal's Marriage and Birth-Rate is decreasing, while the death-rate is increasing. According to the report of the Department of Health for the year 1900, the last which has been issued, the marriage-rate was 7.76, while in 1891 it was 9.65. There has also been a great falling off in the birth-rate. In 1891 the birth-rate per thousand of the population was 48.87. In 1900 it has come down to 34.26. In 1891 the death-rate was 24.24; in 1900, 25.46. The population of the city has increased from 218,268 in 1891 to 288,658 in 1900.

Montreal General Hospital.—The annual meeting of the Montreal General Hospital took place recently. All the old members of the staff were re-elected. The medical report showed that during 1901 the indoor patients treated numbered 1,919. At the end of the previous year 54 remained, and during the entire year 1,933 new patients were admitted. 168 remained in the hospital at the end of 1901. There died in the hospital during the year 148, the death rate being 7.7 as compared with 8.5 for the previous year. The average cost per patient per day was $1.43.

At the Toronto Clinical Society February 5, an interesting discussion took place on capsular nephrotomy. Two cases were reported. The first one, reported by Dr. W. P. Caven, was operated upon by Dr. G. A. Peters, who performed encapsulation of both kidneys at one sitting. The second case was reported at length by Dr. Primrose, who had performed the operation himself. Dr. Caven's case was in a man, aged 34 years; the most notable item in connection with this case was the total disappearance of casts in the urine after operation. The patient is recovering nicely. Dr. Primrose's case was in a boy, ten years of age, who had had general anasarca and ascites for six months, and paracentesis abdominis had been performed seventeen times. Each kidney was operated upon separately. The albumin in the urine diminished from 1.6 per cent. to 0.3 per cent. after the operation, and general edema disappeared. These cases caused extended discussion. Dr. Primrose had operated on his case before the publication of Edebohls' paper on the subject.

Gravenhurst Consumption Sanatorium.—Twenty-five Toronto physicians, many of them prominent men, have been appointed on the staff of the Gravenhurst Free Sanatorium for Consumptives. The furnishing of this institution is now being completed and a third hospital near Toronto will soon be established.

McGill University.—The number of students at McGill University in the various departments is 1,114. The law faculty has 60.: medicine, 490: applied science, 254; arts, 294; veterinary medicine, 16. In 1901, 93 medical degrees were conferred.

Toronto University.—The new medical building for Toronto University will soon be under way. The trustees of the University advance the medical faculty $125,000 for the purpose, upon which they will pay 4% interest per annum.: This plan will receive Government sanction and, if the medical faculty so desire, they may rent a portion of the building, when completed, to the arts faculty. The building will be situated in the Queen's Park, adjoining the Biological Building.

London Insane Asylum.—The new superintendent of the Insane Asylum, London, Ontario, replacing the late Dr. R. M. Bucke, is Dr. T. A. McCollum, of Dunville, Ontario. Dr. McCollum is a well-known practitioner of the Niagara peninsula, where he has practised his profession for the past quarter of a century.

Smallpox During 1901.—According to a statement recently issued from the office of the secretary of the Quebec Board of Health, there were no less than 5,069 cases reported. These occurred in 276 localities in 55 out of the 73 counties in the province. The death-rate is about one per cent.

MISCELLANY.

Champagne and Cancer.—There is a remarkable coincidence between the spread of cancer and the largely increasing consumption of effervescent wines and waters. Prior to the sixties, champagne as a drink was used but occasionally, nor were aerated waters consumed in anything like the quantity or frequency that they now are. The upper classes, by constantly imbibing effervescent beverages, solutions of carbonic acid of greater or less strength, so prepare their mucous tissues as to make them a favoring host to the cancerous fungus, if fungus it be.—*London Medical Times.*

Infection Carried by Books.—Experiments have shown that the bacillus of cholera will live in books 48 hours or more, that of diphtheria 28 days, that of tuberculosis 103 days. Hence it is essential to disinfect books. The disin-

fection can best be done by an exposure to steam, under pressure, for forty minutes. No damage is done to the pages. Pasteboard and linen bindings recover their shape after pressing. Formic aldehyde and sulphur vapor are less satisfactory than steam.

Scurvy in Alaska.—Latest reports from Alaskan cities tell of the prevalence of scurvy, on account of the lack of fresh vegetables. Nome City is most affected. As it takes two months for mail to reach Seattle from Alaska at this time of the year, these reports date from December.

Tuberculosis Among Merchant Seamen.—With a view to aid in preventing the spread of tuberculosis among seamen of the merchant marine, Surgeon-General Wyman has issued a circular letter to commissioned officers and acting assistant surgeons of the Marine Hospital Service directing that whenever a seaman suffering from pulmonary tuberculosis applies for treatment notice shall be sent to the master of the vessel on which the seaman sailed preceding his application for treatment, and if this vessel is in port, the apartment formerly occupied by the seaman shall be disinfected under the direction of the medical officer, with the consent of the owner. Thorough mechanical cleansing of floors, walls and bunks with hot water and concentrated lye and wetting floors, walls and bunks with either of the following solutions: Carbolic acid, 1 to 100, or corrosive sublimate, 1 part, hydrochloric acid, 2 parts, water, 1000 parts, should be done. It is strongly recommended that forecastles or other apartments used should be painted or whitewashed after disinfection, if possible. A report of every vessel whose forecastle is disinfected is to be rendered to the Marine Hospital Bureau.

Medical Corps of the Navy.—Senator Hale has introduced a bill providing for an increase in the Medical Corps of the Navy, by making the active list of surgeons consist of seventy, and that of passed assistant surgeons of one hundred and thirty-five.

Vaccination in Alaska.—Charles H. Mulroney, Surgeon, U. S. R. C. S., reports under date of January 29, from Sitka, Alaska, that about 1,400 natives of southeastern Alaska were accinated by him in the summer season of 1901.

Wilcox Leper Bill.—At a mass meeting held in Honolulu, February 8, resolutions were adopted by the Republican party of Hawaii protesting against the passage of the Wilcox bill providing for the establishment of a national leper reservation on the Island of Molokai. The bill is characterized as unjust. There are 1,000 lepers in the Molokai settlement and 2,000 in the mainland, and Hawaii is making every effort to get rid of leprosy with some show of success. Congress has no right to perpetuate in those islands what is considered the most dreadful of human maladies.

The Health of the Philippines.—Governor Taft states that there is very little malaria in Manila, although the city is quite low and surrounded by marshes. In some of the high valleys there is virulent malaria. Heavy rains are supposed to be necessary to the health of the islands. From the beginning of the dry season diseases grow in intensity and extent. When the rain comes, it seems to flush the land and carry off the dangerous germs. It is unsafe for Americans to expose themselves to the midday sun. Statistics will probably show that the health of troops, when not exposed to rough weather and continuous marches, is as good as in the Southern States. The climate, however, is not a comfortable one, and after two or three years wears on one's nerves. Tuberculosis kills more people in the islands than either dysentery or malaria.

Infectious Diseases.—Cuba: The annual report of the chief sanitary officer, published this week, shows that the death-rate of Havana has decreased to one-fourth of what it was before the Government intervened in sanitary affairs. During the past 11 months there have been but five deaths from yellow fever, and not a single case of smallpox, against 1400 deaths in 1897. Active work has been begun against tuberculosis. The chief quarantine officer for the Island of Cuba reports no quarantinable disease in any port of the island during the past three months.—**Brazil:** The U. S. M. H. S. reports from Rio Janeiro, for the week ending January 19, five deaths from yellow fever, 15 from smallpox, and 14 from bubonic plague.—**Hawaii:** Two deaths from plague are reported in Honolulu and six deaths at Eleele during the last week of January.—**Philippine Islands:** U. S. M. H. S. reports from Manila, January 15, state that the city was at that date free from plague, and that no rats infected with the disease had been found for two weeks, though the total number killed and examined had increased.—**Australia:** One case of plague was reported at Melbourne, Victoria, March 4. Sydney, New South Wales, has had 46 cases, 14 of which have proved fatal.—**China:** The U. S. Consul at Canton, February 28, reported that Asiatic cholera was increasing, the captain of the British gunboat *Britomart*, having died of the disease.—**Turkey:** One case of bubonic plague is reported from Smyrna January 17. In Bagdad five cases of plague had occurred, with three deaths, on January 23.—**Egypt:** For the week ending February 4, 14 new cases of plague are reported. Since April 7, 1901, there have been in Egypt 278 cases with 163 deaths.

Obituary.—Dr. Benjamin Franklin McCuiston, at Paris, Texas, March 1.—Dr. George Saul, at Honolulu, February 25, aged 27 years.—Dr. Thomas A. Keables, at Napa, Cal., March 2, aged 58 years.—Dr. Edward Mott Moore, at Rochester, N. Y., March 3, aged 88 years.—Dr. Mordecai Price, at Govanstown, Md., March 5, aged 80 years.—Dr. J. F. Hall, at Ripon, Wis., March 5, aged 31 years.—Dr. Arthur T. Muzzy, at New York City, March 4, aged 51 years.—Dr. Richard Ferguson, at Columbia, S. C., March 6, aged 28 years.—Dr. Lawrence A. Ashton, at Dallas, Tex., March 6, aged 54 years.—Dr. George W. King, at King's Station, N. Y., March 7, aged 76 years.—Dr. Herman W. Weber, at Phoenix, Ariz., March 6, aged 41 years.—Dr. Charles O. Carpenter, at Holyoke, Mass., March 7, aged 63 years.—Dr. Allen Heavenridge, at Stilesville, Ind., February 10, aged 73 years.—Dr. Mortimer Ayers, at Pasadena, Cal., February 27.—Dr. Henry Ayres Hyland, at Baltimore, Md., February 26, aged 47 years.—Dr. Joseph A. Booth, at New York City, February 26, aged 62 years.

GREAT BRITAIN, ETC.

Liverpool School of Tropical Medicine.—Major Ronald Ross sailed from Liverpool, February 22, to join the expedition now engaged in sanitary work on the West coast of Africa, under the auspices of the Liverpool School of Tropical Medicine. He will examine the drainage operations in Sierra Leone and will prepare statistics upon that work, and upon the health of the natives. He will also visit Gambia. He is expected to return to Liverpool toward the end of April.

A Surgeon Honored.—Captain T. J. Crean, a graduate of an Irish university, who was severely wounded in South Africa, has received the Victoria Cross from the King.

A Skeleton Unearthed in London.—Workmen, while excavating in St. James Palace, recently unearthed a leaden coffin containing a skeleton in a fair state of preservation. The relics, which are believed to be at least 400 years old, and possibly double that, will be placed in the British Museum. Many skulls and thigh bones were dug up in the neighborhood of the casket. The discovery was made in the quadrangle known as Color Court. It is said that centuries ago a leper hospital stood on this site.

Influenza in London.—While the epidemic of influenza, reported some three weeks ago, still exists in London, the number of cases has markedly diminished. A number of prominent people have been attacked and many deaths have been reported. The warm, wet weather which has existed is blamed for the spread of the disease.

Anti-Smallpox Measures.—Commencing February 28, all American bound vessels from English ports infected with smallpox have been ordered to have the officers, seamen, firemen and assistants vaccinated, unless they can show that they were recently inoculated with vaccine virus. The order includes Liverpool, Glasgow, and London. United States consular officers have instituted a vigorous system of inspection under the instructions of the authorities in Washington. Should the epidemic increase, more strict measures may be adopted.

A Bequest.—Over $45,000 has been left by the late Mr A. J. Dettmar for the new hospital for epilepsy, paralysis, and other diseases of the nervous system, now in course of erection at Maida Vale. This gift is sufficient for the first section of the building, but large sums are still required for furnishing and fitting.

Notes.—In England no physician can legally give a certificate of the cause of death unless he has prescribed for

the person at least forty-eight hours before death. Without such certificate no undertaker is permitted to bury the body.—There are at present in London 52,000 persons aged more than 75 years.—The Treasurer of Guy's Hospital has received £500 to endow a cot "in remembrance of a child of two years of age admitted to the hospital in 1862, without charge, and cured of a broken leg."—Drug-taking for insomnia has become a craze among certain sections of London society.—During the past five years there have been 1845 cremations in England.—Great Britain has 135,000 illiterate voters.

Obituary.—William C. Hills, a graduate of Aberdeen University, formerly superintendent of the Norfolk County Asylum, died of heart failure at his home at Norwich, January 18, aged 84 years.—P. W. Marriott, a graduate of St. Andrew's University, formerly in the Indian Army Medical Service, died February 1, aged 71.—Robert Barry, a graduate of the University of Ireland, medical officer of health at Limerick, died February 8.—C. E. G. Simons, a graduate of Aberdeen University, died February 16, of pneumonia, at Merthyr, aged 34 years.—J. F. L. Mullin, a graduate of Queen's University, Ireland, died at Newport, Monmouthshire, February 17, aged 52 years.—Seymour G. Toller, a graduate of St. Thomas' Hospital, died February 19, in Cairo, aged 35 years. He was professor of clinical medicine in the Cairo Medical School.—Thomas Pearse, a graduate of the Universities of Aberdeen and Edinburgh, died at Plymouth, February 20, aged 74 years.—Patrick M. Kelty, a graduate of the University of Edinburgh, died at Blackpool, February 21, aged 70 years.—S. A. K. Strahan, a graduate of the Royal University of Ireland, died in London February 21.—D. B. Carter, a graduate of the Leeds Medical School, died recently, in Shipley, aged 42.

CONTINENTAL EUROPE.

A New Anesthetic.—Acoine is the name of a product destined to rival cocaine, morphine, chloral, and other anesthetics. A drop upon a gnawing tooth diminishes pain. Its properties were recently reported to the French Academy of Medicine by Dr. Chauvel, based upon experiments. It is claimed that acoine is not toxic.

Academy of Medicine of Belgium.—Professor J. Renaut, of Lyons, France, has just been appointed foreign correspondent of the Belgium Academy of Medicine.

American Hospital in Paris.—For the benefit of the American colony and American visitors in Paris, Edward Tuck, a wealthy Bostonian, who for many years past has resided in Paris, has decided to defray the entire expense of establishing a free American hospital in the Passy quarter, to be named Franklin Hospital. It will be built on the latest American model and managed entirely by American physicians and nurses. Mr. Tuck will also donate a sufficient fund to maintain the hospital permanently. Franklin Hospital will be in the most healthful part of Paris, and will be inclosed in extensive grounds. Dr. Magnin, a well-known American physician, will be the director. It is expected that the hospital will be opened in 1904.

The Thirty-first German Congress of Surgery will be held at Berlin, April 2-5. Seven communications will be read upon the treatment of wounds; Gussenbauer, Petersen, and von Mikulicz will discuss cancer, and several others will speak upon the subject of abdominal surgery.

Obituary.—February 8, Dr. Nilus Filatow, the well-known professor of pediatrics at the University of Moscow, died of apoplexy, aged 55 years.—Dr. Heinrich Labs, professor of gynecology in the University of Marburg, died February 20, aged 64 years.—Dr. Moriz Kaposi, the celebrated dermatologist, died, in Vienna, March 6, in his 65th year. Born in Kaposvar, Hungary, October 23, 1837, he was graduated from the University of Vienna in 1861, and then studied under the elder Hebra for several years. In 1875 he became professor of dermatology, and in 1879 he succeeded Hebra as director of the clinic and department for skin diseases in Vienna. He became Court Councillor in 1889. His works upon syphilis and the diseases of the skin reach far into the hundreds, including several text books. He married Hebra's daughter.—The death is announced of Dr. H. Barella, of Chapelle-des-Herlaiment, formerly president of the Belgian Academy of Medicine.—Dr. G. Siegmund, of Berlin, an authority upon medical chemistry, died February 14, aged 82.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

February 22, 1902.

1. An Address on the Reorganization of the Army Medical Service. C. B. BALL.
2. The Treatment of Chronic Malarial Fever by Subcutaneous Injections of Quinine Bihydrobromate. G. B. FERGUSON.
3. Should Milk be Boiled? W. R. RANSOM.
4. Remarks on the Relations of Human and Bovine Tuberculosis. C. H. CATTLE.
5. General Hospitals and Pulmonary Consumption. ALEXANDER ROBERTSON.
6. The Origin of the Modern Treatment of Pulmonary Consumption. A. T. TUCKER WISE.
7. Hydrogen Peroxide in the Treatment of Lupus Vulgaris and Tuberculous Abscess. CHARLES HERBERT GUNSON.
8. Effects of Forced Feeding in Cases of Pulmonary Tuberculosis, etc. NOEL D. BARDSWELL, FRANCIS W. GOODBODY and JOHN E. CHAPMAN.

2.—Several years ago Ferguson was asked to see a military officer who was suffering from chronic malarial fever of tertian type. He was much emaciated and was getting steadily weaker. Quinine, of which he had taken much by the mouth, moderated, but did not remove the fever, whilst it induced much sickness, which added to the debility of the patient. Quinine was tried by the rectum and by inunction, but without success, and iodine and arsenic were equally unavailing. The condition of the patient having become very serious, the author injected 2 gr. of quinine sulphate, dissolved by the aid of a minimum of tartaric acid, under the skin of his forearm. Decided improvement followed and, accordingly, the injection was repeated. It was distinctly painful, however, and the arm swelled and became tender. Accordingly, a series of experiments with different salts of quinine was begun and finally the bi- or acid hydrobromate of quinine was found to dissolve readily in 6 parts of pure warm water. After 6 injections of this salt the patient made a rapid and perfect recovery. This method of **treating chronic malaria** has been used in nearly 100 cases; in none of which tetanus or ulceration has been seen. The treatment is very efficacious and it will often cure malarial joints and malarial rheumatism. It is not very painful if the bihydrobromate salt is used. This salt is perfectly stable and makes a solution (1 in 6) that is only faintly acid. If the operation is done with care and with antiseptic precautions, there is no danger of tetanus. Three grains of **quinine bihydrobromate** dissolved in 20 minims of pure warm water are injected **subcutaneously.** It should first be injected under the skin of the upper arm, then under that of the thighs, then under the skin of the abdomen at the top of the chest or between the scapulæ. Six injections on alternate days are usually required in a serious case. [J. M. S.]

3.—There is no solid evidence to show that **milk raised to its boiling point** or to the temperature of boiling water for 10 minutes or a quarter of an hour suffers any diminution of its nutrient qualities. Neither is it probable that, if consumed within 24 hours of the heating, it will cause infantile scurvy. The same is true of Pasteurized milk heated to 80° or 85° C. None of these methods render the milk absolutely sterile, but they do kill the majority of pathogenic micro-organisms and if the milk is kept cool and drunk within 12 hours of the heating, few or no spores will have developed into bacilli. Pasteurization is probably less reliable than heating to 212° F. for 10 minutes and is also more difficult to carry out. In times of epidemic summer diarrhea the heating should be prolonged for at least half an hour and the milk drunk within a few hours or subjected again to the process, as the spores of the bacillus sporogenes enteritidis are very resistant. Under all circumstances milk, whether raw or sterilized, should be drunk as fresh as possible and then the liability to gastro-enteritis and nutritional diseases will be diminished. It is Ransom's emphatic opinion that infants, who live wholly or mainly on milk as at present supplied, should never be exposed to the dangers lurking in the raw fluid. Nothing

in the paper is intended by the author to detract from the paramount importance of children being suckled by their mothers for the first 7 or 8 months of their lives; or from the equally vital matter of securing a pure milk supply from healthy cows, hygienic stables and dairies, and clean milk cans. [J. M. S.]

4.—We cannot as yet deny the possibility of **tuberculous infection by milk**; still, enough has been said to show that the assumption that the frequency of tuberculosis in early life is chiefly due to tuberculous milk is in one direction too narrow and in another erroneous. An exclusive milk theory, while it ignores the greater incidence of tuberculosis in the lungs than in the bowels of young children, fails also to take account of other sources of infection. There can be no doubt that certain infantile diseases, such as measles, whooping-cough, bronchitis and bronchopneumonia, serve as powerful predisposing causes to tuberculosis mortality. They leave behind them constitutional weakness, catarrh of the respiratory passages and of the intestinal canal. Under these conditions the widely disseminated bacilli of human tuberculosis gain a footing, attaching themselves to the most susceptible organs, in a majority of cases the lungs or their related glands, in other cases to the intestine, ear or neck glands. Milk may be responsible for some cases, but the fact that thoracic tuberculosis is so common at an early age suggests the conclusion that the human bacillus, mixed with the bodily secretions or with food, is the cause of chest trouble in one instance and of abdominal disease in another. Koch has told us that while secondary infection of the intestine is common, primary infection of that tube with tuberculosis is exceedingly rare. This conclusion, however, is not in accordance with British experience concerning the disease in children. [J. M. S.]

5.—Robertson believes that complete exclusion of **patients suffering from pulmonary tuberculosis** from the wards of a **general hospital** is the only sound and satisfactory position to take. [J. M. S.]

6.—Wise gives an interesting account of the hygienic treatment of a case of pulmonary tuberculosis in 1836. [J. M. S.]

7.—Gunson recommends **hydrogen peroxide in the treatment of lupus vulgaris and tuberculous abscess.** [J. M. S.]

8.—Bardswell, Goodbody and Chapman report the results of their investigation of the **effects of forced feeding in cases of pulmonary tuberculosis and in normal individuals.** Their observations show: (1) That pushing the amount of proteid in the diet in cases of tuberculosis resulted in an increased excretion of nitrogen out of all proportion to the increased amount retained; a diminution in the percentage of nitrogen excreted as urea; and consequently an increase in the percentage amount excreted in less oxidized forms, indicating diminished nitrogen elaboration; a diminution in the percentage of nitrogen absorbed; and an increase in the amount of aromatic sulphates excreted, indicating intestinal putrefaction. (2) That the absorption of fat remained very good in all cases even when very large amounts were taken. (3) That the amount of nitrogen excreted in the urine on comparable diets was very small in cases much below weight and was largest in patients approaching or up to their normal weights. (4) Clinically, it was observed that the very large diets gave rise to much anorexia, dyspepsia, and, in one case, vomiting. It was also noticeable that the onset of dyspeptic symptoms nearly always coincided with experimental figures indicating deranged metabolism. (5) In every case weight was gained, the gain being greatest on the very large diets, but with these large diets the gain was achieved at the expense of the physical well-being of the patient, as was shown both by clinical and experimental results. (6) It was observed, in regard to the diets, that the original generous hospital diets were capable of being distinctly increased with advantage to the patients. Still further increase of the diet, as already stated, was followed by less satisfactory results. The effect of forced feeding upon 3 normal individuals up to weight and in nitrogenous equilibrium were: (1) A marked increase in the amount of nitrogen excreted in the urine, with a proportionate increase in the amount of urea. (2) No diminution in the absorption of nitrogen. (3) A diminution in the absorption of fat. (4) A rapid and large gain in weight, which was in every case associated with marked impairment of general health. The chief symptoms induced were anorexia, nausea, dyspepsia, drowsiness, abdominal discomfort and diarrhea. (5) The weight put on was rapidly lost on resumption of ordinary feeding. In conclusion, the authors make the following suggestions: (1) That, since very large diets gave worse results than those of more moderate amount, the indiscriminate stuffing of all tuberculous patients should be replaced by systematic dieting. The amounts and constitution of the diet should be determined in each case after due consideration has been given to the respective conditions of the activity and the extent of the disease, the amount below weight, the digestive capability and, to some extent, the personal dietetic likes and dislikes of the patient. (2) That, in view of the bad effects which over-feeding gave rise to in the normal individuals, great care should be taken in the selection of a diet for patients who, as the result of treatment, have reached or passed their highest known weights. When this regain of weight is associated with arrested disease, the original diet found suitable for a person very considerably under weight and with active lesions, should be reconstructed more upon the lines of what would be suitable for the same person in perfect health. The observations were not sufficiently extended to allow conclusions to be drawn concerning which diets gave the best results in certain conditions of the lungs; but subsequent sanatorium experiences of 2 of the writers, with the advantage of being able to observe the course of the pulmonary lesions in patients upon weighed diets, leads them to think that the lungs do not improve any more rapidly upon forced feeding than upon generous diets. Further, there is no doubt that anorexia, dyspeptic symptoms, and vomiting are much more frequently met with when working with very large diets than when more moderate amounts of food are given. [J. M. S.]

LANCET.

February 22, 1902.

1. The Erasmus Wilson Lectures on the General Pathology of Tumors. CHARLES POWELL WHITE.
2. The Hospital Ships of the Metropolitan Asylums Board and the Dissemination of Smallpox. JOHN C. THRESH.
3. On Cleft Palate. W. ARBUTHNOT LANE.
4. Burns from Celluloid. ALEXANDER OGSTON.
5. A Case of Hydatid Disease of the Gall-bladder. LAWRIE HUGH McGAVIN.
6. Tetanus Following Revaccination on the Leg, etc. WILLIAM FINDLAY and JOHN W. FINDLAY.
7. Notes of 15 Cases of Operation for Internal Derangement of the Knee-joint. J. N. COTTERILL.
8. Rheumatism as a Cause of Epistaxis in Children. SIDNEY PHILLIPS.
9. Foundling Children in France. CHARLES GORING.

1.—White discusses the **"general pathology of tumors"** in a series of lectures delivered before the Royal College of Surgeons of England. This, the third lecture, deals with the relation of tumor formation to other pathological processes. He makes the following summary: 1. Tumors are to be classified on a histological basis. The best mode of effecting this is to make use of the three-fold basis of cells, tissues and organs. 2. The rudiment from which a tumor springs may consist (1) of the structures normally present at the point of origin; (2) of an embryonic collection of cells such as is described by Cohnheim; or (3) of tissues of new formation, the result either of an inflammatory condition or of a previous tumor formation. 3. Extrinsic factors play a part in tumor causation, but are not the determining factors—that is, the occurrence or nonoccurrence of a tumor does not depend on extrinsic factors. In particular the parasitic theory is shown not to stand a critical investigation. 4. The determining factor of tumor causation is to be found in the intrinsic factors. 5. This determining factor consists in the existence of a condition of unstable equilibrium between the intercellular forces, so that proliferation, once started, is progressive and is not limited by the resistance of the surrounding tissues. 6.

The causes of this instability are many and various and may be either intrinsic or extrinsic. 7. Proliferatoin, having started, the cells acquire the habit of growth—that is, the power of independent proliferation which enables them to proliferate in parts of the body in which the condition of equilibrium is stable. 8. Tumors grow by proliferation of their own cells. 9. Tumors do not invariably continue to increase without limit. Under certain circumstances they may cease to grow, may diminish in size or may even disappear completely. 10. Tumor formation is not to be regarded as an isolated process, but is to be considered as one of a group of progressive processes with which it is closely allied. Still less must one form of tumor, such as carcinoma, be considered apart from the others." Finally the author discusses some points in the treatment. [F. J. K.]

2.—Thresh discusses **"the hospital ships of the Metropolitan Asylums Board and the dissemination of smallpox."** The author mentions that for many years smallpox has been excessively prevalent in Orsett Union County of Essex| The prevalence of this disease in this district, the author thinks, has been solely due to the smallpox ships of the Metropolitan Asylums Board and he further believes that the infection is carried by the air in the direction of the winds for two or three miles. [F. J. K.]

3.—In concluding his article on cleft palate W. Arbuthnot Lane presents figures to show the wonderful improvement that takes place in children suffering from **chronic inflammatory conditions of the naso-pharynx** when proper attention is paid to the method of respiration. These children should be taught to breathe with the mouth closed and to inspire deeply in order that the naso-pharynx is thoroughly aired and the chest expanded. When this treatment is well carried out it will be found that the chest expansion will become greatly increased and the child will gain greatly in flesh. The naso-pharyngeal condition will also gradually disappear. Lane makes a strong plea for early operation in case of cleft palate, because, after the repair of the opening between the nose and the mouth, the nasal cavities can be made to perform their function, becoming correspondingly developed, and that distressing condition, the nasal voice is overcome. It is thought that the best time to operate is between the fourth and fifth weeks, unless there is some contra-indication. Lane prefers to operate by raising a flap of mucous membrane from one side and fastening it securely beneath the separate margin of the other side. The operation at this early age is accompanied by much less hemorrhage than when done in later life. The author prefers, when hare lip and cleft palate are associated, to operate upon the cleft palate first, as it is less accessible if the lip is first repaired. [J. H. G.]

4.—Alexander Ogston refers to the great frequency of **burns resulting from the spontaneous ignition of celluloid combs**, such as are worn in the hair. He had a number of experiments carried out in order to discover the ignition point of celluloid articles commonly sold in the shops. It was found that this point varied greatly, but that the cheaper articles ignited at a lower point than the higher-priced ones. It is thought that celluloid should, in some way, be rendered incombustible, or that the manufacturers should be compelled to mark these articles "ignitible." [J. H. G.]

5.—L. H. McGavin reports an interesting case of hydatid **cyst of the gall-bladder.** The patient complained of pain over the epigastrium and suffered from attacks of vomiting. Physical examination resulted in a diagnosis of growth of the omentum. Exploratory laparotomy revealed the true condition and a cholecystectomy was performed, the patient making a good recovery. The author refers to the rarity of hydatid cyst of the gall-bladder, and states that he has been able to find but three cases recorded in the literature of the past twenty years. [J. H. G.]

6.—W. and J. Findlay report a case of **tetanus following vaccination upon the leg.** The symptoms developed on the twelfth day. As the point of inoculation was well protected by a dressing, it is thought that the tetanus bacillus must have been present in the skin of the patient at the time of vaccination. The attack of tetanus was not a typical one and the patient recovered under very large doses of chloral. [J. H. G.]

7.—J. M. Cotterill discusses the question of **dislocation of the semilunar cartilage,** the basis of his remarks being fifteen cases upon which he has operated. The accident happens when the knee is partly flexed and the tibia rotated externally. The internal cartilage is the one most frequently dislocated. Cotterill prefers the older term of "internal derangement of the knee-joint" to the more modern one of "dislocation of the semiulnar cartilage." The most valuable symptom is the inability to extend the leg. Only occasionally is flexion interfered with. In sprains of the joint, extension is painless and flexion painful. In "loose bodies" in the knee-joint the seat of pain shifts and flexion and extension are interfered with irregularly. Reduction is best accomplished by flexing, rotating outwards and then extending the leg if the internal cartilage is the one affected. After reduction, the joint should be put at rest for several weeks, else recurrence is apt to take place. When a patient suffers from frequently recurring dislocations, is below middle life, and wishes to lead an active life, if no contra-indication is found, operation should be performed. In opening the joint he prefers to make his incision considerably above the line of the cartilage. He does not believe in suturing the dislocated cartilage into its normal position, but advises all of the loosened portion should be removed. Drainage should not be employed and asepsis should be perfect. The joint is kept fixed two weeks after operation, and at the end of the third week the patient is allowed to get out of bed and use crutches or canes. No violent exercise should be indulged in for four or five months. [J. H. G.]

8.—Philips thinks **that rheumatism may give rise to epistaxis** and he cites fifteen cases in which this condition was present. Mention is made that in the literature of rheumatism the author has not found any suggestion of this disease causing epistaxis, except indirectly through the development of endocardial changes. [F. J. K.]

MEDICAL RECORD.

March 8, 1902

1. The Treatment of Malignant Growths by the X-Ray etc. WILLIAM J. MORTON.
2. Regarding the Infectious Agent of Yellow Fever. A Reply to Dr. Souchon. ALVAH H. DOTY.
3. Pneumonia in the Light of Modern Research. STEPHEN SMITH, M.D.
4. Diabetic Coma. Symptoms, Pathology and Treatment. ABRAHAM MAYER.
5. A New Test for Albumin. FLORA C. FLIS.

1.—William J. Morton discusses the **treatment of malignant growths by the X-ray.** The report of the progress made in the treatment of 8 cases is included in his paper. He concludes that by this means of treatment we accomplish: 1. Relief from excruciating pain and constant suffering, often immediately. 2. reduction of the size of the new growth; 3, establishment of the process of repair. 4 removal of the odor if present. 5. cessation of the discharge; 6. softening and disappearance of lymphatic nodes; 7. disappearance even of lymphatic enlargement not directly submitted to treatment and often quite distant. 8 removal of the cachectic color and appearance of the skin; 9. improvement in the general health. 10 cure up to date of a certain number of malignant growths. The uncertainties and dangers of the method are found in the absence of a definite measure of the dosage, the possibilites of a burn or of gangrene. There is present the difficulty of ascertaining when the danger point of ad-

ministration as regards burning and gangrene is reached. [T. L. C.]

2.—A. H. Doty replies to the **recent article of Dr. Souchon regarding the infectious agent of yellow fever**, which appeared in the *Medical Record* of December 28th, 1901. Dr. Doty does not believe that the article of Souchon has in any way damaged the argument already advanced that yellow fever is not transmitted by personal contagion or by clothing, bedding, etc., nor has it proven that the mosquito is not the medium of infection in this disease. Doty is not aware that Dr. Souchon or any other health official has presented statistics which tend to prove that disinfection has diminished the extent of outbreaks of yellow fever which from time to time have appeared in the South. To the contrary, he believes that it has been stated on excellent authority that disinfection has been of no practical value in this direction. Doty further feels certain that we have reasonably conclusive evidence that yellow fever is not propagated by the clothing, bedding, etc. We do not know whether other means of propagating yellow fever exist, but we do know that the mosquito is a means of infection, and this knowledge furnishes us a means of protection against the extension of yellow fever which has proven most effective in preventing the spread of the disease—protecting patients with netting, etc. [T. L. C.]

3.—S. S. Burt presents a paper on **pneumonia in the light of modern research.** He epitomizes what his thesis endeavors to maintain as follows: that lobar pneumonia is universal in diffusion, in nature infectious, unequalled numerically, and in fatality unsurpassed. It is a malady that can be lessened in frequency and lowered in mortality, if it can not be eradicated; at the same time this reduction in quantity and in destructiveness for the most part is to be effected by incessant sanitary promulgations. [T. L. C.]

4.—A. Mayer gives in outlines the **symptoms of diabetic coma** and a brief discussion of the various hypotheses which have been advanced appertaining to the condition. Only two of these seem to be tenable; (a) that of **acidosis or acid intoxication,** first described by Stadelmann and verified by a number of others; (b) that of a **specific toxemia** as taught by Klemperer and von Noorden and their followers. The second of these theories Mayer regards as really a continuation of the first. As to treatment he calls attention to the fact that the enforced method of dieting in diabetes has much to do with the acidosis present. He mentions that few patients can stand the exclusion of carbohydrates in the diet for any great length of time without gastric disturbances resulting. The proteids too favor by their disintegration the production of toxins and he does not believe that a rigid diet of fats and proteids should be continued. He has obtained his best results from milk and about one quart may be allowed in 24 hours. Lactose is better borne in severe cases than any other form of carbo-hydrates. The condition of the whole digestive apparatus must be carefully watched and dyspeptic disturbances especially avoided. For the avoidance of the impending coma, large doses of the **alkalies,** especially the **bicarbonate of soda,** are especially indicated. Enormous quantities must be injected, at the same time giving as much by the other channels as the patient will stand. The author speaks favorably of his experience with urotropin, basing the rationale of this treatment on thus introducing into the system a sufficient quantity of ammonia to unite with the various acids found in the condition of acidosis, so that by their neutralization the acid intoxication would be reduced, the alkalinity of the blood kept at its normal point and the disintegration of proteids prevented. He has used this drug, however, in but one case. [T. L. C.]

5.—F. C. Fuhs bases a **new test for albumin** on the following facts; 1, albumin is coagulated by carbolic acid; 2, equal volumes of non-albuminous urine and a mixture composed of equal parts of carbolic acid and glycerin form an emulsion which clears up entirely upon agitation, leaving a perfectly transparent and highly refractive liquid; 3, equal volumes of albuminous urine and the above mentioned carbol-glycerin solution, when mixed together, produce a white turbidity, which remains in spite of agitation and does not precipitate on standing or redissolve. The test is performed in the following ways: 2cc. of carbol-glycerin solution are poured into a small test tube, and 2 cc. of the filtered urine are added. Mix thoroughly with a glass rod, or agitate. If a clear transparent liquid results, there is no albumin present; but if the slightest turbidity is noticeable, the urine is albuminous. [T. L. C.]

MEDICAL NEWS.

March 8, 1902. (Vol. 80, No. 10.)

1. The Craig Colony Prize Essay—Serotherapy in Epilepsy. CARLO CENI.
2. One Way to Fight Contagion. CHARLES V. CHAPIN.
3. A New Cystoscope, for the Simultaneous Catheterization of Both Ureters, and for Double Current Irrigation of the Bladder. FREDERICK BIERHOFF.
4. Congenital Dextrocardia. WILLIAM EDGAR DARNALL.
5. Somnolence and Loss of Memory Resulting from Cholesteatoma of the Middle Ear. FRANCIS R. PACKARD.
6. Urticaria of the Upper Respiratory Tract. LEWIS S. SOMERS.

1.—To be abstracted when concluded.

2.—Charles V. Chapin makes the following suggestions for the teaching of cleanliness among school children in his article on **one way to fight contagion:** (1) Not to spit; it is rarely necessary. To spit on a slate, floor or sidewalk is an abomination; (2) not to put the fingers into the mouth; (3) not to pick the nose; (4) not to wet the finger with saliva in turning the leaves of a book; (5) not to put pencils in the mouth or moisten them with the lips; (6) not to put money into the mouth; (7) not to put pins into the mouth; (8) not to put anything into the mouth except food and drink; (9) not to swap apple cores, candy, chewing gum half-eaten, whistles or bean blowers or anything that is habitually put into the mouth; (10) teach the children to wash the hands and face often. See that they keep them clean. If a child is coming down with a communicable disease, it is reasonable to believe that there is less chance of infecting persons and things if the hands and face are washed clean and are not daubed with secretions of the nose and mouth; (11) teach the children to turn the face aside when coughing and sneezing, if they are facing another person; (12) children should be taught that their bodies are their own private possessions, that personal cleanliness is a duty, that the mouth is for eating and speaking and should not be used as a pocket, and the lips should not take the place of fingers. [T. M. T.]

3.—Frank Bierhoff says that his cystoscope will permit: (1) The examination of the entire bladder; (2) the renewal of the filling fluid without removing the instrument should the fluid become turbid during the operation; (3) the catheterization of one or both ureters during one sitting; (4) the facilitation of the procedure of leaving one or both catheters à *demeure*. [T. M. T.]

6.—Lewis S. Somers states that **urticaria of the upper respiratory tract** may be either acute, when the symptoms usually assume a most alarming aspect, or chronic, as is more rarely the case. In either variety, but especially in the former, two types of the disease may be clearly distinguished, the first being that in which the skin eruption makes its appearance primarily and is followed by the development of wheals upon the mucous membrane, while in the second type, the difficulty of diagnosis is greatly increased by the appearance of the respiratory symptoms first, followed later by the skin eruption. In the latter form the disease closely simulates other laryngeal affections accompanied by edema and respiratory distress, and in the absence or delayed appearance of the cutaneous wheals the diagnosis may be impossible, the disease not being recognized at all or, as has been suggested by others,

the affection is considered to be asthma. The history of [illegible] attacks of the disease, even if they have not involved the mucosa, is an important aid in diagnosis and in practically all cases before the disturbance of the mucosa has entirely subsided, the appearance of isolated or multiple wheals on the skin will clearly indicate the nature of the affection. The presence of an unrecognized cough or periods of obstruction to breathing associated with irregular attacks of cutaneous urticaria should at least lead to the suspicion of some relation existing between the two phenomena, and the placing of the patient under an appropriate treatment based upon such an association may be the means of elucidating some of these obscure cases which are usually unrecognized. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

March 8, 1902. (Vol. LXXV, No. 10).

1. Nevus Verrucosus Associated with Certain Anomalies of Pigment. H. TAYLOR.
2. Again the Rectal Valve and Obstipation. THOMAS CHARLES MARTIN.
3. The Care of Incurable Cases of Chronic Pulmonary Tuberculosis. HENRY L. SHIVELY.
4. The Civilized Indian, His Physical Characteristics and Some of His Diseases. A. D. LAKE.
5. The Siderscope. THOMAS R. POOLEY.
6. The Severing of the Vasa Deferentia and Its Relation to the Neuropsychopathic Constitution. H. C. SHARP.
7. On Gonorrheal Arthritis. A. HERZFELD.
8. The Treatment of Habitual Constipation. W. L. CALLAWAY.
9. A Case of Acute Anterior Poliomyelitis: Recovery. DAVID DAVISON.

1.—H. Taylor reports a case of the above in which the lesions were rigorously limited to the right side of the patient, and their distribution in the track of certain cutaneous nerves, the alterations of deeply pigmented papillomata with merely the presence of pigment in the skin and finally the merging of this pigmented condition into decolorized patches. [T. M. T.]

2.—Thomas Charles Martin, after reporting several cases, says that congenital valvular obstipation is by no means uncommon. In 172 cases of obstipation he has seen only 22 in adults. The majority of cases have in their history and proctoscopic appearance that which signifies the previous existence of this condition, and it is this element which has predisposed to an acquired hypertrophy of the valves. These valves are attached on opposite sides and are in a vertical direction, but an eighth of an inch apart at their base. Their free edges, being movable, are thrown in contact and thus form a barrier to the descent of feces. When adolescence is attained, the rectum has been about doubled in length and breadth, and at this period in such a case the valve bases may be separated by one-half an inch in the vertical direction and their free edges separated by an inch or two. Thus may a subject outgrow congenital valvular obstipation, yet by reason of their propinquity he may more readily acquire an obstructive degree of valve hypertrophy than another. [T. M. T.]

5.—Thomas R. Pooley concludes his article as follows: (1) The presence of a steel or iron foreign body in the eye when of a considerable size and situated near the surface may be determined by testing for it with a suspended magnet. (2) The presence and position of such a foreign body may most surely be made out by rendering a magnet by induction and then testing for it by a minute suspending magnet. (3) The probable depth of the enclosed foreign body may be inferred by the intensity of the action of the needle near the surface. He also states that much may yet be done to perfect the method. It seems to him especially desirable that a more delicate needle than he has been able to obtain should be made use of. He predicts a useful future for this method in practical ophthalmology. [T. M. T.]

6.—Sharp, in castrating for this condition, first disinfects the external ring, infiltrating the tissue with a two per cent. sterile solution of cocaine; making an incision about an inch long in the direction of and directly over the cord down to the vas deferens, clearing it for about half an inch; ligating at the nearest point to the seminal vesicle, letting the testicle end go free; removing about one-fourth of an inch of the vas; closing the wound with a buried stitch. Latterly he selects the scrotal region as the site of operation. Then clasp the vas between the thumb and index finger, make a longitudinal incision about three-eighths of an inch in length, and sever the vas; thus ending the operation, as the scrotal wound is not closed. He believes that it is the rational means of eradication from our midst of a most dangerous and harmful class. [T. M. T.]

7.—A. Herzfeld, after reporting a case, calls attention to the fact that in the presence of gonococci the dilatation and irrigation treatment of gonorrhea is one which has to be resorted to with great caution, and before resorting to this method the gonococci should be destroyed by proper antiseptics, or at least be reduced to a minimum. The case demonstrates the fact that we have in gonorrhea, not a relatively harmless local affection, but a disease with a decided tendency to general infection in the sense of the induction of metastasis and the formation of toxins. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 6, 1902.

1. A Case of Severe and Threatening Hematuria from Movable Kidney with Discussion of the Causation of this Condition. ARTHUR T. CABOT.
2. Report of Two Cases Operated on for Deformity of the Nose. J. PAYSON CLARK.
3. Contribution to the Study of Spinal Fracture, etc. G. L. WALTON.
4. Adenocarcinoma of the Liver, etc. CHARLES S. WALKER.

1.—**The case of severe threatening hematuria from movable kidney** reported by Arthur T. Cabot reached such proportions as to give rise to a grave anemia. It occurred in a spare unmarried woman, 43 years of age, who for a few years previous to consulting the author had experienced a dull pain in the abdomen. Occasionally blood was observed in the urine. Six weeks after consultation the hematuria increased, and even clots were observed in the urine. As no evidence as to the cause of the hematuria was present other than a marked congestion of the right kidney due to downward displacement of that organ, such a diagnosis was made. Nephropexy finally controlled the hematuria and also confirmed the diagnosis. Hematuria from this cause is very rare, as signified by the scarcity of such cases in the literature. The author solicits further observation and study in such cases. [M. R. D.]

2.—J. Payson Clark reports **two cases operated on for deformity of the nose.** One case, that of a car conductor, 31 years old, who had sustained an injury by falling and striking his nose when a boy, causing a very noticeable deformity, is illustrated in the article. The nose was decidedly turned upward. The nasal mucous membrane in the left nostril close to the septum and below the deformity was cut through with a small bistoury and the redundant cartilage removed piecemeal until the desired shape of the nose was obtained. An accompanying illustration shows the great improvement as a result of the operation. The points to be emphasized in the second case are: The extreme thickness of the right nasal bone, the failure of the nasal bone to separate from the frontal at the suture, and the inability, owing to the condition of the skin, to keep on the support as long as seemed desirable. [M. R. D.]

3.—**In presenting a contribution to the study of spinal fracture with special reference to the question of operative interference,** G. L. Walton comes to the following conclusions: (1) There are no symptoms which establish (otherwise than through their persistence) irremediable crush of the cord. (2) While total relaxed paralysis, anesthesia of abrupt demarcation, total loss of reflexes, retention, priapism and tympanites, if persistent, point to complete and incurable transverse lesion, the onset of such symptoms does not preclude a certain degree at least of restoration of function. (3) The prognosis without operation is grave

(4) While the results of operation are not brilliant, they are sufficiently encouraging to warrant us in making the practice more general. (5) In most cases it will be wise to operate within a few days of the injury; but a delay of some hours is advisable, partly on account of shock and partly to eliminate the diagnosis of simple distortion. (6) We have no infallible guide to the extent of the lesion. The operation, at the worst, does not materially endanger life nor affect unfavorably the course of the case, and may, at least, reveal the lesion and lessen the pain; it may sometimes save a patient from death or from helpless invalidism of the most distressing character. Instead of selecting the occasional suitable case for operation, we should rather select the occasional case in which operation is contraindicated (the patient with great displacement of the vertebræ, the patient with high and rising temperature, the patient plainly moribund, the patient still under profound shock). (7) The dura should be opened freely; it need not be sutured; drainage is not necessary. [M. R. D.]

4.—Charles S. Walker reports a case of **adenosarcoma of the liver associated with perforation of the stomach.** A man, 64 years of age, shoemaker by occupation, showed incoordination, marked physical disturbance, he vomited and complained of pain about the heart. He died about forty hours after the onset of the symptoms. Autopsy showed that the exciting cause of his death had been perforation of the posterior stomach wall and septic peritonitis. Microscopic examination of the liver showed the presence of a papillary adenosarcoma of that organ, probably originating in the bile ducts. In addition to the chronic gastric ulcer many other pathological conditions were found, which would, in themselves, have caused death. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 8, 1902.

1. The New Era in Medicine. What it Means to Cleveland. P. MAXWELL FOSHAY.
2. Extra-Uterine Pregnancy. F. F. LAWRENCE.
3. The Role of Certain Non-Granular and Granular Somatic Cells in Infection, Etc. H. F. HARRIS.
4. The Correction of Deflections of the Nasal Septum with a Minimum Amount of Traumatism. OTTO T. FREER.
5. The Indications for Myomectomy in Young Married Women, etc. EDWARD REYNOLDS.
6. Symphyseotomy, etc. EDWARD A. AYERS.

2.—Lawrence states that as a rule the **diagnosis of extra-uterine pregnancy** before rupture is easier than after the rupture and its accompanying hemorrhage have resulted in peritonitis. The fact is becoming increasingly apparent that extra-uterine pregnancy occurs much more frequently than has been supposed. He claims that no man should teach obstetrics who is not competent to make the diagnosis of extra-uterine pregnancy. A safe rule in surgery of the uterus is to regard every enlargement of the uterus as suspicious of pregnancy until that is positively known not to exist. Lawrence would add to this what he believes an equally safe and valuable rule, namely to look upon every woman who has the opportunity of pregnancy as a probable victim of the extra-uterine form. Menstrual history is usually irregular in these cases. As soon as the diagnosis is made, operation must be performed. The choice of route is to be determined by the condition of the patient and the method in which the individual operator is most dexterous. [W. A. N. D.]

3.—Harris discusses **the role of certain non-granular somatic cells in infection,** and considers the technic, origin, significance, and fate of these morphologic elements. He mentions that a matter of the highest importance when studying cells is that of securing tissues as fresh as possible. Of the various fixing substances, he prefers the mercuric salts and has recently been in the habit of using the mixture of Bensley's which consists of equal parts of a saturated solution of bichloride of mercury in alcohol and a one per cent. solution of bichromate of potassium in water. The objection which he has to this solution is that it must be prepared fresh each time. He prefers paraffin for embedding the tissues. For studying nuclei, the various stains that are obtained from hematoxylin are to be particularly recommended. Thionin, methylene blue, and toluidin blue when dissolved in a four or five per cent. solution of carbolic acid in water give brilliant results. He emphasizes that sections should always be washed in water after being taken out of alcohol, as a dirty precipitate will occur if this is not done. For differentiation he employs either a weak acid solution of alcohol or he prefers Unna's glycerin-ether solution diluted with water. The sections should then be thoroughly dehydrated in alcohol and cleared with cedar-wood oil, xylol, or chloroform. When it is desired to bring out the peculiarities of the protoplasm of eosinophilic cells and polymorphonuclear leukocytes, eosin as a counterstain should be employed. Harris mentions that there seems to be little doubt that plasma cells are directly derived from lymphoid cells by an increase in their protoplasm and by the formation around their nucleus of small basophilic masses. He discusses the interesting question as to how the lymphoid cells gain entrance into the inflammatory areas and for the following reasons he does not think that they reach these parts through ameboid movements of the cells. In the first place, in those inflammatory conditions in which great numbers of polymorphonuclear leukocytes collect in the diseased parts, there is never, in his experience, the proportion of lymphoid cells intermingled that occur in the blood. And in the second place, nothing is more familiar to every pathologist than the fact that in mild inflammatory conditions of a chronic kind enormous numbers of lymphoid cells may be massed together without any of the polymorphonuclear leukocytes being present at all—which certainly would not be the case if they all passed directly from the blood vessels. Of course it is conceivable that the different chemotactic substances may each have the power of attracting only one kind of leukocyte, but so far as he is aware we have no knowledge bearing directly upon the matter. For some years it has appeared to him that the explanation of these peculiar facts might lie in the possibility that the lymphoid cells reach the diseased parts by means of the lymphatics, and on account of the damaged condition of the walls of the lymph-vessels, and the greater amount of pressure in the diseased parts the cells do not pass through, but accumulate in and around these areas. He was made a number of experiments in the attempt to prove this, but has not as yet reached any satisfactory results. He further contends that plasma cells are probably the real fibroblasts and that the intercellular substance of fibrous tissue—the collagenous material—is the secretion product of the plasma cells. As the cicatricial tissue develops, the plasma cells undergo retrogressive changes and are finally carried away by means of the lymphatics of by phagocytes. Others may become branched, their protoplasm loses its basophilic affinities and the cells remain in the parts as fixed connective tissue cells. He believes that the presence of these cells in the area always indicate beginning formation of cicatricial tissues. Of the new formation of endothelial cells in disease he confesses complete ignorance, but mentions that it seems not improbable that these elements appear to be identical with epithelial cells, and are reproduced from pre-existing cells of their kind. Regarding eosinophilic cells he mentions that the significance of their presence has not been clearly shown in connection with infections. He suggests the name "mucinoblast" for the entirely misleading term "mast" cells, and believes that in the light of our present knowledge several kinds of these cells exist. Four varieties are described: (1) The mast cells of Ehrlich. (2) The mast cells of the lymphatics. (3) The mast cell of the blood. (4) The muscle-fiber mast cell. He concludes that inasmuch as mast cells show a tendency to disappear in acute inflammatory conditions, their absence under these circumstances is of more or less significance, but in chronic processes they not infrequently increase in number, and their presence under these circumstances may be suggestive of the character of the condition. This peculiarity seems to be of especial importance in differentiating so-called inflammatory conditions from sarcoma. [F. J. K.]

4.—Otto T. Freer discusses the **correction of deflections** of the nasal septum with a **minimum** amount of **traumatism.**

Most deformities of the septum can be classed under the two general types of angular and bowed deflections. The angular variety is more apt to be limited to the cartilaginous septum and the bowed deflection almost invariably involves the bony septum, often for nearly its entire extent; the latter is also most common. The concavity of both forms of deflection presents more uniformity of shape than does the convexity, on which spurs, crests and thickenings are often met with. The bowed deflections are more apt to be thin walled than the angular ones. In the correction of these deformities the operator should aim to accomplish his end with the least injury to the parts. A submucous resection is thought to be a much more satisfactory method of operation than the operation of Asch, in which the parts are roughly fractured. Reference is made to the work done by Krieg, Boenninghaus and the author in perfecting and modifying the operation of Ingalls, to whom belongs the credit of having originated the method of resection of the septum. It is known that no deformity of the external nose follows such resections. It has been claimed by some that both cartilage and bone are reproduced. The author has never seen tilting upward of the tip of the nose or sinking in of its bridge after the operation. The supporting function of the septum has been exaggerated. The physiological function of the mucosa of the septum must not, however, be disregarded but carefully preserved. The author confines his resection to the cartilaginous portion of the septum and when necessary fractures the bony portion with forceps after a preliminary chiselling or trephining, which renders fracture in the directions desired easier. Powdered cocaine is applied to the mucous membrane and has proved a satisfactory and safe anesthetic. The application of adrenalin together with the cocaine renders the field practically bloodless. Freer concludes with a description of the various steps of the operation. The article is illustrated. [J. H. G.]

5.—Reynolds, in speaking of **myomectomy in young married women**, gives the following diagnostic points: (1) The appearance in the early part of the puerperium of severe intermittent paroxysmal pains bearing a close resemblance to labor pains, and referred to a definite spot at which there is acute tenderness. (2) The appearance after a few hours of these pains, of the symptoms of the pelvic peritonitis and often in an alarming degree. (3) The detection on physical examination of an irregularity in the uterine wall at the tender spot, not necessarily of large size, and possibly to be made out only under anesthesia. The principles of treatment should be: (1) The control of the pain by morphine, and if this is not promptly successful, by brief but profound anesthesia, which should be succeeded by relief, and should be repeated whenever the pain reappears. (2) If the preceding measures fail and the patient is still in good operative condition, an immediate myomectomy is probably the best treatment. [W. A. N. D.]

6.—Ayers has performed **symphyseotomy** 13 times upon 11 individuals, and in one case three times upon the same woman. In a service of some five thousand confinements he estimates that there were about 25 cases which would have been suitable for symphyseotomy from a theoretical standpoint, had they been reached when in proper condition to justify the operation. In none of his operations was there infection of the joint. Three children were lost and eleven saved. A well-defined prejudice exists against the operation due to the dislike of making wounds close to the vulva in labor, to the opening of a joint, to fear of hemorrhage that might be difficult to control, to fear of tearing the soft tissues around the symphysis, to fear of injuring the sacroiliac joints, and to the dread of failure of union of the joint with consequent crippling. The great majority of cases of pelvic contraction beyond the scope of forceps-delivery lie within the range of symphyseotomy. [W. A. N. D.]

AMERICAN MEDICINE.

March 8, 1902.

1. Concerning the Hypnotic Action of Apomorphin Hydrochlorate in Alcoholism. WARREN COLEMAN and JOHN METCALFE POLK.
2. Clinical Report of Two Cases of Osteo-Sarcoma of the Inferior Maxilla Treated by Excision. HERMANN B. GESSNER.
3. Proteosuria. H. O. MOSENTHAL and WILLIAM J. GIES.
4. Tuberculous Pericarditis, with Effusion; Repeated Tappings; Bacilli in the Exudate: Recovery. FLORENCE R. SABIN.
5. Sprue or Psilosis in Manila. WILLIAM E. MUSGRAVE
6. Old Compound Depressed Fracture of Frontal Bone Involving the Frontal Sinuses. G. CHILDS MacDONALD.
7. The Responsibility of the General Practitioner in Diseases of the Nose and Throat. JUSTUS SINEXON
8. The Danger to the Public Health and Morals, Especially to Young Persons, from Quackery as Promulgated by Public Adertisements. WILL B. DAVIS.

1.—Warren Coleman and J. M. Polk contribute a paper on the **hypnotic action of apomorphin hydrochlorate in alcoholism.** To obtain the hypnotic action of the drug it should be given hypodermically. The dose cannot be fixed. It is well to begin with 1-30 gr., or less, and to repeat this or give a slightly larger dose within a short time. Should vomiting occur, the drug should be discontinued for several hours. Doses repeated in two or three hours have but little beneficial effect. The administration of apomorphin should not be repeated in patients who are weak. The hypnotic action of the drug lasts only a few hours, and when the patient awakes the condition is practically unchanged. The best results are obtained from the drug when it is followed in two or three hours by some recognized hypnotic. Apomorphin should always be given in fresh solution. The most favorable results are obtained in ordinary drunks and in cases verging on delirium tremens, but in the latter cases apomorphin has no beneficial effect. [T. L. C.]

2.—H. B. Gessner reports 2 cases of **osteo-sarcoma of the inferior maxilla** treated by excision with the condition of the patients, 18 and 13 months, respectively, after operation. Both were free from recurrence at these periods. [T. L. C.]

3.—H. O Mosenthal and W. J. Gies prefer the term **proteosuria to peptonuria** in connection with the **proteoses** of the urine. The term **peptonuria** should be restricted to the occurrence of a true peptone. They have conducted a number of investigations with **Freund's method** for the detection of peptone in the urine and feces, and state that Freund seems to have taken the usual liberty with the term peptone and to have proteose in mind and not peptone. Their results show that Freund's method is not a differential process and that it cannot be safely applied to the urine or feces as a peptone test. They prove that peptones, proteoses and gelatines in urine and feces may each give positive results with it. They indicate further that seromucoid in the urine might also affect the final reaction. [T. L. C.]

4.—F. R. Sabin reports a case of **tuberculous pericarditis with effusion**, in which repeated tappings were performed. Recovery followed in spite of the presence of **tubercle bacili in the exudate.** This case would indicate these points of interest: the great value of repeated tappings in serous effusions; the finding of tubercle bacilli in the pericardial exudate and the high per cent. of monocytear forms in a tuberculous exudate. [T. L. C.]

5.—Will be abstracted when concluded.

AMERICAN JOURNAL OF SURGERY AND GYNECOLOGY

January, 1902.

1. Meddlesome Surgery. LUCY WAITE.
2. Hydrocele. Intracranial Infection, etc. N. SENN.
3. The Cause of Diffuse Peritonitis Complicating Appendicitis and its Prevention. A. J. OCHSNER.
4. Endovesical Surgery, etc. F. KREISSL.
5. The Present Status of the Treatment of Pulmonary Tuberculosis by Operation to Secure Compression. A. F. LEMKE.
6. Counter-Drainage. DENSLOW LEWIS.
7. An X Ray and Dissection of the Ureter and Utero-Ovarian Artery, etc. BYRON ROBINSON
8. Prevention and Management of Infection of the Breast During Lactation. G. S. BACON.

1.—Waite emphasizes the importance of recognizing the difference between **conservative** and **meddlesome surgery.** Under the latter term she includes the great fallacy of breaking up adhesions. In many cases in which this process has been adopted a subsequent abdominal section re-

vealed the uterus, ovaries, oviducts, and pelvic loops of intestines glued into a solid mass. The conservative operation is the one which is indicated by the pathology and which holds out to the patient the greatest hope of recovery. It is equally nonconservative to retain organs either normal or diseased which by their presence render the patient an invalid. All patients should be subjected to a rational course of treatment. The hot douche, the medicated vaginal tamponade, electricity, the daily shower bath, constitutional treatment, massage, rest, and physical culture will do more to correct inflammations of the pelvic organs with attending uterine displacements than will curetting, suspension of the organs and round ligaments, and other so-called conservative processes. [W. A. N. D.]

2.—Senn reports a **surgical clinic**, the cases including hydrocele, intracranial infection, tuberculosis of the hip-joint, recurrent carcinoma of the breast, and strangulated umbilical hernia. [W. A. N. D.]

3.—Ochsner concludes his paper on the cause of **diffuse peritonitis complicating appendicitis** as follows: (1) Peristaltic motion of the small intestines is the chief means of carrying the infection from the perforated or gangrenous appendix to the other portions of the peritoneum, changing a circumscribed into a general peritonitis; (2) this can be prevented by prohibiting the use of every kind of food and cathartics by the mouth, and by employing gastric lavage in every case in which there are remnants of food in the stomach or in the intestines above the ileo-cecal valve, as indicated by the presence of nausea, vomiting or meteorism; (3)the patient can be supported by the use of concentrated predigested food administered as enemata not oftener than once in four hours, and not in larger quantities than four ounces at a time; (4) this form of treatment, when instituted early, will change the most violent and dangerous form of acute perforative or gangrenous appendicitis into a comparatively mild and harmless form; (5) cases of perforative or gangrenous appendicitis with beginning general peritonitis can usually be carried through the acute attack safely by this method; (6) in all cases of this class gastric lavage should be practiced in order to prevent the absorption of material from the alimentary canal; (7) in all cases of doubtful diagnosis this form of treatment should always be employed. [W. A. N. D.]

4.—Kreissl reviews the recent methods of endovesical **surgery** with special reference to cystoscopy and ureteral catheterism. He remarks that the catheterization of the ureter was not only the stepping stone to a more solid basis in diagnosing kidney-disease, but it has also contributed to enlarge our therapeutic possibilities in pathologic conditions of the ureter and the renal pelvis through the cystoscope. Last, but not least, among the endovesical surgical procedures he places the galvanocaustic radical treatment of prostatic hypertrophy commonly known as Bottini's operation. [W. A. N. D.]

5.—Lemke, in speaking of the **present status of the treatment of pulmonary tuberculosis by operation to secure compression** remarks that pulmonary tuberculosis is, in the beginning at least, a localized lesion which tends to heal by cicatrization and never by resolution. There is sufficient evidence to warrant the statement that compression tends to favor and hasten this cicatrization about a focus of disease. The dissemination of tuberculosis in lung-tissue by continuity or contiguity is slight and unimportant. It is the dissemination of the disease along the air-channels and lymph-vessels that is the source of danger; on account of the comparative quiescence of the compressed lung and the occlusion of these avenues of dissemination, spreading of the disease is impeded. Newly formed tubercles are not seen in lungs that have for some time been in a state of collapse or compression. Old fibrous or caseous lesions are often seen in such lungs. By operation, cavities are emptied of their secretion and finally obliterated; the absorption of toxins and the rapidity of the lymph-circulation are diminished. [W. A. N. D.]

6.—Lewis has devised a **forceps for use in counter-drainage** which, since 1888, he has used at least 200 times with most satisfactory results. He has employed it in cases of fecal fistulæ, subperitoneal abscess, and in other abscesses that have become adherent to the abdominal wall or stitched to the abdominal incision. It is of use when the vaginal incision is inadequate. He remarks that counter-drainage is most useful when the healing of a sinus is prevented by an infected suture deep in the pelvis. [W. A. N. D.]

7.—Robinson divides the **genital circle of the utero ovarian artery** into five segments, namely, a straight segment, including the abdominal aorta, the common iliac and the internal iliac, and the spiral segment, including five portions, the pelvic floor, the uterine, the oviductal, the ovarian, and the arteries of the round ligament. He gives an extensive description of these portions of the circle. [W. A. N. D.]

8.—Bacon describes the prevention and management of **infection of the breast** during lactation. He emphazizes the importance of careful washing of the nipple with soap and water. The practice of pulling on the nipple should be forbidden. Any pustules on the face or neck of the child must be carefully evacuated and the face cleaned before nursing. Suppurating glands of Montgomery must be carefully opened, evacuated, and sealed with collodion before the child nurses. When fissures or abrasions appear, a nipple shield should be used. When nipple wounds become infected, nursing from the breast should be entirely stopped and a proper supporting bandage applied. [W. A. N. D.]

UNIVERSITY OF PENNSYLVANIA MEDICAL BULLETIN

December, 1901.

1. The Division of the Sensory Root of the Trigeminus for the Relief of Tic Douloureux; an Experimental, Pathological Clinical Study, with a Preliminary Report of One Surgically Successful Case.
   WILLIAM G. SPILLER
   and CHARLES H. FRAZIER.
2. Myositis Fibrosa. MONTGOMERY H. BIGGS.
3. Statistical Study of Fifty-three Cases of Left Cecal Hernia, with Report of an Additional Case.
   OTTO H. FOERSTER.
4. A. Study of Post-Operative Changes in the Blood.
   CHARLES H. FRAZIER
   and THOMAS B. HOLLOWAY.

1.—See **Philadelphia Medical Journal**, December 14, 1901.

2.—Dr. M. H. Biggs contributes a paper on **myositis fibrosa** in which he reports a case of fibrous myositis of the skeletal muscles. The etiology, symptomatology, the diagnosis, prognosis, and treatment of the condition are discussed. The patient was a miner of twenty-four years, who suffered from a swelling which occupied the outer central portion of the right thigh. This followed traumatism and an exploratory operation with a subsequent examination of tissue cleared up the diagnosis. There was present the possibility of the case being one of osteomyelitis, osteoperiostitis, osteosarcoma or a tumor of fibrous formation. Treatment consisted at first of absolute rest and massage, later while massage was continued the patient was allowed to get up and walk about the ward. The pathological findings as well as the clinical signs and symptoms of the reported case correspond quite accurately to the described idiopathic or primary form of fibrous myostitis; the history would warrant one in designating it as a secondary form. [T. L. C.]

3.—Dr. O. H. Foerster presents a statistical study of 53 cases of **left cecal hernia** and reports an additional case. The patient, aged 18 years, presented himself with a somewhat nodular swelling of the left groin extending into the left half of the scrotum. The swelling had existed ever since he could remember. When the patient stood erect the tumor increased in size and peristaltic movements were visible. It was soft, partially reducible, attended with gurgling, did not fluctuate or transmit light. An impulse on coughing was transmitted to the upper part of the swelling. The left testicle was palpable below the tumor. The percussion note over the upper part was tympanitic, and quite flat over the lower part. The heart and lungs were normal. At the operation an incision was made over the left inguinal canal and carried down to the hernial sac. This was opened and dissected from the gut to which it was very firmly adherent. The sac contained

omentum and portions of the large intestine, including the cecum and appendix, the latter being normal in appearance. The contents of the sac were reduced and part of the sac was resected, the remainder being closed with a continuous suture. The pampiniform plexus of veins was greatly enlarged; it was ligated and removed. The operation was completed by a modification of Bassini's method. The patient made an uninterrupted recovery and when last seen (November) had a firm scar and no sign of a return of the hernia. The presence of the cecum had not been recognized before the operation. [T. L. C.]

4.—C. H. Frazier and T. B. Holloway discuss the **post-operative changes in the blood.** They very properly state that, in order to estimate the value of the part which blood examinations are to play, we should have at our command thousands of observations. These can only be forthcoming provided surgeons make the practice one of routine in every case. The paper contains full directions for the hematologist and nurses. The observations recorded in this paper deal only with **the condition of the blood in the post-operative period** and are confined to a phase of the subject which has hitherto not been dealt with. The paper contains the report in full of forty cases in which the blood was repeatedly examined. The statistics, arranged in tabular form, include the records in every case of an estimation of the hemoglobin, of the number and conditon of the erythrocytes, and finally a record of the differential leukocyte count. In order to eliminate the personal equation the blood was in every case examined by Dr. Holloway. The result of these investigations has been given accurate expression in figures and these together with the technique adopted are included in the report. The authors discuss at length the changes found in the hemoglobin and the red and white cells. Referring to the latter they present their conclusions as to the **time required for the return of leukocytes to normal** in the uncomplicated cases, (this period in their series was three and a half days): the relation of **the degree of the leukocytosis to the extent and character of the operation and to the temperature** in complicated cases, as well as **the behavior of the leukocytes** in uncomplicated cases. **The general conditions affecting the progressive fall of the leukocytes** are also considered. The authors state that in the management of their cases in the post-operative period these records have been a source of great comfort and offered evidence at times which led them to suspect the presence of unfavorable conditions before any other clinical data were obtainable. [T. L. C.]

VRATCH.

December 29, 1901. (Vol. XXII, No. 52).

1. On the Question of Accidental (Non-operative) Injuries to the Large Venous Trunks.
B. K. FINKELSTEIN.

1.—Finkelstein reports a number of cases of **accidental wounding of large veins** observed at the Obuchoff Hospital. These included wounds of the internal and external jugular, the subclavian, the inferior vena cava and the iliac veins. An exhaustive bibliography is given and the operative treatment discussed. The following résumé is made: (1) There is no vein in the body (except, perhaps, the superior and inferior vena cava near the heart) which the surgeon has no right to ligate whenever suturing is impossible; (2) in all cases of wounds of the veins an effort should be made to preserve the lumen of the blood-vessel, notwithstanding the fact that the danger from disturbances following complete ligation is not great; (3) the chief danger in accidental injuries lies in the primary and secondary hemorrhage. The entrance of air is of little importance; (4) the veins most frequently injured are the internal jugular and femoral, then the subclavian and axillary. Accidental isolated injuries to the other large veins are rare. [A. R.]

RUSSKI VRATCH.

Vol. 1, No. 1.

1. On Desirable Reforms at the Medico-Chirurgical Academy. N. I. PIROGOFF.
2. Some Remarks on Appendicitis. I. I. METCHNIKOFF.
3. On Cardiac Cirrhosis of the Liver and Its Significance in the Diagnosis and Treatment of Cardiac Lesions.
S. V. LEVASCHOFF.
4. On the Indications for Operative Intervention in Perityphlitis. G. F. ZEIDLER.
5. On the Question of Concomitant Affection of the Large Intestine with Cancer and Tuberculosis.
A. PH. MANKOVSKI.
6. On the Question of Serodiagnosis of Tuberculosis.
G. N. KAZARINOFF.
7. The Prevention and Treatment of Plague.
V. P. KASCHKADAMOFF.

2.—Metchnikoff contends that the appendix furnishes the best proof of the evolution of man from monkeys. An appendage identical with the vermiform appendix of man is found only in the man-like apes, all other quadrumana being devoid of this structure. The appendix, therefore, brings the orang-utang, gorilla and chimpanzee closer to man than to the other apes. Like all other rudimentary organs, the appendix is devoid of function and is extremely prone to disease. Appendicitis may run the course of an afebrile affection accompanied by pain at MacBurney's point, or as a general febrile infectious disease. In the first case the local affection may be attributed to mechanical causes, in the second to microbic infection. There is no specific microorganism causing appendicitis, the streptococci, pneumococci and the b. coli being the more common organisms found associated with the disease. Secondarily, especially in cases of necrosis and perforation, anaerobic organisms are found. The role of these anaerobes is not definitely known, but it may be supposed that their invasion takes place after the aerobic bacteria, as is the case in tetanus, malignant edema and symptomatic anthrax. However, in order that the bacteria may invade the appendix, an injury to its walls must primarily take place. This injury is usually caused by some foreign body, such as bristle, woody fibres, nails, fecal concretions, etc. **Intestinal parasites** may also act as foreign bodies. Entering the appendix, they injure the mucous membrane and thus **facillitate the invasion of pathogenic bacteria.** This role played by the intestinal parasites in the causation of appendicitis was first pointed out by the author in a paper read before the Paris Medical Academy, in 1891. Since then, the author investigated 17 cases of appendicitis. In 12 he found the eggs of the round worm in the feces. **Trichocephalus** was the more important of the intestinal parasites concerned in the etiology of appendicitis. The eggs of this parasite were found within a fecal concretion obtained from the appendix during an acute attack of appendicitis. The eggs of **ascarides** were much rarer in the feces of patients suffering from appendicitis. However it is not always that the parasites or their eggs can be found in the feces of such patients. In some cases the mature females of ascaris and trichocephalus are absent, while in others the parasite concerned may be the **oxyuris**, the latter laying its eggs outside of the intestinal canal. **Nor does appendicitis develop in every case in which intestinal parasites are present.** The latter are only one of the predisposing factors and play the same role which a rusty nail plays in the causation of tetanus. Nevertheless the nematodes are the most common cause of injury to the appendix and should therefore be looked upon as a source of danger. Their invasion into the intestinal tract should be prevented by avoiding raw vegetables, berries and impure water, while their expulsion, if already present, may be accomplished by the administration of anthelmintics, the best of which is **thymol.** Many persons, suffering from appendicitis, are cured, without surgical intervention, after they have been cured of intestinal parasites. [A. R.]

3.—Levaschoff argues for the existence of a **distinct cirrhosis of the liver dependent on cardiac disease.** He has observed a number of cases of typical cirrhosis of the liver developing in the course of mitral disease, these cases constituting 1.2-1.5% of all cases of cardiac disease. In none of them were there the least indications of preexisting hepatic disease. In a great majority of cases the rapidly developing venous stasis in the liver produces such severe

general disturbances that the patients succumb before any considerable production of fibrous tissue in the liver has taken place. In these cases the pathological anatomy is that of cyanotic induration. On the other hand, cases are met with in which the disturbance of compensation is limited for a long period to the smaller circulatory circle and the liver without any immediate danger to the patient's life. In such cases an excessive production of fibrous connective tissue gradually takes place around the blood vessels of the liver, giving rise to typical cardiac cirrhosis. Naturally, such cases are rather rare, and it is on this account that the Germans deny the existence of this form of hepatic cirrhosis. In a group of cases showing severe general disturbances, the existence of hepatic cirrhosis was nevertheless evident from the fact the edema of the lower extremities followed and did not preceed the ascites. Also in these cases the circulatory disturbance must have been slight for a considerable period to allow the changes in the liver to take place before the general circulation became involved. The fact is pointed out that hepatic cirrhosis cannot take place in diseases of the aortic valves for the reason that the general circulation becomes involved rapidly, terminating the life of the patient. The pathology and pathological physiology of the affection are discussed and the treatment considered. The latter is palliative. The ascites is removed by repeated tapping, while of drugs the most unexpected results were obtained with **theobromin sodiosalicylate,** the latter having been found far superior to caffein. In some cases a carefully regulated milk diet gave the best results. On the other hand, **calomel,** alone or in combination with digitalis, acted badly, producing, at times, extreme prostration. [A. R.]

4.—Zeidler writes on **the indications for operative intervention in appendicitis.** He would retain the term **perityphlitis** as denoting the inflammation of the peritoneum surrounding the cecum, following perforation of the appendix. After considering the possible terminations of appendicitis, the author advances the usual argument that in cases of perityphlitis there is no telling when the disease may take an unfavorable turn and demand an immediate operation. His conclusions are: (1) In an acute attack of perityphlitis operative intervention is indicated if there is no tendency towards the absorption of the inflammatory infiltrate and pus, or the localization of the suppuration. (2) An operation is indicated only in true recurrent appendicitis. [A. R.]

5.—Mankovski reports a case in which the microscopical examination of a growth removed from the lower end of the large intestine of a man, 50 years old, revealed **the presence of both carcinoma and tuberculosis. Tubercle bacilli were demonstrated within the giant cells.** There were no clinical indications of tuberculosis in this case. Owing to the lack of clinical data, the author refrains from expressing an opinion as to which of the affections was primary. A review of the literature shows that such a combination is rather rare. [A. R.]

6.—Kazarinoff reviews the literature and describes the technique of **serum diagnosis of tuberculosis.** He also gives the results of his own observations. The serum test was applied to the blood of 84 persons, 11 of whom were perfectly healthy. On the latter, a negative reaction was obtained in 9 and a marked positive in 2. One of the two entered the hospital a month later with an affection of the joints, probably tubercular. Of the 15 patients suffering from various acute non-tubercular infections, as croupous pneumonia, acute articular rheumatism, influenza and syphilis, agglutination was obtained in 2 (acute articular rheumatism and influenza). Of the 17 patients suffering from disease of the respiratory organs, principally bronchopneumonia, 9 showed a marked and 2 a slight reaction. Of the 9 cases with a positive reaction 3 developed subsequently a thickening of the apices, while the 2 cases of bronchopneumonia with a slight reaction assumed such a chronic course as to suggest the possibility of tubercular infection, although no tubercle bacilli were discovered. Of 13 cases of acute serous pleurisy a positive reaction was obtained in 6. Of these one terminated fatally 3 months later from tuberculosis of the pleura, lungs and peritoneum, while the other 5 gave indications during the course of the disease of a tubercular origin of the process. The pleuritic effusion gave the same reaction as the blood. In 3 cases of ascites a slight but positive reaction was obtained in all. 2 of these came to autopsy and showed tubercular peritonitis. Of 4 cases of acute miliary tuberculosis 3 gave a slight (1:5) and 1 a negative reaction. In none was the reaction positive immediately preceding death. In 2 cases of affections of the bones (tubercular?) positive reaction was obtained in both. Of 19 cases of tuberculosis, 5 gave a marked reaction (1 in a dilution of 1:30), 11 gave a slight reaction, while in 3, in the advanced stage of the disease, the reaction was negative. The above data, the author believes, confirm the opinion of Arloing and Courmont as to the specific nature of the reaction and its value in the recognition of incipient tuberculosis. [A. R.]

7.—Will be abstracted when concluded.

NORDISKT MEDICINSKT ARKIV.

1901. (Afd. I. No. 3.)

16. Malginant Tumors of the Long Bones. J. BORELIUS.
17. Folliculoid Carcinoma of the Ovary. INGOLF LOENNBERG.
18. Postoperative Prolapse of the Viscera. NIELS NEERMANN.
19. A Case of Laminectomy. GUSTAV BÄLERNHIELM.
20. Thiersch's Skin-flaps in Plastic Surgery. JOHN BERG.
21. Investigations Among Deaf-mutes and Other Deaf People. ALFRED RUNDSTROEM.
22. The Treatment of Anuria in an Individual with Only One Kidney. E. S. PERMAN.

16.—After a full discussion of the literature, Borelius reports three cases, two of them **malignant osteosarcomata,** the third nonmalignant osteosarcoma. He concludes that conservative treatment is indicated in most myelogenous giant-celled sarcomata, especially those which are completely circumscribed and run a slow course. When any other type of sarcoma resembles these, the same treatment is indicated. As a rule, radical operation, exarticulation or amputation, is necessary and Borelius prefers the former. Resection by the Mikulicz method is only indicated when the patient refuses to undergo radical operation. [M. O.]

17.—Lönnberg studied a **malignant ovarian tumor which resembled the ovarian follicles** in structure. After fully reviewing the literature, he describes the tumors removed from a woman of 44 by Dr. Landau in Berlin. The patient died from erysipelas five months afterward. The tumors, consisting of the enlarged ovaries, were composed of epithelial cells in a connective tissue framework. Small masses of epithelial cells were also found in the connective tissue, making the tumors folliculoid in type. He appends the description of an adenosarcoma also seen in Landau's clinic. [M. O.]

18.—Neermann reports 14 cases of **postoperative prolapse of the viscera.** Care should be taken to suture abdominal wounds well and to prevent infection, both of which may lead to prolapse. When prolapse occurs, reposition is immediately indicated, with attempts to decrease the size of the wound by sutures. The intestines must be cleansed before reposition, and rarely resection of a portion of the intestine may become necessary. [M. O.]

19.—Bäärnhielm reports a **laminectomy** performed by him upon a man of 26, with tubercular dorsal spondylitis and spinal paraplegia, which had existed only six months. The technique of the operation, which was followed by complete recovery, follows. The meagre literature on the subject is quoted. The patient has kept perfectly well during the six months since operation. [M. O.]

20.—**Skin flaps** may be made double, single with mucous membrane, or single recurrent. Berg has used the Thiersch method of skin flaps in several cases of exstrophy of the bladder with success. In hypospadias, meloplasty, blepharoplasty, rhinoplasty, and tracheloplasty, he has made skin flaps **with successful plastic results.** His technique is given in full. [M. O.]

21.—It is an acknowledged fact that many **deaf mutes** are not absolutely deaf. Of the 139 studied by Rundström, the cause of the condition in one half of the cases was congenital. 26% showed chronic rhinitis, 11% adenoids. Pathological changes in the middle ear were frequent, especially

in cases of acquired deaf-mutism. Tables show the conditions of the auditory organs in these cases and the technical details of his investigations which were also carried out upon a series of people who were hard of hearing first and only later became deaf mutes. He concludes that deaf mutes who can hear must be separated from those who cannot. For they need practice in watching other people talk. All cases with otorrhea or nasal disease should be energetically treated. Rundström's article is long, comprehensive, and masterly, and deserves the attention of the specialists. [M. O.]

22.—Perman reports a case of **anuria** in a man of 37, who had several attacks of **renal colic.** His father also had had renal calculi. His attacks were always confined to the left side. The left kidney and upper part of the left ureter were removed by operation. The wound had already healed when pain appeared over the right kidney. He was put on milk diet and morphine. Several more attacks followed. Anuria occurred suddenly, and **pyelostomy** was performed. By palpation a large stone was pressed back from the ureter into the pelvis of the kidney, where a number of calculi were felt. So much hemorrhage followed an effort to extract the stones that the wound was packed. More attacks followed, and urine was passed through the renal fistula and the bladder. Finally, the large stones were passed per urethra. Then the fistula healed slowly. 8 months later he had another attack which was successfully treated by Perman's assistant. In such cases, nephrostomy or pyelostomy is indicated. The literature is fully quoted. [M. O.]

ZEITSCHRIFT FUER ORTHOPAEDISCHE CHIRURGIE.

1901. (Volume 9, No. 3).

13. The Report of the Höftmann Clinic in Königsberg for Eighteen Months. STRUBE.
14. The Nineteenth Report upon the Treatment of Spinal Deformity, from 1895 to 1900. WILHELM SCHULTZE.
15. A Simple Orthopedic Operating Table. FERDINAND SCHULTZE.
16. So-called Multiple, Progressive, Ossifying Myositis. WILHELM RAGER.
17. The Late Results of Resection of the Sterno-cleido-mastoid in Muscular Torticollis. E. G. STUMME.

13.—Strube reviews the cases observed in **Professor Hoeftmann's clinic in Koenigsberg** from January, 1899, to July, 1900, in all 2256 patients. 241 operations were performed, and 395 cases of scoliosis were treated, mainly by massage and exercise on the Zander apparatus. The Hessing plaster jacket was employed in 123 cases, while redressement was only done once, 148 cases of spondylitis were treated with plaster jackets, the vertebra being trephined in three cases. 94 cases of tubercular joint disease were observed, some of which were operated upon, others received injections or apparatus. Four cases of hygroma of the sheaths of the tendons are reported. Massage seemed useful in the treatment of adherent hernia. 51 cases of flat-foot, 37 of club-foot, 42 of infantile paralysis, 40 of rachitic deformity, and 9 cases of congenital dislocation of the hip were seen. Several cases are reported in detail with excellent photographs, radiographs, and descriptions of the apparatus employed. [M. O.]

14.—In the **treatment of scoliosis** either the deformity is overcome by active movements in the corrected position, or motion is carried out in the corrected position after the deformity has been passively corrected. The complicated Schulthess apparatus for these exercises is described in detail, with a remarkable series of illustrations, showing its effects. Its position, pressure, etc., can be changed for the use of every individual. Massage and plaster jackets are also employed. From 1895 to 1900, 520 females and 98 males came under treatment for scoliosis, their average age being 13.6 years. The scoliosis was left convex in a few more cases than right convex, but was generally dorsal in position. The results with treatment were favorable in 341 cases, 92.9%. The final results were 72 recoveries out of 92 cases. The entire 89 patients treated in the hospital gave good results. Full statistics and many diagrams accompany the article. [M. O.]

15.—Schultze describes, with photographs, a **simple orthopedic table** with complicated apparatus attached, so that all kinds of orthopedic operations may be performed. The method of utilizing the table is fully explained. [M. O.]

16.—**Multiple progressive ossifying myositis** is an affection of the voluntary muscles and their tendons, causing the fixation of the head, body, and extremities in abnormal positions. Only the muscles of the hands, fingers, feet, and toes remain unaffected. Clinically an edematous tumor appears after some injury or with slight fever and pain. This grows hard, and the muscles affected cease their function. This condition in a girl of 14 is minutely described, with many photographs. At birth she showed microdactylia: exostoses appeared on the forehead at a year and a half: and in the neck at three years, recurring after extirpation. Then, about puberty, various muscles showed inflammation, retraction, and ossification, while all treatment proved useless. At the age of 15, she shows ankylosis of the jaw, shoulder, and elbow; stiffness of the neck, back, and breast: torticollis and kyphoscoliosis. Even the platysma myoides is involved. Only 54 cases were found in the literature. It seems more frequent in boys than girls, always occurring in childhood. The muscles of the neck, back, and shoulders are most often affected. The diagnosis is not difficult after the disease has existed for some time. The prognosis is bad, while the etiology remains unknown. There seems to be some hereditary predisposition and the illness always develops before growth has ceased. The **literature of the subject is fully collected. [M. O.]**

16.—Stumme describes the **late results of resection of the sterno-cleido-mastoid for muscular torticollis** by the Mikulicz method, giving the case-histories in full of 34 cases, with photographs at different stages of the treatment. In only 34 patients out of 120 cases of muscular torticollis seen was it considered necessary to operate, during the past ten years. All were cases with marked deformity, ranging from 1 to 26 years in age. The wound healed by first intention in 29 days. The treatment lasted, on an average, 22 days. In 28 cases, the results were studied from 7 months to 9 years after operation. Only one case still complains. The head was absolutely normal in 14 cases, while a trace of inclination remained in 10 others. Overcorrection was noted in two patients. Movement of the head was unhindered in 20 cases, while some depression about the scar showed in but four. The muscle stood out plainly in 15 cases. Marked deformity after operation was seen once. While some scoliosis had been present in all the patients before operation, only 14 still showed it afterward. The shoulders were symmetrical in position in 12 cases. The first 21 patients were completely cured, while of the other 7 but two still showed some inclination of the head. The operation is especially of service in the severe cases, while subcutaneous tenotomy or other orthopedic treatment will do in mild cases. The technique of the operation is given. The many photographs are excellent. [M. O.]

ZEITSCHRIFT FUER HEILKUNDE.

November, 1901. (Volume 22, New Series, Vol. 2, No. II.)

1. Cystic Swelling of the Vesical End of the Ureter. AUGUST TOEBBEN
2. A Case of Leukemia with Giant-Cell Emboli and General Osteosclerosis. EMIL SCHWARZ.
3. Researches Upon the Gruber-Widal Reaction and Auto-agglutination in Typhoid Fever. L. ZUPNIK
4. A Rare Condition. Advanced Glioma Sarcomatodes of the Spinal Cord. OSKAR FISCHER.
5. Anthrax Infection. HANS HAMMER.

1.—**Cystic swelling of the vesical end of the ureter** is rare, only 21 cases having been reported. These are divided into groups: 8 cases in which the ureter enters far into the bladder: 7 cases with the ureter ending in a blind sac: 4 cases with a blind ending yet some other communication with the genital apparatus: and 2 extraordinary cases which come under no previous heading. Tobler reports three cases which he has observed. The first was a boy of 5, in whom one of the right ureters, as there were two, ended deep in the bladder, in a cyst. The second

case, a woman of 50, was an extraordinary case with dilatation of the ureter outside and in the bladder. The third was a case in which a renal calculus caused cystic swelling of the end of the ureter. Among the causes of intravesical cyst formation of the ureters are an opening deep in the bladder with compression of the vesical sphincter, a blind ending with some other communication with the genital tract, and stenosis of the opening, even by a calculus. Any of these causes must have existed some time for the development of a cyst. [M. O.]

2.—Schwarz reports a case of **leukemia** in a woman of 47, ill but a few weeks with pain in the bones of the legs and abdominal swelling. Examination showed aortic insufficiency and a greatly enlarged spleen. There were no enlarged lymph-glands. She died 8 months after the onset of the illness. Erythrocytes numbered 4,000,000, leukocytes 40,000, while the differential count showed 87% neurotrophilic polymorphonuclear leukocytes, 6% eosinophilic polymorphonuclear leukocytes, and 7% large and small lymphocytes. As she grew worse, marrow cells and erythroblasts, which had previously been present, disappeared. The autopsy showed an enlarged lymph-gland in the anterior mediastinum, insufficient aortic leaflets with calcereous deposits, enlarged spleen, liver and kidneys, enlarged mesentric and retroperitoneal lymph-glands, and sclerosis of the sternum, ribs, vertebrae, skull, and long bones. The liver, spleen, lymph-glands, and kidneys showed **sclerosis with typical giant-cell tubercles.** The bones showed marked sclerosis of their spongy portions and diaphyses, with hyperplasia of the marrow. The diagnosis was **myelogenous leukemia.** So great a number of giant-cells and their occurrence in emboli have previously been unknown. A discussion of the case, with the description of experiments upon animals to show that giant-cell emboli can occur, follows. But three somewhat similar cases were found in the literature, which has been carefully reviewed. [M.O.]

3.—Zupnik reports his results with the **Widal reaction.** After describing his technique and several cases, he states that a positive reaction means typhoid fever when there has been no previous attack and when there is no jaundice; that an early negative reaction does not positively exclude typhoid fever unless high fever has already been noted for some time; that abortive cases do not, as a rule, give the reaction; and that only those other diseases which begin with jaundice ever give a positive reaction. Besides, a blood serum possesses no great agglutinating power with its own typhoid bacillus. [M. O.]

4.—Fischer reports a **malignant glioma of the spinal cord** which grew through the meninges, along the spinal nerves, into the abdomen. A girl, 8 years old, had pain in the abdomen and lumbar region, with dorso-lumbar caries. Paralysis of the lower extremities, vesical and rectal sphincters followed, without convulsions. She died of dyspnea from pulmonary edema. The autopsy showed a greatly enlarged spinal cord, in the lumbar and sacral regions, extending in less marked degree to the medulla. Secondary neoplasms existed in the medulla and left ventricle, there was syringomyelia in the upper cervical region, the arachnoid and pia were affected as high as the hemispheres, while the spinal nerves showed changes deep into the abdomen. The greater part of the tumor was dorsal to the spinal canal. Microscopically, the tumor was a **glioma sarcomatodes.** Two somewhat similar cases have been reported. [M. O.]

5.—Man sems but little susceptible to **anthrax infection,** while it is common in sheep, cattle, and horses. Of 4511 autopsies performed in six years, in but two cases was death due to anthrax. Generally, infection occurs through the skin, with the formation of a carbuncle or malignant pustule. One of the fatal cases was in a man of 63, in whom diffuse edema with widespread suppuration followed infection. Anthrax bacilli were found in all the organs. While infection through the respiratory tract is rare, Hammer's other case was of this kind. The autopsy showed hemorrhages in the meninges, pleura and blood-vessel sheaths on the right side of the neck, and hemorrhagic infarcts in the lungs and spleen. Anthrax bacilli were found on examination. Infection by the gastrointestinal tract is commoner, yet by no means so frequent as by the skin. [M. O.]

LA PRESSE MEDICALE.

December 11, 1901. (No. 99).

1. A Case of Syringomyelia with Longitudinal and Transversal Syringomyelia BRISSAUD.
2. The New Pathological Institute in Bucharest BABES.
3. Hermophenyl. ALFRED MARTINET.

1.—Brissaud reports a most interesting case of **syringomyelia** in a woman of 37, with almost absolute loss of power in her arms and marked thoracic deformity. The affection began at 9 years, with scoliosis and pain in the cervical region. Atrophy in the left hand commenced at 14, and in the right hand at 17. After typhoid fever at 21, muscular atrophy advanced rapidly. She became a morphinomaniac at 26, after having married a man with infantile paralysis. The marked atrophy of all her muscles and the thermo-analgesia are well shown in photographs and diagrams. The distribution of the analgesia to heat is both rhizomeric and myelomeric. Lesions are undoubtedly both radicular and spinal. A detailed description of the patient is given. [M. O.]

2.—Babès describes the **new Pathological Institute in Bucharest,** with diagrams. It cost $140,000. There are sections for pathology, bacteriology, the infectious diseases of animals, serotherapy and anti-rabic treatment, biological chemistry, experimental medicine, library, amphitheatres, museum, etc. A full description of the buildings follows. [M. O.]

3.—**Hermophenyl** is an antiseptic and antisyphilitic. It is used for antiseptic gauze and for dressing wounds in a solution 1 to 100; for gonorrheal ophthalmia, in a solution 1 to 30; and as an injection in syphilis, 4 cc. of a solution of ½ cg. to the cc., every 2 or 3 days. [M. O.]

December 14, 1901. (No. 100).

1. Malignant Lymphoma in a Child of Nine. ALBERT JOSIAS and LOUIS TOLLEMER.
2. A Typhoid Form of General Staphylococcus Septicemia. EDGAR HIRTZ and GABRIEL DELAMARE.
3. The Treatment of Bronchitis with Bronchoplegia. ALFRED MARTINET.

1.—This case of **malignant lymphoma** began in the tonsil of a child of 9, as a streptococcic angina. The submaxillary glands enlarged, and the inguinal and axillary glands followed, while the tonsil became immense. Then a subcutaneous tumor appeared in the epigastrium, which, on examination after removal, showed lymphadenoma. Dysphagia, dyspnea, and death followed, two months after the initial sore throat. The autopsy showed enlarged glands throughout. Tumors, glands, spleen, marrow, liver, kidneys, diaphragm, and omentum all contained lymphadenomatous tissue. The diagnosis was **general leukemic lymphadenoma.** The condition resembled an infectious disease. Colored plates illustrate the article. [M. O.]

2.—Hirtz and Delamare report a case of **generalized staphylococcus septicemia** in a man of 33, who presented clinically the signs of typhoid fever. The autopsy showed an eruption of small white nodules upon both kidneys, liver, spleen, heart, medulla , marrow, and intestines, which, upon examination, proved to be staphylococcic emboli. The illness only lasted 17 days. As a rule the staphylococci which cause this generalized septicemia enter through the skin. [M. O.]

3.—In **bronchitis** the indications to be met are the cough, the excessive secretion, and the prevention of **bronchoplegia** by stimulation of the bronchial muscles . For bronchoplegia, while a frequent symptom of chronic bronchitis, is commonly found in influenza. When there is great dyspnea, when secretion increases rapidly, or when a bronchitis becomes chronic, bronchoplegia may occur. Opium should at once be stopped, and stimulants, such as ergot, ergotine, quinine, and strychnine, given. [M. O.]

Society Reports.

COLLEGE OF PHYSICIANS, PHILADELPHIA.

SECTION ON OPHTHALMOLOGY.

Meeting held February 18, Dr. Thos. H. Fenton in the chair.

Dr. W. C. Posey read a paper on **transient monocular blindness.** After referring to momentary blurring from a tired ciliary muscle, the partial blindness which accompanies migraine and the periodic dimness of vision so frequently preceding glaucoma, he said that transient loss of vision limited to one eye was uncommon. He reported five cases in which blindness extended over years, unassociated with headache or nausea. There was a history of rheumatism or gout, and evidences of arterial sclerosis. Hysteria was excluded. Ophthalmoscopic examination was negative. Blindness varied from a few minutes to an hour, coming on rapidly and passing away gradually. Loring, in 1874, was the first to note transient blindness, Nettleship, Priestly Smith, and Wagenmann subsequently presenting papers upon the subject. He agreed that the probable cause of the blindness was a spasmodic disturbance in the vascular supply of the eye, not maintained long enough to cause permanent change in the tissues. Dr. Posey believed that the prognosis should be guarded. He pointed out that transient blindness had long been known as the precursor of embolism and thrombosis of the central artery of the retina, and cited a case recently reported by Leber in which there were all the ophthalmoscopic signs of thrombosis of the central artery of the retina without any structural change. Dr. Posey reported two cases of a similar nature, in both of which there had been blindness persisting over many years without any ophthalmologic change. Finally the blindness became permanent, the ophthalmoscope showing total stoppage in the circulation of the eye. Blindness was probably due to spasm. Dr. Randall remarked that the theory of spasm to account for transient blindness was borne out in toxic amblyopia. Dr. Zentmayer referred to a man of 38, who for ten years had transient monocular blindness. Visual acuity was reduced to light perception for 3 to 10 minutes. He had had but one attack of illness, articular rheumatism 20 years ago. There was a family tendency to atheroma. The phenomenon seems best explained by the supposition of a spasm of the vessel walls, or by functional paralysis induced by reduced blood pressure with diseased vessels as suggested by Haab. Dr. Fenton thought that sudden and complete binocular amblyopia was equally rare. He had recently had under observation a man of robust health who suddenly went blind. The possibility of endocraditis was considered. He had failed to find a similar case reported. Dr. Posey said that it was difficult to account for blindness except as part of general syncope, as it did not seem likely that there would be spasm in both ophthalmic arteries at the same time. He said that in one case, in which there had been blindness in both eyes for five minutes without any other symptoms of syncope, he was unable to assign a cause. He did not agree with Wagenmann that iridectomy should be done, but believed that careful treatment of rheumatic or gouty conditions was indicated, to combat any tendency toward endarteritis; at the time of the attack to give nitrite of amyl and gentle active massage of the eye.

Dr. B. A. Randall exhibited a number of **models for teaching the refraction and movements of the eye,** which he had constructed several years ago. He referred to the difficulties of presenting to students by diagrams the essential points in refraction, accommodation, and eye movements. In the models confusion is impossible and problems become simple. This is most manifest in the model demonstrating the mechanism of accommodation according to Helmholtz's theory, and in the more complex model giving the relations of convergence and accommodation. Dr. Sweet showed a model for demonstrating the various forms of astigmatism in which the rays in the vertical and horizontal meridians were made of sheet metal. He also presented a rough model to represent the movements of the eyeballs and the positions of the true and false images in paralysis of the internal and external recti muscles.

Drs. G. E. de Schweinitz and W. M. Sweet presented a water-color sketch, macroscopic and microscopic preparations of an **epibulbar growth at the corneoscleral junction,** occurring in a woman of 34. Clinically the growth appeared like a sarcoma, the microscope showing it to consist of polymorphous cells in a delicate reticulum. Many of the cells were distinctly epithelioid in type. Its point of origin was apparently a conjunctival nevus. Dr. Posey remarked that the rarity with which tumors in this situation involved the interior of the eyeball was well known, the growth having attained large size and spread by metastasis to the preauricular and cervical glands without affecting intraocular structures. He referred to the corneal limbus as the favorite seat for the development of neoplasms upon the exterior of the eyeball, on account of the arrangement of the epithelial cells in that location. He mentioned a case, which he had recently seen, of epithelioma of the lids in which the cornea became secondarily involved. The eye was glaucomatous and the corneal epithelium had been destroyed by ulceration. The corneal tissue in this case was infiltrated with epithelial cells.

ARCHIVES DE MEDECINE DES ENFANTS.

January, 1902. (Volume V. No. 1.)

1. Lithemia in Children. JULES COMBY.
2. Congenital Dislocation of the Hip. VICTOR VEAU and V. CATHALA.
3. Two Cases of Intermittent Fever with Migration of the Testicle. FARAGGI.
4. Benign Hemorrhagic Scarlatina. BOUYER.

1.—Will be abstracted when concluded.

2.—Veau and Cathala report a case of **congenital dislocation of the right hip** in a girl of 4, reduced by the Lorenz method six weeks before death from diphtheria. Postmortem examination showed thickening of the aponeurotic covering of the hip muscles and of the joint capsule, with ecchymosis between the newly formed joint and the old articulation. This showed a depression near the obturator foramen through which the head of the femur could most easily return to its normal position. The false cavity was above and behind the normal point, and the head of the femur was small. The dislocation was easily reducible after death. Movements tending to push the head of the femur up and forward help to keep the dislocation reduced. With abduction and external rotation, reluxation is impossible. Permanent reduction is probably due to retraction of the posterior part of the capsule secondary to prolonged abduction and external rotation of the hip. [M. O.]

3.—Faraggi reports two interesting cases of **intermittent fever,** with delirium, nausea, vomiting, headache, etc., **accompanying migration of one testicle** in the inguinal canal, in boys of 6 and 7 years. From these cases it seems that the presence of the testicle in the inguinal canal was the cause of the attacks. [M. O.]

4.—Bouyer reports a case of **scarlet fever** in a girl of 4, followed by **albuminuria** when desquamation began. Then **hematuria** appeared, with **petechiae** on the body and lips, vomiting and epistaxis. Yet she recovered in three weeks, the albuminuria also having disappeared. As the child had profuse epistaxis with measles a year before, it is possible that the hemorrhages were due to hemophilia. [M. O.]

Original Articles.

MEDICAL EDUCATION.

An Address by JOHN B. DEAVER, M. D.,

of Philadelphia,

Surgeon-in-Chief to the German Hospital.

Delivered, February 12th, 1892, at the opening of the New Operating Amphitheatre of the Mercy Hospital, Chicago.*

The choice of a subject to present on this occasion cannot help but be a matter of considerable anxiety. When I received the invitation from my distinguished friend, your, yes, our Murphy to speak to you, two thoughts were most prominent in my mind: First, one of pleasure at the honor bestowed upon me in being invited to journey so far to address an audience composed of many of the leaders in the American medical profession, (which the majestic distances of this great country have prevented me from knowing personally, as well as I know them by the luster of their names and achievements). The second thought that instantly followed was the difficulty of choosing a subject which would prove of sufficient interest and value to merit your kind invitation.

After reflection, it seemed clear to me that on an occasion like this no subject could be more suitable than that of Medical Education. A subject that will never become trite so long as the human race endures, for as one by one the Great Reaper, time, mows down with his sythe the medical profession of to-day, it can leave no better legacy to posterity than the proper preparation of those who are to spring up to take its place.

There is one fact that makes this subject of the greatest difficulty. The fact that we are all medical students from the day we first enter the halls of our particular Alma Mater until, in the fullness of time, we must turn over our incomplete tasks to those who are to follow us. In this arises the greatest difficulty in arranging a course of study and deciding how far it should go before the student is fitted to advance from his medical school to the broarder and higher school of a practitioner of medicine.

It is not in the province of this paper to discuss the theoretical question of a complete medical education. Indeed, the alloted span of life is too short for any of us to ever hope to explore the whole, broad field open to us; but our aim is only to outline some of the principles, applicable to proper instruction in the first school of medicine which will enable its graduates to enter the higher school, fitted, both to advance the most rapidly and, more important, with the greatest benefit to humanity, whose health and safety it is our noble mission to promote. The aim of a medical school should be to turn out men well grounded in the fundamentals of medicine, who are ready to take up any of the many branches of the profession, into which their varying talents may lead them and, above all, make them safe conservative physicians with confidence in their groundwork, and enthusiasm to follow this forward and fill out their knowledge in the broader school to limits bounded only by the years Providence vouchsafes them.

In the halls of my particular Alma Mater hangs the portrait of Gibson, one of the master minds in the history of American surgery and one of whom the Philadelphia profession may well be proud. Under his portrait are written these words: "Principles, principles, principles" and it were well that these words were engraven on the minds of all teachers of medicine. For it is only by the ingrounding of the principles of medicine that the young physician can judge between the false and the true that he is sure to meet with in after-life.

The course of study in a medical school should be well balanced and proportionate, and this aim should be kept in mind. The time given is too short to fit a man to become a specialist, but is only sufficient for a groundwork that will permit him to follow his bent, either in post-graduate schools, or in that larger and greater school of personal experience, in the daily routine of practice.

Even a rapid review of the curricula of the various medical schools will show that in most this balance is not maintained. Some devote too much time to laboratory methods, some to surgery and anatomy, and in others the preference is given to internal medicine. This unevenness is usually due to the domination of one branch of the faculty over the others, and suggests the remedy of each department asking for only the necessary time for the groundwork principles of their branch, and not that necessary for the instruction of future specialists. A college course should be practical, for instance, in some schools nearly as much time is given to instruction in chemistry as is given to anatomy, and yet the graduate is hardly able to examine a specimen of urine for albumin, with certainty and dispatch. In every school of medicine, as in other lines of higher education, a well organized body of alumni should be actively engaged in shaping the destinies and policies of their Alma Mater. Who is better prepared to know the actual needs and medical attainments which are necessary to the well being of the young idea in medicine, and the needs of the ailing community, than he, who of long experience at the bedside and operating table has learned the many difficulties, which the doctor must overcome in treating disease; ay, he must do more than treat disease, he must treat the individual. If the time demanded is too long, let each course be cut down in proportion; but the pruning must be most judiciously done in those branches in which all medicine centers, anatomy, physiology and pathology.

Clinical and didactic teaching each have their place. Were it possible, the ideal method would be a presentation clinically, in a logical order, of all the varieties and stages of disease, but this is manifestly impossible, and didactic teaching must always fill up the gaps left by clinical teaching, and be useful in reducing the lessons learned clinically to a systematic and rememberable classification. Thus both kinds of teaching have their place: but there is little doubt that a lesson learned at the bedside, or operating table, is more real and applicable to the student than a lesson learned from a didactic lecture.

In this regard we may speak of the value of en-

*Under the auspices of the Chicago Medical Society and Northwestern University of Chicago, Ill.

couraging students to attend clinics outside of their particular college hospital. No one man has a monopoly of medical skill and much valuable information may be obtained by the student, both of methods of thought and technique, outside of the walls of his Alma Mater.

A spirit of commercialism is one of the greatest enemies of a medical school. A large production at a cheap rate may be a good enough aim for a business house, but this spirit is fatal to a medical school. Too many schools seem to take pride in their large enrollment of students, forgetting that at the same time the teachers and clinical material are entirely inadequate for the proper instruction of so large a body of men. Salaries are in many cases insufficient. It is not reasonable to suppose that a man able to make a large income in practice will be willing to give up the best part of his time to a teaching position that pays him practically nothing. The primary object in selecting medical teachers should be the fitness of the individual for the position and not his price. A man of broad general education, with a large experience in the subject which he is to impart to the student, and who is recognized as an authority, with the ability to impart this knowledge, is the type of man who should fill the professorial chair; not he who is possessed of influence or affluence sufficient to warrant an acceptance of a small or totally inadequate compensation.

In the great commercial organizations of to-day it is merit and fitness which is the accepted standard for leaders. Men who have demonstrated their peculiar ability in certain lines who are chosen to lead; men who, of their own worth, command and receive yearly salaries that would be handsome endowments for any medical school or college. Why is it therefore, that the men who are teaching those who will have the health of the community in the hollow of their hands, are compelled to accept a paltry pittance in return for the ability which is, as a matter of necessity and human limitation, a work of a lifetime to acquire? Can any one of you call to mind a physician or surgeon who has, from the practice of his profession alone, accumulated a fortune to compare with those of a thousand leaders in commercial life?

The inadequacy of salaries has in it one of two dangers: Either the chair is held by a man who holds his position only at its value as a means of advertisement for his practice and who, therefore, as his practice increases, is compelled to give less and less time to it, until too often the only benefit the student receives from his occupancy is the luster of his name. Or, the chairs are held by men who have not attained that high plane of excellence, which I feel is so essential in those who are to be leaders of men and who by virtue of their position are shaping the destinies of future generations. Either of these two alternatives is greatly to be deplored.

Nothing is of greater importance to the body politic than the proper instruction of those who are to have the care of the health of the community on their shoulders. The idea is preposterous that those to whom this instruction is intrusted should be men of mediocrity, either failures, or those whose measure of the value of the position lies in its value as an advertisement.

There is not, and never has been, a higher calling than that of a teacher, and a teacher of medicine is one of the highest in this calling. The dignity of the calling is seriously debased by its being occupied by men who, in order to obtain even a respectable livelihood, must make their high position subservient to their practice.

Many States and individuals have been liberal in their donation to this work, and surely nothing is more deserving of aid, and no charity will better repay posterity than one that assists in medical education or medical research.

This problem of education is a great and interesting one, and although it is still not entirely solved yet in this regard we have many causes for congratulation on account of advances made and a fresh interest excited, not only among the medical profession, but also among the laity.

The very occasion upon which we are gathered together, the opening of this beautiful amphitheatre, shows the spirit in which education should be held. Beautiful as it is, it is none too beautiful for the high purpose for which it is designed. The day of straight backed uncomfortable benches, foul smelling, badly ventilated amphitheatres has gone for good, and in its place has come such a room as it is our pleasure and delight to occupy this evening. A regard for health and comfort and artistic beauty coupled with a strict regard for the preserving laws of asepsis are here most faithfully carried out, independent of expense, time and trouble, and—I venture to prophesy that the work that will be performed here by my illustrious colleagues will not be surpassed by any in this great home of modern surgery, the United States of America.

But, allow me to return to a consideration of those principles that are the rock upon which the enduring edifice of medical education must be reared. They are three, as I have already said, anatomy, physiology and pathology. With a thorough practical working knowledge of this triumvirate all knowledge of medicine is possible of attainment.

Where is the surgeon who [illegible] his life, call to his aid his knowledge of anatomy and pathology, or the physician who is not constantly in need of a knowledge of physiology and pathology in making the simplest diagnosis, or in performing the simplest operation of surgery.

It seems to me that there is a pressing necessity for a pathology that cannot be learned in the laboratory, which, for the want of a better name I will call living clinical pathology. I refer to the kind of information which is obtained by the study of pathological processes in the living body, and particularly that which is alone seen at the operating table. I have but to remind you of the appearance of a diseased vermiform appendix immediately before it is amputated, and the markedly different appearance which it presents the instant it occupies the bottle waiting for its reception. Or the appearance of the intestines before and after the liberation of an obstruction. Those of us, who are granted the privilege of this view of nature's work in diseased states, frequently occupy positions varing materially

from those of our brothers who make their observations upon the shell of the individual, fortunate or unfortunate as the case may be, from whom the godlike principal, *life*, has departed.

What manner of man is it, who is so lost to conscience that he would dare to remove a goitre or a mass of lymphatic glands from the neck; or a gall stone from the common duct; or a vermiform appendix from a confining wall; a carcinomatous uterus from the pelvis; or set a broken thigh, without an accurate knowledge of the anatomical relations of the involved area; or, in the case of the physician who would venture a diagnosis of phthisis pulmonalis; gastric carcinoma or ulcer; brain tumor, or in fact derangement of any organ of the body, unless he knew the normal function of that organ from which he could draw logical and scientific comparisons and deductions.

And I say again, and with all the emphasis at my command, who is better prepared to teach these principles of medicine, than the man who has acquired the knowledge by years of experience and has the ability to impart them? Teachers are born, not made, although it may transpire that many years go by before the fact dawns on the minds of the community, or that he is discovered by a small circle of friends and admirers who are possessed of sufficient acumen to recognize the inherent talent of an otherwise obscure leader.

It is this knowledge of men that marks the great educators who are thus fitted for occupancy of the highest seats in the institutions of higher education. It is not buildings or money, however necessary they may be, which mark the standard of an educational institution, but the man at the head and the corps of associated educators over whom it is his function to preside, and whose efforts towards advancement in knowledge he shall foster and guide, that makes the only solid ground for reputation.

Among the pioneers of those who have done most for the advancement of medical education stands the name of one of the members of the Chicago profession. I refer to Dr. N. S. Davis, who as long ago as 1839 began a series of articles asking for improvement in our medical schools. Almost the first in the field, his conscientious and able efforts were finally crystalized into the American Medical Association.

Thus we see from its very inception the primary object of this great bond of unity between the most widely separated members of the American profession was the advancement of medical education. That its purpose has been productive of valuable results, there can be no question; and Dr. Davis has been able to see results worthy of the greatest congratulation in the advancement of the medical schools of the country.

Contrast this beautiful, modern, aseptic amphitheatre with the dirty operating rooms of fifty years ago: Contrast this well equipped hospital, where the poorest of patients may receive care that is in no way second to that received by the richest man in his palatial residence, with the hospitals known to our fathers: Contrast the medical course of thirteen to sixteen weeks, of fifty years ago with our present medical course, and we certainly see the best causes for congratulation and wonder at the magnitude of the changes in only half a century.

Kingsly in "Westward Ho" drew attention to the fact that the tide of immigration was ever toward the westward, and it would seem that medicine is following in the track of the westward tendency in the United States. It was not many years ago when the East held the palm of medical education; but to-day we of the East must bow to the progress of our western brothers, whose achievements speak so loudly and who, with no uncertain voice or faltering hand, have taken a place in the front ranks of medical attainment, and have raised the banner of Aesculapius to the virgin winds of the great west.

THE REPORT OF A CASE OF OBLITERATIVE PERICARDITIS WITH HEPATIC ENLARGEMENT AND ASCITES.*

By EDWARD W. BECKER, M. D.,
of Troy, N. Y.

In 1896, in the *Berliner Zeitschrift für klinische Medicin*, Vol. XXIX, page 385, F. Pick, of Prague, directed the attention of the profession to a hitherto unknown clinical entity, which he denominated "pseudo liver cirrhosis, the result of obliterative pericarditis," the chief symptom of which was marked ascites without general anasarca. In his article Pick reports three cases with autopsies, a summary of which is as follows:

CASE I.—Male, aet 47. June, 1889, had pericarditis, March, 1890, had pleurisy. Abdomen and liver were enlarged at this time. Owing to recurring attacks of dyspnea and ascites he entered the hospital six times up to 1892, to be tapped. Over the region of the heart no murmurs were ever heard; liver was greatly enlarged. Before sickness began, he drank forty-one glasses of beer daily. Was admitted to hospital October, 1892. Heart sounds distant. Abdomen 103 cm. in circumference. Ankles slightly edematous; liver at this time was not particularly enlarged. Shortly after this he developed pneumonia and died. The diagnosis had been pleuritis, pericarditis, and cirrhosis of the liver. Post mortem showed slight jaundice of the skin and conjunctiva. Abdomen swollen, and gives a distinct fluctuation wave. Right lung normal. In the right pleural space 11 cm. of clear serum were found. Left lung generally adherent and lower lobe thickened. The two layers of the pericardium were grown together, causing hairy, thick bands, save at apex where it was separated by fresh hemorrhage. Abdominal cavity contained 51 ccm. of clear serum, which also contained a few blood clots. Peritoneal surface covered with a fibrinous exudate which was particularly marked over the liver and spleen. Liver appeared about normal in size and was of the typical nutmeg variety. Kidneys and spleen enlarged, full of blood and were of greater consistency than normal. The rest of organs appeared normal. Brain and cord examined and found normal.

Diagnosis:—Pericarditis, left-sided pneumonia and passive congestion of all organs. Microscopical examination of liver showed typical passive congestion. The post mortem showed that the liver affection was secondary, due to chronic pericarditis, causing connective tissue formation with subsequent contraction.

CASE 2.—Male, 26 years old. Has had swelling of abdomen since he was 18 years old. Was very obese, and in 1888 went to Marienbad to reduce his flesh. After three days of this treatment, he suffered from shortness of breath, palpitation of the heart, cyanosis of the lips and enlargement of the abdomen. He then went to a hospital where the veins of his upper and lower extremities were

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found dilated. Abdomen 111 cm. in circumference. Liver enlarged. September 13, 1888, was tapped. August, 1889, went to Teplitz hospital, where he was again tapped. In 1890 went to Vienna to Kahler's clinic, where ascites without edema was found. January 19 to 26, 1890, had fever, with well defined friction rub over the heart. June 24, 1891, again entered hospital and was tapped. No friction rub was found then. Since then has been tapped twice. June 9, 1892, went to Pirbram's clinic at Prague. The abdomen was 124½ cm. in circumference; was tapped and liver was found to be enlarged and uneven. Superficial area of cardiac dulness not increased. At apex a distinct presystolic murmur was heard. He was repeatedly tapped and later on considerable edema of the lower extremities came on. Death occurred December 11, 1892. Post mortem showed complete obliteration of the pericardial sac, with partial calcification of the same. Chronic passive hyperemia and secondary cirrhosis of liver. General dropsy.

This case shows practically the same symptoms as case 1, and if one had not observed the patient during his attack of pericarditis, he would doubtless have erred in his diagnosis.

CASE 3.—Male, aet 24. For two years has had shortness of breath and palpitation of heart with gradual swelling of the abdomen. Was in hospital for six weeks. Four weeks afterward developed complete anuria, later urine was passed, but much less in amount. At the same time there was slight edema of scrotum and extremities. Again entered hospital at Prague in February, 1894. Abdomen 117.5 cm. in circumference. Ankles very slightly edematous; liver enlarged. Over region of heart no murmur was detected, but later on an occasional systolic murmur was heard. From February 6 to February 10, friction rub at apex of heart was heard. At this time abdomen was 133 cm. in circumference. After several tappings he developed pleurisy and died September 24, 1894.

Post mortem.—Heart in toto united with pericardial sac. Both layers measuring 1 cm. in thickness; in places caseous nodes and deposits of lime were observed. The heart was very large. Muscular fibre soft and pale. Ventricles not dilated. Valves normal. Abdomen contained about three liters of serous fluid. Peritoneum thickened, had lost its glistening appearance and contained several adhesions. Liver unusually large, irregular and granular on inferior border, creaked under knife and contained a large amount of connective tissue which had contracted. Spleen normal; capsule thickened. Kidneys normal. Peribronchial glands tuberculous.

Diagnosis.—Pericarditis, pleurisy, tuberculosis and cirrhosis of the liver. Universal edema; chronic diffuse peritonitis.

This case gives the same picture as 1 and 2, as enormous ascites without, until later in the disease, edema of extremities together with an absence of heart disease, and the presence of dry pericarditis. This pericarditis, together with observations and post-mortem findings of the other cases, enabled me to diagnose this case.

These cases show, first, that there existed a mixed form of cirrhosis of the liver accompanied by enlargement of the same and ascites without jaundice, which is occasioned by a latent pericarditis, creating a passive congestion of the liver with consequent connective tissue proliferation. This later so interferes with the portal circulation that a high degree of ascites follows.

Second, these cases come on chiefly in young individuals, although some have been observed late in life.

From the study of these three cases Pick draws the following conclusions in regard to the differential diagnosis:

(1) An absence, in the clinical history of the case, of the etiological factor in the production of primary liver cirrhosis.

(2) A history of a previous attack of pericarditis, accompanied by slight edema of the ankles.

(3) In every instance a painstaking and careful examination of the heart should be made. When evidences of adherent pericardium are present together with enlarged liver and ascites which is unaccompanied by general edema or enlarged spleen, the diagnosis of pseudo liver cirrhosis due to obliterative pericarditis should be made.

Other observers who have reported cases confirming the views of Pick are, Nachod, Werbatus, Patella, Galvagni, Bozzolo and Cabot.

1.—F. Nachod, *Prager medicinische Wochenschrift*, 1898, No. 23. A patient, six years old, with very marked ascites without evidence of heart disease. A tubercular peritonitis could not be excluded. Section was done and the peritoneum was found free, smooth and without adhesions. Liver smooth, hard and cyanotic; spleen normal. Nine months later, after repeated tappings, death occurred.

Autopsy showed chronic fibrinous pericarditis. In liver and spleen cheesy nodules, and in ileum tubercular ulcers were found. Over the peritoneum, opposite these ulcers, tuberculous nodes existed. Tuberculous glands, pleural adhesions, and tubercular meningitis were also found. It is to be noticed that the tubercular peritonitis was recent, because of its absence at the laparotomy, and that the ascites, which occurred four months prior to the laparatomy, was as Pick believes, due to the subsequent contraction of the nutmeg liver occasioned by old pericardial adhesions found at autopsy.

2.—G. Werbatus, *Inaug. Diss. Erlangen*, 1898, describes in detail the history of a case extending over a long time. Man, 42 years old, whose symptoms indicated that he had to deal with a case of pseudo liver cirrhosis of Pick. After examining the literature on the subject, particularly in regard to great ascites in contrast to the slight edema of the extremities, the question arose, why in one case of chronic passive congestion we should have connective tissue formation with contraction, and in another not. In regard to my case it seems as if we had to deal with a chronic inflammation of all serous surfaces in general which passes over to the blood vessels, creating in them a locus minoris resistentiae, which in turn causes the dropsy. This so frequently observed cirrhotic process of the liver is due to an inflammatory irritation which passes from the peritoneum to the capsule of the liver, which the chronic passive hyperemia only increases, owing to the proliferation and consequent contraction of the connective tissue in the liver, results the hyperemia in the domain of the portal circulation, with consequent ascites.

3.—V. Patella (Perugia) *Clinica Medicini Ital.* 1898, No. 2. After general review of literature, Patella relates the following case from his own observation, which completely fulfills the observation of F. Pick as pericarditis pseudo liver cirrhosis. The high degree of ascites and slight edema of feet. The autopsy showed pleuropericardial adhesions with tubercular nodes in them, strong adhesions between liver, diaphragm and stomach, nutmeg liver, with great thickening of the capsule, spleen not enlarged. His case he believes confirms Pick's observations of pericardial adhesions which cause atrophy of the connective tissue of the liver.

4.—E. Galvagni (Modena) *Clinica Moderna*, 1898, No. 33. In conclusion, after demonstration of his cases of ascites with double heart sound, although the heart appeared normal, he speaks of the great difficulty of diagnosing light degrees of pericarditis and adds three new cases to those published, which cases at autopsy showed complete adherent pericardium. As a result, the aorta and pulmonary artery were compressed, which was probably due to marked heart action because of hindrance by pericardial adhesions. The following diagnostic points he advances. The small but regular pulse, marked ascites without edema of extremities, turgidity of jugular vein without pulsation; no enlargement of right ventricle, marked venous stasis, apex of heart not changed by position of patient, and re-

duplication of second sound. In reference to ascites, the opinion as to its being due to chronic peritonitis in my cases was not shown, there being no peritoneal adhesions. These cases are corrobative of Pick's views as to the causation of this condition.

C. Bozzolo (Turin) *Clinica Moderna*, 1898, No. 8 reports a case of a boy, aged 20, who complained of pains in the epigastrium. He had edema of legs and scrotum and collections of fluid in the pleural spaces and abdomen. The heart presented no murmurs. Bozzolo thoroughly examined the different theories, viz.: Polyserositis (Galvagni); poliorrhomenitis (Concata) and Zuckergussleber (Curschmann), speaks particularly of pseudo livercirrhosis of Pick, and brings forth two additional cases from his own observation. By the contribution of Pick he was able to make the correct diagnosis.

R. C. Cabot, *Boston Medical and Surgical Journal*, 1898, May, reports a case, boy, 18 years old, with symptoms of a greatly enlarged liver with ascites, but without discoverable disease of the heart, so that the diagnosis was very uncertain. He was inclined to think of a neoplasm in the liver as being the cause of ascites.

Post mortem showed chronic pericariditis of probable tubercular nature, chronic pleurisy, passive hyperemia of liver and kidneys.

My own case is as follows:

A. M., aged 7. Father and mother living and well; has three brothers and one sister living, lost one sister in infancy. No history of rheumatism, tuberculosis, or cancer in family. Has had measles, whooping cough, scarlet fever and chicken pox. Had chorea at 5. Has always been quite healthy otherwise, except the gait which was impeded by a condition of genu valgum. September 1, 1899, he entered the Samaritan Hospital for treatment of the genu valgum. At that time the physical examination was negative save at apex of heart was heard a soft systolic murmur transmitted to axilla and heard at angle of left scapula. The apex was displaced downward and to the left of the nipple. Double osteotomy was performed and he left the hospital November 20, 1899, with good results.

After being home a short time the wound on his right leg opened and discharged considerable pus.

November 29, 1889, he reentered the Samaritan Hospital for treatment of the discharging wound. Physical examination practically the same as at previous entrance, except he was somewhat weaker and anemic. Temperature normal, pulse 120.

January 2, 1900, was etherized and old sinus curetted and dressed.

January 5, 1900, temperature 104°, pulse 130, respirations 54 and grunting. He complained of pain in his right hand which was somewhat swollen, and sharp pains in his right side, beneath the nipple of which was a well defined friction rub. Respiratory murmur normal. This condition disappeared in a few days, but on January 18 respirations became more rapid and over base of heart a to and fro friction rub was heard. This increased in intensity by pressure of the stethoscope and was not synchronous with the heart sounds. At apex a systolic murmur was heard.

January 21, 1900, temperature 98.6°, pulse 136, respiration 78. Dyspnea marked. Complains of pain in right wrist and in right side. Face somewhat edematous, lips and finger nails somewhat cyanosed, apex beat diffused. Superficial area of cardiac dulness increased downwards both to right and left. At base of heart the same friction rub is heard, but is distant, as if fading away. The systolic murmur at apex is now distant but can be easily recognized. Over right side of chest toward base a friction rub can be heard, but the respiratory murmur is everywhere normal. These conditions gradually subsided so that on January 24 his temperature was normal, pulse 120 and respirations 40. His temperature remained normal but pulse and respirations kept quite high until he left the hospital, which was March 3, 1900. From this time he enjoyed fairly good health up to August 23, 1900, when his mother noticed an enlargement of his abdomen, at which time I saw him, he presenting the following symptoms and physical signs: Was quite pale and respirations hurried; movements of chest equal. The precordial region was prominent and showed a distinct systolic heaving. Apex beat in sixth intercostal space about an inch outside of nipple line. Marked epigastric and juglar pulsation. Veins of abdomen distended; abdomen prominent, tense, and tender. No edema of extremities or face. Spleen not percussible. There was dulness in both flanks which changed with position of patient, together with a well defined fluctuation wave. Liver dulness at upper border of sixth rib, lower border not to be felt because of the marked ascites; no thrills could be felt over heart. At apex a loud blowing systolic murmur was heard, which was conducted toward axilla and also to angle of scapula. Over ensiform cartilage a systolic murmur was detected. Both pulmonic and aortic second sounds were accentuated. Urine negative.

Treatment consisted of the administration of digitalis and strychnine, and in a few days the ascites was considerably diminished so that it was possible to feel the inferior border of the liver which extended a hand's breath below free border of ribs. The liver was hard, tender, and pulsated with each beat of the heart. October 16th his breathing became labored and abdomen was greatly distended. His face was edematous and cyanotic. The lower extremities were slightly edematous. Diuretics and stimulants were given, but dyspnea and distension of the abdomen progressed so that on October 18 he was tapped, and over a gallon of clear opalescent fluid was withdrawn. After this he was much relieved and in a few days the edema of the face and extremities disappeared, yet ascites soon returned, but to a lesser degree. At this time the liver extended about two finger breadths below the level of the umbilicus, was hard and somewhat tender. The cardiac dulness was much increased, extending on the left, from the second rib to the upper border of the sixth rib about an inch outside of nipple line; on the right from the second rib to the upper border of the fifth rib about an inch to the right of sternum. There was jugular and epigastric pulsation. During his entire illness the wound on his right leg has been a source of annoyance. At intervals there would be a profuse discharge of pus.

After the last tapping he was quite comfortable and was able to be up and about the house, up to December 8. Then his breathing became labored again and ascites increased. December 11 patient very weak, respirations very labored, lips and finger nails cyanotic, abdomen very tense. He was again tapped and about three quarts of clear greenish amber fluid were removed. Death occurred next day.

Post mortem 12 hours after death.

Skin sallow, face in general edematous, soft edema of lower extremities. P. M., lividity on dependent parts, no petechiae, no rigor mortis. On inner surface of right thigh a stellate cicatrix exists. Superficial fat moderate in amount, muscles pale and flabby, liver extends heart that when separation is attempted portions of heart 9½ cm. below ribs. Precordium 10x12 cm. Both layers of pericardium completely united and so firmly encasing the muscle are torn away. Toward base of heart are well marked pleuro-pericardial adhesions. Right ventricle 4x4½ cm. dilated and very thin walled. Right auriculoventricular opening much dilated, valve normal. Pulmonic and aortic valves normal. Aorta shows patches of atheroma. Mitral opening much dilated, valve seat of vegetative endorcarditis and its chordæ tendineæ thickened and retracted. Left ventricle 1¾ cm. thick. Heart as a whole measures 10½x 12 cm.

Left lung adherent at base and posterior surface by organized bands. Is generally congested and slightly edematous. No areas of consolidation.

Right lung same as left save lower lobe, which is the seat of red hepatization.

Liver 13x18x7cm. Perihepatitis well shown. Between capsule and abdominal wall are soft adhesions. The parenchyma is the seat of an infiltration, probably waxy in character.

Spleen 6x8x3 cm. Normal in appearance. Left kidney 6x5x3½ cm. Capsule strips easily. Kidney substance rather pale, otherwise apparently normal. Right kidney same as left.

Both layers of peritoneum smooth and everywhere free. Appendix normal. Intestines and stomach normal.

Microscopic examination. Liver shows passive congestion. Spleen moderate degree of interstitial splenitis.

Kidneys show acute paranychamatous degeneration.

After reviewing the data from the cases in literature, and from my own case, the following conclusions can be drawn:

1. That pseudo cirrhosis of the liver due to pericardial adhesions is a distinct entity.

2. In all cases of this condition at autopsy the pericardial sac has been found obliterated.

3. Autopsies have shown in all recorded cases that the ascites is due to passive congestion of the liver, causing a connective tissue formation with subsequent contraction and obstruction of the portal circulation, the result of obliterative pericarditis.

4. In all cases of enlarged liver with ascites without edema or enlarged spleen, a very careful examination should be made of the heart to determine whether the symptoms are not due to chronic pericarditis.

5. The presence of ascites with enlarged liver and systolic retraction of the precordium together with absent or later appearance of edema of ankles is of great diagnostic value in determining the presence of chronic pericarditis.

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CEREBRAL APOPLEXY.

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In presenting this subject again to this Society, I can only claim for it, its importance and the frequency with which the general practitioner has to consider it in his daily practice. I shall refer at this time principally to the more unusual symptoms which confront us, especially those in the prodromal and final, or at least later, stages of the disease.

First, and before all, I would like in this discussion of cerebral apoplexy to have it understood that I mean to take the term in as wide a sense as possible, that is, any insult to the brain due to arterial causes whether hemorrhage, thrombosis, or embolus. I do this because the site of the lesion is usually the same, and impairment or destruction of the function of these brain areas gives the same later symptoms; only the early symptoms and the nature of the onset differentiating them. In each instance, outside of embolus, we are dealing with arterial disease, for without that condition no amount of strain is likely to lead to cerebral apoplexy. This view of apoplexy coincides with the definition as given in Foster's Encyclopedic Medical Dictionary, where, in part, it is said that instead of the typical loss of consciousness and hemiplegia there may be but slight and transient loss of consciousness and no paralysis. We so much more often see an apoplectic seizure accompanied by paralysis than not so associated, that we are apt to forget that similar lesions may occur in parts of the brain remote from the motor areas and thus give us symptoms of a different type involving the psychical or mental functions most severely—as shown by altered emotional states—such as automatic crying or laughing in which no actual feeling either of grief or mirth is present; or again, as seen in a loss of memory, of time, as of the day of the week, etc.; or again, of place, as to the actual surroundings, the patient often insisting that he is in another house or room, although surrounded by his own personal effects with which he has been familiar for years. Such mental states may occur in paralytic cases as well as in those in which there is no motor disturbance. My experience would seem however to show that it is more common when the paralysis is slight or absent. The etiological factors most commonly found as causing apoplexy are, atheroma of the cerebral vessels which is almost always general throughout the body, leading to sclerosis of other organs of the body and especially the kidneys and the liver: with its common

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accompaniment of hypertrophy of the heart, especially the left ventricle, this is indeed the commonest picture in cerebral hemorrhage. Interstitial nephritis is usually present and in any patient, especially if over fifty years old, when cerebral symptoms of any character are present, should be carefully sought for. The absence of albumin or casts is no proof of its absence. A persistent low specific gravity of the urine is a most suspicious indication that slow arterial degeneration is going on, and at any time may manifest itself by an uremic outburst or a cerebral hemorrhage.

These arterial changes are often so insidious and so slow in their progress, varying so much according to the conditions of life of the patient, whether he is more in the open air, takes more exercise or not, controls his appetite for food or drink, that before the physician is aware of it, the disease has culminated in an apoplectic attack which with care might have been averted.

Again, alcohol when taken in quantities beyond the point where the system can consume it, has a tendency to produce arterial degeneration of an atheromatous nature, or again fatty changes in the blood vessels. This is frequently found in persons who are habitual steady drinkers, especially if sedentary in their habits and given to brain work either in their professional or business life, with little opportunity for active outdoor exercise. Such people are not rated as excessive drinkers, are rarely if ever intoxicated, but nevertheless are taking a poison into the system, which their method of living never allows them to throw off. The excessive, periodical drinker, in my experience, is in less danger than the persistent, often unconsciously so, constant tippler. Many of these persons are unaware that they are using daily so much alcohol. This condition is not uncommon before old age, occurring frequently about the age of forty-five to fifty. Both sexes show it at this their climacteric period. The brain no longer increases in weight, its growth has ceased, and either now remains stationary or already begins to decline and slowly approach towards the atrophic stage of old age. Man is, indeed, as old as his arteries, and the alcoholic is usually old in this respect before his time.

The only other etiological factor I shall speak of in this paper is syphilis; but while other causes are present, these three include ninety per cent. of all our cases.

Syphilis is certainly most protean in its effects on the whole body, but especially on the nervous system, and nowhere does it show its far reaching secondary effects more distinctly than in the brain. Especially is this seen in the disease which is the subject of my paper. Syphilis in its tertiary stage, which may be five or thirty years after the initial lesion, has a direct influence on fibrous tissues, causing fibrosis. This leads to inflammation of the arterial walls, acute or chronic. We do not observe atheromatous changes with calcareous infiltration; but rather thickening of vessel walls, with, at times, gummatous infiltration in the muscular coat of the vessels and narrowing of the lumen. As a result of this, aneurysm with hemorrhage may result; more commonly, however, the condition is one of slow occlusion of the vessel by thrombosis.

I wish now to pass to a study of the symptoms. The onset in a classical, typical case of hemorrhage or embolus, is usually sudden, accompanied by loss of consciousness, coma, stertorous respiration and hemiplegia. If due to hemorrhage of marked degree the coma is profound and lasts several hours with a subnormal temperature; if due to embolus, the coma is less profound and usually short in duration; the pulse in the former is full and incompressible, while not so in the latter. In thrombosis, the loss of consciousness is slow in its progress, increasing as the occlusion becomes more decided and complete, the patient often being able to note the increasing spread of the paralysis; or again, the consciousness may never be affected, paralysis or mental confusion being the only symptoms.

The usual symptoms in all these cases are paralysis of the lower part of the face and of the arm and leg, with impairment of speech, either merely difficulty of articulation, motor aphasia or loss of the memory for names of ordinary articles, with or without paralysis. We may also have word deafness or word blindness.

I wish now to refer to the more unusual class of cases, or rather to those in which the symptoms are less clearly defined. Many of these symptoms are prodromal, or represent an apoplectic attack of a slight character, which has been readily recovered from without leaving any trace of paralysis or secondary changes in the nervous system, as shown by exaggeration of the reflexes, or rigidity of the muscles of the side affected. Two such patients during the past six months have been under my care.

One, a man of sixty-seven years of age, with a marked alcoholic history, but at the same time of unusually active mentality in his business life. While away from home in a city with which he was, however, perfectly familiar, he became confused and could hardly find his way back to his hotel. Soon after he had a violent epileptic seizure and passed into unconsciousness, from which he recovered in four or five hours, and it was noticed that he was slightly aphasic and that he was somewhat clumsy in the use of his right arm and leg. The next day, however, he was apparently perfectly well, except for a slight headache and some lassitude. Two weeks later he had a second attack, with an epileptic seizure and marked delirium, which left him with a partial right-sided paralysis, from which he gradually recovered, to again within a week have an attack of unconsciousness with resulting extreme paralysis of the right side, which remained without improvement until his death two weeks later.

The second case was a young man of forty-four, with marked alcoholic history. The first attack was a slight right hemiplegia with motor aphasia, without loss of consciousness, from which he completely recovered in one week's time. He continued his excessive drinking and in six weeks was taken with a second attack, involving the same side; no loss of consciousness. From that time on his mental state showed impairment; he became emotional; and after two more attacks with only very slight paralysis, he had many of the symptoms of general paralysis, without any of the exalted ideas peculiar to that disease; but much of the fatuous self-satisfied feeling of content and well-being. He had that peculiar automatic symptom of crying when spoken to of his general health, which, as I have said, does not indicate any real sorrow or grief He had lost all idea of where he was, invariably giving the number of the house he had lived in years before. He would speak

of his wife being in the next room, although she had been dead some time. There was considerable dementia.

A woman, aet. fifty, gave very similar symptoms in regard to time and place. The attack coming on suddenly after an exciting altercation. In this latter case there was at no time any paralysis. These two cases resemble senile dementia, and may be almost called "pseudo-paresis."

Another class of cases somewhat unusual in their course, and found, as a rule, among older persons with senile arterial degeneration, may show all the usual early symptoms of an apoplectic seizure, loss of consciousness, stertorous respiration, and hemiplegia, from which, however, an absolute recovery takes place. In fact, several such attacks may take place. Such temporary interruptions of cerebral functions can, to my mind, only be explained by a stasis in the cerebral circulation, which results in an edema of that part of the brain, or what was formerly called serous apoplexy. Post-mortem little or no change can be observed.

Cases from time to time are reported in our journals in which a paralysis has been present for months with the usual condition of aphasia and exaggerated reflexes of the paralyzed side, and yet post-mortem no evidence of disease has been found. I would place such instances as due to arterial stasis, incomplete, but sufficient to cause cerebral edema in that given area; but which producing no destructive lesion shows no pathological changes post-mortem.

That was well shown in a patient, a young woman of twenty-five, who had tuberculosis of the lungs, and who for six months presented the usual appearance of right hemiplegia with exaggerated reflexes and aphasia. Post-mortem, the most careful examination showed no cerebral lesion.

Several years ago this subject attracted considerable attention, and uremia was put down as the cause. Dr. R. A. Wilcox, of New York, read a paper before this society on the subject. In discussing it I then said, and see no reason to change my views, that I thought we were dealing with a serous apoplexy following stasis of the cerebral vessels.

I wish also to speak of epileptic seizures occurring not infrequently in the aged with atheromatous arteries, and also among a younger class of patients who have been rather free users of alcohol, or have had syphilis. A number of such cases have come under my observation. We are dealing probably with lesions in the cortex of the brain, either slight capillary hemorrhages or thrombosis, causing partial occlusion of the vessels, usually the arteries; although more rarely the veins. Essential epilepsy rarely occurs after twenty-five years of age. We usually find therefore in such cases a history of alcoholism, syphilis or Bright's disease. I have had many such cases among adults under my care, and can almost invariably trace the cause to such conditions as above mentioned.

Another condition which some hemiplegiacs complain of is pain in the paralysed member. This is comparatively rare, but still not unfrequently met with. I believe it to be entirely cerebral or psychical. There is no reason why there should be pain as far as the peripheral nerve supply to the extremity is concerned. I have not the time to go farther into this.

I wish to refer at this time also to the Babinski reflex, a symptom of some value in determining the site of the lesion. There is some confusion in regard to the Babinski reflex and also in regard to the method of eliciting it; and possibly some of the contradictory reports from various observers depend on this fact. By the Babinski reflex we mean an extension especially of the big toe and possibly of the other toes on irritating the sole of the foot with a sharp instrument, as a needle. We must recollect that the normal reflex act, or the so-called plantar reflex, is a flexion of the toes instead of extension. Babinski found that in disease of the motor or pyramidal tract extension of the big toe and at times also of the other toes took place. The general consensus of opinion is, I believe, that we find this reflex only where there is disease in the lateral pyramidal tract, although many do not always find it. The discrepancy is due to the method of examination. I have found that the best method is to use a sharp needle, scratching it first under the first metatarsal joint, and, if not successful, using it on the external side of the sole of the foot. I would say in conclusion that I consider this reflex valuable, but principally as confirmatory in connection with the patellar reflex.

Now only a few words in regard to treatment.

In regard to ordinary attacks of cerebral apoplexy I would advise, outside of speedy movement of the bowels by enemata or calomel or Croton oil, absolute rest; and unless collapse manifests itself, no administration of drugs. If the pulse is full and bounding, bleed through the veins, i. e., administer aconite, but never use the lancet. If there is evidence of collapse with feeble pulse, administer digitalis or even whiskey and strychnine. These latter cases are usually due to thrombosis or embolus. Still, as a rule, I advise doing little but giving absolute rest except meeting various special conditions or emergencies as they arise. The most important time for treatment is in the prodromal stage, when, if we have made out the etiological factor, the indication is manifest.

The Surgical Treatment of Malarial Splenomegaly.—Charles Février, at the Fourteenth French Surgical Congress, discussed the surgical treatment of the enlarged spleen due to malaria. (*Medecine Moderne*, October 23, 1901.) The destruction of the erythrocytes causes hypertrophy of the splenic tissue. As malaria causes marked erythrocytic destruction, this hyperlasia is striking. Both pigment and plasmodia are found in the spleen. Perisplenitis and adhesions occur frequently, rupture of the spleen rarely. Pain follows from pressure, as do dysuria, uterine troubles, etc. Quinine and arsenic seem to be the best treatment, but splenectomy has often been performed. Of 119 cases, only 20 died; while out of 26 cases of splenectomy for movable spleen after malaria, only one died. All symptoms disappear after splenectomy, though the malaria may reappear. Adhesions are the main contraindication to operation. Exploratory laparotomy should be done to determine their presence or absence. Rarely the spleen has been kept outside of the abdominal wall (exosplenopexy), but infection generally follows. He describes the technique of splenectomy. [M. O.]

HEPATIC INSUFFICIENCY.

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No organ is of more importance to the general metabolism and consequent nutrition of the body than the liver, through it passes the whole of the nutrition and not only has it to change the chemical form of food products, but it has also to arrest, transform, and eliminate toxic products and soluble poisons taken in with the food, and also to act as a storehouse for nutritional substances. From its multiplicity of functions and the artificial conditions under which we live, it is subject to severe strains upon its powers, causing it to be overtaxed, thereby becoming deranged and unable to functionate perfectly, more than any other organ of the body. One of the most important factors in keeping an organ in health is that its elimination of the waste products of metabolism should be as perfect as possible, for this purpose the liver possesses a special secretion, the bile; should the chemical composition of the bile be pathological or the quantity deficient, it is evident that the elimination will be interfered with and it is therefore of great importance that both the quantity and quality of the bile should be maintained.

The quantity of bile secreted by the liver in 24 hours is about 800 to 900 grams with about 15 to 16 grams of solid matter, about 10 grams of which are bile salts, principally glycocholate of soda, the remainder of the solids being excretory matter, viz., bile pigments, cholesterine, etc.

The so-called cholagogues of the materia medica have time and again been found to have no effect in producing an increased flow of bile, in cases with biliary fistula. Huppert (*Arch. f. Heilkunde*, 1896) and Gosenberg (*Arch. f. d. ges. Physiol.*, 1890) have conclusively shown that the bile salts are the only substances which will increase the flow of bile. Schaefer, in his text book of physiology, 1898, p. 563, says: "They (the bile salts) appear to be the only substances which produce this result, and since the bile salts are the most abundant solids of the bile, it seems fairly certain that they are absorbed and re-excreted from the blood by the liver." Pfaff and Balch (*Journal of Exp. Medicine*, 1897) show that human bile, ox bile, and bile salts have a marked cholagogic action and also that during the administration of bile the bowels moved without medication, the stools decreased in bulk but increased in consistency and color, and conclude by stating that the bile salts may be useful in certain cases of constipation, and when it is desired to increase the absorption of fat. Dr. Elliott P. Joslin (*Journal of Exp. Medicine*, 1901) in a most interesting paper on a case with biliary fistula and gallstones, in which bile was administered, comes to the following conclusions: That the administration of bile increases the digestion of fat (in his case 50 per cent.); that the digestion of nitrogenous food was improved; that ox bile is a cholagogue.

The active principle, so to speak, is the bile salts, and it is therefore better to give them in a pure form than with the addition of the pigments and cholesterine and other impurities contained in the Fel Bovis of the materia medica. The Fel Bovis purificatum is little better, the purification method being hardly worthy the name, and very crude.

Gall stones are of two kinds, pigment and cholesterine, both of which are formed by the precipitation of their constituents owing to an insufficiency of their normal solvent, the bile salts. Cholesterine is in the laboratory a most intractable substance, being soluble only in ether and boiling alcohol of the ordinary solvents, neither of which it is therapeutically possible to bring into the gall bladder or into the general circulation in sufficient quantities to be of any use. Pigments are also soluble with difficulty, and it therefore follows that the only practical solvent is that provided by nature, the bile salts, which can be administered by the mouth, passing through the liver into the bile. From the above considerations it seemed rational to try their effects upon patients suffering from hepatic colic. Dr. Todd of Baltimore had a patient who for years had suffered every three or four months from hepatic colic and had been under all the various traditional treatments of the text-books without effect. He commenced taking the glycocholate of soda extracted from ox bile in November, 1898, and up to the present time has had no return of his trouble. Dr. H. Burton Stevenson of Rider, who had three cases of hepatic colic in his practice, tells me that all of them have been free from attacks since the treatment commenced.

It was not, however, for hepatic colic that the writer commenced the use of glycocholate of soda, though, among the insane, autopsies show that about 12 per cent. have gall stones and 20 per cent. disease of the gall bladder, but as an hepatic stimulant. Any one accustomed to the insane will have noted the dirty brownish discoloration of the skin, often associated with a slight yellowness of the eyeball, while on urinary analysis traces and sometimes more than traces of bile pigment can be detected, pointing to a deficient elimination of bile pigment by the liver, the presence of an excess of urinary pigments, urosein, ethereal sulphates, indol and increased proportion of neutral sulphur as well as clinical symptoms pointing to an hepatic insufficiency, which made it necessary to look for some method which would stimulate the liver to healthy and complete action. Insanity being a physical disease with mental symptoms, it is of importance that every organ of the body should be put into as healthy a condition as possible, if mental improvement is to be obtained. It was for this purpose that the writer suggested the use of the glycocholate of soda to Dr. Charles G. Hill, the physician-in-chief of Mount Hope Retreat, and the results have exceeded our expectations. Under the influence of the bile salts the muddy icteroid complexions clear up, many of the so-called liver-spots disappear and the general condition and nutrition of the patients improve.

A defective excretion of bile by the liver may produce cirrhosis. Dr. Mason (*Brit. Med. Journal*, 1898) tied up the left gall duct in a dog and found after 6 months a marked cirrhosis of the left lobe of the liver. Dr. Mills (*Brit. Med. Journal*,

1901) records a case of hepatic cirrhosis caused by obstruction of the bile ducts. In cases of chronic alcoholism and gastritis in which the formation of butyric and other fatty acids takes place in the stomach, they produce a cirrhosis of the liver, if not rapidly eliminated. Boix has shown experimentally that it is not alcohol *per se* that produces cirrhosis, but the fatty acids which are produced in the gastritis consequent upon the effect of alcohol on the stomach. Exner (*Deutsche med. Wochenschrift*, 1898) found 0.4 per cent. of his cases of glycosuria had gall stone, and Zinn (*Centralbl. f. innere Med.*, 1900) found 0.2 per cent. Many cases of glycosuria are hepatic in their origin and are curable by a not very strict diet, with the substitution of fats, as far as possible, for starch, and glycocholate of soda to assist in the assimilation of the fat. We have had four cases in Mount Hope Retreat diagnosed as hepatic glycosuria, two of them with gangrene, which have been cured by this treatment, viz.: An ordinary diabetic diet, but allowing three slices of bread a day, also all kinds of fluids and vegetables except potatoes, beets and grapes, with as much fat in the shape of butter, cream or oil as the patient would take. The medication consisted in 2½ grs. of glycocholate of soda to increase the absorption of the fat and to stimulate the liver, and 2½ grs. of thyroid (Armour's) *t. i. d.* to increase oxidation.

The glycocholate of soda was supplied by Messrs. Hynson and Wescott, of Baltimore, and we have usually given it in five-grain doses, though in one case we gave 15 grs. *t. i. d.* for some time with marked benefit. As the bile salts are cumulative, being reabsorbed by the intestine, it is not necessary to keep up the dosage for any length of time; in the cases of hepatic colic the patients take about two drams per month. From the writer's experience, and that of other physicians, the glycocholate of soda is useful in many cases in which other remedies fail, is better than Fel Bovis on account of its being more pure, and is a useful rational hepatic stimulant.

The Treatment of Aneurysm by Subcutaneous Injections of Gelatine.—Z. A. Presman (*Medicinskoie Obosrenie*, August, 1901), employed subcutaneous injections of gelatine in a case of aneurysm of the arch of the aorta and the innominate artery in a woman, 49 years old. He summarizes the case as follows: 1. This is one of the fortunate cases in which gelatine had a beneficial effect. 2. From the 21st of August to the 26th of October, 1900, the patient received 10 injections of gelatine. Owing to strict antiseptic precautions, no abscess formation or any local reaction followed the treatment. 3. After 8 of the injections, a general reaction characterized by an elevation of temperature developed. The temperature commenced to rise 2-3 hours after the injection, reaching 38° C., and once 38.9°. The fourth and tenth injections were followed by no reaction. 4. After 5 injections a trace of albumin appeared in the urine, lasting 1 day. 5. The injections were painful, but in spite of that the patient asked for their continuance, owing to the relief she experienced. 6. For a period of 5 months after the treatment was discontinued, the patient enjoyed perfect health; she was able to work, run, climb hills whout getting tired or feeling bad. 7. With careful application and individualization of each case, injections of gelatine are perfectly harmless; therefore further observations are desirable to elucidate the problem of the therapeutic effect of this substance. [A. R.]

THE PROGRESS OF KNOWLEDGE CONCERNING VENOM AND ANTIVENENE. A SYNOPTICAL REVIEW OF THE LITERATURE OF THE PAST FIFTEEN YEARS.

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(Continued from Page 457).

Phisalix (Compt. rendu de l'Acad. des Sciences de Paris, Dec. 12, 1898, Tome 127, p. 1036; also Compt. rendu de la Soc. de Biol. de Paris, Dec. 17, 1898, 10th Series, p. 1151) found "Les sucs de champignons vaccinant contre le venin de vipère," 5-10 cc. of an aqueous extract of crushed mushrooms injected under the skin of a guinea pig caused tumefaction, which disappeared after some days. 20-25 cc. cause constitutional symptoms. 15-20 cc. in the vein of a rabbit caused death.

Guinea pigs which received 5-20 cc. of such an extract of the mushroom (agaricus edulis) became, after a couple of days, able to endure a fatal dose of vipers' venom. The immunity continued from 15-30 days. The injection of the mushroom juice is, however, sometimes followed by gangrene of the skin. Heating the juice to 120° C. for 20 minutes lessens, but does not destroy the vaccinal powers.

Phisalix, "La tyrosine, vaccine chimique du venin de vipère" (Compt. rendu de l'Acad. des Sciences de Paris, Jan. 31, 1898, Tome 126, p. 431; also Compt. rendu de la Soc. de Biol. de Paris, Feb. 5, 1898, 10th Series, V, p. 153), found that 5 mg. of tyrosin injected into a guinea pig sufficed to protect it against a fatal dose of viper's venom given 24 hours subsequently. The immunity had disappeared by the twentieth day. The tyrosin used was of vegetable origin, made by Bertrand from the tubers of the dalia and narcissus. 1-2 cc. of the fresh juice of these plants will also vaccinate a guinea pig against a fatal dose of venom.

Phisalix and Charrin, "Action du Venin de Vipère sur le Nevraxe, Paraplegia spasmodique" (Compt. rendu de la Société de Biologie de Paris, Jan. 22, 1898, 10th Series, Vol. V, p. 96), describes a spasmodic paraplegia with hyperesthesia, apparent muscular atrophy, trophic disturbances, etc., caused by vipers' venom in a rabbit experimentally inoculated. The lesions found upon histological study of this rabbit are described by Phisalix, Charrin and Claude, "Lesions du système nerveux dans un cas d'intoxication experimentelle par le venin de vipère" (Compt. rendu de la Soc. de Biol. de Paris, March 19, 1898, 10th Series, Vol. V, p. 317). Marked lesions were found in the anterior and posterior limbs, but principally in the former. A poliomyelitis was also present chiefly in the lumbar and sacral regions.

Jousset, "Lésions produites par les venins de serpents" (Art. Med. Paris, 1899, LXXXVII, p. 358-360), deals with tissue changes caused by venom.

Nowak, "Etude experimentelle des alterations dans l'organisme par les venins des serpents venimeux et des scorpions" (Ann. de l'Inst. Pasteur, 1898, XII, 360-384), studied the anatomical lesions in various animals caused by the experimental injection of varying size doses of venom heated to

80° C. then passed through a porcelain filter. The microscopical lesions are carefully described, and the resemblance of many of them to those of yellow fever carefully pointed out.

Bertholdo has a paper upon "La Sieroterapia nella morsicature di Serpenti velenosi" (*Corrier san. Milano*, 1898, IX, p. 516.) (This journal was not accessible to me, so that I am unable to give an abstract of it.)

Calmette, "Sur le mecanisme de l'Immunisation contre les Venins" (Ann. de l'Inst. Pasteur, 1898, Vol. XII, p. 343; also *Presse Med.*, 1898, I, p. 191; also Ann. dHyg. et de Méd. Colon, Paris, 1898, I, 129-134), considers the work achieved by Phisalix, Fraser and others, and concludes:

(1). The action of bile cholesterin, etc., as well as that of normal antitetanic and antiabric sera, etc., cannot be regarded as truly antitoxic, i. e., specific in regard to venom. It is simply a stimulant of the cells and the effects are very transient and can be produced by very different substances.

(2). After the injection of antivenomous serum, a preventive action is manifested in spite of the diminution of the resistance of the nervous elements by the injection of various poisons which act upon the latter.

Calmette published the results of all his work upon venom in a book, "Le Venin des Serpents; Physiologie de l'envenimation, Traitement des Morsures Venemeuses par le serum des animaux vaccinés," Paris, Société des Editions Scientifiques, 1896.

Fraser, in a "Further Note on Bile as Antidote to Venoms and Disease Toxins (*British Med. Jour.*, Sept. 3, 1898, Vol. II, p. 627), suggests that the antidotal power of the bile depends upon antitoxin that is being eliminated from the blood by it. He bases his suggestion upon the demonstration that the serpents, bile, and bile from immunized animals (antivenomous animals) is more strongly antagonistic to venoms than to other toxins.

T. W. W. Stephens and W. Myers (*British Med. Jour.*, March 5, 1898, p. 621) read before the Pathological Society of London, March 1, 1898, an account of "Test Tube Reactions Between Cobra Poison and Its Antitoxin." This paper opens the subject of hemolytic action of venom, and the antihemolytic action of the antivenomous serum, and is the first of an interesting series of observations upon hemolysis. They found that when cobra venom is added to shed blood *in vitro*, destruction of the corpuscles—hemolysis—and retardation of coagulation take place. The experiments were made (1) with a fixed volume of blood mixed with a fixed volume of cobra poison of known strength in a hemocytometer pipette, and the corpuscles in a given field counted from time to time, and (2) mixing known volumes of blood and poison solutions in small test-tubes and observing in which series of tubes hemoglobin was dissolved. Care was taken to have the solutions isotonic, according to the suggestion of von Limbeck, or slightly hypertonic. They found that venom had marked hemolytic powers, and that these powers could be checked in the test-tube by the addition of the antivenomous serum. Antivenomous serum, alone, had the power to inhibit the hemolysis, all other sera tried were without effect.

They found that in all cases 0.1 cc. of the isotonic serum sufficed to arrest the hemolytic action of 0.1 mg. of the poison, applied to the defibrinated blood of the guinea pig. They also found that the relationship held good for multiples of these numbers. The proportions varied with different bloods.

In endeavoring to determine whether there might be some relationship between the neutral point *in vitro* and the protective power of the serum *in corpore*, they found that for a guinea pig weighing 250-300 grammes, 0.1 mg. of cobra poison was the minimum lethal dose, death ensuing in 5-8 hours. The hemolytic action of this poison, as shown above, was neutralized by 0.1 cc. of isotonic serum, and such a neutral mixture they found was never fatal to animals, but if the hemolytic action was completely neutralized, the guinea pigs might or might not die. When, however, they used larger quantities of the poison, completely neutralized as regards hemolysis, on injection they were found to be rapidly fatal, 5 out of 6 animals dying. Thus they conclude that there is no positive connection between the neutralization, the hemolytic and toxic actions of the venom. Their results are summarized thus:

(1). Cobra poison is strongly hemolytic *in vitro*.

(2). This action is neutralized by antivenomous serum, and the action of the latter is specific.

(3). For certain doses (0.1 mg.) the measure of this neutralization *in vitro* is a neutralization *in corpore* for guinea pigs.

(4). This neutralization is chemical, not cellular or vital.

W. Myers, "Cobra Poison in Relation to Wassermann's New Theory of Immunity" (*Lancet*, 1898, II, p. 23), was unable to find that crushed nervous substance, or any other tissue extract mixed with cobra poison, destroyed it, until he tried the suprarenal glands, which he found contained in the cortical substance some principle which invariably influenced the venom. They only influence quantities slightly in excess of the minimum fatal dose, not multiples of it, so that their action is not antitoxic. These facts are not considered to accord with the Wassermann-Takaki theory of immunity.

Phisalix, "La propriété preventive du serum antivenimeux resulte d'un reaction de l'organisme: c'est donc en réalité une propriété vaccinante" (Compt. rendu de la Soc. de Biol. de Paris, Mar. 5, 1898, 10 Series, Vol. V, p. 253). It will be remembered that Phisalix believes that antivenomous serum contains immunizing and vaccinating substances. The vaccinating substance is apparently independent of the antitoxic substance as the injection of a quantity of the serum, too small to be of any antitoxic power, will afford immunity against a much larger quantity of venom. The same peculiarity exists for eels' blood. A quantity of eels' serum, heated as directed in former papers, produces immunity that is marked, although its antitoxic power is almost nil. The total bulk of blood in a guinea pig's body really contains, under these conditions, very little antitoxic power. The probability is, therefore, that the physiological processes which lead to

the generation of antitoxin in the body act in a manner irregular and successive.

The two steps in the formation of antivenomous serum *in vivo*, also occur in the same serum with the passage of time *in vitro*. Thus, some antivenomous serum, of which 6 cc. annulled the effects of a fatal dose of vipers' venom when injected at the same time, or after 20 minutes, was abandoned to itself for 18 months, after the lapse of which time, being again tested, it was found that 6 cc. no longer possessed the antitoxic powers, but that the immunizing power was retained intact. There exist, according to Phisalix, two degrees of immunization. In the first the animal makes a quantity of antitoxin necessary to protect it—simple vaccination; in the second it produces enough to protect other animals—hyper-vaccination. Curiously enough, the serum in the first case can provoke the formation of an equal amount of antitoxin in another animal. This is another demonstration of the fact that the vaccinated animal is under the influence of internal secretions possessing a remarkable power of exciting the formation of more vaccinal material—in a word is *vaccinogenous*.

R. Wilson, Jr., "The Venom of Poisonous Snakes" (*Yale Med. Jour.*, New Haven, 1898-1899, V, 140-146), gives a brief but careful review of the important knowledge pertaining to venom and its peculiarities.

Stephens and Myers (*Journal of Pathology and Bacteriology*, 1898, Vol. V, p. 279), in a paper upon "The Action of Cobra Poison on the Blood, a Contribution to the Study of Passive Immunity," go at length into the interaction of venom and antivenene, and after a most excellent scientific research, the details of which can be of interest only to workers in the same field, come to the following conclusions:

(1). Cobra poison delays or inhibits the clotting of the blood *in vitro*.

(2). This inhibitory action is neutralized by antivenomous serum *in vitro*.

(3). This action of the antivenomous serum *in vitro* is specific.

(4). The antivenomous serum itself, when added to blood, delays clotting.

(5). For certain doses (0.1 mg.) the measure of the neutralization *in vitro*, using clotting as a test reaction, is also the measure of the neutralization *in corpore* for guinea pigs.

(6). The neutralization of the toxin by its antitoxin, *in vitro*, is certainly not vital nor cellular, but must be chemical.

These experiments lend further support to Ehrlich's view that antitoxins render toxins harmless by combining with them, it being reasonable to infer that if such a combination takes place in the test-tube, it also takes place in the body.

Calmette, "On the Curative Power of the Antivenomous Serum" (*Brit. Med. Jour.*, May 14, 1898, p. 1253; also *Intercolonial Med. Jour. of Australasia*, Melbourne, 1898, III, p. 192-197), answers the objection of C. J. Martin (referred to before) that antivenomous serum is not operative upon that principle of the venom which is destroyed by heat, by suggesting that Martin's methods are faulty in that he does not take into account two very important facts, the vital resistance of animals and its increase with increase in weight. Thus of the venom of the pseudichis porphyriacus, for each kg. body weight:

0.006 mg. kill a guinea pig in 24 hours.
0.025 mg. kill a rabbit in 24 hours.
0.5 mg. kill a dog in 24 hours.
0.35 mg. kill a mongoose in 24 hours.

In consequence of these facts there is no exact correlation between a dose of venom fatal in 12-24 hours and the weight of the animal for which that dose is fatal. Everything depends upon the resistance of the kind and on the size of the same. It is, therefore, evident that a much smaller dose of serum will be necessary to protect or cure a dog or ichneumon, than would be necessary to cure a rabbit. It is also evident that to immunize or cure a guinea pig it will be necessary to use four times as much serum as to immunize a rabbit.

Martin, not taking these facts into account, inoculated his rabbits with doses that were much too small.

Calmette is positive from the investigations of the venom of all snakes, that the activity depends upon a principle which is the same in all, and is positive that the antivenomous serum protects equally against them all. In answer to Martin's second contention that the antivenomous serum was too weak successfully to treat human beings bitten by serpents, Calmette recommends a series of six experiments which he believes to be convincing, and from conclusions based upon them, contends that he has the right to conclude that a dose of 10 cc. of his serum will be more than sufficient to prevent intoxication and death, provided that the serum be injected two or even four hours after the snake's bite. As the most dangerous tropical snakes rarely cause death in less than 8-12 hours, it will be possible in many cases to apply the treatment. Practical experiments in the field bear him out in his assertions. The effect of the injection of the serum into a vein is immediate.

W. Myers, "On the Interaction of Toxin and Antitoxin; Illustrated by the Reaction Between Cobra-lysine and Its Antitoxin" (*Journal of Pathology and Bacteriology*, 1899-1900, p. 415), furnishes some excellent information, adding further confirmation to the work of Ehrlich and his associates as to the specific nature of the toxin-antitoxin reaction.

Myers found that cobra venom contained two principles, of which he speaks as "cobra-lysine" and "cobra-nervine."

The cobra-lysine, which is the hemolytic substance, is destroyed by heat, the cobra-nervine remaining unaltered.

Cobra lysine can be neutralized by antivenene, the cobra-nervine remaining free. It is only in minimum fatal doses that the neutralization of both runs hand in hand. With multiple of the minimum fatal dose, a non-hemolytic mixture of venom and antivenene may rapidly kill a guinea pig.

The susceptibility of the erythrocytes to the action of cobra-lysine *in vitro*, bears no relationship to the susceptibility of the animal to subcutaneous intoxication by the venom. In the lethal properties of the venom the cobra-lysine plays an insignificant part.

Toxoids rapidly form in dilute solutions of venom, these toxoids seeming to be specific.

A. K. Stone, "The Properties of Snake Poison; a Review of the Work of Fraser and Calmette (*Boston Medical and Surgical Journal*, 1898, Vol. 138, p. 321). A general, readable review of the work of Fraser, Calmette, Phisalix and others.

Ricketts, "Serpents and Their Venoms; Copperhead, Coral and Rattlesnake" (*Cincin. Lancet Clinic*, 1898, N. S., XLI, p. 219-224), says that Professor Joseph Leidy informed Professor Dury that "there was no authentic case of death as the result of the bite of either the copperhead or rattlesnake." As the result of his own investigations, Ricketts is constrained to believe that most of the authentic cases of death by these serpents have been in children. He was unable to find any authentic death, resulting from the bite of either of these snakes, in adult men. [Cases are, however, recorded in the work of Mitchell and Reichert.]

Phisalix (Compt. rendu de l'Acad. des Sciences de Paris, July 10, 1899, 11th Series, I, p. 659) reports "Nouvelles observations sur l'echidnase," which he finds is not present in the salivary secretion of all snakes, being absent from that of the naja, ophidiophagus and probably in the majority of venomous colubrids. It is present, more or less abundantly, in the venoms of all vipers and constitutes one of the principle characteristics. In vipera aspis, it varies with the season. It is the phlogogenic principle of the venom, and its presence can be recognized by the extent of the local disturbance occasioned by subcutaneous injection of the venom. Phisalix has shown by experiment that it is the presence of this substance that is responsible for the deterioration of solutions of the venom, and points out that venoms poor in echidnase retain their virulence longest. Therefore, in addition to the external conditions that determine that venoms shall deteriorate, there are also internal reasons—the existence of a special ferment, echidnase, whose formation is different from that of the other constituents and which has important different characters.

In a paper upon "Venins et la Coagulabilité du Sang", Phisalix, (Compt. rendu de la Soc. de Biol. de Paris, October 28, 1899, 11 Series, p. 834) after reviewing the work of others and recording some experiments of his own, is obliged to conclude that "the conditions which have to do with the coagulability of the blood in venom poisoning are numerous and complex, and we are not yet able to explain the phenomena."

In another paper upon "Relations entre le venin de vipère, la peptone et l'extrait de sangsue en point de vue de leur influence sur la coagulabilité du sang", Phisalix (Compt. rendu de la Soc. de Biol. de Paris, November 4, 1899, 11 Series, Tome 1, p. 865) found that there was no antagonism between the action of peptone and venom, or extract of leeches and venom, but that animals immunized to one, responded as usual to poisoning by the other.

Still another paper by Phisalix (Compt. rendu de la Soc. de Biol. de Paris, November 11, 1899, 11th Series, Tome 1, p. 881) deals with the coagulation of the viper's blood. "Sur la coagulation du sang chez la vipère". The peculiarities of the coagulation of the reptiles, blood are thought to depend on the quantity of CO 2 and the number of destroyed corpuscles which it contained.

Semple and Lamb, "The Neutralizing Power of Calmette's Antivenomous Serum; its value in the treatment of snakebite", (*British Medical Journal*, April 1, 1899, Vol. 1, p. 781) take up the controversy of Martin vs. Calmette upon the virtue and method of testing Calmette's serum. They side with Martin in preferring the German method, and proceed to apply it to antivenene. The results of their experiments and calculations are very interesting, are given in full and terminated by concluding that notwithstanding the validity of the objection to his method, the estimations made by Calmette were correct, and that 15-20 cc. of his antivenene should be sufficient to protect a human being weighing 120 pounds from the effects of an average snake bite.

O. W. Andrews, "On the Preparation and Use of Calmette's Antivenene", (*British Medical Journal*, September 9, 1899, Vol. 11, p. 660) gives the main facts already outlined by Calmette. The general facts relating to immunization are defined and some experiments in neutralization recorded. The writer comes to the conclusion that if given 1 to 3 hours subsequent to an ordinary snake bite, 20 cc. of the antivenene should be sufficient to save a human being.

J. W. W. Stephens, "On the Hemolytic Action of Snake-Toxins and Toxic Sera" (*Journal of Pathology and Bacteriology*, 1899-1900, p. 273) in a deeply scientific and abstract paper which is not well adapted to condensation, arrives at these conclusions:

(1). That antitoxic sera can act upon toxins, other than but allied to those used in the preparation of the serum.

(2). That the hemolytic constituents of snake toxins, and hence snake toxins as a class, are not identical.

(3). That against a minimum lethal dose of daboia toxin, 0.5 cc. of Calmette's antivenene has very little action.

(4). That the antihemolytic properties of antivenomous sera must be increased, in order to afford any efficient protective serum, e. g., against pseudechis toxin or daboia toxin.

This paper is deserving of careful consideration by all who are interested in the subjects bearing upon the toxin-antitoxin reaction, the specificity of immune sera and hemolysis.

Behal and Phisalix "La quinone, principe actif du venin du Iulus terrestris" (Compt. rendu de la Soc. de Par., December 8, 1900, 11th Series, Vol. 11, p. 1036), studied the venon of this myriapod and found:

(1). The venon has the odor of quinone.

(2). When distilled is passes over with the vapor of water.

(3). The liquid distillate is yellow but imparts its disolved matter at once to ether. If one evaporates the ether rapidly on a watch glass, the remaining yellow substance possesses a strong odor which disappears in a few instants. This residue is soluble in alcohol, also in water, but less so in ether.

(4). The liquid obtained by distillation reduces nitrate of silver—a reaction of quinone.

(5). The liquid when exposed to the air in company with an alkali, browns rapidly.

(6). The liquid distillate in the presence of cold, added to KI or HCl liberates a quantity of iodine. It also reacts characteristically to Liebermann's reagent, hydrocerulignone.

Phisalix, upon "Un venin volatil: Secrétion cutanée du Iulus terrestris". (Compt. rendu de la Soc. de Biol. de Paris, December 8, 1900, 11 Series, Vol. 11, p. 1033) describes the myriapod and its venom. If the animal is handled, it coils and discharges through "foramina repugnatoria" a few drops of a yellowish liquid. When inoculated into the peritoneal cavity of a guinea-pig it causes death. Subcutaneous injections are very irritating. Repeated injections produced no immunity.

Robert Henry Elliot in a series of papers "An Account of Some Researches into the Nature and Action of Snake Venom", (*British Medical Journal*, 1900, Vol. 1, p. 309; 1146, vol. 11, p. 217) records many interesting observations.

The first paper deals with general facts concerning securing and experimenting with venoms. The difficulty of accurately fixing a minimum fatal dose of venom is pointed out and the most accurate dose of cobra venom is placed at 0.0007 gr. per kg. of rabbit; of daboia venom, 0.003 gr. per kg. of rabbit. For fowls the dose of cobra venom was fixed at 0.003, of daboia venom also 0.003.

The second paper gives some experiments concerning the effect of the digestive juices upon venom *in corpore*. When the common bile duct of dogs was ligated and venom exhibited by the mouth, no ill effects were noted, hence it is scarcely probable that the bile is the source of the gastro-intestinal immunity. When a link of intestine was withdrawn, opened and stitched to the abdominal wall so as to make an artificial anus, the wound permitted to heal, then the solution of venom injected into the intestine directly, the dogs sickened and died so that it seems certain that venom can be absorbed through the intestinal epithelium. He concludes:

(1). That cobra venom can be absorbed through the walls of the small gut, but not so readily as through the channels of the subcutaneous tissue.

(2). That some change or changes are wrought in cobra venom before it has time to reach a rapidly absorbing area.

Trypsin was found capable of very materially reducing the lethal powers of cobra venom when the two were kept at 100° F. over a water-bath in an alkaline solution.

The disturbance of the venom by trypsin probably explains why venom taken by the mouth fails to kill even when the bile is excluded from the intestine. No ill effects followed the injection of a large dose of venom into the large intestine of a large dog. Death followed intraperitoneal more rapidly than subcutaneous injections of the venom.

The third paper deals with the immunity of the mongoose. He found it likely to die from 0.000 gr. per kg. Some survived 0.01 and 0.015 gr. per kg. It therefore takes 10 to 25 times as much venom to kill a mongoose as to kill a rabbit. The discrepancy between these observations and those of Calmette who found the mongoose susceptible to smaller doses of venom is explained by Elliot as depending upon the fact that Calmette's mongooses were from Guadaloupe where they had been taken in 1882, and that since that date they have come in contact with no venomous snakes and have lost immunity. This leads Elliot to believe that the immunity of the mongoose is acquired, not natural.

The respective immunity of different animals is put down by Elliot as: rabbit 1, dog 2, mongoose 10 to 25. Interesting descriptions of mongoose-snake combats are given together with deductions drawn from them. The paper closes with an account of the snake charmers of India concerning whom Elliot says:

(1). The snake-men of India are certainly ignorant of any method of producing in themselves a highly developed condition of immunity.

(2). Some few of them appear to practice the swallowing of venom, or the inunction of venom into their limbs, but it is doubtful if they do so with any well defined object. It is possible that they thus obtain some degree of immunization.

(3). They confine themselves almost exclusively to the cobra and escape harm by their intimate knowledge of the snake and the methods of handling it.

Walter Myers, "The Neutralization of the Hemolytic Poison of Cobra Venom (Cobralysine) by Antivenomous Serum" (Transaction of the Pathological Society of London, February 6, 1900; also, *British Medical Journal*, February 10, 1900, Vol. 1, p. 318) found that when a large multiple of the minimum hemolysing dose of venom, for human blood, and the quantity of antivenene necessary to render it completely neutral determined, and the same multiple taken with a less quantity of antitoxin and its hemolysing powers determined, the quantity of hemolysin that remained unneutralized could be determined. Thus, using 1-13 of the antivenene necessary for complete neutralization, he found 4-5 of the toxin neutralized; with 1-6, 0-10 were neutralized. The peculiarities of this neutralization can be explained by the action of the products of the reaction of toxin and antitoxin reversing the chemical process. In the case of the complete neutralization of a large quantity, it would, therefore, be necessary to add more than the chemically equivalent amount of antivenene, but in partial neutralization, the excess of free toxin that was present, makes the presence of free antitoxin impossible, because under these circumstances the two interact and the antitoxin disappears. He showed the changes that dilute solutions of the poison undergo, at different temperatures, consisting of diminution of toxic power without loss of combining power with antitoxin, to depend upon the formation of toxoids, i. e., bodies which interact with antivenene (antihemolysin) but are not hemolytic. He found that the toxoids of diphtheria did not, even in large quantity, affect the union of tetano or cobra-lysine with its antitoxin, so that within these limits the toxoids were specific. The toxoid first produced is characterized by a great affinity for antitoxin (pro-

toxoid), but this is no proof that several toxoids exist in the case of cobralysin. It is at present impossible to measure the amount of toxin present, as there is no evidence how far the reaction between the equivalent parts of toxin and antitoxin is complete.

Walter Myers, "The Standardization of Antivenomous Serum" (*Lancet*, May 19, 1900, Vol. 1, p. 1433) suggests that antivenomous serum be standardized with mice instead of guinea-pigs because as Cobbett has shown (Proc. Phys. Soc., 1899) the necessary quantity of horses serum is often toxic for the latter. Using mice of 15 grammes, it is possible to locate the minimum fatal dose of cobra poison within 20% of error. 0.012 mg. usually is fatal in 3 to 4 hours. 0.12 mg. (10 minimum fatal doses) was the test dose employed and the quantity of antivenene necessary to neutralize is estimated, the mixed venom and antivenene always being permitted to stand for one-half hour at room temperature before injection. The neutralization of the ten fatal doses could be determined within 15 per cent. of error.

Myers believes the method of mixing the venom and antivenene before injection into mice, to be more accurate than Calmette's method of using rabbits. For example, when rabbits of 2000 grammes were used, 0.5 mg. of the dry venom per kg. killed in 20 minutes. When 0.3 cc. of antivenomous serum per kg. had been mixed five minutes previously, the animal died in 1½ hours. With 0.4 cc. of serum or more, the animal lived and showed no symptoms. 0.5 mg. of venom is here neutralized by 0.4 cc. of serum, hence 0.12 mg. would be neutralized by 0.096 cc.

With mice, however, using the same serum, 0.2 cc. were originally required to neutralize 0.12 mg. of the poison. When 0.175 cc. were used, the animal died in three hours. The latter method is, therefore, more accurate. This method of testing, with unheated venom is, therefore, cheap, simple, and accurate for clinical purposes. For convenience "a unit" may be the quantity of antitoxin that neutralizes ten times the minimum lethal dose of cobra poison for a mouse of 15 grammes. A serum, 0.2 cc. of which are required to neutralize the test dose, would contain five units per cc. Greater accuracy still will be attained when the serum can be made to protect against 100 fatal doses of toxin (as in the new Ehrlich method of testing diphtheria antitoxin (Klinisches Jahrbuch, 1897).

The effect of heating cobra poison to 73° C. for ½ hour (1 cc. 1 mg. in physiological salt solution) is to increase the hemolysing dose for human blood twenty times, and for mice twice. The power of combining with antitoxin is diminished but not nearly as much as its toxic power is diminished.

D. J. McCarthy, (Contributions from the Pepper Clinical Laboratory, Philadelphia, 1900) gives a careful description of the cerebellar lesions found in a rabbit which, having survived an injection of crotalus venom, subsequently developed interesting rotary movements.

Gustav Langmann, (*The Medical Record*, September 15, 1900) in a paper upon "Poisonous Snakes and Snake Poison", reviews the whole subject in an interesting and profitable manner. His method of collecting the venom by holding the snake by the neck and permitting it to bite a funnel covered with chamois-skin or thin rubber, seems preferable in some respects to that employed by Mitchell and Reichert. He recognizes two active principles, "venom-peptone" and "venom-globulin" in all venoms. The symptomatology and physiological pathology of venom intoxication are well reviewed. The nature of the cobra intoxication is described as an "acute bulbar paralysis of the most furious and vehement type", while that of the viper poisoning resembles an "acute ascending spinal paralysis, the last stage of which exhibits alike bulbar symptoms and inhibition of respiration."

Concerning the effect of venoms upon the blood he says "Formerly it was an accepted dogma that cobra venon increased and viper venom inhibited clotting; recently, however, the investigations of Heidenschild, and more so the careful experiments of Martin, of Sydney, have cleared up the matter. It is true that viper venom has a more pronounced influence upon the circulation, yet the doses and the mode and rapidity of introduction are matters of the greatest importance. As a rule coagulation is inhibited for a long period. A small dose injected intravenously causes a positive phase of coagulability of two or three minutes, which is followed by a negative phase of longer duration. A second larger injection brings on the same positive and a much longer negative phase. A third, still larger injection, which is borne remarkably well, destroys coagulability for a long period. At the same time the leukocytes disappear almost entirely from the circulating blood; they are massed in the liver, lungs and bone marrow, and reappear only when the blood regains its coagulability (or perhaps inversely).

The matter of immunity and antivenene is interestingly discussed. The treatment recommended is summed up as follows: "One or several tight ligatures should be made above the wound, followed perhaps by deep scarifications; then injections of antivenene if at hand. If the latter cannot be had, injections should be made of a solution of hypochlorite of lime, 1 to 60, at several points near the bite and elsewhere. Stimulation, if necessary, by either strychnia or atropine or alcohol; hypodermoclysis of physiological salt solution; lavage of the stomach, artificial respiration for hours; and, not least of all, continuous encouragement of the victim, for a deep mental prostration goes together with the physical depression of the nervous centers."

Appended to the paper is a report by Dr. James Ewing and Fred. R. Bailey, regarding changes in the central nervous system. The former found the changes occasioned in the ganglion cells of a rabbit by moccasin venom, to be somewhat specific and of extreme grade. Nissl's stain showed a general disintegration of the chromatic substance. The outlines of the Nissl's bodies were completely obscured; the substances had been redeposited in a finely granular form all over the cell body and even in the pericellular lymph space. In the majority of the large stichochromes neither formed bodies nor reticulum could be distinguished. It was evi-

dent that the lesions went much deeper than the chromatic substance, affecting the underlying cyto-reticulum, which was granular, disintegrated, in places completely destroyed. The nuclei were very opaque and the neucleoli often swollen and subdivided. The dendrites were often irregular, shrunken, or detached. These changes constitute a true acute degeneration of the cell, in contradistinction to the simple disturbances of chromatic substance, which may be entirely physiological

Dr. Fred. R. Bailey found that most of the cells of the anterior horn of the spinal gray matter were normal, but that a small number presented those modifications in their chromatic elements which probably evidence the early stages of a beginning acute degeneration, i. e., an increase in the granularity of the chromophilic bodies, and a fraying out at their edges, with some distinct loss in chromatic substance. The cyto-reticulum is normal. The nucleus may be normal, or there may be an intensification of the surrounding membrane, and a thickening of the strands of the nucleo-reticulum. A few cells are found in which there is much greater loss of chromatin, the cell bodies appearing extremely pale, and no distinct chromophilic bodies being present.

McFarland, (Proceedings of the Pathological Society of Philadelphia, 1900, Proceedings of the Society of American Bacteriologists, December, 1900. Proceedings of the American Medical Association, June 4, 1901). "Some studies of Venoms and Antivenene" has successfully immunized horses to the unmodified venom of the American rattlesnakes (mixed venom of several species) and found that the local effects of this highly irritating venom could best be overcome by injecting dilute solutions into the venous system of the horse. By this treatment a horse was raised to a high degree of immunity to the nervous poison of the venom, but no immunity developed against its local irritative effects and the horse finally, accidently, succumbed to the entrance of some of the venom into the subcutaneous tissue through a misdirected needle in making an intravenous injection. The antivenene which he thus produced was protective against the venoms of rattlesnakes and copperheads, and against the venoms of the cobra and cerastes. The effect of the serum seemed to be exerted against the nervous poison chiefly and as the horse, highly immune to that principle, was still susceptible to the irritant action, so the animals receiving mixtures of the serum and rattlesnake venom, while protected from death in its usual form, sometimes died after several days from the effects of local lesions, or suffered from considerable local lesions.

Calmette's method of immunizing animals by heated venom is thought to be much better than the method attempted, because it accomplishes the same result with the minimum amount of pain and inconvenience to the experiment animals.

George Lamb, "On the Action of Snake Venom on the Coagulability of the Blood," *Indian Medical Gazette*, Dec., 1901, Vol. XXXVI, No. 12, p. 443, investigated this important subject in an entirely new manner. The ingenious method employed consisted in the use of sodium citrate for the inhibition of the coagulation of rabbits' blood employed for the experiment. Lamb found that 1 part of sodium citrate in one hundred parts of blood was sufficient to prevent clotting of the drawn blood. By means of a canula introduced into the femoral artery, 10 cc. of blood was received in a tube containing 1.5 cc. of a 20 per cent. solution of the sodium citrate. The mixture was well shaken up and the citrated and incoagulable blood divided among a series of test-tubes, 1 cc. being accurately measured into each. When it was desired to bring about coagulation of the blood, all that was necessary was to precipitate the sodium citrate contained in the mixture with 0.5 cc. per 1 cc. of blood, of calcium chloride solution, after which coagulation rapidly occurred.

The demonstration of the effect of the venom upon the coagulability of the blood consisted in the addition to each of the tubes containing 1 cc. of the citrated blood, different quantities of a solution of the venom to be investigated, and about fifteen minutes subsequently, the addition of the appropriate quantity of the solution of calcium chloride.

The tubes were kept at laboratory temperature and the time of clotting carefully noted. By these means it was shown that the addition of 0.1, 0.3 and 0.5 mg. of daboia venom caused the formation of a solid clot in rabbits' blood, to which it was added, in a few minutes, whereas rabbits' blood drawn in the same manner without the addition of the venom showed no signs of clot in one and one-fourth hours.

A second series of experiments showed the effect of the addition of the daboia venom previous to the addition of the calcium chloride solution; the result, however, was identical. All of the tubes to which the venom was added coagulated solidly in a few moments, while the blood to which no venom was added remained unclotted for one and one-fourth hours.

From these experiments Lamb concludes that venom increases the coagulability of the blood and that death in venom poisoning is largely due to thrombosis.

B. Durigen. Deutschland's Amphibien und Reptilien. Magdeburg, 1897. This is a treatise upon the natural history of the amphibia and reptiles of Germany, and is particularly useful to those interested in the natural history of snakes.

Gordan. Manual of the Vertebrates in the Northern United States, 1899. This is a general work upon vertebrate morphology. In it are many useful and important facts concerning the serpents.

L. Stejneger. The Poisonous Snakes of North America. Publications of the Smithsonian Institute, 1895. This is probably the best single work upon the venomous serpents of our own country, and is really indispensable to those who engage in the study of snakes or venom.

Boulenger. Catalogue of Snakes in the British Museum, London, 1893. This is a systematic work upon the natural history of snakes.

Howard A. Kelly. The Recognition of the Poisonous Serpents of North America. Bulletin of the Johns Hopkins Hospital, Dec., 1899. Vol. 10, No. 105, p. 217. In this paper Dr. Kelly gives a

brief description of the venomous serpents of North America.

Thomas R. Brown. Bulletin of the Johns Hopkins Hospital, Dec., 1890, Vol. 10, No. 105, p. 221. This paper contains a brief description of the important venomous snakes and their chief characteristics, statistics concerning the mortality of snakes in India and general facts concerning the peculiarities of the venom. A very good review of the chemistry of snake venom is included. The section upon the treatment of snake bite outlines the work of Halford, Sewall, Calmette, Fraser and others. No original investigations are reported.

Since the completion of this review, a paper by Mitchell and Flexner, upon "Venom and Hemolysis" has been read before the National Academy of Sciences (1901) but so far as I have been able to discover, has not been published.

A STUDY OF THE CASES OF ACCIDENTAL X-RAY BURNS HITHERTO RECORDED.

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(Continued from Page 442).

Appearance of First symptoms.

The impression has prevailed that these lesions usually make their first appearance only after a number of days. The following is a table of the records as to this point.

In	9	instances	signs	or	symptoms	were	noticed	within 24 hours.
"	6	"	"	"	"	"	"	2 days.
"	6	"	"	"	"	"	"	3 days.
"	5	"	"	"	"	"	"	4 days.
"	5	"	"	"	"	"	"	5 days.
"	3	"	"	"	"	"	"	6 days.
"	4	"	"	"	"	"	"	7 days.
"	2	"	"	"	"	"	"	8 days.
"	2	"	"	"	"	"	"	9 days.
"	2	"	"	"	"	"	"	10 days.
"	8	"	"	"	"	"	"	10-14 days inc.
"	8	"	"	"	"	"	"	15-21 days inc.
"	5	"	"	"	"	"	"	22-28 days inc.
"	5	"	(3, 4, 147)		"	"	"	after the 4th week.
	70							

These figures indicate that at least in a good proportion of the cases the first symptoms are noticed within the first few days after the exposure. Three are mentioned as being noticed *immediately* after the exposure. It seems possible that the reason that so many are first noticed in the 2nd and 3rd weeks is that it is at this time that the sensitiveness of the lesion becomes severe enough to attract the attention of the patient. In some cases, however, this late appearance is well substantiated, e. g., in the cases of Thompson, Orleman and Barthelemy. But five cases of my series 3, 4, 41, 126, 147 appeared later than 21 days. It is unfortunate that we have not more accurate reports of them.

The writer has been able to find no especial relationship between the early appearance of the lesion and the ultimate severity. It by no means follows that because a burn is severe, it appears early; or that because a burn appears late it will be of mild degree. Barthelemy's two extraordinary cases which appeared 5 months after exposure open up a new subject for investigation. How many lesions appear so late that they are mistaken for other things? Barthelemy also hints at other similar cases and promises a future report of them.

The question of intervals at which to repeat therapeutic doses of the X-Ray can be to a certain extent answered by these figures. If we wait three weeks after the initial dose we are reasonably sure of doing no damage. A shorter interval than this would be excusable if warranted by other conditions as the urgency of the case, the efficiency of the apparatus, the quality of the tube, etc.

The Portion of the Body Injured.

Nothing striking results from the consideration of our data on this subject. The reason that such a large proportion of the severe burns have occurred on the abdomen and groin is undoubtedly due to the fact that these are the thickest portions of the body and require the longest exposures.

Treatment.

The treatments which have been applied to these lesions have been many and for the most part unsatisfactory. Two main lines of treatment may be mentioned; (a) physiological rest and mild poulticing and (b) excision followed by skin grafting. The first should be used at least until the process has become stationary and has ceased spreading. The second only when pain is severe and rest has not produced improvement.

Precautions to Prevent Injury.

In exposures for skiagraphs the writer relies entirely on keeping the distance and time of exposure within proper limits. These limits are usually within those mentioned in table (a), though occasionally over them—never more than double the time. In therapeutic exposures the parts to be protected are covered by a lead plate. X-Ray workers who are constantly exposed should have the tube shielded in a suitable box with glass faces. It is perhaps well to use a grounded aluminum sheet between the patient and the tube.

CONCLUSIONS:

1. The frequency of X-Ray injuries has been much exaggerated by the medical press owing to the wide publicity given to many early cases.
2. The writer has been able to collect somewhat less than 200 cases, less than half of which were serious, and about one third of which occurred in X-Ray workers.
3. Judging from the experience with these injuries in Boston, it is the writer's opinion that a fair proportion of the severe burns are included in this series, while the dermatitis of skiagraphers is less well represented.
4. At a maximum estimate it is safe to say that not one patient in a thousand has been injured in the past five years by an X-Ray examination and in the past year not one in ten thousand.
5. More than two-thirds of these injuries occurred in the first two years of the use of the X-Ray. Only one mild case is reported as occurring in the current year, those cases in which the exposure has been made for therapeutic purposes being excluded.
6. The cause of X-Ray injuries is not definitely known. It is some form of energy closely allied to the photographically active X-Ray and radiates with it from the platinum terminal.
7. The primary injury is to the nerves controlling the nutrition of the skin.
8. There is no good evidence of injury to the deeper tissues without primary interference with skin.
9. The important factors which contribute to the production of X-Ray burns are: the intensity of the current used to stimulate the tube; the quality of the tube, the distance and time of exposure; the idiosyncrasy of the patient.
10. The static machine is somewhat less likely to produce injury than other forms of apparatus.
11. From the data of the reported cases we can say that

no burn has been produced by an exposure equal to or less than the equivalent of 5 minutes at 10 inches.

12. It is impossible from the data to say how intense an exposure must be to produce a burn, for a comparison of the cases shows that an inconstant factor or factors exist.

13. These inconstant factors are more likely to lie in the complex human organism than in the less complicated construction of the tube.

14. General experience has shown that soft tubes produce a more intense effect on the tissues than hard.

15. While we cannot control these inconstant factors, therapeutic exposures will continue to be dangerous, and it is therefore important to record the exact conditions of the patient's local and constitutional idiosyncrasies, as well as those of the tube.

16. In cases of injury the time before the appearance of the first symptoms has varied from a few minutes to three weeks. Five cases have remained latent for over three weeks; two of these for five months.

17. It is impossible to predict the severity of the lesion from the time of its appearance after exposure.

18. The writer suggests 10 minutes at 6 inches from the platinum terminal, as a standard therapeutic exposure. This will make comparisons between the inconstant factors easier.

19. Unless signs of dermatitis appear within three weeks after the exposure, they are unlikely to appear at all. In one-third of the reported cases the appearance occurred within the first four days; in one-half the cases before the ninth day.

20. In the ordinary X-Ray examination with fluoroscope or skiagraph, the operator takes the entire responsibility of injury; in exposures for therapeutic purposes the patient shares the responsibility.

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CASES 7, 8, 9, 10 and 11.—Same authors. Similar cases.

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CASE 13.—Dr. Below. Münch. med. Woch., March 1st, '98. Daily exposures. Blisters and exfoliation of face. Patient was impatient for removal of hair on face, and approached tube so near that sparks jumped across.

CASE 14.—Bernard. Lyon. Méd., '00, XCIII, 442. One exposure 35 minutes. First symptoms appeared in 9 days on shoulder. Severe. Ulcer. There was an aluminum screen used, but probably of insufficient size.

CASE 15.—Bloom, J. M., Louisville Med. and Surg. Jour., Vol. VII, '00, p. 289. One exposure, 30 minutes. First symptoms in 5 days, lasting 10 mos. Abdomen. Severe ulceration. Recovered after skin grafting.

CASE 16.—Borden, Maj. W. C., "Use of the Röntgen Ray in the war with Spain." Coil. 10 inches from platinum reflector. 3 exposures on successive days, 20 minutes each. First symptoms 6 days after last exposure. Chest. Not healed 11 mos. later. Ulceration.

CASE 17.—Borden, Maj. W. C., "Use of the Röntgen Ray in the War with Spain." Static machine. 3 exposures every other day. 25 minutes each. First symptoms 5 days after last exposure. Lasted 10 days. Abdomen. Erythema and hyperesthesia.

CASE 18.—Borden, Maj. W. C. Personal communication to E. A. C., Static Machine. 3 exposures every other day, 30 minutes each, at about 8 inches. First symptoms appeared three days after last exposure. Left hip. Lasted 16 days. Erythema and hyperesthesia. Slight exfoliation.

CASE 19.—Bronson, J., Cut. and G. U. Dis., '97, p. 478. Tesla Coil. Patient said 6 inches, operator said 15 inches from platinum terminal. 5 exposures, 1 for 80 min. and 4 for 1 hour. Hip. Severe ulceration. Taken through a chemise.

CASE 20.—Buguet, Abel, Techniques Méd. Rayons, 3 cm., 45 min. Temple. Severe ulceration and depilation.

CASE 21.—Buri. Monat. f. prak. Derm., XXVIII, No. 9, May, '99. Strong coil. Many exposures. Dermatitis of the left hand. Palpitation and dyspnea. Gives a photo., showing changes in nails.

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CASE 24.—Same author. Same ref. Static machine. Skiagrapher's dermatitis.

CASE 25.—Same author, same ref. Tesla coil. Skiagrapher's dermatitis of face.

CASE 26.—Same author, same ref. Tesla coil. First symptoms appeared 10 days after exposure. Right iliac region. Severe ulceration lasting a year and a half, complicated by ulcerating sarcoma.

CASE 27.—Same author, same ref. First symptoms 10 days after exposure. Iliac region. Burn of second degree, lasting many months. Formation of leathery tissue without ulceration. Skin grafted.

CASE 28.—Same author, same ref. Tesla coil. Small burn of second degree in groin.

CASE 29.—Same author, same ref. Tesla coil. Burn of first degree on face.

Case 30.—Same author, same ref. Tesla coil. Fore-arm and back of hand. Burn in the first degree.

CASE 31.—Same author, same ref. Tesla coil. Burn of first degree on anterior chest.

CASE 32.—Caffrey and Wilson. Elect. World. Jan. 9th, '97. 2 Exposures for 3 hours each. Fingers. Dermatitis and ulceration. Also some remarkable cases of deep effects. Healed in 3 mos. under boracic acid.

CASE 33.—Cassidy, Dr. P., Case of Dr. Weldon. Med. Rec., LVII, 180, '00. Static machine. 1 exposure of 45 min. 5 in. from tube. First symptoms in one week. Left groin. Lasted a year and a half. Deep ulceration. Leathery necrosis. Dissection of groin was done, removing necrotic tissue, later Reverdin grafts.

CASE 34.—Clark, C. F., Trans. Ohio Med. Soc., '97, p. 139. Case of alopecia without inflammation, mentioned in discussion of Dr. Scott's paper.

CASE 35.—Codman, E. A. Present article. Allard, Henry. Case was not seen by writer. Deep ulceration of abdomen above umbilicus.

CASE 36.—Codman, E. A. Present article. Case of W. J. D. Very severe skiagrapher's dermatitis. Repeated exposures for months. Hands and somewhat on face and other parts. Permanent loss of several nails. Ulceration involving extensor tendons, necessitating skin grafting. The process has existed with exacerbations from continued exposures for five years.

CASE 37.—Conrad. Codex Medicus, Aug., '96. Skiagrapher's dermatitis.

CASE 38.—Corlett, W. T., Cleveland Med. Gaz., '96, 97, p. 696. Distance 8 in. from platinum reflector for 45 min. Thigh. Ulceration. After 6 mos. excision and skin-grafting was done.

CASE 39.—Crocker, H. Radcliffe, B. M. J. Jan. 2nd, '97. Coil. 1 hour at 5 in. from platinum. First symptoms in 24 hours. Epigastrium. Severe ulceration. Lower border sharply marked, where trousers were turned down.

CASE 40.—Daniel, Prof. J. N. Y. Med. Rec., April 25th,

'96. Coil. 1 hour at a half inch from tube. Side of head. Alopecia. No inflammation.

CASE 41.—Dale, J. Y. Med. News, July 24, '97.

CASE 42.—Delorme. Bull. et Mem. Soc. de Chir. April 7, '97, p. 296. Alopecia.

CASE 43. Destot. Forschritte Rönt.-Strahl., Vol. 3, '00. H. 5. 30 cm. from platinum for 20 min. Knee.

CASE 44.—Destot. Acad. Sci., May 17, '97, 10 cm. from platinum for 30 min. Thorax.

CASE 45.—Deutschländer. See Kienböck. Wien. klin. Woch., '00, p. 1155. 15 cm. from platinum. 52 min., in 5 exposures. Inguinal region. Ulceration.

CASE 46.—Dowie, W. Ed. Med. Jour., Jan., '97. Coils. Several exposures. Burn appeared 10 days after last exposure. Neck and scalp. Ulceration.

CASE 47.—Drury, H. C. B. M. J., Nov. 2, '96, p. 1877. Coil. Several exposures at an inch or two from tube. Exposures two hours and a half. Dermatitis began 2nd day after 2nd exposure. There was nausea after each exposure. Ulceration for 4 mos. Clothing and celluloid between patient and tube.

CASE 48.—Elliot. Jour. Cut. and G. U. Dis. '97, p. 478. Chest. Referred to in discussion of Dr. Bronson's paper. This and following cases were in boys who were used to demonstrate the fluoroscope.

CASE 49.—Same author, same ref. Chest.

CASE 50.—Feilchenfeld. Deutsch. med. Woch., July 23, '96. Face. Case similar to that of Marceuse. No details.

CASE 51.—Ferrier, Charles. Cong. Fran. de Chir. Paris, '99, XIII, p. 611. Coil. Several exposures. Skiagrapher's dermatitis.

CASE 52.—Same author, same ref. Coil. 3 exposures for 45 min. at 11 cm. Symptoms appeared first in two days. Groin. Lasted 10 mos. Ulceration.

CASE 53.—Forster, A. Deutsch. med. Woch., Feb. 11, '97. 2 exposures. 25 min. at 10 cm. Symptoms appeared in 5 days. Dermatitis, alopecia.

CASE 54.—Same author, same ref. 5 exposures, amounting to 2 hours at 8 or 10 cm. Head. Dermatitis, alopecia.

CASE 55.—Freund, Leopold. Wien. med. Woch., Mar. 6, '97. Coil. 10 exposures, 2 hours each. For removal of superfluous hair. Child was anemic and tuberculous. Mild dermatitis on back and neck.

CASE 56.—Frie. Elect. Rev., Aug. 19, '96. Daily exposures. Skiagrapher's dermatitis.

CASE 57.—Fuchs, Paul. Deutsch. med. Woch., No. 35, Aug. 27, '96. Coil. 16 cm. for one hour. Hand looked as if frozen during exposure. Vesicles appeared 15 min. later.

CASE 58.—Gage, W. B. Med. Rec., Aug. 29, '96. Abdomen of a child. Ulceration. Mentions indefinitely other cases of alopecia.

CASE 59.—Gassmann. Fortschritte Rönt.-Strahl., 1900, II, p. 121. 4 exposures of 20 min. each at 5 cm. Thigh. Ulceration. Was excised and skin grafted.

CASE 60.—Same author, same ref. P. 199. 3 times a week, 10 or 20 min. each. Shoulder. This was also excised and grafted. Cases 59 and 60 are quoted from Kienböck.

CASE 61.—Gilchrist, T. C. Johns Hopkins Bulletin, Feb. '97. Skiagrapher's dermatitis. Reported as a case of osteoplastic periostitis.

CASE 62.—Gray, W. M. Personal communication to E. A. C. Coil. 2 exposures of 30 min. each at 6 in. First symptoms appeared in two weeks and lasted three mos. Groin. Ulceration and gray slough. Taken through clothing.

CASE 63.—Greene. See Dr. N. Stone Scott's article. Coil. 3 exposures 1 hour each at 8 in. Head. Burn of 2nd degree lasting 3 mos.

CASE 64.—Hawks, H. D. Elect. Rev., Vol. 29, No. 7. Powerful coil. Skiagrapher's dermatitis.

CASE 65.—Havas, A. Ungar. med. Presse, '99, 4, p. 38, Dermatitis of face following attempt to remove hair. Severe.

CASE 66.—Hoffa. Fortschritte Rönt.-Strahl., Vol. 2, p. 110. 1 exposure of 35 min. at 30 cm. Groin. Ulceration. Quoted by Kienböck and probably case of E. E. mentioned by E. A. C.

CASE 67.—Ivanischevitch. Gaz. Hebd. de Méd. and Chir. Paris, '99, p. 517. 3 exposures for 55 min. 1st symptoms appeared in 15 days. Hand. Blebs and exfoliation.

CASE 68.—Jackson, G. S. Jour. Cut. and G. U., '00, XVIII, p. 177. Dermatitis of face.

CASE 69.—Jones, F. S. Elect. Rev., '96. Dermatitis behind ear and on face. Occurred in the physical laboratory in the University of Minnesota.

CASE 70.—Jones, H. S. Clinical Jour., Mar. 30, '98. Static machine. Skiagrapher's dermatitis.

CASE 71.—Kaposi. Wien. klin. Woch., '99, p. 1113. Repeated exposures at 10 cm. Severe. Hand. Mentions a number of other cases indefinitely which are probably included elsewhere.

CASE 72.—Kessabian, Mihran K. Am. X-Ray Jour., Oct., '00. 3 exposures at 15 in., 30 min. in all. 1st symptoms in 2 weeks. Side of face. Alopecia.

CASE 73.—Same author, same ref. Skiagrapher's dermatitis.

CASE 74.—Same author, same ref. Skiagrapher's dermatitis.

CASE 75.—Kienböck. Wien. klin. Woch., Dec. 13, '00. 78 min. at 20 cm. Abdomen. Ulceration. Other cases are given which have resulted from therapeutic treatment.

CASE 76.—Kibbe, A. B. N. Y. Med. Jour., Jan. 16, '97. Coil. Several exposures at 4 inches. First symptoms appeared in two days on face and elbow. Mild. Elbow covered with clothing.

CASE 77.—King, E. E. Canad. Pract., Nov., '96. Coil. Skiagrapher's dermatitis.

CASE 78.—Kolle, F. S. Brooklyn Med. Jour., Dec., '96. Coil. First symptoms appeared in nineteen days. Alopecia. No inflammation. Lasted four months.

CASE 79.—Lassar, Prof. Berlin Med. Soc., Abs. P. M. J., April 16, '98. It is probable that this is the same case as that of Plonski from the same clinic. Abdomen. Severe ulceration lasting over a year. Woman was pregnant. She had had a previous exposure without ill effects.

CASE 80.—Launois. Soc. Méd. des Hôp., Jan. 15, '97. Referred to by Barthelemy as reporting one grave and several mild cases.

CASE 81.—Lederman. Annales de Derm. & Syph. Allusion to scars on back, resulting from many exposures.

CASE 82.—Lee, E. H. Jour. Am. Med. Assoc., Jan. 16, '97. Many exposures of head. Dermatitis and ulceration. Eyes closed during exposure, but a conjunctivitis developed.

CASE 83.—Leppin, O. Deut. med. Woch., July 9, '96, No. 28. Skiagrapher's dermatitis.

CASE 84.—Leonard, C. L. N. Y. M. J., July 2, '98. "A burn of considerable extent, but not severe in character," on abdomen. Two other cases referred to in therapeutic use.

CASE 85.—Lustgarten, S. Jour. Cut. and G. U. Dis., 1897, p. 525. Eleven inches from platinum, fourteen exposures for fifteen to thirty minutes each. Abdomen severe ulceration. For therapeutic effect.

CASE 86.—Same author, same ref. Severe ulceration of hand which was purposely exposed to remove nails.

CASE 87.—Lyon, Howard. Albany Med. Ann., 240, '00, 21. Coil. Ten minutes at three to four inches. First symptoms developed two weeks later. Knee. Lasted three years. Question whether this is Dr. Tuttle's case.

CASE 88.—Mansell, Harry. Occurred in Hastings, Eng., taken by Mr. Bloomfield. Notice in Med. Press and Circular, Nov. 21, 1900, page 548, and in Sc. Am., Jan. 26, 1901. Patient was an elderly woman. Burn on left side of abdomen. Slough 7x3 inches. She was exposed the first 80 minutes in two sittings, the second time for 45 minutes in one sitting. Distance not given. Death six months later. Coroner's verdict, "that death was due to shock and exhaustion following the accident and the effects of the Röntgen rays on a weakened system." Note:—The injury was a fracture of the neck of the femur.

CASE 89.—MacIntyre, J. Nature, Nov. 19, 1896. Skiagrapher's dermatitis.

CASE 90.—Marceuse. Deut. med. Woch., No. 30, July 23, 1896. Coil. Skiagrapher's dermatitis. Face.

CASE 91.—Meis, Jos. Deut. med. Woch., '97, June. Many exposures dermatitis of face, done by a homeopath for facial paralysis. Another case by same man on abdomen alluded to.

CASE 92.—Montgomery. Occid. Med. Times, June 1901. Ann. of Surgery, Dec., 1901. Static machine. Ulceration on abdomen. Excision and skin grafting.

CASE 93.—Merrill, Walter H. Cases of severe burn alluded to as reported by Dr. Vaughn at a medical society

in Washington. Dr. Merrill has also performed several successful experiments on his own arm.

CASE 94.—Mockert, Mme. Given Macquaire. B. M. J. April 2, '99. Ed. Presse Médicale, April 1, 1899, page 125. Severe ulceration. Suit for damages.

CASE 95.—Newcomb, G. S. Mod. Med. Sci., Nov., 1896. Skiagraphers dermatitis.

CASE 96.—Noir, Julian. Le Prog. Méd., July 2, 1898, 17 minutes at 10 cm. Dermatitis on hand appeared in 8 days. Note:—While dermatitis existed, an accidental scratch on it healed normally.

CASE 97.—Orleman, Daisey M. N. Y. Med. Rec., July 1, '99, page 8. Coil. Three exposures of 7 minutes each at 10 inches. One exposure in January, another in March, another in May. First symptoms appeared 21 days after last exposure. Thigh. Severe ulceration. Excision and skin grafting unsuccessful at first.

CASE 98.—Oudin and Carnaud. See Barthelemy. Several exposures. Dermatitis of scalp and alopecia. Exposures made for the cure of deafness.

CASE 99.—Same authors, daughter of the above patient, similar lesions.

CASE 100.—Oudin. Bull. de la Soc. d' Elec.-Ther., March, 1901. Perhaps same case as No. 27. Symptoms did not appear until 5 or 6 months after exposure.

CASE 101.—Parker, W. E. New Orleans Med. & Surg. Jour., Sept., '96, p. 158. Burn occurred at Chicago. Many exposures. Dermatitis of left cheek.

CASE 102.—Plonski. Dermat. Zeitsch., '98, p. 36. (Statement of patient). One exposure for 30 minutes at 50 cm. Burn appeared next day on abdomen. Lasted eleven months. Severe ulceration. Examination undertaken to determine position of fetus. Dead child born at term 3 months after. She was in the sixth month when the X-ray was used.

CASE 103.—Ramsey, Prof. Wm. Spoken of by Downie. Skiagrapher's dermatitis.

CASE 104.—Rendu and Du Castel. Soc. Méd. des Hôp., Jan. 15, '97. Coil. Several exposures. Dermatitis and ulceration of chest. Authors claim improvement in pneumonia.

CASE 105.—Reid, E. W. Mon. Med. Jour., April, '97. Also Scot. Med. & Surg. Jour., Feb. '97. Coil. Several exposures. Dermatitis of abdomen and chest. Waistcoat lined with scarlet flannel worn during exposure.

CASE 106.—Richardson, M. H. Case of Dr. Stickney. Med. News, Dec. 26, '96. Three exposures amounting to 85 minutes at 18 inches. Burn appeared in two days on abdomen. Ulceration lasted four months.

CASE 107.—Rockwell, A. D. Med. Rec., April 24, '97. Static machine. Skiagrapher's dermatitis.

CASE 108.—Robinson, A. R. Jour. of Cut. & G. U. Dis., '97, page 526. First symptoms appeared in five days. Chest. Severe ulceration.

CASE 109.—Schmidt. Case of Mallet vs. Schmidt. Elec. Review, Vol. XXX, No. 8. Feb. 24, '97. Negro. Bad burn of chest.

CASE 110.—Schmiat. Wien. klin. Woch., '00, page 1155. Severe burn of abdomen. See Kienböck.

CASE 111.—Schmidt, Otto L. Case of Balling F. B. vs. Schmidt. Am. X-Ray Jour., May, '99. Severe burn of dorsum of ankle and foot. Amputation finally became necessary from pain and ulceration. Two reamputations.

CASE 112.—Scott, J. W. Am. X-Ray Jour., Aug., '00. Fifteen minutes at at least 8 inches in two exposures. First symptoms appeared three hours after exposure. Neck; erythema. Rubber sheet between patient and tube. Patient was nervous. Fainted at second exposure.

CASE 113.—Same author, same ref. Two for ten minutes each at 10 inches. First symptoms one week after second exposure. Dermatitis of shoulder, hip and back of hand. Rubber sheet. Hip which was under anode not burned.

CASE 114.—Scott, N. Stone. American X-Ray Jour., Aug., '97. Original article in Trans. Ohio Med. Soc., '97, page 139. Case No. 1 of Dr. Scott's series. Coil. Severe burn of left thigh.

CASE 115.—Same author, same ref. No. 45 of series, superficial burn of thigh.

CASE 116.—Same author. No. 9. Skiagrapher's dermatitis.

CASE 117.—Same author. No. 21. Coil. Two exposures of 30 minutes each at eight inches, first symptoms in ten days. Arm and hand. Symptoms of periostitis. Inflam. said to have delayed op. for dislocation of ulna. Dermatitis?

CASE 118.—Same author. No. 65. Coil. Inexact data. Mild case. Chest.

CASE 119.—Same author. No. 66. Inexact data. Mild case. Back.

CASE 120.—Same author. No. 67. Inexact data. Mild case. Back.

CASE 121.—Same author. No. 13. Coil. Two exposures 30 minutes each, 3 inches from platinum. Breast. Like burn of second degree.

CASE 122.—Same author. No. 14. Coil. One exposure for five minutes. Slight burn of wrist lasting two weeks.

CASE 123.—Same author. No. 12. Coil. Skiagrapher's dermatitis.

CASE 124.—Same author. No. 17. Tesla coil. One exposure for 30 minutes at six inches. First symptoms appeared in two hours. Superficial burn of knee.

CASE 125.—Same author. No. 23. Coil. Three exposures, 1½ hours each at six inches. Abdomen; mild; cloth over skin.

CASE 126.—Same author. No. 24. Three exposures for 1½ hours each at six inches. Symptoms appeared in four weeks; left hip, dermatitis and ulceration. Used vaseline at each exposure freely.

CASE 127.—Same author. No. 40. Coil. Three exposures of 5 minutes each at one or two inches. First symptoms in ten days. Chest and hand. Mild.

CASE 128.—Same author. No. 20. Coil. Skiagrapher's dermatitis.

CASE 129.—Same author. No. 38. Skiagrapher's dermatitis. See Nature, Oct. 29, 1896, probably same case as reported by Barthelemy.

CASE 130.—Same author. No. 18. One exposure for 20 minutes at one inch. Thigh.

CASE 131.—Same author. No. 19. One exposure for 30 minutes. Thigh.

CASE 132.—Same author. No. 41. Coil. One exposure for five hours at from 2 to 8 inches. Head. Ulceration extended to bone.

CASE 133.—Same author. No. 42. Severe burn of abdomen.

CASE 134.—Same author. No. 43. Superficial burn of chest.

CASE 135.—Same author. No. 44. Superficial burn of chest.

CASE 136.—Sehrwald. Deut. med. Woch., Oct., '96. Coil. One exposure for 45 minutes at 14 cm. from skin. First symptom appeared in two weeks. Abdomen: dermatitis and ulceration, lasting 9 or 10 weeks.

CASE 137.—Sewall. Lancet, '96, Vol. II, page 1049. Alopecia and dermatitis of neck.

CASE 138.—Scherwell. Jour. of Cut. & G. U. Dis., '99. Vol. XVII, page 40. Superficial burn of shoulder, knee and temple. No details.

CASE 139.—Skinner, G. C. Dr. Scott's article. Am. X-ray Jour., Aug., '97. Three exposures, 20 minutes each: 4 inches. Ulceration and implication of tendon sheaths of wrist. Tesla Coil.

CASE 140.—Same author, same ref. Tesla coil. Abdomen: severe.

CASE 141.—Sorel, M. A. Bull. de la Soc. Fran. de Photo., 2. s., Vol. XIII. Coil. One exposure of 20 minutes at 1 cm. from tube. First symptoms appeared in 6 days. Epigastrium. Severe ulceration. Thin sheet of celluloid between tube and patient.

CASE 142.—Same author, same ref. Coil. Mild dermatitis. Groin.

CASE 143.—Sterne, Max J. Am. Med. & Surg. Bull., Nov. 21, '96. Three exposures of 40 or 50 minutes each at 3 inches. Chest severe.

CASE 144.—Stephens, L. G. B. M. J. Apr. 13, '97. In report on R. R. by Rowland. Mild case. Skiagrapher's dermatitis.

CASE 145.—Stein, W. M. Elect. Review, '96. Skiagrapher's dermatitis.

CASE 146.—Same author, same ref. Mild case on back. Patient had on thin clothing.

CAS6 147.—Stinson, J. Coplin. Med. News, Oct. 7, '99, page 463. Groin. Severe case. Leathery slough. First

symptoms did not appear for 6 weeks. Final scar was soft.

CASE 148.—Testaz. La Radiographie, June or July, 1901. Severe case.

CASE 149.—Thompson, Elihu. Boston Med. and Surg. Jour., Dec. 10, '96. Small rubber plate static machine. One exposure for 30 minutes at 1¼ inches. First symptoms in 9 days. Little finger. Ulceration. Experimental case.

CASES 150, 151 and 152.—Same author, same ref. Three cases of skiagrapher's dermatitis.

CASE 153.—Same author, same ref. One exposure for 12 minutes at 5/8 of an inch from glass. First symptoms appeared in 11 days. Finger. Mild. Experimental case.

CASE 154.—Tuttle. N. Y. Med. Rec., March 5, '98. Coil. Details not given. First symptoms in three weeks, back of knee. Skin grafting was done which later broke down. Amputation. Alluded to two other cases.

CASE 155.—Weldon, J. Case of Mr. Long, alluded to in case of Weldon vs. Otis Clapp & Son. Static machine. Case had previously been exposed to coil. Half hour at 8 inches. Symptoms of burn of second degree. Patient died soon after. Dr. W. signed death certificate as apoplexy and fatty degeneration of heart. Did not believe burn was cause of death.

CASE 156.—White, J. C. Boston M. & S. J., Dec., '96. Two exposures amounting to 75 minutes at 6 inches. First symptoms appeared the day after the second exposure. Breast. Deep ulceration.

CASE 157.—Wiley, A. B. M. J., '99. Reference lost. Superficial ulcer lasting three weeks.

CASE 158.—Ryan. Brit. Jour. of Derm., Aug., '97. Shoulder. Mild.

CASE 159.—Med. Press & Circ., Oct. 10, 1900, page 378. Alludes to a man at St. Paul, U. S. A., who died after an X-ray exposure and a street car accident. Death certificate says that death was due to X-ray burn.

CASES 160, 161 and 162.—Salvador. Thèse de Lyon, '99, mentions two cases of skiagrapher's dermatitis. One reported by Nobele and another by himself. He also reports some experimental observations made on himself. Also a number of accidents in therapeutic cases. Also one case of severe burn.

CASES 163 to 171 inc.—Nine additional cases of mild skiagrapher's dermatitis of hands in friends and acquaintances of the writer. One was caused by the static machine, the rest by coils or both.

NOTE:—1. Dr. Francis Carleton of Providence, in the Weldon trial, alluded indefinitely to cases which he had seen caused by both static machines and coils.

2. Dr. Valentine Zarubin, in Monatshefte für prak. Derm., XXVIII, No. 10, May 15, gives a general discussion of cases without definite reference.

3. While this article has been in print, Dr. Beck has published a few additional cases in the N. Y. Med. Rec., Jan. 18, '00, p. 83.

JOURNAL DES PRATICIENS.

November 23, 1901. (15me. Année, No. 47.)

1. The Operations for Cataract. F. TERRIEN.

1.—**The operation for the extraction of a cataract may be simple or combined with iridectomy.** For uncomplicated cataract, simple extraction is indicated. The operation should be performed when the cataract is ripe, soft, not adherent to the iris, and without any anterior ocular affection. The instruments used and the technique of the operation are described in detail, being divided into three stages. The method of extraction with iridectomy is also given in full. This is only employed when the cataract is complicated, either before, during, or after extraction. [M. O.]

November 30, 1901. (15me. Année, No. 48.)

1. Electricity in the Treatment of Trigeminal Neuralgia. HENRI BORDIER.
2. A Clinical Lecture on Therapeutics. HENRI HUCHARD.
3. Latent Aneurysm of the Arch of the Aorta with Pneumonia from Compression of the Left Pneumogastric Nerve. HENRI HUCHARD and BERGOUIGNAN.

1.—Bordier considers **electricity** the most favorable method of **treatment for neuralgia.** He uses aluminum or platinated copper electrodes, the galvanic current, 60 to 80 milliamperes for an hour daily, in trigeminal neuralgia. Two case-histories are reported in detail, men of 59 and 69, both cured permanently by galvanism. Bordier considers this treatment invaluable in **tic douloureux.** [M. O.]

2.—Huchard reported the case of a woman with mitral disease which was well compensated, whose frequent **attacks of syncope** were of nervous origin. A physician also had syncopal attacks, of purely nervous origin, occurring from his fear of angina pectoris. Another case with syncope had extreme vertigo with complete loss of consciousness. Huchard diagnosed the case **epilepsy** and cured the condition upon 6 to 7 grams of potassium bromide daily. Two other cases of epileptic attacks simulated syncope, in which the diagnosis was exceedingly difficult. Syncope, while a heart symptom, is always caused by some other affection, never by heart disease. In these cases, over 4 grams of potassium iodide should be given daily to adults. [M. O.]

3.—Huchard and Bergouignan report a case of **latent aneurysm of the arch of the aorta,** in a man of 55. He had a hoarse cough, pain in the left side of his chest, and complete dulness over the left side of the thorax. The diagnosis of aneurysm was only made after death. The autopsy showed an aneurysm as large as an orange, on the arch of the aorta, which had ruptured into the left bronchus. The left pneumogastric nerve was compressed, the left pleura adherent, and the entire left lung showed a massive necrotic pneumonia. This destructive pneumonia followed compression of the vagus in 14 out of 35 cases collected. [M. O.]

December 7 and 14, 1901. (15me. Année, Nos. 49 and 50.)

1. Antidiphtheritic Serum in Pneumonia. LANDRIEUX and G. LEGROS.
2. The Treatment of Subglottic Laryngeal Stenosis. BOULAY.

1.—Landrieux and Legros have treated 10 cases of acute **croupous pneumonia with injections of antidiphtheritic serum.** Only 2 cases died, aged 42 and 45 years. In the other cases the defervescence seemed to follow the injections, yet were also noted in 7 cases treated by cold applications without the serum. Their experiences do not lead them to adopt this as a routine treatment. Examination of the blood after injection failed to show any leukocytic reaction. [M. O.]

2.—**Subglottic laryngeal stenosis** may be congenital or acquired. Those which are acquired may be acute, in diphtheria, measles, typhoid, in spasmodic or traumatic laryngitis; or chronic, due to chronic laryngitis, ulceration or erosion from secondary infection or cicatricial contraction, following leprosy, tuberculosis, syphilis, former operation, or intubation. Laryngoscopic examination sometimes permits a view of the stenosis, which may show infiltration, a cicatrix, or a membrane. The diagnosis must differentiate from spasm of the glottis, paralysis of the dilator muscles, a polyp, collected secretion, or a foreign body. While ulceration may be due to intubation, the degree of subglottic infiltration, the nature of the infection, the length of intubation, and the material of which the tube is made have some influence upon the occurrence of cricoid ulcerations. These strictures of the larynx may be inflammatory, cicatricial, or both. The treatment of acute stenosis consists in leaving the tube in place as short a time as possible, removing it early to perform tracheotomy, especially before the appearance of ulceration; or in not doing intubation at all, performing tracheotomy at once, if subglottic infiltration is marked. The chronic form of subglottic stenosis may be wide, narrow, or impassible. The treatment will be direct or retrograde catheterization. When the stenosis is impassible, laryngofissure or resection of the cricoid cartilage will be necessary. Great care should be taken after the treatment, to prevent edema. The prognosis is very unfavorable, for treatment must be continued a long time, and the final result is not very good. The length of the stricture is more unfavorable than its width. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ending March 8, 1902:

SMALLPOX—United States.

			Cases	Deaths
ARIZONA:	Naco	Feb. 23	12	
ARKANSAS:	Mississippi County	Feb. 18		100
CALIFORNIA:	Los Angeles	Feb. 15-22	6	
	San Francisco	Feb. 16-23	18	
COLORADO:	Denver	Feb. 15-22	3	
ILLINOIS:	Chicago	Feb. 22-Mar. 1	2	
	Danville	Feb. 22-Mar. 1	8	
	Galesburg	Feb. 15-Mar. 1	4	
INDIANA:	Evansville	Feb. 22-Mar. 1	8	
	Michigan City	Feb. 17-Mar. 3	1	
	Indianapolis	Feb. 15-22	4	
	Terre Haute	Jan. 11-Mar. 1	12	
IOWA:	Clinton	Feb. 22-Mar. 1	2	
KENTUCKY:	Covington	Feb. 23-Mar. 2	6	
	Lexington	Feb. 15-22	3	
LOUISIANA:	New Orleans	Feb. 15-Mar. 1	2	
MAINE:	Durham	Feb. 15-19	12	
	Freeport	Feb. 19	1	
	Portland	Feb. 8-Mar. 1	9	
	Sanford	Feb. 19	1	
MARYLAND:	Baltimore	Feb. 22-Mar. 1	2	
MASSACHUSETTS:	Boston	Feb. 22-Mar. 1	40	7
	Cambridge	Feb. 22-Mar. 1	9	
	Everett	Feb. 22-Mar. 1	1	1
	Haverhill	Feb. 23-Mar. 1	1	
	Holyoke	Feb. 22-Mar. 1	9	
	Malden	Feb. 22-Mar. 1	1	
	Newburyport	Feb. 22-Mar. 1	1	
	North Adams	Feb. 22-Mar. 1	1	
	Quincy	Feb. 22-Mar. 1		1
	Somerville	Feb. 15-Mar. 1	6	
	Waltham	Feb. 22-Mar. 1	1	
	Weymouth	Feb. 15-Mar. 1	3	
MICHIGAN:	Detroit	Feb. 22-Mar. 1	2	
	Grand Rapids	Feb. 22-Mar. 1	2	
	Ludington	Feb. 22-Mar. 1	6	
MISSOURI:	Hannibal	Feb. 1-28	6	
MONTANA:	Butte	Feb. 16-23	6	
NEBRASKA:	Omaha	Feb. 22-Mar. 1	55	
NEW JERSEY:	Camden	Feb. 22-Mar. 1	5	1
	Jersey City	Feb. 23-Mar. 2	19	
	Plainfield	Feb. 22-Mar. 1	1	1
	Newark	Feb. 22-Mar. 1	24	2
NEW YORK:	Binghamton	Feb. 23-Mar. 2	10	1
	New York	Feb. 22-Mar. 1	56	13
OHIO:	Cincinnati	Feb. 22-28	7	
	Toledo	Feb. 22-Mar. 1	1	
PENNSYLVANIA:	Allegheny	Feb. 22-Mar. 1	8	
	Philadelphia	Feb. 22-Mar. 1	62	17
	Pittsburg	Feb. 22-Mar. 1	6	
	Scranton	Feb. 15-22	1	
RHODE ISLAND:	Providence	Feb. 22-Mar. 1	4	1
	Warwick	Feb. 22-Mar. 1	4	
SOUTH CAROLINA	Charleston	Feb. 22-Mar. 1	2	
TENNESSEE:	Greenville	Feb. 15-22	3	
	Memphis	Feb. 22-Mar. 1	24	
	Nashville	Feb. 22-Mar. 1	1	
TEXAS:	Houston	Feb. 22-Mar. 1	32	
UTAH:	Salt Lake City	Feb. 8-22	7	
VERMONT:	Burlington	Feb. 15-22	17	
WASHINGTON:	Spokane	Feb. 15-22	26	
	Tacoma	Feb. 16-23	14	
WISCONSIN:	Fond du Lac	Feb. 22-Mar. 1	6	
	Green Bay	Feb. 23-Mar. 2	10	
	Milwaukee	Feb. 22-Mar. 1	2	

SMALLPOX—Foreign.

			Cases	Deaths
AUSTRIA:	Prague	Feb. 8-15	10	
COLOMBIA:	Cartagena	Feb. 15		3
	Panama	Feb. 17-24	50	10
FRANCE:	Paris	Feb. 8-15		3
GREAT BRITAIN:	Cardiff	Feb. 1-8	1	
	Dublin	Feb. 8-15	3	
	Dundee	Feb. 8-15	4	
	London	Feb. 8-15	185	61
INDIA:	Bombay	Jan. 27-Feb. 4		3
	Calcutta	Jan. 11-Feb. 1		3
	Karachi	Jan. 19-Feb. 2	31	8
	Madras	Jan. 25-31		1
ITALY:	Rome	Dec. 27-Jan. 4		2
MEXICO:	Mexico	Feb. 8-16		1
RUSSIA:	Moscow	Feb. 1-8	20	6
	Odessa	Feb. 8-15	1	3
	St. Petersburg	Feb. 1-15	14	3
URUGUAY:	Montevideo	Jan. 11-18	65	5

YELLOW FEVER.

MEXICO:	Vera Cruz	Feb. 15-22	1	1
WEST INDIES:	Curacao	Feb. 1-8	1	1

CHOLERA.

INDIA:	Bombay	Jan. 27-Feb. 4	1	
	Calcutta	Jan.-11-Feb. 1	159	
	Madras	Jan. 25-31	1	

PLAGUE—United States.

CALIFORNIA:	San Francisco	Feb. 2	1	1

PLAGUE—Insular.

HAWAII:	Honolulu	Feb. 18	3	

PLAGUE—Foreign.

CHINA:	Hongkong	Jan. 11-18	1	
	Shantung	Jan. 18, no deaths		
	Yeung Kong	Jan. 18		60
INDIA:	Bombay	Jan. 27-Feb. 4	58	
	Calcutta	Jan. 11-Feb. 1	132	
	Karachi	Jan. 19-Feb. 2	107	90
	Madras	Jan. 25-31		1
RUSSIA:	Batoum	Feb. 5	3	

CENTRALBLATT FUER CHIRURGIE.

October 5, 1901. No. 40.

1. An operative Procedure in the Treatment of Congenital Luxation of the Hip. Hetroplasty of the Limbus. OSCAR WITZEL.

1.—The author relates his experience with the procedure named in the title, in a case of congenital dislocation of the hip in which the bloodless reposition proved futile. The patient was a child four years of age with a congenital dislocation of the left hip. The skin was made aseptic and then painted with tincture of iodine in order to inhibit any deep seated bacteria. An incision was made over the trochanter, 8 cm. in length and as far as into the fascia. The upper margin of the incision was pulled upward and the depth of the soft parts ascertained. Two semi-circles of tissue were now in view and five gold plated nails were driven into the head of the femur close to the pelvis, and in such a manner that they were approximated in the shape of a palisade. The rounded heads of the nails when in apposition formed a complete circle, and thus prevented any deviation of the femur. The author had no hesitancy in driving the nails in deeply, as it is an accepted fact that in congenital dislocation of the hip the affected wall toward the pelvis is of abnormal thickness. The nails were 4 cm. long and 3 mm. thick. The last nail was driven in somewhat obliquely and anteriorly, close to its neighbor, so as to prevent any possible injury to the sciatic nerve. The last few blows upon the nails were performed by means of a short thick instrument being interposed between the head of the nail and the hammer, so that the muscles would not become caught. The wound was closed and dressed with collodion and covered with an aseptic gauze dressing. The condition of the child after the operation did not differ from the condition of children after the bloodless reposition. The nails remained *in situ* and as is known, do not prevent a recurrence mechanically, but as has been the experience of surgeons, also stimulate the formation of a bony limbus. A further report of this case as well as those that will undoubtedly be performed hereafter, is promised in the near future. [M. R. D.]

October 12, 1901. No. 41.

1. The Drawing Forward of the Tendons Before Their Detachment, in Amputation of the Finger on account of Injury, an Occasional Cause of Suppurative Inflammation of the Tendon Sheaths.
CARL LAUENSTEIN.

1.—The author has frequently experienced, that an unobserved infection of the tendons at a point removed from their seat of injury has been due to the fact that in treating an injured finger the tendons had been drawn forward more or less, before their detachment. The stumps often retract within their sheaths to a distance of 5 cm. In spite of keeping the wound open fever occurs in such cases, followed by suppuration. The author emphasizes the significance of such occurrence in the flexor tendons. He furthermore has been unable to find this in many large and small treatises on surgery, and believes that proper caution will often prevent such occurrence. [M. R. D.]

The Philadelphia Medical Journal

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See Advertising Page 8.

VOL. IX, NO. 12 — MARCH 22, 1902 — $5.00 PER ANNUM

Science in America.—It seems to be generally agreed that the criticism by Mr. Carl Snyder, in a recent number of the *North American Review*, was undiscriminating. Mr. Snyder argued that America's position in science is an inferior one, and he seemed to feel that this alleged fact is due to our democratic institutions and our lack of a great social, political and scientific center.

The *Popular Science Monthly* has made an able reply to Mr. Synder's criticism. The editor of that magazine points out especially that it is unfair to compare one particular country with all the rest of the civilized world as to the quantity and quality of its scientific output. America, by any fair measurement, constitutes only about one-seventh of the intellectual and productive countries. But what is more to the point is the fact that this country is still young. Its best universities have been anything like thoroughly equipped only in the last quarter of a century. At the period when Darwin and Pasteur were born and educated, the United States was not equipped for producing great scientists. The same applies in a measure even to the time of men still living—like Virchow, for instance. If Mr. Snyder thinks that science cannot flourish without the smiles of an aristocratic society and the support of a highly centralized and paternal government, he should wait a while and see what the endowments of such philanthropists as Carnegie, Rockefeller and Mrs. Stanford can do for it in America.

It seems to us preposterous for any one who aspires to be credited with the possession of a critical judgment, to make such sweeping assertions as Mr. Snyder has done. This country has never in its short existence been lacking in virility, intelligence, inventive genius and scientific insight. To imply that the fact that it has not yet outstripped England, Germany and France combined, is an evidence of some fatal defect in our national make-up, is to be guilty of downright captiousness. Our methods, to be sure, may not be, and may never be, those of Germany or France; but they will probably be all the better for being our own. It is certain that the tide is turning, and that our scientific instinct and conscience do not take us abroad so much as formerly. The prophecy, recently uttered half jokingly, that we may soon be instructing Europe in scientific medicine, may be after all another of those true words that are sometimes spoken in jest.

In medicine and surgery America surely has no need to take a back seat. While a boasttul spirit is said to be too easily our fault, the temper that would not resent the somewhat flippant judgments of writers like Mr. Carl Snyder, would be rather too complacent toward a spirit of condescension in our critics to be altogether to our own credit.

The Social Evil.—The problem of evil, as an abstract question, has never been solved; and the control of evil, as a practical question, is still far from solution. In spite of these obvious facts it is the imperative duty of mankind to combat evil unceasingly and to minimize its effects. To do this with anything like success requires a knowlege of the conditions of evil. Too many of our would-be reformers have a mere academic knowledge of sin; they denounce it, but they do not know it. If they did know it, and had a greater measure of common sense, they would probably cease to scold and declaim against it, and would do their little share in a practical way in trying to mitigate its effects.

Of all the moral evils in this world the social evil is the worst, and probably the one least susceptible to eradication. Those moralists who will not recognize this last mentioned fact, are academic moralists. In demanding the impossible they often oppose the only things possible. The progress of ethics was never yet along such lines, for ethics is only practical conduct.

The Committee of Fifteen, of New York, has published its report on the Social Evil. The book is a most interesting one and a most disappointing one. Any reader who has seen even a little corner of this world, must feel when he lays the book down that the Committee has offered no solution of the social evil. For this we do not blame the Committee. In fact, we do not see how it could well have written a different report from what it has. To expect these fifteen eminent and respectable gentlemen to make

a report on the social evil for public miscellaneous reading, and to write it differently than they have, or to make any more practical suggestions than they have, would be to expect them to compromise themselves in the opinion of a large and influential portion of the community. The whole idea of solving such a problem in such a way is of course impractical, and the members of the Committee probably recognize this fact themselves.

What the Committee has done, however, and what it deserves thanks for doing, is to present a very readable statement of the case. To this extent, we believe, the book will do good. As a historical statement it is especially good, for it is clear and concise, and shows the conditions of prostitution in many countries in ancient and modern times. Such information is especially needed by some of our reformers.

The Committee presents a strong case against the regulation of prostitution. It believes that regulation does not regulate. Apart from all moral considerations, this is a severe indictment. But the discussion of regulation can be only futile in this country, where there is an overwhelming popular sentiment against it. In the present state of the public conscience the thing is inconceivable in our best American cities.

The best recommendation made by the Committee is for larger accommodations for venereal cases in our hospitals. It is a crying shame that these cases are so poorly housed. After all, as physicians, we may be allowed to hope that the age of sanitary science is coming, and that, when prostitution and the control of the venereal diseases are approached more frankly from the sanitary standpoint, a partial solution of the social evil may be reached. But that time is not yet.

Sanitation in Japan.—Dr. Kinyoun has written for the United States Government a very interesting account of the quarantine and other sanitary methods in force in Japan. This progressive insular nation has been quick to adopt methods suggested by western science, but in many ways traces of the old oriental wastefulness of labor still persist. For example, rats are exterminated on ship-board not by poisons, ferrets or dogs, but by the very primitive and laborious method of sending the crew after them with clubs. This may be fun for the crew, and is probably very hard on the rats, but Kinyoun very conservatively doubts if it is an absolutely effective method in all cases, and, of course, if a single pair of rats survives, it would be perhaps just as well if the crew had remained in their usual quarters. Then for the disinfection of ships the Japanese still resort to mechanical cleaning, which is an excellent thing and by no means to be neglected, but they follow this with nothing more efficient than sprinkling the surface with a solution of carbolic acid, entirely neglecting formalhedyde and hydrogen disulphide gas, which we have reason to believe are vastly more efficient. From Kinyoun's account the methods of personal disinfection are rather promiscuous, and, we fear, not as effective as they might be. Large vats are filled with heated water, and then as many Japanese as possible crowd into them and bathe altogether. On the other hand, Kinyoun especially praises the law-abiding character of the people, their willingness to subject themselves to all sorts of unpleasant regulations suggested by the government, and the general efficiency of inspection; and in this we may as well admit that they are far ahead of the civilized United States, where evasions on the part of the immigrants and emigrants are only too frequently attempted; where inspections by officials appointed rather by influence than on account of merit are sometimes lamentably lax. It must not be understood that the Japanese Government is satisfied with excluding plague alone. Rigid measures aimed to check dysentery are enforced, and there is an earnest crusade against cholera and smallpox. In fact, compulsory vaccination, as now performed with Government vaccine, leaves little to be desired, and the rule is always to vaccinate unless there is absolute proof that successful vaccination has recently been performed.

The report concludes with the sad news that Acting Assistant Surgeon Eldridge, who was so efficiently performing the duties of medical inspecting officer at Yokohama, had just died at his post.

Concerning Vaccination.—We call the attention of our readers to the paper on the best methods of vaccination, by Dr. F. M. Wood, which is published in this issue of the **"Philadelphia Medical Journal."** Dr. Wood is city vaccine physician, of Camden, N. J., and in his official position has had ample opportunity for testing the various methods of performing the operation. He advises the use of the sterilized needle, as a scarifier, and the application of a dry, sterilized gauze dressing to the wound, after the vaccine is dry. He is opposed to the use of shields. We are thoroughly in accord with the advice of the writer of the paper concerning the application of a dressing to the wound made in vaccinating, irrespective of the method of performing the operation. Dr. Wood makes no mention of the cases of tetanus that occurred in Camden after vaccination; but we feel confident that if all the Camden physi-

cians could be induced to follow the methods of the city vaccine physician and if the patients could be induced to let the wound alone, infected arms would not follow, to say nothing of cases of tetanus. The physician who carries vaccine points loose in his vest pocket; who uses these points to scarify the arm of a child who has been playing on an ash-heap or a dung-hill, without cleaning the arm; and who then pulls a dirty shirt sleeve over the freshly made wound, will have infected arms, if nothing worse, as the result of his technique.

The Elmira Reformatory.—The annual report of the Board of Managers of this institution contains some excellent reading. The attitude of the managers toward the subject of the insane criminal is especially noteworthy. We do not remember ever to have read in such a document such an intelligent and conscientious statement of the case The managers at Elmira seem to have awakened thoroughly to the fact that there is close relationship between crime and insanity; they even incline to the belief that crime is often an evidence of disease and, therefore, should come more closely under the care of the physician than has been customary heretofore.

We wish to call especial attention to a few items in this report. At Elmira they have evidently awakened to the necessity of studying the *individual*. They state the case clearly when they say that the mere fact that insane patients are not reported in our penal institutions, is no evidence that such cases do not exist: it is evidence rather that such cases are not recognized. This is a good point for gaolers to meditate upon. The gaols themselves are on trial.

Again, many cases committed to penal institutions are insane or defective before commitment, and should not have been committed as criminal. Such cases need the diagnostic attentions, not of juries, but of scientists. At Elmira the physicians have proved the truth of this proposition by examining into the heredity and antecedents of their insane criminals. It is the old story. They find hereditary insanity, hereditary epilepsy, hereditary crime.

The managers and physicians at Elmira deserve the recognition and thanks of the scientific world.

The Condition of the Medical Profession in Russia.—From a correspondence in the *Russki Vratch* by Dr. Turovski we learn the following deplorable facts: There are in Russia 12,521 physicians to a population of 112,342,758, or one physician to every 8,800. This proportion is, however, only apparent, for while in some parts of the country there is one physician to every 250,000 or 300,000 or even 500,000, the proportion in the larger cities is one to 1,000 and even less. The reason physicians flock to the larger cities is that they cannot earn a living in the country, where they are thrown in competition with nurses (*feldschcers*) and quacks. But even in the cities their lot is far from satisfactory. The law makes the physician the slave of the public and in no way guards his interests. The physician is compelled by law to render services at any time of the day or night for the lawful compensation of 15 copecks (7½ cents). However, should the patient see fit, as he often does, not to pay, or pay with insult and abuse, there is no redress for the doctor. At this rate, it is not at all surprising that 50% of practitioners earn not more than 500 roubles (250 dollars) a year and 15% from 1 to 100 roubles. Instances of actual starvation are therefore not at all uncommon. It is true that a considerable proportion of medical men, except Jews, are in the employ of cities, hospitals, *zemstwos*, etc., but the salaries of these fortunate ones are barely sufficient to give them a comfortable living. Army surgeons receive 600 roubles (300 dollars) a year; city physicians from 600 to 1200 roubles a year, 1500 roubles being at the zenith!

We might add that to reach such a material "prosperity" in Russia one must study about 13 years, five of which are spent in the actual study of medicine. To the lasting credit of our Russian colleagues be it said that, in spite of the financial straits in which many of them find themselves, cases of breach of professional ethics are extremely rare.

Injury to the Median Nerve.—Dr. Haldor Sneve reports, in the *St. Paul Medical Journal* for February, 1902, an exceedingly interesting case of trauma of the median nerve. The patient, a young farmer, aged 20 years, had been cut with a scythe some months before he came to Dr. Sneve. The wound was on the anterior surface of the right forearm just below the elbow. The median nerve had evidently been severed, and its retracted proximal end, upon which was a large neuroma, could be felt about two inches above the scar. Painless whitlows had formed on the ends of the index and middle fingers, and had resulted in the loss of the third phalanx of each of these fingers. Anesthesia was present on the palmar surface of these two fingers and thumb and on the radial half of the palm of the hand. On the dorsal aspect the loss of sensation involved only the distal half of the two fingers. The grip of the hand was weakened, and the thumb, index and middle fingers could be flexed only partly. The thumb could be flexed, however, so as to touch the ends of the fingers. Supination and pronation were pre-

served. On the whole, motion was not so much affected as might have been expected.

The most interesting feature of the case was the painless destructive process which involved the tips of the fingers. The case illustrates very clearly the trophic functions of the nerves. Dr. Sneve publishes a skiagram of the hand, which shows very plainly the loss of the terminal phalanges. We think it unfortunate that he was not able to induce the patient to submit to operation for suturing the ends of the nerve. Even at this late day some result might possibly be obtained. It would be interesting at least to see the matter tested.

Medical Sharks and Medical Harpies.—An advertising circular of a so-called sanatorium in a city not one hundred miles from Philadelphia, has recently been brought to our attention with the statement that the proprietor, who glories in the name of physician, is a noted abortionist. The printed matter of the circular is, like others of its kind, adroitly worded to give the impression of skill, experience and professional standing. Thorough antisepsis and the most modern technique are especially guaranteed, and every measure is taken that will contribute to the bodily comfort of the inmates. In order still further to capture the unwary medical victim, a discount of the fees is allowed physicians who refer cases to the institution.

A light that is set upon a candlestick, and often one that is placed beneath a bushel, cannot be hid, and the snares of the medical sharks and harpies whose illegitimate business it is to prey upon the over-confiding or wilfully colluding medical men, sooner or later acquire a well-merited odium which rises as an offense in the nostrils of upright, conscientious men. The division of the fee, while it may be legally correct, is antagonistic to the recognized medical code of ethics, and all such offers, large or small, should be the danger-signals to careful men. Almost invariably such a discount partakes of the nature of hush money and stamps the recipient as partaker in the nefarious business that may be transacted behind the doors of these criminal institutions lurking beneath the sheltering influence of a benevolent name. There are sanatoria and sanatoria, but it takes more than a mere name to guarantee integrity of purpose. Unfortunate as it is that such houses find protection from a municipal point to a view, it is a crime against the profession that there are found those ready to further their projects for hard, but not clean, cash.

The Profession's Debt to Helmholtz.—Among all the exhibits at the meeting of the American Medical Association in St. Paul there was probably none which more appealed to the gratitude of the profession than a little volume, modestly nestled among the various ophthalmological instruments of precision, and entitled, "Beschreibung eines Augen-Spiegels zur Untersuchung der Netzhaut im lebenden Auge." For over fifty years we have been enabled to fathom and observe nature at work in her own laboratory; have been able to inspect the only nerve in the body, which as yet is accessible to our view without the division of tissues, and have seen, by means of the application of simple optical principles, the interchange of venous and arterial circulation. Although the ophthalmoscope has been the subject of innumerable modifications since its invention, these all revolve around the fundamental principle applied by Helmholtz, namely, as is also quoted by Dr. Harry Friedenwald of Baltimore, that the rays pass out of the eye in the same lines in which they have entered and that they can be made to form a distinct image in an observer's eye. There was no pretense or superficiality about Helmholtz; he was a master, with a phenomenal depth and breadth of thought, who knew no intermediate point between knowledge and ignorance. His [illegible]

Music-loving Mosquitoes.—The aesthetic side of the mosquito's nature seems to require investigation as well as its malarial characteristics. According to Howard, in his recent book on mosquitoes, A. M. Mayer found that the antennal hairs of the male mosquito are auditory. By using a tuning-fork he showed that some of these hairs are tuned so as to respond to vibrations numbering 512 per second. This [illegible] probably an instance of [illegible] selection. Mr. A. DeP. Weaver, an electrical engineer, while making some experiments in harmonic telegraphy, was surprised to find that at a certain note all the mosquitoes in the room flocked to the instrument. He devised a trap for electrocuting them, but unfortunately did not observe whether the victims were all males. Hiram Maxim, according to the *Lancet*, made similar observations by means of an electrical lamp which gave off a constant musical note. The instrument was soon covered with mosquitoes. By thus inducing the mosquitoes "to face the music" we may have a means in every arc lamp to help in eradicating these insects. Perhaps the electrical lamp will thus supersede petroleum in more ways than one.

The Cinematograph in Surgery.—The [illegible] calls M. Doyen, the French surgeon, the "Barnum of Surgery." M. Doyen has made a tre-

mendous "hit" in Paris by separating the Hindoo twins. In fact, according to the ever veracious *Practitioner*, the French papers are making as much fuss over the case as though Doyen had divided the Isthmus of Panama. The French surgeon is a past master in advertising; on this occasion he operated with the aid of a cinematograph. So now all the world can see the "moving picture" of Doyen and the Twins.

Under date of February 22, the Marine-Hospital Service reports a fatal case of plague at Berkeley, California. The exact location of Berkeley is unknown to us, but the report of this case evidently shows that plague is inclined to break bounds in California and is no longer confined to San Francisco. An additional focus of the disease in that State tends to make the situation still more dangerous. We quote below from the *Occidental Medical Times*.

Current Comment.

PLAGUE IN CALIFORNIA.

The plague is still here, and the outside districts are, and always have been, infected. This opinion needs no confirmation other than a review of the cases already reported. Efforts have been frequently made by the various officers of the Marine Hospital Service to secure from that service and the State Board of Health power to inspect the cities and towns throughout the state, but immediately another field has been found for this display of energy. At present nothing is being done. Nor is any one allowed to broach the question. The Marine-Hospital Service still maintains a morgue in this city, but no inspection is allowed, no bodies can be examined, or removed from Chinatown, without the consent of the Chinese; and if any are found, it is because some one has failed in his duty to the Six Companies or to the State Board of Health. The local board now stands at the mercy of the mayor, who has declared that the fair name of the city and State shall not be tarnished by false reports of the existence of such a dread disease as imposed upon the State by the infamous "bubonic board." The case of February 21 will test his power, and result possibly in the disruption of that body. We know that the majority of the board will do its duty, irrespective of the consequences. The situation, therefore, is *satisfactory*. No inspection, no prevention; every avenue for further infection open; the local board handicapped, and spread of the disease quite possible, if it follows out its record in all other countries of the world.

—*The Occidental Medical Times.*

THE MALAY CHARACTER.

Other deficiencies, in their mental and moral equipment, are a lack of organizing power. No Malay nation has ever emerged from the hordes of that race which have spread over the islands of the Pacific. Wherever they are found they have certain marked characteristics, and of these the most remarkable is their lack of that spirit which goes to form a homogeneous people, to weld them together. The Malay is always a provincial; more, he rarely rises outside the interest of his own town or village. He is never honest, as we count that virtue, never truthful, and never industrious or persevering. This is his dark side, but it is with that we are concerned. The two points which are most inimical to progress are, as already indicated, the lack of unity and the lack of persistence. The Malay is the laziest of Orientals, and the Filipino is not the least lazy of Malay's. The Malay, in short, is a creature of limitations.

—*Colquhoun's Mastery of The Pacific.*

VACCINATION IN MASSACHUSETTS.

That is a queer performance of the Massachusetts Senate in amending the vaccination bill so that a certificate from any kind of a physician, stating that the possessor of it, whether a child or an adult, is not a fit subject for vaccination, may entitle such persons to exemption from our vaccination laws. This will please Dr. Pfeiffer and all his ilk. It is just the loophole they want.

—*The Boston Herald.*

A STATE SANATORIUM FOR NEW JERSEY.

The Legislature of New Jersey has before it a bill for the creation of a State sanatorium for consumptives. It is gratifying to learn that the proposition is not only indorsed by the medical profession of the State, but has besides a substantial backing of enlightened public sentiment. The appropriation necessary is not large, and should by no means stand in the way of the success of so laudable a scheme.

The accepted method of treating tuberculosis the world over is by fresh air, sunshine and such other hygienic means as sanatoria can easily supply.

When the retreats are once properly founded, the cost of their maintenance is comparatively small, and the good which they accomplish for the large class of sufferers who need their aid is incalculable in dollars and cents. New Jersey owes it to herself not to be behindhand in ordinary humanitarian endeavors. The bill should become a law without question.

—*The New York Herald.*

Correspondence.

INFORMATION WANTED.

By I. L. VAN ZANDT, M. D., Fort Worth, Texas.

To the Editor of the **Philadelphia Medical Journal:**

In order to prepare a statistical table showing the results of the treatment of pneumonia with creosote or creosote carbonate, I ask the aid of the profession.

Let every physician who has given the treatment a trial send me on a postal card during April, 1902, the number of cases treated, and number of deaths. State whether of record or an approximation.

Please answer yes or no to the following questions:

1. Do you believe creosote ever aborts pneumonia?
2. Do you believe the majority of cases are mitigated by it?
3. Have you found cases, which, having plenty of time, were entirely uninfluenced by it?

To every one favoring me with a report, I promise to mail a copy of the condensation of reports.

If the remedy is what some of us think, the world ought to know it. If we are deceived, we ought to be undeceived. Therefore send on the reports.

A CORRECTION.

By J. C. WILSON, M. D., of Philadelphia.

To the Editor of the **Philadelphia Medical Journal:**

By an unfortunate oversight, for which I assume the entire responsibility, Mr. Bowlby was misquoted in the final paragraph of my paper on Osteitis Deformans in the **Philadelphia Medical Journal**, February 15, 1902. The reference should be *Allbutt's System of Medicine*, p. 150, and the paragraph should read: Treatment has been without avail. This appears to be the general experience. Bowlby states that no treatment is known to produce any healing effect in the softening and bending of the bones.

Reviews.

Venereal Diseases. James R. Hayden, M. D. Third and Revised Edition. Lea Brothers & Co., Philadelphia and New York.

This very admirable manual, properly bound in scarlet, with gilt tile, is a complete revision of the original work, which has already gone through two editions.

The first section is devoted to gonorrhea and its complications. The abortive treatment receives the attention which its importance merits. The author states that it should be attempted while the discharge is still serous and mucoid in character, but shows, under the microscope, only epithelial cells and gonococci, but no pus cells. If these directions are taken literally, the abortive treatment would not be practised. The rule generally followed is to practise abortive treatment in the very beginning of the attack when the epithelial cells predominate. The steps in the procedure are described by Hayden as follows:

A soft rubber catheter is passed into the urethra three or four inches, and through this warm boric acid solution is flushed. After this, through an endoscope, a 15 grain to the ounce solution of silver is applied to the navicularis fossa, or the silver solution can be injected through a catheter immediately after the preliminary washing.

A more conservative form of abortive treatment is in the form of silver nitrate irrigations of the first few inches of the canal with solutions varying in strength from 1-5000 to 1-500 or of permanganate of posassium, 1-4000 to 1-500.

Silver is used once a day and the permanganate twice a day. The Janet method, which consists in flushings, with permanganate of potassium, 1-4000 to 1-500, is condemned, as are also the modern silver preparations.

Hayden does not use injections until the acute inflammatory symptoms begin to subside. He then employs those which have been familiar to the profession for many years. When the patient can come to the surgeon every day, he employs irrigations through a French rubber catheter, preferring as medicaments boric acid, lead water, zinc, alum, potassium permanganate, and silver nitrate. During the declining stage he uses the ordinary balsams.

The various complications of gonorrhea are briefly but satisfactorily discussed. The treatment of chronic anterior urethritis consists in the use of irrigations or instillations, the ordinary medicaments being employed. Sounds are added to this treatment at the end of the tenth or fourteenth week of the disease. The endoscope, devised by Otis, is employed, as a rule, only in cases which require local applications. The treatment advised for gonorrheal ophthalmia is somewhat more conservative than that customarily employed by eye specialists.

Attention is very properly called to the importance of curing all urethral lesions in treating gonorrheal rheumatism.

In discussing the treatment of strictures, internal urethrotomy is limited to undilatable strictures situated anterior to the peno-scrotal junction.

The treatment of retention of urine particularly that due to enlarged prostate, is scarcely given in sufficient detail to be of great service to the inexperienced.

There is a short but excellent section of the book devoted to the care of instruments and to instrumentation.

It is interesting to note that Hayden makes no distinction between chancroid and the ordinary infected sore. The treatment of chancroid consists in cleanliness, Hayden holding that it is rarely if ever necessary to cauterize it. He advises wet dressings. In the treatment of suppurating bubo, he advocates puncture under cocaine, evacuation of the pus, and irrigation with 1-5000 bichloride of mercury solution, after which the cavity is completely filled, but not painfully distended, with a 10 per cent. iodoform ointment. This method should be employed only when the glands are thoroughly broken down, fluctuation well marked, and the integument thinnned over the most prominent part of the tumor.

In the section on syphilis, a very admirable discussion of the subject, excision of the chancre is not advised. Moreover, the constitutional use of mercury in the primary stage is absolutely tabooed, the author advising that before treatment is begun patients should wait for the appearance of the roseola or macular syphilide or the general glandular enlargement. The best preparations of mercury for mouth administration are believed to be the protoiodide or the tannate. Inunction is said to be the most efficient and rational mode of administering mercury, the best preparation being 50 per cent. fresh mercurial ointment made with lard. The regular inunction treatment consisting of a series of 11 rubbings with a few days rest is continued up to the end of the first year. As a general rule, at the beginning of the second year, the majority of patients should be put upon an internal form of mixed treatment which should be continued with intervals of rest for 1½ to 2 years.

The book closes with a short chapter on hereditary syphilis.

This work will prove not only helpful but consoling to the practitioner of medicine that has not had the benefit of the more recent training which the modern medical schools afford. Helpful because it presents in concise and dogmatic form most of the teachings of the day; consoling because it shows that there have been no noteworthy advances made in either the diagnosis or the treatment of venereal affections. Many men of experience will not agree with Hayden in his scepticism as to the efficacy of some of the recent silver salts, in his lack of confidence in the irrigation treatment of acute gonorrhea from its very beginning; in his rejection of the excision of the chancre as a means of removing a focus of infection; in his conservatism as shown by withholding mercury from the syphilitic until the entire system has become saturated with the virus as demonstrated by general symptoms, and in his limitation of the application of internal treatment; and in many other points.

His teachings, however, are based on a wide experience, and come as authoritatively as they could come from any single source. The book is to be heartily commended as a useful guide. [E. M.]

Criminology, by Arthur MacDonald, with an Introduction by Dr. Cesare Lombroso, Second Edition, New York, Funk and Wagnall's Company, 1893.

The subject of the volume before us is divided into three parts; first, general criminology, second, special criminology, and third, the "bibliography of crime." In part first are considered general principles such as the evolution of crime, the physical and psychological aspects of criminals, the relative intelligence and such other allied subjects, as the associations formed by criminals, the contagion of criminology, criminal hypnotism and recidivation. The whole is prefaced by a brief though interesting introduction by Dr. Cesare Lombroso which is mainly concerned with the discussion of type. "The type is indeed," says Lombroso, "an ensemble of traits, but in relation to the group, which it characterizes, it is also an ensemble of its most prominent traits and those repeating themselves the most often," in the actual existence of which he is as is well known, a firm believer. He of course excludes from the criminal type, criminals by occasion.

In the chapter on the evolution of crime, the author, Arthur MacDonald, seeks the elements of human criminology in facts of general biology and animal psychology, in the habits and customs of savage tribes, and dwells upon the well-known truth that many acts, now universally regarded as crimes were in primitive stages of civilization regarded as virtues. He closes the chapter by a fitting allusion to the bloody idea of war which still remains in the whole human race and as an instance points to modern Europe with its twelve million trained soldiers. "War from the natural-history point of view is universal murder, an extension and development of universal homicide. In primitive times it was terrible in character exceeding the ferocity of the wildest beasts; in the next stage of development one did not eat his enemy, but mutilated and tortured him and modern civilized war is the same in essence though different in form. For inventive genius is at present exerting itself to its utmost to discover how to kill and mutilate the enemy at great distance, and to the disgrace of the 19th century humanity, it seems to have succeeded. And, while we look with horror upon the cannibal the words of Montaigne are not inapplicable when he says that

'it is more barbarous to kill a live man than to roast and eat a dead one.'"

The chapter on the physical side of the criminal is exceedingly interesting and relates to various facts of anthropometry, physiognomy, craniology and general brain anatomy. The frequency of brain anomalies and the pathological factors both cerebral and general are fully dwelt upon and it appears to be a justifiable conclusion from the facts adduced from the chapter that the criminal as a whole departs from the average or non-criminal man both in peculiarities of structure and in the frequency of pathological lesions.

The chapter upon the psychology and intelligence of criminals is equally interesting. Such well-known facts as the excessive percentage of color blindness, left handedness and defective sensibility, are fully dwelt upon. The chapters on criminal associations and criminal contagion are also very suggestive. Histories of special cases of murder, theft, etc., are presented in Part II, while in Part III, we have an extensive and valuable collection of the bibliography of criminology in various languages. The impression left upon the mind after reading the book is that the weight of evidence is in favor of the view that habitual criminals, considered as a class, are persons who are defective or otherwise abnormal both in structure and function.

[F. X. D.]

A Manual of the Practice of Medicine. By George Roe Lockwood, M. D., Professor of Practice in the Woman's Medical College of the New York Infirmary. Second Edition, Revised and Enlarged. Octavo volume of 847 pages, with 79 illustrations and 20 full-page plates. Philadelphia and London: W. B. Saunders & Company, 1901. Cloth $4.00 net.

The second edition of this manual is greatly enlarged and improved. There is, however, much still to be changed and added if the work is to be classed as up to date and accurate. As an instance, on page 17, typhus fever (German) is given as a synonym for typhoid fever. It is true the Germans speak of Abdominal Typhus, Darmtyphus, Unterleibstyphus, Ileo typhus, but never of typhus alone, signifying typhoid or enteric fever, certainly not within modern times The statement that "leukocytosis in typhoid fever is not marked" is also misleading. The statement on page 33, that perforation of the intestines occurs in 6% of the cases is not correct, it should read 6% of the fatal cases. The period of incubation of typhoid fever is about eighteen days in the majority of cases, and not a week or ten days as stated by the author.

In the etiology of yellow fever no mention is made of the mosquito. The description of the malarial parasites is inadequate. No student could gain a correct idea from this description. Under exophthalmic goiter the ocular signs are not all described; there is no mention of Moebius' or Dalrymple's sign. The illustrations are many, in fact the book is overillustrated. The press work and binding are all that could be desired. We cannot recommend this book to students. [J. L. S.]

The Transactions of the Medical Society of the State of California. Thirty-first Annual Session, Sacramento, April, 1901, Volume 31.

The transactions of the Medical Society of the State of California is a volume of 419 pages. Of the papers read at the 1901 meeting of this Society those concerning the outbreak of plague in San Francisco have a national interest. From the discussion which followed the reading of the papers, as well as from the papers themselves, we are glad to be able to conclude that that portion of the medical profession represented by this state society is not in harmony with the political intrigue that made it possible for plague to exist in a great commercial center like San Francisco for a number of months without effective measures being taken to stop its spread. The profession seems, since no opposing voice is recorded as having been raised, to be united in opinion against the political domination which caused the recommendations of the very able commission appointed by the Federal Government to be ignored. If, as one has said, the luxurious tastes that the American people are developing are a source of menace to the nation, the unceasing endeavors of the commercial interests to make more money will, in time, bring the calamity that will teach the lesson that must inevitably follow the breaking of the rules of hygiene. The existence of plague must be kept secret, forsooth, for fear our commerce may be, for a time, suspended!

[J. M. S.]

Aphorisms, Definitions, Reflections, and Paradoxes, Medical, Surgical and Dietetic. By A. Rabagliati, M. A., M. D., F. R. C. S. (Ed.) Bradford. Demy 8vo., pp. xvi—292. Price 7s. 6d. net. London: Balliere, Tindall and Cox.

The author of this work, which consists of 552 paragraphs, bases his claims upon the sentence "that a true science of medicine and surgery founded on a sound philosophy is possible, I have no doubt, and that it is to be created through the knowledge of the circulation of the blood and the fluids of the body, and that this again depends on the relations of the body to food, air and exercises, and in the order food first, then air, and then exercises, I have equally little doubt." There is much sound knowledge and fine judgment shown in these aphorisms, definitions, etc., and unquestionably were the author's rules followed, there would be less disease. While the work makes very interesting and often instructive reading, perhaps we cannot agree with all that the author claims for food, air and exercise. Many a leisure moment may be well spent in the perusal of this book. [J. L. S.]

Tuberculosis in Algiers and Tunis.—Tostivint and Remlinger discuss the favorable position of Algiers and the more favorable situation of Tunis for consumptive patients, in the *Archives de Medecine et de Pharmacie Militaires*, (October, 1901). Tuberculosis is almost twice as frequent among the native troops than among Europeans in Algiers and Tunis. Deaths from tuberculosis in Algiers and Tunis are but one third as frequent as in France, while about half as many cases of consumption occur. About one-third as many cases of pleurisy, peritonitis, meningitis, etc., due to tubercle bacilli, are seen in Algiers and Tunis as in France. While phthisis occurred in 2.99 per 1000 in Tunis, 8.29 per 1000 were affected in Algiers. Deaths from tuberculosis were 4.25 per 1000 in Tunis, 8.60 per 1000 in Algiers. About twice as many cases of tuberculosis entered the hospitals of Algiers as did those of Tunis. It seems to be a fact that the further East the army moved, the greater became the immunity to tuberculosis. Tuberculosis, while seen but seldom in Algiers, is rare in Tunis. In the city of Tunis the death-rate of the natives from tuberculosis is 11.30 per 1000, of Europeans, 5.13 per 1000, and of the Jews, 0.75 per 1000. Long ago, Seneca spoke of Tunis as the land where the Romans died from old age only. Tostivint and Remlinger plead that a sanatorium for consumptives be established in Tunis. [M. O.]

A Diplobacillus in Cerebro-spinal Meningitis.—Simonin reports a case of cerebro-spinal meningitis in a man of 27, with death on the ninth day of the disease, the temperature reaching 107° F. The cerebro-spinal fluid, obtained by lumbar puncture, revealed pus corpuscles, large mononuclear and polynuclear leukocytes, and diplobacilli which were identical with those found at autopsy in the meninges and the tonsils. The bacillus was motile, did not stain by Gram's method, and liquefied gelatin. It was not inoculable. Simonin believes that this may have been a germ of secondary infection. (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, July 25, 1901, No. 26). [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Widener Memorial Training School for Crippled Children.—The five buildings to compose the Widener Memorial Training School for Crippled Children, to be erected on the large tract of land between Old York Road, Broad Street, and Olney Avenue, are to be begun next week. The main building will be the central unit of a square, and at each corner will be a separate building, to the right an industrial and educational building, and at the left-hand corners two cottages. Joining the main building to the others are covered colonnades. The central structure measures 42 by 84 feet, with narrowed ends 72.6 by 34 feet. The other four buildings will each measure 88.6 by 45 feet. The style of architecture is Colonial, the exteriors presenting an ornate combination of red brick, limestone and granite. The institution, when completed, is to be under the direction of Dr. DeForrest Willard. The total value of the lands, buildings and equipment, when ready for use, will approximate $2,000,000.

Medical Club of Philadelphia.—A reception will be given at the Hotel Bellevue, Saturday evening, April 5, by the Medical Club of Philadelphia to meet Dr. John A. Wyeth, of New York, president of the American Medical Association.

Wills' Eye Hospital.—The Board of City Trusts has been appealed to for the relief of the Wills' Eye Hospital, now financially in a bad way and without money to remodel the antiquated buildings and equipment or even to purchase new surgical instruments, those now in use being unfit and worn out.

Society Meetings Next Week.—The following societies will hold meetings next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Tuesday evening, March 25, Neurological Society; Wednesday evening, March 26, County Medical Society; and Thursday evening, March 27, Pathological Society.

State Insane Hospital, Harrisburg.—Plans for the new building soon to be erected at a cost of $130,000 have been approved by the executive committee of the Pennsylvania State Insane Hospital. Three buildings are to be erected, one for the treatment of ordinary patients, one for the confinement of dangerous patients, and a kitchen. They will be of brick with stone trimmings.

Philadelphia County Medical Society, North Branch.—The last meeting of the North Branch of the Philadelphia County Medical Society, held March 20, was a symposium on gynecology. Dr. J. T. Schell spoke upon ovarian diseases as a factor in pseudo-cyesis and Dr. W. E. Parke read a paper on puerperal eclampsia. Among those who took part in the discussion which followed were Drs. J. G. Clark, W. F. Haehnlen, C. P. Noble, Mordecai Price, Wilmer Krusen, A. J. Downes and others.

Sanitation in Our Large Cities.—Dr. Justus Ohage, Health Commissioner of St. Paul, Minn., delivered the eighth lecture in the municipal progress series at Witherspoon Hall, Philadelphia, March 13. His subject was "The Sanitation of Our Large Cities." A banquet was given him after the lecture at the Manufacturers' Club.

German Hospital.—A tablet in memory of the late John D. Lankenau was unveiled in the Mary G. Drexel Home at the German Hospital, March 18. At the same time the Founders' Room, containing a collection of paintings and other objects left to the institution by Mr. Lankenau, was opened to visitors.

SOUTHERN STATES.

Naval Hospital, Annapolis.—As a result of the recent visit of Surgeon-General of the Navy Presley M. Rixey to the Naval Academy, it is announced that the old naval hospital on the Government farm is to be remodeled and made into a hospital for mariners and sailors. The building was erected under Admiral Porter's administration as superintendent of the Naval Academy. The entire cost, including land etc., was about $200,000. The building has long been in disuse. The improvements will cost $75,000. The hospital occupies a high situation with a beautiful view of the bay, city and the surrounding country.

Baltimore's Death-Rate last week was the smallest in the history of the health department for many years past, 1844. The total number of deaths reported was 175, 28 of which were due to consumption, 20 to pneumonia, and 21 to heart disease. 78 births were recorded during the week.

Vacancies in the Medical Corps of the U. S. Army.—The war department has received notification from 54 medical college graduates of their intention to enter the examinations to be held soon for appointment as surgeons in the army. The first section of applicants has been ordered for examination April 7, and the others will appear before the board in classes of equal numbers until every applicant has been examined. There are 64 existing vacancies in the corps.

College of Physicians and Surgeons, Baltimore.—Spring courses, especially designed for medical practitioners desiring to spend a short time in advanced clinical and laboratory study will be given by the College of Physicians and Surgeons, Baltimore, from April 28 to June 9. The clinical courses will include all the departments of medicine and surgery, and are to be entirely practical. The price for each course will be $20, but when a physician takes more than one course, a reduction will be made.

CANADA.

(From Our Special Correspondent).

Smallpox Statistics from Montreal.—According to a recent report of the Medical Health Officer, 24,233 persons have been vaccinated in Montreal between January 15 and February 28. Since last November, 335 cases of smallpox have been reported, and it is likely that a request will be made to the City Council for $50,000 to meet the expenditure in connection with these cases.

The Question of Aid in Treating Consumptives in Quebec is now before the Legislature of that province. There is only one sanatorium in the province devoted to the treatment of the tubercular. This is the Laurentian Sanatorium, situated at St. Agathe des Monts, and is directed by Dr. Arthur J. Richer, of Montreal. An effort will be made to secure assistance in the work from the Government. According to a recent report published by Dr. Paul E. Prevost, recorder of vital statistics, there died in the province of Quebec in 1907 from [illegible] persons in 1905, 3,870 in 1904, 4,085; in 1900, 3,015. Montreal had 71 deaths from consumption in 1907, which was [illegible] per cent. of the deaths from all causes.

New Civic Hospital, Montreal.—After years of delay the City Council has decided to build the new hospital on Fletcher's Field for patients suffering from infectious diseases other than smallpox. The total cost of the hospital will be about $50,000. It will be a single institution, although the Catholics headed by Archbishop Bruchesi desired that in the interests of peace and harmony there should be two, one for Catholics and the other for Protestants.

Dominion Registration, as provided for in the Bill presented by Dr. Thomas G. Roddick, M. P., has passed its second reading in the House of Commons. It will now be referred to a special committee composed of the medical members of the House and three lawyers. Some objection was offered to the second reading of the measure on account of its constitutionality, as the question of education in Canada is, according to the British North America Act, vested in the different provinces. Dr. Roddick now proposes that the Dominion Medical Council, which formerly shall consist of 39 members. The Homeopaths are to have three members, elected by that body generally throughout Canada. Each university engaged in the act of teaching medicine shall have one representative, an additional one being allowed for Laval. He proposes nine for Ontario and Quebec, four each for Manitoba and Nova Scotia, three each for New Brunswick, British Columbia and the North West Territories, and Prince Edward Island two. The medical population of the North West Territories has grown from 110 to 211 in the past year.

The Ontario Hospitals Association. A short time ago representatives of the leading hospitals of Ontario met in Toronto and formed an Association. It appears that for

some time past different hospitals throughout the province have experienced a falling off in funds, ascribed to the action of the Government in cutting off the Succession Duties Act, wealthy citizens not leaving the hospitals anything, believing that the Government sets apart a portion of the amount falling to it for the hospitals. An effort will be made to secure larger appropriations from the Government and an increase in the per diem allowance from the municipalities. Dr. John Ferguson, of the Western Hospital, Toronto, was elected secretary of the Association, which will meet annually in Toronto at the time of the sitting of the local legislature.

A Congress of the French Physicians of America will be held at Laval University, Montreal, in June, to celebrate the golden jubilee of the Quebec University. At a very representative gathering of French-Canadian physicians, held recently at Laval University, Montreal, this was unanimously decided. Dr. A. Simard, of Quebec, and Dr. Le Sage, of Montreal, were elected general secretaries. It was decided also to ask the following gentlemen to be honorary presidents, each to represent a medical faculty; Dr. Craik, McGill; Dr. F. W. Campbell, Bishop's; Dr. Rettet, Laval, Montreal; and Dr. Simard, Laval, Quebec.

The Annual Meeting of the American Medico-Psychological Association is to be held this year in Montreal on the 17th, 18th, 19th and 20th of June. It is the fifty-eighth annual meeting and the headquarters will be at the Windsor Hotel. Dr. Wyatt Johnson, lecturer in medical jurisprudence at McGill University, will deliver the annual address, and his subject will be the Medico-Legal Appreciation of Trauma in Its Relations to Abnormal Mental Conditions."

MISCELLANY.

The First Thermometer.—The first sealed thermometer was made some time prior to 1654 by Ferdinand the Second, Grand Duke of Tuscany : he filled the bulb and part of the tube with alcohol, and then sealed the tube by melting the glass tip. There appears to be considerable doubt as to who first employed mercury as the thermometric liquid; the Academia del Cimento used such an instrument in 1657, and it was known in Paris in 1659. Fahrenheit, however, appears to have been the first to construct, in 1714, mercury thermometers having trustworthy scales. The use of the boiling point of water was suggested by Carlo Renaldini in 1694.—*The Engineer.*

The Consumption of Tobacco.—According to recent statistics, the average consumption of tobacco by each person in the various countries of the world is as follows: Netherlands, 3400 grams; United States, 2110; Belgium, 1552; Germany, 1485; Australia, 1400; Austria and Hungary, 1350; Norway, 1335; Denmark, 1125; Canada, 1050; Sweden, 940; France, 933; Russia, 910; Portugal, 850; England, 680; Italy, 635; Switzerland, 610; and Spain, 550.

The Philippine Leper Island.—The island of Kulion, which has been selected for the leper colony, is about twenty hours from Manila by steamer, twenty miles long, ten miles broad, and admirably adapted to agricultural purposes, especially cattle raising. The island is intended to be self-supporting. Five or six hundred lepers will be taken to the island by April 1st.

A New Local Anesthetic.—A new local anesthetic, obtained from an Indian plant, gasu-basu, has recently been submitted to careful examination. The anesthetic action of this substance was discovered a year ago by a dentist in Fiume. He separated an alkaloid and in his experiments used the salt obtained by treating the alkaloid with hydrochloric acid. This salt has been named nervocidine. Two drops of a one-twentieth per cent. solution applied to the human conjunctiva produced a burning sensation, accompanied by lacrymation and followed, after twenty minutes, by anesthesia of the cornea, lasting five hours. After seven hours the cornea regained its normal condition. A one-tenth per cent. solution of nervocidine brushed over the mucous membrane of the cheek caused local anesthesia of the brushed surface and of the tongue, accompanied by loss of the sensation of taste and the perception of touch, but without loss of the perception of heat and cold. The general action of nervocidine on the system was that of a poison producing death by paralysis of the motor centres and of the peripheral nerves. All experiments proved that nervocidine was a powerful local anesthetic, for the effect of a one-half or one-fifth per cent. solution might last two or three days. It is, however, not without its drawbacks, producing local irritation, slow anesthesia and a liability to nausea, vomiting, salivation, and other symptoms of general poisoning.—*London Lancet.*

Cholera in Arabia.—A dispatch from Constantinople, March 7, tells of 110 deaths from cholera among the pilgrims of Medina, which is 248 miles northwest of Mecca. Of the great numbers of people who make the pilgrimage to Mecca, fully one-third go on to Medina. Two days later cholera was also reported at Mecca.

Asbestos Sheathing on American Warships to Prevent Rheumatism.—When the navy turned to building ships of steel it was remarked that, unless some device was adopted for offsetting the effect of heat condensing on the metal, it would be only a short time before all officers would be suffering from rheumatism. The introduction of metal chairs, tables and other pieces of furniture followed, and now there is no wood of any size to be found in an officer's room on a modern warship. He sleeps in an iron berth, keeps his clothes in a steel chest, while the floor, ceiling and walls of his apartment are of the same metal. Since the adoption of solid armor for the sides of warships, a great deal of trouble has been experienced in making habitable the quarters directly next the outside covering. The heat of the room condensed on the cold metal, and in a short time the occupant was in the hospital with rheumatism. This is now guarded against by the use of a sheathing of asbestos placed next to the metal, held in place by a frame-work. This is found to absorb the moisture in a satisfactory manner. Care is also taken to see that the berths are not built against the outside of the vessel, but against one of the side walls, so that the sleeper will be as far as possible from the metal that comes in contact with the water.—*Brooklyn Eagle.*

Butchers and Consumption.—The fact is well known among butchers that they never die of consumption. While this has often been the subject of comment, no reason has been given for it. One butcher suggests that continually inhaling an atmosphere of fresh meat is probably strengthening. At any rate the fact remains that not a single case is on record of a butcher in the city of Detroit being afflicted with consumption.—*Detroit Free Press.*

The American Association of Urologists, organized February 22, for the purpose of further development of the study of the urinary organs and their diseases, is composed mainly of genito-urinary specialists, but is not limited to them. The association, which is modeled upon the Société Française d'Urologie, consists of active, corresponding and honorary members. Branch associations in the United States, British and Spanish America, will hold meetings on the same evening as the parent association in New York, the first Wednesday of each month. The annual meeting of the association, the work of which is principally clinical, for the demonstration of new methods of technique and treatment, will be held on the last day and the day following the annual meeting of the American Medical Association. The following are the officers of the association: President, Ramon Guiteras, M. D.; vice-president, Wm. K. Otis, M. D.; treasurer, John Van der Poel, M. D.; secretary, Ferd. C. Valentine, M. D., and assistant secretary, A. D. Mabie, M. D.

Heat From Cold Water seems fabulous, but it is an established fact. The water is decomposed by electricity into its constituent gases, hydrogen and oxygen. When these gases are reunited the act of combination causes the evolution of intense heat. The well known limelight is an example of this.

The Pressure of Light.—The idea that the waves of light produce a mechanical push, or pressure, was advanced years ago by Clerk Maxwell, but he could only offer theoretical proof. Recently Prof. Lebedew, of Moscow, made an experimental demonstration of the pressure of light. He employs a radiometer resembling the familiar Crookes' radiometer, using a larger and more completely exhausted bulb, from which the heating effect that is the principal agent in moving the Crookes vanes is excluded. When the light falls upon the vanes they are driven by it, and the intensity of the pressure thus revealed comes within 10 per cent. of that calculated by Maxwell. The

effect is independent of the color of the light and directly proportional to its energy.

The Philippine Army.—The Health report of the military division of the Philippines, for the month ending January 15th, shows the percentage of sick to be 6.10%, the total sick numbering 2534. There were 59 deaths during the month, a decrease of 18 compared to the month previous. Only three cases of bubonic plague occurred during the month, with one death. This shows a much more favorable situation than at the time of the last report, a month previous.

Typhoid and Salt.—Typhoid germs die after several days' exposure to sea water, but it is more than likely that, if sea water is mixed with sewage, the duration of their life will be much longer. This is why typhoid germs will live on in oysters that have been laid down in polluted water. Experiment has shown that certain microbes do not flourish in salt solutions.

Smallpox Last Week.—The weekly bulletin of the Marine-Hospital Service March 17 shows that 22,283 cases of smallpox have been reported during the past week throughout the United States, of which 661 proved fatal. The total number of cases for the same period last year was 9,406, of which 136 were fatal.

Obituary.—Dr. Herkimer B. Miner, at Honeoye Falls, N. Y., March 2, aged 96 years.—Dr. Ervin A. Tucker, at New York City, March 3.—Dr. William B. Hanes, at Detroit, Mich., March 3, aged 25 years.—Dr. Albigence W. Kingsley, at Maitland, Fla., March 3, aged 86 years.—Dr. Sherman J. Hadley, at Hot Springs, S. Dak., March 1, aged 66 years.—Dr. Wellington Carleton, at Rochelle, Ill., March 2, aged 60 years.—Dr. John K. Scribner, at Finleyville, Pa., March 2, aged 32 years.—Dr. William T. Akins, at Chicago, Ill., March 6, 61 years.—Dr. Jonathan W. Goodell, at Lynn, Mass., March 13, aged 65 years.—Dr. William F. Lippitt, at Charlestown, W. Va., March 11, aged 71 years.—Dr. John H. Christian, at Richmond, Va., March 13, aged 56 years.—Dr. J. Baxter Upham, at New York City, March 17, aged 82 years.—Dr. Mauricio W. Gilmer, at Philadelphia, Pa., March 17, aged 40 years.

GREAT BRITAIN, ETC.

The Teaching of Obstetrics in England.—Practical instruction in obstetrics seems greatly neglected in the medical schools of England. The only part of the obstetrical curriculum carried out in full is that of systematic lectures. Medical students are sent to attend maternity cases outside, without any practical instruction whatever beforehand. Students do not spend a certain amount of time on duty in lying-in institutions, because this is not compulsory in England. On this account, perhaps, well-trained midwives are more in demand than young medical men. At any rate, the fact remains that in obstetrics, at least, English medical schools are behind the rest of the world.

Aberdeen University.—The graduation exercises will occur Thursday, April 10, when the honorary degree of LL.D. is to be conferred on Sir Thomas Barlow, physician to the King's household.

Typhoid Fever in South Africa.—From June until November, 1901, a total of 26 weeks, 3336 cases of typhoid fever with 561 deaths occurred among the English troops serving in South Africa, as was reported by Lord Stanley in the House of Commons, February 14. An inspection, however, of the official casualty list since October 1st shows 1161 deaths from typhoid fever up to February 20. The increase in the epidemic of typhoid fever among the English troops since October 1st now seems plain.—*Nieuwe Rotterdamer Courant.*

Medical Research in Liverpool.—$125,000 has been given by Mr. William Johnston, of Liverpool, to promote research work in physiology and pathology. Of this $50,000 has founded a chair of chemical biology, and $30,000 has permanently endowed three research fellowships, one for a medical graduate of a colonial university, another for a graduate in medicine in the United States, and a third for a research student in gynecology. The remaining $45,000 is to erect a laboratory to accommodate the tropical school, the professor of chemical biology, experimental medicine, comparative pathology and serum research departments.

Royal Infirmary, Edinburgh.—The proposal to establish a department for the treatment of incipient cases of mental diseases at the Royal Infirmary is being pushed actively forward. There seems no doubt that it will be an admirable thing. This is only in line with the establishment of psychiatrical clinics all over the world.

Smallpox at Sandhurst.—Several cases of smallpox have appeared in the town of Sandhurst and special precautions have been taken with the object of preventing infection from reaching the Royal Military College situated there.

London's Poor.—London pauperism continues to increase. In the first week of February there were 110,666 paupers relieved—the largest number recorded in the corresponding week of any year since 1895, when much distress was caused by the prolonged frost.

CONTINENTAL EUROPE.

The Length of Life in Epilepsy.—In a recent Paris thesis, Dr. J. Carton has collected statistics concerning the age and cause of death of 419 French epileptics. From five to ten years, 11.9% die; from ten to 15 years, 14.3%; from 15 to 20 years, 22.4%; from 20 to 25 years, 9.6%, while from 25 to 45 years, 6.4%. Below five and above 45 there were very few deaths at all. The average age of death was 25 years and 2 months. Nearly one-third of the epileptics died of severe or prolonged convulsions, a trifle more than one-third died of pulmonary troubles, such as tuberculosis and pneumonia, while a very small proportion of deaths were due to asphyxia or injuries sustained in a fit.

Why Does the Stomach Not Digest Itself?—This question, a perpetual puzzle, was recently answered by Prof. Danilevski in a paper read before the Russian Society of Naturalists and Physicians (December 20, 1901). The author claimed to have demonstrated a specific substance in the gastric mucosa, which inhibits the action of pepsin and does prevent auto-digestion. This substance, which he calls antipepsin, is secreted by the epithelial cells. A similar substance, antitrypsin, is secreted by the intestinal epithelium and inhibits the action of trypsin.

Foot and Mouth Disease of Cattle.—At the meeting of the Prussian Diet in Berlin, March 7, Privy Councillor Kirchner announced that sure means of rendering cattle immune to the foot and mouth disease had recently been discovered, and that preparations would shortly be available whereby individuals could immunize their stock at comparatively little cost. This has followed the successful experiments conducted by Professor Loeffler.

The International Congress of Dermatology, which was to have been held in Madrid when the International Medical congress meets in 1903, has been postponed until 1904, when it will be held in Berlin in September under the presidency of Professor E. Lesser. Dr. O. Rosenthal, of Berlin, is the general secretary of this congress.

An Epidemic of Measles.—It is reported that measles has broken out among the soldiers of the 37th French Artillery at Bourges and the 85th Infantry at Cosne. Many deaths have already occurred. On this account also the reserve troops, which should have assembled March 3, have been informed that their services will not be required until later.

Pasteur Institute, Alexandroff Hospital, Moscow.—Out of 1788 persons treated during 1900 17 died [illegible]. Bites in the face and head were followed by a mortality of 2.74%, of the upper extremity, 0.96%, of the lower, 0.[illegible]. The greatest mortality followed bites of wolves (4.5[illegible]), then dogs (0.99[illegible]) and finally cats (0.21[illegible]). The incubation period in one case was 1 year and 10 days and in another 410 days, the minimum 32 days. Twelve patients died within 2 weeks of treatment.—*Medizinische Obozrenie.*

The Adulteration of Milk.—A Paris journal, *L'Echo de Paris*, has opened a competition for the discovery of some means of making the adulteration of milk impossible. A prize of $1000 has been entrusted to a commission consisting of Drs. Bronardel, Muntz, Pouchet, Guinochet and Blondel for distribution. Another journal, *Le Matin*, has offered similar prizes. Some weeks ago a Paris milkman was found diluting the milk in his cans with water from the fountains in the Place de la Concorde which contain the dust and dirt from the implements of the street cleaners. The director of the Municipal Laboratory says that this practice is very common among the 800 milkmen of

Paris. Naturally the danger of infection is great. Milk coming into Paris is always tested on the train. During the year 1900, 258,000,000 quarts of milk were brought into Paris. Most of this has first been skimmed by the farmer, watered on the train, and finally diluted by the milkman.

Tuberculosis in Sweden.—The Chief City Physician of Gothenburg, Sweden, estimates the number of consumptives in that city to be at least 1700 and the number of deaths from tuberculosis each year to be 350. Of 131,000 inhabitants, nearly one person out of every sixty suffers from tuberculosis, and more than every fifth death is caused by this dangerous disease. The city sanitary statistics for 1901 state that the deaths from tuberculosis numbered 454, whereof 352 were from pulmonary consumption, 80 from tubercular meningitis, and 22 from tuberculosis in other parts of the body. The city council proposes that the city build for curable consumptives a special hospital, and an asylum for incurable ones.

Notes.—The University of Paris has 245 professors, 76 of whom belong to the medical faculty.—A piece of white muslin tied around the bell-handle of a house in Holland informs intending visitors that a case of infectious disease is in the dwelling.—Seventy-two per cent. of the Spanish people cannot read or write.—An Austrian scientist has discovered that a cold in the head is due to the presence of a special bacillus, which he has called the micrococcus catarrhalis.—Cocoanut is much used in Germany instead of cod liver oil for consumptives.—In the Vienna General Hospital 30,381 patients were admitted during 1901, an increase of 131 over the previous year. The number of autopsies performed was 1217, compared with 1288 in 1900.—In order to obviate the frequent disputes as to the ages of children, steamboat authorities in Switzerland have decided that in every case in which doubt arises the child must be measured. All children under two feet are to have free passage, those between two feet and four feet are to pay half-fares.—The first alcoholic perfume made in Europe was Hungary water, made from rosemary, in 1370.—An anonymous donation of 200,000 rubles ($100,000) towards the establishment of a sanatorium for consumptives in the Moscow Zemstwo has been announced.—The practice of burials in churches was commonly discontinued in France about 1777.—One of the provisions of the French Code forbids a doctor to inherit property left him by a deceased patient.—The Pasteur Institute, Paris, has received $10,000 by the will of the late Mr. Eugene Cleisen.—Of 26,165 persons treated since 1886 at the Pasteur Institute, in Paris, after being bitten by mad dogs, only 165 have died.—The oldest general in the French Army has died at the age of ninety-five.—To every 100,000 of the population of the German empire there are on the average forty-eight medical men.—There are about 11,000,000 Jews in the world, half of them under Russian jurisdiction.

The Bacillus of Acute Infectious Conjunctivitis (Koch-Weeks' Bacillus) and Its Relation to the Bacillus of Influenza (Pfeiffer's Bacillus).—Rimovitch (*Russki Archir Pathologii*, etc., Vol. XII, No. 2) established by a series of carefully conducted experiments **the identity of Koch-Weeks's and Pfeiffer's bacilli.** No difference whatever was observed in their cultural, biological, tinctorial and pathogenic characteristics. The author, therefore, concludes that both are one and the same organism, *i. e.*, that Pfeiffer's bacillus causes in some cases influenza and in others acute infectious conjunctivitis, being analogous in this respect to the pneumococcus which is capable of causing inflammation of the lungs and conjunctivitis in different individuals. The following medium was found best adapted to the growth of either Koch-Weeks's or Pfeiffer's bacillus: Defibrinated human or pigeon's blood was strained through sterile gauze, the blood corpuscles separated by means of the centrifuge and dissolved in a treble quantity of sterile distilled water. After complete solution of the corpuscles, the stroma was precipitated by 1:1.5% of sodium chloride and separated by means of the centrifuge. The clear solution of the red blood corpuscles, or hemoglobin, was then filtered through a porcelain filter and added in proportion of 1:3 to melted agar. Still better results were obtained when the solution of hemoglobin was added to the agar prepared from bouillon made from the human placenta. [A. R.]

The Latest Literature.

BRITISH MEDICAL JOURNAL.

March 1, 1902.

1. A Clinical Lecture on Feeding in Gastric Ulcer. LAUDER BRUNTON.
2. An Address on Medical Diagnosis and Modern Discoveries. JOHN ADAM.
3. Remarks on Congenital Cysts of the Tongue. JOHN WARD COUSINS.
4. Abstract of Hunterian Lectures on the Anatomy, Physiology and Pathology of the Imperfectly Descended Testis. W. McADAM ECCLES.
5. A New Method of Dealing with the Peritoneum in Operating for Radical Cures of Umbilical and Inguinal or Femoral Hernia. W. F. BROOK.
6. Rupture of the Jejunum from Direct Violence without External Bruising. J. LOCKHART LIVINGSTON.
7. Two Cases of Inoperable Scirrhus of the Breast Treated by Oöphorectomy; Results. E. PERCY PATON.
8. Treatment of a Case of Scirrhus, Recurrent Five Years in a Patient, Aged 93: Improvement. E. A. PETERS.

1.—In the treatment of **gastric ulcer**, Brunton advises rest in bed, with **feeding** per rectum for a few days, then careful feeding by the mouth while rectal feeding is continued. The first food given is generally milk in small quantities, a tablespoonful of milk with a tablespoonful of lime water every 2 hours. Gradually diminish the lime water at the same time that the proportion of milk is increased, as the patient will bear it, during several days. Then try custard, which is very mild and nonirritating; then give the patient pounded fish, and perhaps pounded chicken next day. Chocolate, which the author finds is very well borne, may be given at the same time, on account of the change that it makes in the patient's diet, which is otherwise very monotonous and tasteless. Some of the various foods may be tried. In preparing starchy foods, make them into a paste with cold water first, and then add hot water afterwards. Stale bread should be added to the diet before fresh is allowed. [J. M. S.]

3.—Cousins reports the case of a woman, aged 40 years, who complained of a painful and rapidly increasing swelling of the tongue. The swelling almost filled the mouth, and the gums and base of the tongue, on the left side, were extensively ulcerated. The patient was unable to swallow anything except a little fluid, and there was also great swelling and tenderness in the submaxillary region. In December, 1900, she commenced to wear a lower plate of artificial teeth; but they caused so much pain and swelling that in a few weeks she was compelled to give them up. The cavity of the cyst was completely laid open to the base of the tongue, and the thick cyst wall, which was intimately connected with the substance of the tongue, was dissected out. The patient rapidly recovered. There are many kinds of **congenital tumor of the tongue** and, of these, nevi and warty growths appear to be the most common. Pedunculated fatty tumors have been recorded, and also large tongues in which the increase in size has been attributed to a diffused development of fatty tissue. Pure cartilaginous tumors have been occasionally observed, and also osteomata and fibromata developing in connection with the fetal structures from which the septum originates. Central sublingual cysts, which are true dermoid cysts, projecting into the submaxillary region, are occasionally met with. These cysts are sometimes intimately connected with cystic swellings that occur near the hyoid bone, on the thyroid cartilage and even lower down the neck. They have been regarded as bursal tumors. Their walls are thin and they are filled with mucoid fluid. The author also reports the case of a woman, aged 36 years, who presented a large cystic tumor situated in the sublingual region. It had been growing rapidly for 2 years and, in consequence, a large portion of it was excised. In 2 months the pa-

tient left the hospital apparently cured. She returned, after a time, with a large and prominent swelling extending from the left side of the chin to the sternum. The cyst was punctured in the sublingual region, and an opening, which was traced with a probe, was found to contain a thick mucoid fluid. The whole sac was completely excised and the wound healed in a few days. [J. M. S.]

4.—In his first Hunterian Lecture on **imperfectly descended testicles** Eccles says the organ may be arrested within the abdomen, in the inguinal canal, or just without the external ring in the higher part of the scrotum. Ectopic testicles may be found in the perineum, Scarpa's triangle, at the root of the penis, and upon the aponeurosis of the external oblique. The conditions which have been considered as causes of non-descent may be classified as follows: Those associated with the mesorchiums, as an unusual length of the mesorchium which allows so much free movement of the testicle that it fails to engage in the ostium of the processus vaginalis, adhesions between the mesorchium and adjacent structures; and abnormal persistence of the plica vascularis; those associated with the testicle and its component parts as a too short vas deferens or spermatic vessels, an abnormally large epididymis, fusion of the testes or synorchism, and certain forms of hermaphroditism, those associated with the gubernaculum as absence of its upper normal attachments, deficiency of its muscular fibres, and deficiency or absence of its scrotal attachments; those associated with the cremaster as retraction of the testicle after it has descended and want of action of the internal fibres of the cremaster before the testicle has reached the inguinal canal; conditions associated with the route as an ill development of the inguinal canal, ill development of the superficial abdominal ring and ill development of one-half of the scrotum; and other conditions such as the wearing of a truss. There are probably only two causes of ectopic testis; it may be drawn into an abnormal position by certain fibres of the gubernaculum or it may be pushed into an abnormal site by an advancing hernia. An imperfectly descended testicle is usually smaller and softer than the normal testicle; only 5% are of normal size. Microscopically the tubules are fewer in number, smaller in size and separated from each other by loose connective tissue which is richly supplied with blood vessels. As a rule, neither spermatoblasts nor spermatozoa can be demonstrated. [F. T. S.]

5.—Brook describes a **new method of dealing with the sac in operations for the radical cure of hernia.** In cases of umbilical hernia two flaps are fashioned from the sac and are drawn tight and superimposed one on the other; sutures are passed through the free edges of the flaps and those sutures attached to the destined lower flap are passed through the entire thickness of the abdominal wall, well beyond the margin of the ring and fastened; the upper nap is similarly treated with the exception that the sutures after passing through the flap of the sac penetrate the muscular abdominal wall only. In dealing with inguinal and femoral herniae a running suture is passed through the neck of the sac just above its point of section and this suture, by means of an aneurysm needle, is passed into the peritoneal cavity and through the abdominal wall some two inches above the internal ring, thus inverting the sac. [F. T. S.]

6.—Livingston reports a case of **rupture of the jejunum** near its commencement, the rent being in the longitudinal axis of the bowel and about 1½ inches long. A horse had stepped on the patient's belly. There was moderate shock but peritonitis did not develop until the second day at which time a large quantity of blood was vomited and collapse quickly supervened. No operation was performed. [F. T. S.]

7.—Paton gives the histories of **two cases of mammary cancer which were treated by oophorectomy.** Both perished without obvious local benefit. [F. T. S.]

8.—Peters publishes the results of a case of **scirrhus of the breast treated by the X-rays.** The original growth was removed 13 years, and the recurrence was first noticed 5 years before the patient came under observation. Ten applications were made at intervals of about three days, the exposures lasting from ten to twenty minutes. This growth decreased from 3 inches in diameter to 1¾ inches, the ulcer became smaller, and the pain and discharge markedly lessened. At this period the patient developed a croupous pneumonia from which she died. [F. T. S.]

LANCET.

March 1, 1902.

1. Hunterian Lectures on the Anatomy, Pathology and Physiology of the Imperfectly Descended Testis. W. McADAM ECCLES.
2. Lettsomian Lectures on Certain Diseases of the Blood Vessels. A PEARCE GOULD.
3. Gray Hair and Emotional States, etc. ROBERT JONES.
4. A Note on Hypostatic Albuminuria of Splenic Origin. H. D. ROLLESTON.
5. Removal of a Sarcomatous Tumor from the Tail of the Pancreas of a Child Four Years and Eight Months Old; Secondary Growth in the Portal Vein. JOHN D. MALCOLM.
6. General Remarks on Asylum Dysentery and its Treatment with Injections of Permanganate of Potash. P. W. MACDONALD.

1.—See abstract of *British Med. Journal*, in Philadelphia Medical Journal, March 22, 1902.

2.—Gould delivered the first lecture of the Lettsomian Lectures **on certain diseases of the blood vessels** before the Medical Society of London, on February 17th. 1902. The first lecture is devoted to certain points relating to varicose veins. Mention is made that there are two views in regard to the nature of varicose veins. One which holds that they are the result of a yielding of the wall to an increased intravenous pressure, due to some obstruction to the return blood. The other view contends that varicose veins may be regarded as venous overgrowths—venous angioma. In the study of fifty cases of varicose veins of the lower limbs, he found that in forty-one the condition developed before the age of 25 and that only in nine the varices showed themselves after that age. He states that the majority of patients suffering from varix are individuals with a good general or even a robust constitution. In a very great number of cases no evidence of venous obstruction in the part affected can be demonstrated at the onset of the disease, and he further states that it is an error to accept enlargement of superficial veins as an indication of obstruction in vein-channels. The venous obstruction is to be sought in the affected part. Pregnancy has an influence upon the production of varices. He mentions that, if he had included in his series of cases all of the cases of varicocele, the sex-incidence would show much greater preponderance in men. He believes that in some cases there is conclusive evidence that a growth of the veins is present. In support of this view, he details the reports of several cases as demonstrating the occasional development in an adult of what may be considered venous angiomata. Six reasons are cited to point out that there are cases in which we have a combination of undoubted venous nevus and varix and other cases in which the condition may almost equally well be designated by either of these terms. In his article there is a table of cases of varicose veins showing the results of Trendelenburg's operation. This table includes fifty cases. With respect to the value of Trendelenburg's operation he summarizes as follows: "I would say that Trendelenburg's operation is not only a simple and safe proceeding, but one that is very useful indeed in nearly all cases of varix. It may be relied upon to relieve the aching pain so often felt, it always stops further development of varices, it frequently

leads to the shrinking, or even to the disappearance of varices, and it exerts a strong influence in preventing thrombosis. Its good effects are most pronounced where regurgitation into superficial veins is best marked. Its supericrity to excision of varices is greatest in cases of widely distributed and numerous varicose veins, for it exerts its influence upon all veins emptying into the saphena trunks. It is therefore useful in those widely-distributed, even general, varicosities of the lower limb for which excision is inapplicable. To ensure success the vein or veins must be obliterated quite at their junction with the deep veins. The fact that this operation has such a marked effect upon the course of the varix is a strong proof of the important part that valvular defect plays in the history of cases of varicose veins." [F. J. K.]

3.—An anthropological note on **gray hair and emotional states** is contributed by Jones. He reports a well-authenticated instance of a patient, a man, 53 years of age, whose hair and beard, during a period of five weeks, changed from a flecking of gray to an absolutely pure white. The author has investigated the color of hair of 2393 insane persons—1400 females and 993 males—in the Claybury Asylum and also attempted a comparison of the color of hair with temperament and disposition of the patients. He found the hair in the maximum number of men dark-brown, and not brown as in Galton's table, whereas the women corresponded with the table, and a higher percentage of women than of men had light-brown and red hair, as also gray and very gray hair (not in Galton's table), but there was a greatly preponderating number of bald-headed and very bald-headed persons among the men. This seems to indicate a more marked loss of self-control among fair females than among males, but a greater proportion of baldness (as among the sane) in men than in women. He took a further record of the color of the hair among those who attended the entertainments and dances, and compared this record with that obtained among those who attended Divine service. A preponderance of very fair and brown-haired women attended the dances rather than church or chapel services, these latter being of the darker, more sober, or atrabilious temperament, and this was also true of the men. In both sexes it was noticed that gray haired persons attended services in preference to entertainments —the passive attitude of religious ministration being more appreciated by the old, whereas active indulgence in pleasurable pursuits prevailed among the young. The author finally discusses the influence of nervous changes upon the hair and is inclined to the view that there is a close physiological connection between the cerebrospinal axis and the skin. Probably the nervous system has a dominating control over the pigmentary system. [F. J. K.]

4.—A note on **hypostatic albuminuria of splenic origin** is contributed by Rolleston. He has observed three cases in which albumin was found in the urine while patients were in a recumbent posture, and that the albuminuria disappeared when in the erect position. In all of these patients the spleen was enlarged. The first case was one of leukemia; the second one of hepatic cirrhosis with considerable splenic enlargement and the third, one of splenic anemia with considerable enlargement. He thinks that the occurence of albuminuria while in the recumbent posture in cases of enlarged spleen is not so very infrequent. He explains the occurrence of this condition on the ground that the spleen causes direct pressure on the left renal vein and further he thinks that the size of the spleen does not necessarily determine this intermittent or hypostatic albuminuria, but it depends in the main on elongation and on the condition of the suspensory peritoneal ligaments of the spleen. [F. J. K.]

5.—John D. Malcolm reports an interesting case of **sarcoma of the tail of the pancreas removed from a child, four years** and eight months of age. The growth was at first diagnosed a tumor of the left kidney. The patient was extremely emaciated and anemic. Under treatment the general condition greatly improved, although the tumor increased in size. It extended to the left loin pushing the lower ribs upward and forward and bulging the side outwards. It extended across the abdomen as far as the outer edge of the right rectus and downwards to below the level of the anterior superior iliac spines. Palpation showed the tumor to be smooth and elastic. The growth was slightly movable. The veins over the upper part of the abdomen were distended. The abdomen was opened through the upper part of the left linea semilunaris. The retroperitoneal space was opened above the transverse colon and when this was done little difficulty was encountered in separating the tumor from the surrounding connective tissue. The lower end of the spleen, however, was firmly adherent. When the growth was drawn from the abdomen it was found to be attached to the tail of the pancreas. A portion of the pancreas was ligatured and removed with the growth. A small mass of new growth could be felt to the inner side of the seat of the original tumor, but because of the patient's serious condition it was not removed. The patient did not survive the shock of the operation. At the necropsy the kidneys were found healthy and normal; caseating glands were found near the bifurcation of the trachea and in the anterior mediastinum. The secondary growth discovered at the time of operation was situated in the gastro-hepatic omentum and, when examined, proved to be, as did also the tumor, a fibrosarcoma. Illustrations accompany the report. [J. H. G.]

6.—MacDonald discusses **"asylum dysentery and its treatment with injections of permanganate of potash.** He remarks that at a recent meeting of the Epidemiological Society this subject was discussed, and there seems to be a general agreement upon two points, namely, that the spread of the disease was due to the removal of patients from one institution to another, and the infectious nature of the complaint. He thinks that the origin and spread of dysentery in asylums are still mooted questions. While defects in sanitary arrangements would be sufficient to cause its spread, these conditions do not often exist in asylums of the present day. Overcrowding has also been suggested, but the disease frequently makes its appearance where overcrowding does not exist. In an epidemic in the Dorsett County Asylum, which occurred in the fall of 1900, the author treated the cases with permanganate of potassium with very favorable results. In every one of the cases and several of them were severe, the patients recovered. He employed a weak solution. The lower bowel was washed out every night and morning. The ordinary enema syringe was employed to inject the fluid. He thinks that permanganate acts in a double capacity—as a disinfectant and as a styptic. [F. J. K.]

MEDICAL RECORD.

March 15, 1902.

1. Specific Medication. ANDREW H. SMITH.
2. Melancholia Simplex and Melancholia Transitoria Simplex. RALPH LYMAN PARSONS.
3. A Few Remarks on Diseases of the Skin, with Relation to General and Special Therapy. S. SHERWELL.
4. A Case of Otitic Brain Abscess and the Lessons which it Obviously Teaches. ROBERT LEWIS.
5. Apparent Cure of Malignant Ulcer of the Breast after Oöphorectomy. WM. H. SIMMONS.

1.—Andrew H. Smith presents an article on **specific medication** which in the main is a further plea for the treatment of pneumonia of croupous form with **carbonate of creosote.** He believes that this treatment **subsitutes lysis for crisis** as the habitual mode of defervescence, the lysis when the treatment is begun easily occurring in advance of the usual time of crisis. Speaking of the treatment with phosphate of creosote which he regards as the most valuable agent with the possible exception of salicylate of sodium,

he states that it may be given in quantities of 2 or 3 drams or even more a day without the slightest inconvenience, and may be continued until all disposition to rise of temperature has passed. It will usually bring about a lysis commencing 24 hours after the administration is begun. It is not disturbing to the stomach and is to be preferred when that organ is irritable. He chooses it even in cases of considerable depression when the sweating caused by the salicylate would be objectionable. [T. L. C.]

2.—R. L. Parsons discusses **melancholia simplex and melancholia transitoria simplex.** He mentions the frequency of states of mental depression from which many persons suffer for varying periods of time and in varying degrees, who are never suspected of being insane. The greater number of these cases speedily recover. In some, however, although typical insane delusions are never manifested, the mental depression so dominates the faculties as to constitute the disease simple melancholia or melancholia without delusion. The proportion of recoveries of cases of this sort, when properly treated, is greater than that of any other analogous affection, the sufferings are more intense and the impulse to suicide is present in almost every case. He does not claim that all persons who commit suicide are insane, and he describes some of the motives which lead apparently sane persons to self destruction. After eliminating this latter class he states that there undoubtedly remains a large number of suicides who are either in the stage of simple melancholia or who may be considered as in a state of transitory melancholia. In order to lead to the early recognition of these cases of simple form he suggests the advisability of adding the term **melancholia transitoria simplex** to the nomenclature of insanity. He devotes considerable space to the differential diagnosis between simple melancholia and other forms and discusses the general remedial measures which the physician should adopt in the treatment of both simple melancholia and the transitory form. [T. L. C.]

3.—R. Sherwell contributes a few remarks on **diseases of the skin with relation to general and special therapy.** In general, he states that in his experience he has found that skin diseases in the hands of the ordinary medical man are subject to the most "strenuous" treatment. He believes that a slight course of hydrarg. c. creta or other alterative will be excellent general treatment in the case of strumous child or adult; that antilithic and purgative medicines are indicated in a constipated person or one rheumatically disposed and will assist largely the appropriate topical treatment which should be employed. A large proportion of eczematous affections, especially the more acute forms of that disease, are best treated by general eliminative and depurative methods, in combination with the simplest and most innocent local alterative treatment or even with simple protection alone. He is not in sympathy with some old precedents which advise against the use of water baths in these eczematous conditions. In the chronic variety of eczema common to robust and usually elderly people in which the lesions are horny, pseudo-psoriatic, and slightly scaly he recommends the use of anti-rheumatic treatment in combination with the more stimulating local measures. He calls attention to the **abuse of arsenic** in dermatology and says that the crime of its use or abuse consists in giving it in all skin diseases, especially those of an inflammatory and easily irritative type. He is an advocate of a bland, rather than a strong, local application and deprecates especially the use of **chrysarobin** in excess. He believes that the number of cases requiring an application of this drug of a strength of over 2 per cent. are excessively rare. Glycerine and many of the **alcoholic preparations,** such as **bay-rum,** must be used cautiously on account of their liability to irritate the skin. [T. L. C.]

4.—Robert Lewis, Jr., reports a case of **otitic brain abscess.** The clinical notes of the case are given. A diagnosis of **mastoiditis and brain abscess** was made which was believed to be located in the temporo-sphenoidal lobe involving the third and ascending frontal convolutions. An operation was performed the technique of which is described and at which time the diagnosis was confirmed. The patient had entirely recovered in 12 weeks. [T. L. C.]

5.—W. H. Simmons reports a case of apparent cure of **malignant ulcer of the breast after oophorectomy.** This ulcer first appeared early in 1897 as a hardening of the left breast. There was no involvement of the axillary glands when she was seen in 1900 and in view of the depth of the ulcer and the infiltration of the surrounding parts Simmons did not believe that an operation was indicated. The patient's husband insisted upon the use of a cancer cure which was injected into the tissue for about a year, during which time the disease steadily progressed. This treatment consists in the deep injection into the tissues surrounding the growth of a thick phenol-smelling liquid which is sold for $30 a bottle of about 2 oz.! About this time Simmons heard that success sometimes follows ovariotomy in these cases and the operation was performed. In eleven weeks the ulcer of the breast was found to be completely healed and the induration has continued gradually to disappear. [T. L. C.]

MEDICAL NEWS.

March 15, 1902. (Vol. 89. No. 11).

1. The Medical Department of Tulane University of Louisiana.
2. The Craig Colony Prize Essay—Serotherapy in Epilepsy. CARLO CENI.
3. Acute Influenzal Nephritis in Childhood. B. K. RACHFORD.
4. A New Method of Locating Foreign Bodies by Means of the X-Ray. LEWIS GREGORY COLE.
5. The Rate of Growth of Epithelium of Ulcers—Observation of 100 Cases at the Vanderbilt Clinic, New York. SIGMUND DEUTSCH.

2.—Carlo Ceni reports ten cases of epilepsy treated with injections with improvement in every case. The technique is as follows: He emphasizes the necessity of scrupulously following the rules of asepsis and antisepsis in every step of the procedure, namely in blood-letting, in the separation and preservation of the serum, and in the injections. The condition of the patient who is to furnish the blood must be ascertained, in order that the danger of transmitting disease be avoided. As to blood-letting, he uses tubular needles of large bore fixed on a glass pipette about 10 centimeters long. With this simple instrument and a receptacle with a large opening, we can draw aseptically as much blood as we like without exposing it to the contact of air. The tubular needle is inserted into a venous trunk that has been compressed above. The free end of the pipette is introduced into the aforementioned receptacle. After having again disinfected the slight wound and washed it with alcohol and ether it is closed with a drop of liquid taffetas. In this way a patient can be bled several times without suffering the least inconvenience. The quantity of blood withdrawn varies with the individual. The most the author has taken at one time from strong persons is 250 to 300 cubic centimeters. Then the serum is separated and divided into small bottles holding 10 cubic centimeters each, only adding some camphor. However, that the preservation may be surer, he has long used fractional sterilization. If this be done at low temperatures it has no influence on the beneficial properties of the serum. Both in injecting serum from one epileptic into another and in reinjecting into the same patient, he always follows the method of progressive doses, beginning with three to five cubic centimeters and increasing gradually up to 10 or 20 cubic centimeters in thirty or forty days. Some patients react violently to the first injections, even when made in small doses, and present the symptoms of an acute intoxication which may even be dangerous. This is the crisis of adaptation and is quite transitory, disappearing after a few injections. Commonly several injections, continued for some weeks, are

necessary before durable results are obtained. The author's method of treatment is as follows: During the first month he injects into the glutei, at intervals of a few days and in progressive doses, a total quantity of 40 or 50 cubic centimeters. During the following months, when he thinks the patient has overcome the first adjusting period, he carries the total dose up to 80, 90 or 100 cubic centimeters, especially when the patient begins to improve. In these cases he continued the injections until he thought the maximum advantages had been obtained. This he inferred from the presence of a firm equilibrium in the general condition as shown by their no longer reacting, but by being indifferent to the treatment. [T. M. T.]

3.—B. K. Rachford reports four cases of **acute influenzal nephritis** occurring not as a sequel, but as a part of the influenzal attack. The kidney symptoms in every instance occurred while other active influenzal symptoms were still present. The influenzal poison attacked the kidneys and produced a most violent acute nephritis just as it, in other cases, attacks and produces inflammation of the lungs, the intestines, the meninges and other parts of the body. In these cases it came on more quickly and violently than nephritis produced by scarlatina, diphtheria and the other acute infections. In the author's experience the worst symptoms occur, as a rule, within six or seven days after the kidney is attacked and, if complete suppression and profound uremia do not destroy the life of the child within the first week of the disease, a sure and steady improvement begins which leads to complete recovery. It is possible that in some of the cases a chronic nephritis may be established. In adults the disease is very different. The acute hemorrhagic type occurring during the influenzal attack is nothing like as common as it is in children. Chronic nephritis, however, resulting from repeated attacks of influenza is much more common in the adult than in the child. [T. M. T.]

4.—Lewis G. Cole gives the important points in the use of the **X-ray** as follows: (1) The skiagraphs should be taken at right angles to each other; (2) the tube should be at the same distance from the plate during each exposure; (3) the rays which cause the shadow of the foreign body should strike the plate at right angles; (4) the anode should be directly over the approximate location of the foreign body as ascertained by a fluoroscopic examination. [T. M. T.]

5.—Sigmund Deutsch, in his article on the **rate of growth of epithelium of ulcers,** reports the following observations: (1) The rate of the growth of epithelium is in direct proportion to the size of the ulcer; (2) in the majority of cases the average growth of epithelium is from two to three and one-half mm. per week; the range is 1.4 to 10.5 mm. (traumatic ulcers not included); (3) the time required to heal an ulcer is in no proportion to the duration of the ulcer; an ulcer of four months' standing does not heal more quickly than one of four years' standing, other conditions being equal; (4) the rate of growth of epithelium in traumatic ulcers is extremely irregular; it is in no relation to the size or duration of the ulcer; the average growth per week is about five mm.; the range is from 1.4 to 8 mm.

[T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

March 15, 1902. (Vol. LXXV, No. 11).

1. The Medical History of Samuel Johnson. FRANCIS R. PACKARD.
2. The President's Inaugural Address, Delivered at the Ninety-sixth Annual Meeting of the Medical Society of the State of New York, held in Albany, January 28, 29, 30, 1902. HENRY L. ELSNER.
3. Uric Acid: Its Sources and Effects. JAMES TYSON.
4. Chancroid of the Eyelid. MATTHIAS LANCKTON FOSTER.
5. Trifacial Neuralgia and Its Treatment. HENRY TREVE BARBER.
6. A Case of Ankylostomiasis (Uncinariasis) Occurring in a Sailor. JOSEPH B. GREENE.

3.—James Tyson states that the treatment from the standpoint that uric acid is solely the product of excessive leukocytosis and that its accumulation in the blood arises from this cause rather than defective renal function, is as follows. There are two indications (1) a reductions in nuclein katabolism; (2) a raising of the process of oxygenation. To obtain the first object everything should be avoided that will produce a leukocytosis. To this end a number of drugs, such as quinine, pilocarpine and atropine, should never be administered, and certain articles of diet that we know produce leukocytosis, notably proteids, should be reduced. Nuclein-containing foods, such as sweetbreads and other internal organs and yolk of egg should be avoided. Overeating should be avoided. In a true uric acid case there will be excessive nuclein katabolism, despite all we may be able to do, in the nature of the taint, and restrictions in diet will not be of permanent benefit; the chief point of attack will be in the direction of raising oxidation. A uric acid case should be treated as an anemic case in all measures employed to promote the oxygenating power of the blood. Iron should be administered in the form and on the same rational principles as it would be to a chlorotic patient. Arsenic should be combined with it. Whatever medicinal and hygienic measures tend to a successful aeration of the blood should be employed. Dr. Croftan says most striking results have been obtained in acute cases by inhalation of oxygen gas. On six occasions he claimed to have aborted an attack of gout by inhalation of oxygen repeated at short intervals. He believes, too, that he can invariably relieve, if not cure, a uric acid headache, migrain, in short, lithemic attacks, by oxygen inhalations.

[T. M. T.]

4.—M. L. Foster reports a case of the above condition and states that venereal ulcers of the eyelids are by no means common, but the non-syphilitic sore is met with so very rarely that the report of this case is most interesting. The diagnosis of this condition is not easy. A sore on a swollen, reddened lid may be an irritated epithelium, a tuberculous ulcer, a vaccinal pustule, a simple septic ulcer, a chancre, a gumma, a chancroid or an ordinary hordeolum or stye. The history, the general condition of the patient and the microscope may be relied upon for the recognition of the first three conditions; the history and the presence of other manifestations of syphilis may lead to the detection of a gumma; and the diagnosis of a chancre will be determined by the appearance in due time of the secondary symptoms, but the author knows no way in which a positive diagnosis can be made between a chancroid and a simple septic ulcer of the lid. In the above cases the diagnosis was narrowed down by exclusion to one of the two last mentioned conditions; in favor of the idea that the sore was a chancroid were the general appearance, the excavated base covered with detritus, and the abruptly elevated, but not indurated, edge, together with the opportunity for and probability of an autoinfection from the suppurating buboes, or from the chancroid itself; in opposition to the idea were the exceeding rarity of the lesion, the fact that the ulcer was elliptical instead of round and the absence of swelling and suppuration of the neighboring lymphatic grands. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 13, 1902.

1. The Value of Alcohol as a Therapeutic Agent in Medicine. HENRY F. HEWES.
2. A Clinician's Estimate of Alcohol as a Therapeutic Agent. F. C. SHATTUCK.
3. The Therapeutic Value of Alcohol. E. N. WHITTIER.
4. The Influence of Alcohol on the Human Organism. ELBRIDGE G. CUTLER.
5. Practical Experience with Hydrotherapy. J. J. PUTNAM and GEORGE W. FITZ.

1.—Henry F. Hewes discusses at length the question of **alcohol in therapeutics,** with especial reference to its rational employment. Alcohol to-day is used most frequently

and generally as a cardiac stimulant, but the author believes that there is evidence at hand against its possessing such a property, except the initial effect resulting from irritant action. The only stimulant effect which it can produce is a reflex one which may result in a momentary increase of work on the part of the heart. Therefore such an action may indicate the use of alcohol in emergencies, but not for the purpose of strengthening the heart by administering it continuously. The most accurate experiments show that single doses of alcohol (20 to 60 grams), if given in the ordinary nondiluted form, and under ordinary circumstances, may cause a transitory cardiac acceleration, with a subsequent depression proportional to the size of the dose. If alcohol is diluted so as to inhibit its irritating powers and the subject is kept quiet, there is no acceleration of the heart. From these and similar results it is concluded that alcohol is generically a depressant of the heart and circulatory mechanism. The author proceeds to point out first, that our pharmacological evidences are collected from conditions existing in both disease and health and so far identical in quality with both; second, that we have no scientific records of any drug possessing a directly contrary pharmacological action in disease from that which it has in health, the difference in action being simply quantitative, and third, that since we have in regard to this particular point at issue no evidence of a clinical or of any other character pointing to a stimulant action which will bear the test of judicial examination, there is no occasion as yet to raise such an issue upon this subject. The actions of alcohol as a stimulant, narcotic, stomachic, and as a food, are all discussed in detail, the article being appended by an extensive bibliography on the subject. [M. R. D.]

2.—F. C. Shattuck discusses **alcohol as a therapeutic agent from a clinician's point of view,** basing his discussion on the premises that we cannot reason directly from the effects of alcohol in health to those in disease, and furthermore that there are clinical as well as chemical, physiological and pathological facts. In conclusion he quotes Osler as follows: "We are still without the agent which can counteract the gradual influence of the poisons which develop in the course of acute febrile diseases, such as typhoid fever, pneumonia," . . . "the chief effect of which is exercised upon the circulation, increasing the rapidity of the pulse and inducing a progressive heart failure. To meet this indication the general experience of physicians still points to alcohol as the most trustworthy remedy. Although some hold that alcohol in this condition is not indicated, I believe that it is in many instances the only remedy capable of tiding the patient over the most dangerous period." [M. R. D.]

4.—Elbridge G. Cutler considers the influence of **alcohol** on the human organism; its use in the acute diseases for a short time, and for a longer time in certain chronic diseases. Its asserted value in the acute infectious diseases is either due to its acting as a protective agent against the infection, as an antipyretic, as a food, as a stomachic, or as an analeptic. Each of these properties are discussed separately in detail. To recapitulate its action, alcohol is no great antipyretic; it is no stomachic and no analeptic. Its action as a food is hindered by its poisonous quality. That it can favor the immunization process in acute infectious diseases is to be denied. Why, then, has it been used so much in these conditions? It is easy to give; it is easy to take. The patient feels for a time more comfortable. It is expensive, and the patient's friends feel they have paid a good price for a good article, and the doctor thinks he has done something. In chronic infectious diseases, notably tuberculosis, it must be given with caution and its continued use is warned against, as it is not a lasting stomachic. As a hypnotic it facilitates the getting to sleep, but shortens the duration of sleep unless given in large doses, in which case it is a narcotic. [M. R. D.]

5.—J. J. Putnam and G. W. Fitz give a brief report of certain experiments recently begun to determine the physiological effects of different kinds of baths, with external reference to changes in blood pressure and pulse due to the baths. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

March 15, 1902.

1. Medical Education. JOHN B. DEAVER.
2. A Case of Brown-Sequard's Paralysis from Stab in the Cervical Region, etc. ARTHUR R. EDWARDS.
3. Dermatomycoses in their Relation to Allen's Iodine Test. JACOB SOBEL.
4. The Origin of Carcinoma of the Stomach from Chronic Round Ulcer of the Stomach. G. FUETTERER.
5. Pneumatic Differentiation in the Treatment of Organic Disease of the Heart. CHARLES E. QUIMBY.
6. Acute Interstitial Obstruction. Report of a Rare Case of Probably Syphilitic Origin. CLARENCE L. WHEATON.
7. Modified Treatment of Typhoid Fever. T. B. GREENLEY.
8. Medication of the Respiratory Tract by Antiseptic Nebulae. HOMER M. THOMAS.

1.—See **Philadelphia Medical Journal,** March 15, 1902, page 483.

2.—**A case of Brown-Sequard's paralysis from a stab wound in the cervical region, with complete hemiplegia, crossed monoplegia and crossed total hemianesthesia,** is reported by Edwards. The patient, a middle aged man of short stature, was admitted to the Cook County Hospital on July 10, 1900, after having been stabbed twice in the neck. Unconsciousness immediately followed the injury, which persisted until his arrival at the hospital, a short while after the accident had occurred. It was found on examination that some slight movement was present in the right upper extremity and free movement existed in the right lower extremity. Rigidity of the left upper extremity was present and no motion was perceptible. There was complete loss of power in the upper extremities. Complete paralysis of the left lower extremity and muscular rigidity were present. There was no disturbance of the special senses. Tactile sensations, especially in the arm and leg, were lost upon the right side, while upon the trunk, the anesthesia did not extend as far as the median line. Absence of susceptibility to pain and lost temperature perception to both heat and cold were pronounced upon the right side. There was no marked hyperesthesia except for pain on moving the arm or leg and extreme sensitiveness of the sole of the foot on the side of the hemiplegia. The left knee jerk was much exaggerated, while the right was normal. In the course of twelve hours the left patella reflex disappeared and did not return for two weeks. In the left arm the reflexes were increased. On both sides, the cremasteric, abdominal and mammillary reflexes, were abolished. The wound in the neck was treated with antiseptic precautions. Seventeen days after admission some motion returned in the right arm. On July 16th, six days after admission, the temperature rose to 102.6° F., and 103.4° F. This fever was probably due to myelitis. After dressing the wound in the neck at this time, the temperature fell to normal. Nearly a year after the injury, in June, 1901, the patient's condition was as follows: "Hyperesthesia on the left side had disappeared while the anesthesia on the right side was but little altered, tactile sensation now being fairly normal. The left-sided deep reflexes were exaggerated and the limbs more or less spastic and yet but little, if any, atrophy was present." He remarks that this case was clearly one of Brown-Sequard's paralysis.

3.—Sobel discusses **"dermatomycoses in their relation to Allen's iodine test."** In his experience he has found no test more valuable for the determination of the parasitic nature of the skin affections apart from the demonstration of the fungus, than Allen's iodine test. This test consists in applying to the diseased surfaces or suspected ones, the iodine solution—preferably Lugol's solution. The diseased areas are stained a deep mahogany color, which occurs at once, while the surrounding healthy tissue is stained a very light yellowish color. He applies the solution with a cotton swab tightly twisted on the end of a tooth-pick. He draws the following conclusions: "(1) For teachers who give classroom demonstration, Allen's iodine test will serve to bring into greater prominence visible parasitic lesions and into

view pale hidden, and sometimes invisible ones. (2) A positive reaction to Lugol's solution in the form of a deep mahogany or dark brown discoloration is strong presumptive evidence that the lesion is parasitic. In the absence of absolute proof of the parasitic nature it is of the greatest aid in the presence of a parasitic skin lesion, it serves to make assurance doubly sure. (3) It is not of service in differentiating one parasitic disease from the other: this must be accomplished by other clinical and microscopical data. [F. J. K.]

4.—Fuetterer writes on **"the origin of carcinoma of the stomach from chronic round ulcer of the stomach."** He gives reports of a number of cases with post-mortem notes. The article is beautifully illustrated. There is also appended a tabulated list of 52 cases taken from literature—six of these were observed by the author—in which carcinoma of the stomach had developed from chronic round ulcer of the stomach. Particular emphasis is laid upon the following points, which are quoted in substance: "(1) If a carcinoma develops from a chronic ulcer of the stomach, then this development occurs from those parts of the edges of the ulcer which are most exposed to mechanical irritation by the contents of the stomach. (2) In the pyloric region it is the lower pyloric margin of the ulcer which is most exposed to mechanical irritation and from which carcinoma develops. But other parts of the edges may be the ones involved when dilatations and adhesions have changed the position of the organ. (3) Development of carcinoma from ulcers of the stomach in the pyloric region occurs with great frequency, while such a development occurs less often in other parts of the stomach. (4) If what has been said under our third conclusion is correct, then we must in all cases in which an ulcer of the stomach or its scar narrows the pylorus, recommend early a gastro-enterostomy to prevent the development of carcinoma. If a gastro-enterostomy has been made, then the mechanical irritation of the ulcer in the pyloric region by food is reduced, and the severe friction necessary to produce a carcinoma will probably not occur. (5) A patient suffering from the consequences of a stenosis of the pylorus, particularly if this is caused by ulcers and scars, should, if a gastro-enterostomy is not performed, be advised to eat slowly and little at a time, and to be particularly careful about carbohydrates and especially hard crusts of bread; they should avoid crisply fried, or other coarse food, and they should, as much as possible, confine themselves to liquid or semiliquid foods. A good deal of fatty food should be recommended. (6) Elderly people in particular, who have but few or no teeth and a saliva which is insufficient in quantity and quality must be carefully advised as to their diet, and to such cases taka-diastase should be administered. (7) From the fact that carcinoma does not develop from the large ulcers alone, but may be developed from the very smallest, the prognosis of ulcer of the stomach is bad. Our aim, therefore, should be to prevent the formation of ulcers, rather than to heal them after they are formed, and this may be done, at least to a certain extent, by the energetic treatment of all cases of chlorosis and secondary anemia that come under our observation. (8) After viewing the literature, we are now in a position to say that no one before us had laid stress on the fact that carcinoma of the stomach, which develops from an ulcer, originates from certain parts of their edges, and that this, while of importance in itself, will prove to be of great value, when it is sufficiently considered in reference to the etiology of carcinoma in general. My experimental work on the stomachs of animals has furnished sufficient corroborating facts, inasmuch as proliferation of the elements of the mucous membrane of the stomach occurred on the edges of ulcers which had been produced by experiment. The histological qualities of such proliferations were those of an adenocarcinoma as described in our case 1, and, while I do not wish to state that I have produced a malignant growth with all its inherent peculiarities and sequelae, such as, for instance, metastasis and cachexia, I do wish to give it as my opinion that histologically there was adenocarcinoma, and that I fully believe that further work in this direction will lead to the production of a true carcinoma by our method. The last cut represents such an ulcer in the stomach of a rabbit, and it is easy to notice the difference in the condition of the mucous membrance at the upper and lower edge of the ulcer. For a more detailed description of the finer histological changes, I must refer the reader to my monograph, which has already been mentioned." [F. J. K.]

5.—See **Philadelphia Medical Journal**, Nov. 16, 1901. Page 821.

6.—Clarence L. Wheaton, after discussing the **various causes of intestinal obstruction** and the mortality of this condition, reports a **case of obstruction due to a growth involving the sigmoid flexure** and necessitating a resection of the bowel. The patient was a woman, 31 years of age, and was admitted to the hospital for myomata of the uterus. The growth involving the sigmoid proved, upon examination, to be of dense fibrous tissue and showed no malignant characteristics. The patient died 48 hours after the operation and it is thought that the growth was probably of syphilitic origin. [J. H. G.]

7.—Greenley contributes an article **"on the modified treatment of typhoid fever."** This modification which is suggested is the use of acetanilid with quinine, which he believes has a soothing and quieting effect. He further notes that these drugs act as antipyretics, and he has not observed any depressing effects from acetanilid on the heart. The doses should be regulated according to the degree of temperature. He has tried this treatment in three cases. He writes that two of these cases were of very short duration, only continuing about eight days. The other case was of a much longer duration. [F. J. K.]

8.—Thomas discusses **"medication of the respiratory tract by antiseptic nebulae."** He holds the view that the antiseptic treatment of diseases of the respiratory tract is well recognized by the profession and that the problem at the present time is, how to administer the remedies in sufficient strength and quantity to control septic processes. He has found Bensen's home nebulizer very satisfactory for the individual use of patients. His article contains an illustration of this apparatus. [F. J. K.]

AMERICAN MEDICINE.

March 15, 1902.

1. The Use of Borax and Boric Acid as Food Preservatives. VICTOR C. VAUGHAN and WILLIAM H. VEENBOER.
2. The Examination of the Blood in Relation to Surgery, of Scientific but often of No Practical Value and may Misguide the Surgeon. J. M. BALDY.
3. Sprue or Psilosis in Manila. WM. E. MUSGRAVE.
4. The Value of Urea Estimation. E. B. BEHREND.
5. Pemphigus, etc. WITTEN BOOTH RUSS.
6. Modern Treatment of Drug Habituation. FRANK R. SEARLES.
7. The Diagnostic Importance of a Digital Examination in Diseases of the Rectum. HERMAN A. BRAV.

1.—Vaughan and Veenboer conclude an article on the **use of borax and boric acid as food preservatives** as follows: (1) The use of borax or boric acid as a preservative in butter and cream in the quantities specified in the recommendations of the English Commission is justified both by practical results and by scientific experimentation. (2) The dusting of the surfaces of hams and bacon which are to be transported long distances, with borax or boric acid, not exceeding 1.5% of the weight of the meat, is effective and not objectionable from a sanitary standpoint. (3) Meat thus dusted with borax or boric acid does not become slimy because the preservative thus used prevents the growth of aerobic, peptonizing microorganisms. [T. L. C.]

2.—J. M. Baldy discusses the **examination of the blood in relation to surgery.** He states that the results of such examination are of scientific but often of no practical value and may misguide the surgeon. In this paper Baldy has carefully reviewed contributions of the same subject by Dr. John B. Deaver and by Dr. Robert N. Willson. The latter disagrees almost in toto with Deaver, but Baldy supports Deaver's views. [T. L. C.]

3.—W. E. Musgrave concludes his article on **sprue or psilosis in Manila** by stating that the symptoms of sprue are nearly always found in the presence of other well-known lesions discoverable by modern clinical methods. Careful study of these cases fails to indicate an additional

etiological factor and with our present knowledge Musgrave believes that **sprue** is a symptom-complex comparable to the typhoid state, occurring in the tropics in chronic diseases, especially those affecting the gastro-intestinal canal.

[T. L. C.]

4.—E. B. Behrend discusses the value of the **urea examination** in which he emphasizes the fallacy of attempting to deduce too much from the analysis of the urine of urea alone. However, in instances in which the urea secretion is found very low or very high, and persistently so under ordinary conditions, we know at once it is abnormal and is usually associated with grave symptoms the nature of which is generally clear. When difficulty is experienced it is when the urea estimation lies between 20 and 40 grams and when some defect in the nitrogen metabolism is suspected. He gives a method of procedure for determining whether the nitrogenous metabolism of a patient is normal or not. He is placed upon a careful diet in which the amount of nitrogen is definitely known. The urine is then measured and collected each day and the amount of urea estimated. [T. L. C.]

5.—W. B. Russ reports a case of **pemphigus foliaceus** involving the mucous membrane of the respiratory tract. The type of the disease suddenly changed from a mild form of **pemphigus vulgaris** to a rapidly fatal pemphigus foliaceus. The writer believes that the development of the disease had its chief etiological factor in the cachexia resulting from a chronic malarial toxemia. The patient died between 15 and 20 days after the development of pemphigus folicaeus which rapid termination the writer accounts for by the involvement of the mucous membrane of the respiratory tract.

[T. L. C.]

THE EDINBURGH MEDICAL JOURNAL.

January, 1902. (Vol. XI, No. 1.)

1. On the Teaching of Midwifery. R. MURRAY MILNE.
2. On the Treatment of Nervous Indigestion or Gastric Neurasthenia. GEORGE HERSCHELL.
3. The Proposed Reorganization of the Medical Curriculum. ARCHIBALD STODDARD WALKER.
4. The Practical Application of the Combined Operations of Internal and External Urethrotomy. REGINALD HARRISON.
5. A Clinical Lecture on Tuberculosis of the Bladder. P. J. FREYER.
6. The Report of the Indian Plague Commission. CHARLES HUNTER STEWART.
7. The Causation of Paralysis in Diphtheria. ALEXANDER C. R. FOULERTON and H. CAMPBELL THOMSON.

2.—The nervous troubles affecting the stomach may be all classified as: (1) Neuroses of sensation, (2) neuroses of secretion, and (3) neuroses of motility. In **nervous indigestion** we usually have a combination of two of these groups. It is important to bear in mind that this condition is not an affection of the stomach, pure and simple, but a local expression of a general neurasthenia, and is in fact the commonest manifestation of it. The first thing to do in the treatment of any case is to make sure that the neurasthenia does not depend upon the absorption into the system of toxins from the alimentary tract. If necrosing and septic stumps or pyorrhea alveolaris are present, the patient should be sent to a dentist for treatment, before the neurasthenia can be attacked with any hope of success. If there is evidence of chronic fecal retention, the colon should be washed out with a series of large injections. If gastroptosis or enteroptosis are present, a suitable bandage or belt should be applied. In **gastric neurasthenia** complicated with myasthenia gastrica, the patient should take 5 or 6 meals, at intervals of 2 or 3 hours, during his waking day. If, after examining the stomach contents, we find hydrochloric acid in excess, we must give a food which has a high combining value with hydrochloric acid, in order to protect the stomach from the irritating effects of excess of acid, such articles of diet as sweetbreads, calves' brains, oysters, eggs, albumen, plasmon and milk. The amount of starchy food should be limited, and as much as possible of that given should be converted into dextrin. In order to accomplish this result, a diastatic ferment, such as malt extract should be given with the starchy food. If the hydrochloric acid is normal or deficient, the main point is to induce the patient to take a sufficient amount of easily digested fat, and to limit the amount of fluid taken with the meal. Food of every kind will cause discomfort, and the majority of patients will already have reduced their diet to far below that required for the needs of the organism, in the vain attempt to find a diet upon which they can live with comfort; and naturally, in so doing, they have increased the gastric trouble, as the stomach will participate in the general tissue starvation. After adjusting the diet, the first point to claim attention is the correction of constipation, which is best treated, according to the method of Fleiner, with systematic injections of warm olive oil at bedtime. Small doses of cascara with hyoscyamus and taraxacum may be given at night, if spasm be not present. Nitrate of silver is the most valuable drug in the treatment of gastric neurasthenia. Another valuable drug is quinine bisulphate in ½ gram doses. Red marrow of bones is also valuable in the treatment of the condition under discussion. Two extremely valuable methods of toning up an exhausted nervous system are static electricity and the sinusoidal bath. Local treatment to the interior of the stomach may be required to relieve pain, to diminish an excessive secretion of hydrochloric acid, to increase appetite and to stimulate the secretion of the digestive ferments. To relieve pain, we may apply solutions of menthol or cocaine to the interior of the stomach with Einhorn's intragastric spray apparatus. To diminish excessive secretion of hydrochloric acid, the intragastric spray of nitrate of silver and the application of a high-tension electric current from a high-tension induction coil apparatus by means of an intragastric electrode are useful. To increase appetite, spray the stomach with infusion of gentian, quassia, or hops. To stimulate the secretion of the digestive ferments, spray the stomach with pepsin. [J. M. S.]

4.—Harrison advocates the use of a **combination of external and internal urethrotomy** for rupture of the urethra. He supposes, for the purpose of illustration, a case of severe and dangerous form of sudden extravasation of urine from an old stricture in the deep urethra, in which the urine has been forced from the perineum into the scrotum and lower portions of the abdominal parietes, flanks, and buttocks and in which mortification and inflammation of the parts involved are impending. The patient being anesthetized, internal urethrotomy should be first proceeded with, by the use of Maisonneuve's urethrotome. A large median-grooved staff is then passed into the bladder, and an external urethrotomy performed, the incision being of sufficient size to permit the passage of a full-sized perineal drainage tube; the opening of the tube should be made as near as possible to the junction of the membranous with the prostatic urethra, as in Cock's operation. The drainage tube should precisely fit the perineal wound. The entire area of extravasated urine should then be manipulated by the hands of the operator so as to squeeze the fluid through suitable incisions made over the area involved. In this way sloughing may be averted. [J. M. S.]

5.—Freyer reports the case of a man, aged 24 years, who for 3 years suffered from hematuria. During the last 3 months the patient had 7 or 8 attacks of rather profuse bleeding. Some months after the hematuria set in, he began to be troubled by increased frequency of micturition, which has gradually grown worse. The flow of urine is intermittent. At the termination of micturition there is much straining to get rid of an imaginary residue. Micturition is accompanied by pain, which is present be-

fore, during, and for a few minutes after the act. This pain is most severe at the end of the penis behind the glands. The urine is faintly alkaline, slightly turbid and contains a little pus and mucus, which give it a flocculent appearance, and do not readily fall to the bottom of the glass. On settling down after some hours, the deposit forms a thick, tenacious mass, which does not disperse when the vessel is shaken, but moves about in an irregular globular mass. The author considers these features to be very characteristic of tuberculous urine. The urine of the patient under consideration has been examined for tuber cle bacilli, but none have yet been discovered. Cystoscopic examination was made under anesthesia, and two small ulcers of the bladder were found. These ulcers were ½ inch apart, situated about 1 inch behind the right ureteral orifice. The case is considered to be a typical one of **primary tuberculosis of the bladder.** In the treatment of the condition, general hygienic and medical treatment is of importance. Cod-liver oil, iron, strychnine, carbonate of guaiacol, and other tonics should be employed. Urotropin in from 5 to 7 grain doses, 3 times daily, freely diluted with water, is the most efficient drug we possess for the treatment of all forms of pus in the urine. Salol and boric acid are also important drugs in this disease. The treatment with installations of iodoform emulsion have not been very encouraging. Injections of weak solutions of silver nitrate are actually injurious in tuberculous cystitis. Corrosive sublimate is the most efficacious drug for injections in this disease, commencing with watery solutions of 1 to 10,000 and gradually increasing to 1 to 2000. For the relief of pain morphine and belladonna, in the form of suppository, will be found most effectual. Suprapubic cystotomy is the operation of election for eradicating the disease and for drainage purposes, to relieve the agony accompanying the overdistension of the contracted bladder and to relieve the constant desire to micturate. [J. M. S.]

6.—Will be abstracted when finished.

7.—It is possible that diphtheritic paralysis may result from some disturbance at the central end of the neuron; in the spinal ganglia, from alteration in the peripheral fibre, whereby its conductivity is impaired, or by an affection of the neuron as a whole. In the common diphtheritic paralysis of the palate, for instance, we have fairly clear evidence of an affection of the peripheral fibres of a portion of a nerve. But, in other cases, it is impossible, by clinical observation alone, to determine the individual influence of each of the possible causes, respectively. Foulerton and Thomson have, accordingly, made an effort to solve the problem by investigating the microscopical appearances, in different regions of the nervous system, in fatal cases of diphtheritic paralysis in man, and in the lower animals after inoculation either with cultures of living bacilli or with the specific toxins, in the hope that definite alteration in structure may indicate the actual seat of impaired function. Guinea-pigs received various doses of a sterile, toxic diphtheria broth, the minimal lethal dose of which was approximately 0.01 cc. for a guinea-pig of 250 gm. weight. Whilst, under the conditions of the experiments, in the greater number of cases there was no alteration from the normal in the ganglion cells, a certain number showed a definite alteration in structure. The principal changes observed were a general swelling of the cell, and an irregularity of its contour, together, sometimes, with an appearance as of pulverization of the Nissl bodies, the last change causing an appearance of pallor of the cell body. The authors also examined the spinal ganglion cells in 7 cases of fatal diphtheria in children. Definite changes were found in 4 cases; the most obvious alteration being a swelling of the cell, with blurring of its outline. On the other hand, in 3 cases no change was found. Certain changes in the central portion of the neuron may be caused by diphtheria intoxication, but the series of cases reported is not sufficiently extensive to throw much light on the exact period of intoxication at which changes are most likely to be found. Nor do the animal experiments show the possible effects of sublethal doses of the toxin after some length of time has elapsed. The experiments of the writers show that, independently of any obvious paralysis, certain changes in structure may be found in the motor cells of the anterior cornua of the cord, at an early stage of experimental diphtheria intoxication. And these observations merely confirm what has been found by others who have worked especially on the pathological changes in the cord. But, on the other hand, it is certain that a peripheral neuritis may occur both in human cases, when the disease is acquired naturally, and also in animals intoxicated for experiment. In some cases of diphtheritic paralysis a descending affection of the neuron occurs, commencing in the portion lying in the motor ganglia; and it is not unlikely that the peripheral affection in these cases is not so much caused by the action of the toxin itself as by nutritive changes following on the lesion of the central portion of the neuron. On the other hand, in the common palate paralysis of diphtheria, for instance, there is distinct evidence of a peripheral affection. [J. M. S.]

LA SEMAINE MEDICALE.

November 20, 1901.

How shall we determine whether an Acute Serofibrinous Pleurisy is, or is not, Tuberculous?

PROFESSOR DIEULAFOY.

Dieulafoy discusses at length the various methods of determination of the tuberculous nature of acute pleurisy. Of these he regards **cytodiagnosis** as the most valuable. The fluid of an acute pleurisy in the vigorous patient whose condition of health is otherwise excellent, is certainly tuberculous, if we are able to find an abundance lymphocytes with red cells and an absence of endothelial structures. The author regards the examination of the pleural fluid in a case of acute pleurisy as by all means as necessary as the examination of the sputum in a case of suspected pulmonary tuberculosis. Dieulafoy mentions that the examination of the fluid in a given case of pleurisy will frequently prove a surprise. A pleurisy which has been regarded as tuberculous because it occurs in the course of pulmonary tuberculosis may be proven to be a simple acute pleurisy, while another case which has been regarded as "grippal" because it has occurred in the course of grippe or during convalesence from this disease may prove to be tuberculous in nature. The fluid in a case of tuberculous pleurisy is formed in large amounts and returns quickly after being withdrawn. The danger from the effusion in such cases is not the dyspnea which arises, but the amount of the pleural fluid. Frequently the rapid accumulation occurs without symptoms and sudden death may terminate a case which has been regarded as progressing favorably. Routine examination in order to determine the quantity of the fluid present should be made frequently and tapping should be performed as often as necessary. Dieulafoy strikes a timely note in insisting upon the fact that after recovery from a case of tuberculous pleurisy the patient's predisposition to tuberculosis should be borne in mind and all preventive and precautionary measures should be urged to prevent the subsequent development of the disease. The value of an open-air life, the avoidance of over-exertion, and the value of proper nutritive food must be especially emphasized. The author advises the injection of 5 cg. of sodium cacodylate each day for fifteen days out of every month for several months. In addition he is in the habit of prescribing before meals 30 drops of a mixture composed of equal parts

of kola, coca and cinchona, freely diluted with water or wine. He regards the value of the treatment outlined as demonstrated absolutely. No patient who has suffered from tuberculous pleurisy should be regarded as free from the tuberculous taint for several years. [T. L. C.]

WIENER KLINISCHE WOCHENSCHRIFT.

November 28, 1901. (XIV Jahrgang, No. 48.)

1. Injuries of the Thoracic Duct in the Neck. FRANZ SCHOPF.
2. The Diagnosis and Treatment of Echinococcus Cysts of the Kidney. DOMINIK PUPOVAC.
3. The Pathology and Treatment of Invagination . ALEXANDER JENEY.
4. A Case of Mesenteric Cyst with Volvulus. VICTOR BLUM.
5. An Instrument for Surgical Suturing. LEOPOLD FREUND.
6. A Simple Means of Securing a Permanent Catheter. LUDWIG MOSZKOWICZ.

1.—**Injuries of the thoracic duct are rare.** As chyle does not clot, chylorrhea results. When the thoracic duct is obliterated by pressure, chyle reaches the venous capillaries, or stasis follows, with chylothorax and chylous ascites. Numerous anomalies of the thoracic duct are described and many cases of injury quoted. After a wound of the thoracic duct in the neck, a large quantity of chyle is lost and marasmus may follow, for the fat absorption is greatly decreased. The thoracic duct is easily wounded during operations upon the neck, such as removing enlarged glands. Tamponing is the best treatment. In the literature two cases of accidental injury to the thoracic duct in the neck are reported, while 19 cases occurred during operation. Only one of these cases ended fatally. Schopf reports a case, in a woman of 49, in whom the thoracic duct was injured while removing carcinomatous axillary glands. Permanent chylorrhea, double chylothorax, and death followed. [M. O]

2.—**Echinococcus cysts are seldom seen in the kidney,** and a correct diagnosis before operation is rare. Pupovac has operated upon two patients out of three cases seen in the last two years. One case was diagnosed correctly, another was diagnosed echinococcus cyst of the liver, and the third, pyonephrosis, which was found with an echinococcus cyst. The case-histories are given in full. All three recovered rapidly. After reviewing the literature, Pupovac describes another case of echinococcus cyst in the thigh, which he removed by operation, recovery resulting. [M. O.]

3.—**Invagination** may be enteric, colic, or ileocecal. In most cases the small intestine is invaginated into the large intestine. The invagination is always descending. While ileocecal invagination is most common in children. enteric invagination occurs commonly in adults. Of the four cases of invagination which follow in detail, two were ileocecal, one rectal, and one iliac. But one patient died. Colicky pains and vomiting occurred in all but the case of rectal invagination, in which tenesmus was the main symptom. The cause seems to be some paralysis of the bowel, and the condition is acute. If high irrigation does not afford relief, laparotomy is indicated immediately. [M. O.]

4.—**Cysts of the mesentery** are rarely correctly diagnosed. Blum reports a case in a girl of six, constipated for eight days. Beside abdominal pain, she had been vomiting for three days. A year previous she had a similar attack, and paroxysms of colic had occurred six times since. Her abdomen was greatly swollen, and a tumor was palpable in the right hypochondrium, near the umbilicus. Laparotomy showed a mesenteric cyst as large as one's fist, and volvulus of the small intestine. Death followed operation. The mesenteric glands were tubercular. The main points in the diagnosis of mesenteric cysts are repeated attacks of intestinal occlusion, and a soft, fluctuating, freely movable tumor near the umbilicus. Operation is always necessary. The main cause of mesenteric cysts is a specific degeneration of the mesenteric glands, causing serous cysts to form, with tubercular changes in the glandular system of the mesentery. Typhoid fever also seems a predisposing cause of mesenteric cysts. The literature is fully cited. [M. O.]

5.—Freund describes a **complicated needle-holder,** needle, and thread-containing apparatus for surgical suturing. The thread is kept in the handle of the needle-holder, and passes out into the needle. A photograph illustrates the description of the instrument. [M. O.]

6.—Moszkowicz describes a **simple method of holding a permanent catheter in position** by the use of rubber tubing. The description is illustrated by photographs. [M. O.]

LA PRESSE MEDICALE.

December 18, 1901. (No. 101).

1. Paroxysmal Mental Puerilism. PAUL GARNIER and ERNEST DUPRE.

1.—Transformation of personality may be by alienation, when a new personality exists with or in place of the old; by alternation, when two distinct personalities exist, one succeeding the other from time to time; or by reversion, when the personality which appears is but a reproduction of the subject at some earlier time. Garnier and Dupré report in full an interesting case, a woman of 23, of alcoholic ancestry, hysterical and alcoholic herself, with mental confusion, stupor, anxiety, etc. Her fixed idea was her children. Her manner of speaking, her choppy sentences, playing with games, balls, running about, etc., were typically childish. The attack was over in two weeks, and she became herself again. Suggestion was of great influence during and after the attack. She had already had several such attacks. Garnier and Dupré consider this an attack of what they term mental puerilism. [M. O.]

December 21, 1901. (No. 102).

1. Hysteria and Malaria. PROFESSOR BOINET.

1.—Boinet states that **malaria can provoke hysteria or aggravate it,** but cannot cause it. He reports in detail the case-histories of two patients with hysteria provoked by malaria, one in whom it was aggravated by malaria, and another in whom an hysterical tremor followed attacks of malaria. The diagnosis depends upon the enlarged spleen and the presence of the hematozoa. But hysteria alone may occur in attacks resembling malaria. Relapses are common, and the hysteria may persist long after the malaria. The prognosis is not grave, though the condition is often prolonged. The malaria should at first be treated with quinine, and sodium cacodylate should be given for the anemia. Bromides, hydrotherapy, rest, and isolation should be employed when necessary. [M. O.]

December 25, 1901. (No. 103).

1. Spleno-Hepatic Asystole. PAUL OULMONT and FELIX RAMOND.
2. Metchnikoff's Theory of Immunity in the Infectious Diseases. M. WEINBERG.
3. A Metal Clasp for Suturing Bone. A. JACOEL.

1.—Oulmont and Ramond report the case-histories of two patients aged 24 and 28 years respectively, with hypertrophied spleen and liver, and heart disease. In one the lesions were mitral and aortic insufficiency; in the other, mitral and tricuspid insufficiency due to myocarditis. Both patients died with grave anemia. The livers weighed nearly 2000 grams, the spleens about 1000 grams. The signs of **spleno-hepatic asystole** are hypertrophied spleen and liver, with a severe anemia which causes death. Hematoblasts

are increased in number, but leukocytes are normal. This condition in its later stages resembles Banti's disease.

[M. O.]

2.—Weinberg shows that **Metchnikoff's theory of the immunity in infectious diseases** is but Ehrlich's idea with new names, macrocytasis and microcytasis. The article is exceedingly technical. [M. O.]

3.—Jacoel describes a **metallic clasp for suturing bones**, especially useful in the treatment of fracture of the patella. The method and technique for its employment are described, with a photograph. [M. O.]

LA RIFORMA MEDICA.

No. 127, *May 31, 1901.* 17th Year.

Observations Upon The Cutaneous and Tendon Reflexes.

TEDESCHI.

Tedeschi contributes a series of valuable articles upon **the cutaneous and tendon reflexes in epileptics.** He tabulates the results of his examinations during the intervals, which can be briefly summarized by saying that in the majority of cases ankle clonus was absent, the knee reflexes were moderately or considerably exaggerated, and the cutaneous reflexes were absent or weak. In a few cases the toe phenomenon of Babinski was present on one side, and, although it is not stated, there seems to be reason to believe that there was disturbance of one of the pyramidal tracts. In 5 cases he was able to observe the reflexes during the attacks. The results did not seem to indicate that there was much alteration in the reflex activity. In 3 of these, however, Babinski's toe phenomenon was present on one side, apparently indicating some temporary derangement of the pyramidal tract. In 2 of these cases this phenomenon was absent during the interval, and in the 3rd its condition is not stated. [J. S.]

No. 128, *June 1, 1901.* (Continued.)

Tedeschi in continuation of his article, gives his conclusions upon the study of the reflexes in various conditions, which are as follows: First, in morbid processes in which there is a lesion of the pyramidal tracts there is generally exaggeration of the tendon reflexes and abolition and diminution of the cutaneous reflexes. Second, in some cases of chorea and in some cases of motor epilepsy and especially just after the attack, the antagonism between the tendon and cutaneous reflexes is very frequent. Third, in the differential diagnosis of organic and functional nervous disease the cutaneous reflexes are of considerable value. Fourth, the symptom of Babinski is frequently associated with lesion of the pyramidal tract. The condition of the extensor and flexor muscles of the toes is of considerable importance with regard to its production. A very valuable bibliography accompanies the paper. [J. S.]

No. 131. *June 5, 1901.*

Contribution to the Casuistry of Diplococcic Infection.

C. PAGANI.

The patient had nursed one of his brothers who was suffering from croupous pneumonia. Toward the end of his service he developed chills, fever, and sore throat. An examination showed redness of the pharynx, especially of the tonsils, both of which were enlarged and without exudate. Examination the next day showed no exanthema of the skin; the thoracic and abdominal organs were normal. The presence of the diplococcus of Fränkel was determined in the throat. As the patient's condition continued alarming an examination of the blood was made; as a result of careful staining numerous diplococci, resembling morphologically and in their staining peculiarities the diplococcus of Fränkel, were found. Later the patient developed an acute typical attack of croupous pneumonia followed by a purulent pleurisy, and in the pus of the latter the diplococcus was again discovered. It seems likely that the series of events were diplococcic angina, lobar pneumonia, metapneumonic empyema. He calls attention to the ease with which the diplococci are recognized in the blood, and the importance of such examinations in similar cases. [J. S.]

No. 133, *June 8, 1901.*

Sub-Diaphragmatic Abscess on the Left Side.

AREZZI FRANCESCO.

The patient was stabbed in the left anterior axillary line at the level of the umbilicus. It was apparently not a serious injury, and he suffered only from hemorrhage into the skin. The following day he was in good condition, suffering only from pain at the site of the wound. This continued for 6 or 7 days and the pain became somewhat more severe, radiating from the stab wound, which in the meantime had healed by primary union. There was also fever. The semilunar area of Traube was dull on percussion; the heart was dislocated upwards; the area of dulness gradually extended and became continuous with that of the spleen. The patient suffered from time to time from almost persistent hiccoughing and at the same time there was a profuse and frequent diarrhea. An exploratory puncture showed the presence of a brownish fluid, and an operation was therefore performed. An abscess was found beneath the diaphragm containing about 2 litres of pus. The diagnosis in this case was made partly on account of the persistent hiccoughing, the profuse diarrhea, the pain and dislocation of the heart, and the area of dulness. The interesting point is that stab wounds in the left side may cause sub-diaphragmatic abscess. [J. S.]

No. 134-135-136-137-138.

Toxic Amyloid Disease Occurring During the Anti-Diphtheritic Immunization of Horses; A Contribution to the pathology of Amyloid Disease.

CONSTANZO ZENONI.

After a thorough discussion of the literature Zenoni describes some changes he found in horses that he was treating for the purpose of producing anti-diphtheritic serum. These animals sometimes developed symptoms of a chronic intoxication and finally died, and their tissues showed a general amyloid degeneration. As in these cases the disease was produced by an injection of fluids that did not contain the living organism, and as there were no symptoms of chronic suppuration, the condition is an interesting contribution to the knowledge of amyloid disease. He gives detailed reports of autopsies upon the animals, including the microscopical examination of the tissues. The changes in general showed hemorrhages into various tissues, sometimes old, sometimes recent, embolism into various organs, particularly the kidneys, and pulmonary edema, in addition to the extensive amyloid alterations, and an acute anemia of all the tissues. He discusses the literature of this condition and endeavors to deduce some facts regarding the histogenesis of the substance. He regards it as a manifestation of perturbation of the functions of the cells representing precipitation or coagulation of the lymphatic fluids. It is an interesting point that in animals in whom this condition develops, the serum loses markedly in its anti-diphtheritic powers. There is probably a secretion of salts by a substance which acts upon the lymph. [J. S.]

No. 139-140-141.

The Compounds of Chlorine in the Urine.

AUGUSTINO BRUNO.

As Bregnone has called attention to the presence of chlorine in organic combination in the urine in the form of urochloralic acid, Bruno has undertaken to determine the relative proportions of organic and inorganic chlorine salts. For this purpose he made quantitative estimations in 10 cases, 3 of chronic gastric catarrh; 3 of carcinoma of the stomach; one normal individual; one case of diabetes; one of pernicious anemia, and one of Reichmann's disease. His results briefly stated are: That in all cases there is a certain amount of chlorine in the form of organic salts in the urine, and that this amount is some-

what diminished in quantity in patients suffering from indigestion, either as a result of insufficient food, or of disease of the stomach. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

December 23, 1901. (38 Jahrgang, No. 51).

1. The Symptomatology and Treatment of Cervical Ribs. M. BORCHARDT.
2. Sanatorium Treatment for Surgical Tuberculosis. SPRENGEL.
3. The Symptomatology and Treatment of Dilatation of the Lung, a Vagus Neurosis. G. ZUELZER.
4. A Case of Hematometra in the Right Horn of a Uterus Duplex with Hematosalpinx. ABEL.

1.—In early fetal life rib elements exist along the entire vertebral column except the sacrum. As a rule only the thoracic ribs develop, yet **rudiments of ribs are sometimes found upon the sixth and seventh cervical vertebrae.** Out of 139 cases reported in 1895, but 28 were diagnosed during life, while but half of these showed symptoms, the others being discovered accidentally. The symptoms consist of the peculiar formation of the base of the neck, decided disturbances of the circulation, such as thrombosis or aneurysm of the subclavian artery or its branches, and nervous disturbances due to pressure upon the brachial plexus. The condition is often first noticed after an acute infectious disease. The prognosis is favorable, the symptoms gradually subsiding under rest, hot baths, compression, electricity, etc. But surgical intervention may become necessary on account of the pain. The case-histories of four patients with cervical ribs follow, operation being performed upon two of them, with removal of the rudimentary ribs. Borchardt concludes that in the majority of cases in which cervical ribs occur, they cause no symptoms. Operation is only indicated when a large subclavian aneurysm causes trouble, when pressure symptoms in the brachial plexus show no improvement after some months of electrical treatment, and when, though recurrent paralysis and sensory disturbances point to syringomyelia, the plexus symptoms are so serious as to demand surgical interference. [M. O.]

2.—**Surgical tuberculosis** in adults is generally accompanied by phthisis, and does well in sanatoria. But in children, in whom the surgical condition should often be curable, the results in sanatoria are very poor. On the contrary, cases of surgical tuberculosis treated surgically in hospitals show a much greater percentage of recoveries. Naturally the best results are obtained when surgical treatment can be carried out together with the advantages of climate, hygiene, etc. Especially will the results be good under conservative surgical treatment. Mild cases of tuberculosis of the glands, long bones, knee-joint, and ankle-joint in children, and of the ribs, sternum, face, and skull at all ages will recover as a rule upon hospital treatment; closed spondylitis, hip disease in childhood, and joint disease in the upper extremity have a better chance of being cured in sanatoria than in hospitals; cases of bone or joint tuberculosis in old people, of open bone or joint tuberculosis in young people, and of genital tuberculosis need operations in hospitals for improvement; while open spondylitis, hip disease in persons over 25 years, and the immense majority of cases of multiple tuberculosis are incurable. While these are general rules, numerous exceptions to them will necessarily be found. The duration of the treatment should only be limited by the condition of the patient. Sanatoria which take surgical cases should have competent surgeons, and such sanatoria should be built for children in Germany, as is so well done in France. [M. O.]

3.—**Dilatation of the lung** occurs with bronchial asthma as a result of a vagus neurosis. A decrease in the pulse rate and a small area of heart dulness accompany the condition. Zuelzer has seen nine cases of vagus neurosis in the past year, with thoracic pain of varying severity, tenderness over the vagus in the neck, some dyspnea, palpitation and an increased area of pulmonary resonance, but no rales. Atropine cures the condition rapidly, subcutaneously injected in 1 mg. doses daily for 10 days. The condition, while due to some irritation of the vagus, is accompanied by a chronic spasm of the bronchial muscles. Zuelzer adds that atropine has a good effect, even when tachycardia, and not bradycardia, exists. [M. O.]

4.—Abel reports a case of **hematometra in the right horn of a uterus duplex,** with hematosalpinx, occurring in a girl of 26, who had had pain and hemorrhage every three weeks since the age of 18, when menstruation began. The diagnosis of a uterus duplex was made and the diseased half, with the hematometra and hematosalpinx, was removed per vagina. The patient recovered and has menstruated normally since. [M. O.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

November 28, 1901.

1. The Agglutination of Tubercle Bacilli and the Importance of this Agglutination. R. KOCH.
2. The Bacteriologic Substances Contained in Normal Goats' Serum. R. PFEIFFER and E. FRIEDBERGER.
3. Medicine and Sea Travel (Continued). H. CURSCHMANN.
4. The Practical Results of the Newer Investigation of Malaria and Some Further Objects of this Investigation. F. PLEHN.
5. The Coincident Therapeutic Use of Mercury and the Iodine Preparations. (Conclusion). F. LESSER.

1.—Koch, because of the difficulty in making cultures such as those recommended by Arloing and Courmont, and because of the unsatisfactory results obtained through using those cultures, has **adopted another method.** He takes a definite amount of tubercle bacilli, filtered off from any culture of those organisms, rubs it up with 200 parts of a very weak (1/50 normal) soda solution and then centrifugates, pours off the fluid above the bacilli, adds weak acid until only slightly alkaline, and then dilutes with weak carbolic acid and normal salt solution, the dilution being carried to about 1:3000. He then used this as a test fluid, and states that one **can get marked agglutination with this fluid.** He has found normal agglutination in a dilution of 1:10 in rabbits; goats give scarcely any reaction; two asses did not react; two normal dogs did not react at 1:25; two normal cows gave no reaction at 1:25; horses gave a reaction regularly at from 1:25 to 1:50. It was very **easy to increase the agglutinating power of the blood of various animals by injecting them with dead tubercle bacilli or with cultures of living bacilli.** The goats, for instance, gave a reaction as high as 1:1000, 1:1500, and in one instance 1:3500, after such treatment. The reaction seems to be, in some considerable measure, an evidence of the degree of immunity possessed by the animal, and the **blood of animals made immune in this way was used in the treatment of tuberculosis in human beings, but without any success, as yet.** Koch attributes this lack of success to the fact that the serum was not sufficiently active in immunizing power. He has investigated the reaction in human beings, and was **unable to find any striking difference between tuberculous and non-tuberculous persons; and he does not think that the reaction has or will have any practical diagnostic value.** He has, however, made further attempts for immunizing human beings by the use of injections of dead tubercle bacilli. In his previous methods he divided the bacilli into the soluble and insoluble portions, and used the insoluble portion, because it gave the weaker reaction; but he now recommends the use of the whole mass, prepared first by being rubbed up into a fine powder. The preparation of the fluid is given in detail. He uses 0.0025 mgm. of the preparation at first, and increases the dose rapidly. He found that by using this preparation **in 74 cases he was able, in all instances, to increase the agglutinating power;** and in some instances to increase it from 1:10 up to 1:300. He also **claims decided clinical improvement in the cases.** [D. L. E.]

2.—The authors present experiments to show that the intermediate body in the normal goat serum which is active in cholera, is different from that which is active in typhoid fever. This and other observations lead them to the conclusion that there are **numerous different bacteriologic bodies in normal serum.** They do not believe that each amboceptor is absolutely specific in each disease, and this would mean that there must be innumerable different substances in the blood; but they do believe that there is a decided difference in many of these bacteriologic substances,

and that the differences can be definitely determined. [D. L. E.]

3.—Curschmann calls attention to the **great mortality from tuberculosis in sailors**, and insists upon the importance of the fact that sailors are brought in contact with each other throughout the greater part of the time of their voyage, and that this explains the ready spread of the disease and the frequency of it on the sea. Bad local conditions and bad hygienic arrangements are sufficient to overcome the most satisfactory general and personal regulations concerning hygiene. The author believes that there has not, as yet, been sufficient attention directed to the great danger from tuberculosis among seafaring people, and calls attention to the fact that in the last Tuberculosis Congress at London there was not one word said about consumption in sailors. He believes that the ships should be manned only by persons that are evidently free from tuberculosis, and with those that have no especial tendency to consumption; and that there **should also be inspection of the steerage passengers for tuberculosis**, so as to exclude those, at least, that are severely ill with the disease, or else to isolate them. Voyages on ships, for the purpose of treating tuberculosis, should be forbidden; and sailors should be instructed in the methods of prophylaxis against that disease. The author then refers to the frequent occurrence of **hyperthermia, heat exhaustion and heat-stroke** in the workers about the furnaces of ships. These effects of the seafaring life can, to a large extent, be prevented by proper mechanical arrangements. Curschmann then refers to the occurrence of other infectious diseases on board ship, particularly emphasizing the fact that yellow fever is more closely connected with sea travel than any other disease, and that **almost 25 per cent. of the deaths in sailors are due to yellow fever.** He believes that, if the cases which occur in persons after landing are also reckoned, the deaths would amount to about 42 per cent. This disease is found almost solely along the coast and it spreads almost entirely through sea travel. The author directs attention to the danger of the spread of the disease into Europe from the Brazilian coast. [D. L. E.]

4.—Plehn, in referring to **blackwater fever, states his belief that quinine should be used in patients with this disease, and should not be given sparingly.** If the patient has a tendency to blackwater fever, small doses of quinine are quite as likely to produce an outbreak as large ones; and quinine must be used in the treatment of malaria, in Europeans, at any rate, and the danger of producing blackwater fever must be taken in order to control the more important disease. In referring to the mosquito theory, the author calls attention to the danger that always exists in the small stations, missions, etc., because in these places laborers are thrown into contact with others, and the Africans are frequent carriers of malaria, and thus give a ready opportunity for the spread of the disease among the Europeans. On expeditions, the greatest danger of malaria is at the time of resting and camping, because the latter are likely to be made in spots which are often already partially occupied by the huts of the natives, and there is then constant danger of carrying the disease from natives to members of the expedition. He does not believe that there is much danger of infection on board ships that are lying in port, but thinks that the frequency of cases in sailors could be largely reduced by requiring them to be on board ship before nightfall and by preventing their going about with the natives. He speaks of some observations of his which show the frequency of anopheles in a region terribly infected with malaria, while they were absent in a nearby region where malaria was not common. He insists that **Europeans should have dwellings at some distance from those of the natives**, and that this should be particularly insisted upon in the newer settlements; it would be difficult to carry it out in the older ones, because of the expense, but it could be done in future settlements. He also recommends the use of mosquito nets in the houses, and of such nets when persons are likely to be exposed to the bites of mosquitoes. In parts where malaria is rife, there should be regulations demanding that the neighborhood of the piers should be free frem dwelling houses, and that the sailors should not be allowed to be on land in the evening. This would decidedly reduce the number of cases in seafaring people. [D. L. E.]

5.—Lesser refers to the numerous possibilities of danger from irritation, etc., in the use of mercury and iodine preparations together, and states that he has found that injections of salicylate of mercury, thymol-acetate of mercury, and oleum-cinereum, are not influenced by the coincident presence of potassium iodide in the tissues. Hence, he recommends the salts mentioned in using mercury with iodine. [D. L. E.]

December 5, 1901.

1. A New Valerian Preparation. H. KRONKA and E. LEIBRECHT.
2. An Analysis of Disturbances of Movement. A. BICKEL.
3. Medicine and Sea Travel. H. CURSCHMANN.
4. On the Practical Results of the Newer Studies of Malaria, and Some Further Problems Connected with the Same. (Conclusion.) F. PLEHN.
5. Concerning the Diaphragm. LEVY-DORN.

1.—Owing to the unsatisfactory results obtained by the use of practically all of the valerian preparations, the authors have made various experiments in the attempt to produce a new and more satisfactory preparation, for clinical use. They finally settled upon the diethylamid, which is a clear, colorless fluid, of a peculiar odor and of a burning taste. They describe the results obtained in animals with this preparation; these are quite similar to those obtained by the use of pure, fresh valerian preparations. They then state that the new preparation has been tested in a number of hospitals in Breslau and Berlin, and in private practice, by a series of practitioners. It is given in gelatin capsules, containing about 4 grains of the substance, together with the same amount of sheep tallow. At first olive oil was used instead of the tallow; but it proved to be unsatisfactory, often causing marked burning in the esophagus and stomach. More than 100 patients have been treated with this substance. The capsules were always taken without trouble, although there was sometimes belching of gas with a rather unpleasant odor. No collateral disturbances were observed, even when large doses were given. Good results were obtained in hysteria, neurasthenia, hypochondriasis, traumatic neurosis, hemicrania, and neuralgias such as sciatica; also in menstrual disturbances, in the disturbances of the climacteric and of pregnancy. The authors believe that this preparation is useful in such diseases, and that it shows the properties of good preparations of fresh valerian. [D. L. E.]

3.—Curschmann concludes his interesting and very suggestive article by first finishing his remarks concerning yellow fever and again insisting upon the danger of its transmission from South America to Europe. He speaks of its localization along the coasts. He then mentions dengue and beriberi, the latter of which may cause very severe epidemics on board ships and may be carried from port to port. It is not so dependent upon a warm climate as are yellow fever and dengue. The author refers to the fact that scurvy may be confused with beriberi; he then speaks of typhoid fever and cholera in their relation to sea travel, particularly insisting upon the danger of the bilge and ballast water in the transmission of both these diseases. The danger from typhoid fever is now by no means so great as it was before proper hygienic measures were taken against this disease, but in the French navy, between 1891 and 1895, 147 of every 1000 deaths were due to typhoid fever. The greatest danger now, in relation both to typhoid fever and to cholera, is from the small steamers and sailing vessels. In closing, Curschmann insists upon the fact that seaports are in much greater danger from infectious disease than are cities in the interior, and thinks that there cannot be too careful quarantine regulations. He strongly advises that there should be courses given in the hygiene of seaports and ships, and in tropical medicine; and thinks that these courses should be offered everywhere in civilized lands, in order that properly trained persons may be on hand in sufficient numbers. [D. L. E.]

4.—Plehn concludes his article with the statement that his brother found that in prophylaxis half-gram doses of quinine every five days have the best effect. He himself thinks that the use of quinine for prophylaxis should be regulated according to the purpose in view; that is, according to whether the prophylaxis is intended to be only temporary or permanent. If sailors and persons in similar occupations, who are tem-

porarily exposed to malaria, will take a gram of quinine immediately after exposure and an equal dose every week, he believes that the disease can be practically wiped out in all such occupations. He is much less optimistic concerning quinine prophylaxis in persons who have to live constantly in malarial regions. It is very difficult indeed to get the great majority of whites, and impossible to get the great majority of negroes, to take the drug constantly. He recommends its use, but does not find that he can persuade people to use it in this way. He believes, however, that it will be possible by the use of quinine to develop in affected individuals a distinct immunity to malaria—an immunity which is analogous to that seen in native African children, who are often found infected with malaria without showing any signs of the disease other than, perhaps, enlargement of the spleen and the presence of the parasites in the blood; that is, they have a definite degree of immunity from malaria. He believes that by using quinine, as his brother recommends, in half-gram doses every five days, it will be possible to create immunity from malaria and to avoid all severe complications, such as blackwater fever. In this way the effect is produced much more satisfactorily than with the large doses of quinine previously employed, as the latter do not lessen the virulence of the organism, but actually kill them and hence do not produce immunity. [D. L. E.]

5.—Levy-Dorn directs attention to the fact that the study of position and movements of the diaphragm has not been satisfactory by any method. He thinks that the X-rays provide a much more satisfactory method than any other. The two sides can be clearly observed; the right under natural circumstances, and the left when the stomach is filled with air. Of course, the results obtained depend upon the position of the tube as related to the diaphragm. If the tube is above the diaphragm, the anterior portion of the latter will be seen; while if the tube is below, its lower portion will be visible. It is only when the tube is directly on a level with the top of the diaphragm that its actual position will be indicated. The author first gives schematic charts of the position of the diaphragm in various stages of inspiration and expiration, and calls attention to the fact that the true movement of that membrane is not indicated by the difference between two points marked on the chest at the times of greatest excursion, since these points vary very greatly, according to the position of the chest wall. He has invented an instrument which will give the true excursion of the diaphragm, and gives a description of this instrument. [D. L. E.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

(No. 48).

1. Diagnostic Judgment upon the Inflammatory Processes Arising from the Appendix and Cecum. H. CURSCHMANN.
2. Contribution to the Surgery of the Kidneys. H. LINDNER.
3. The Effect of Ovarian Preparations upon the Symptoms Occurring in Bilaterally Castrated Women. A. FLOCKEMANN.
4. Blood Poisoning in Amputation. H. WOLFF.
5. Epidemic Dysentery in the Fetus. MARCKWALD.
6. Cancer and Malaria. KRUSE.
7. Tetanus After Injections of Gelatine. F. KUHN.
8. A Case of Atropine Poisoning. M. SELO.
9. Needle Forceps: A Simple Instrument for Introducing Sutures, Transfixing Organs, and Ligating Arteries. E. KURZ.
10. The Theory of the Anti Bodies: II. Bacteriolysis and Hematolysis. M. GRUBER.
11. Nature and Principles of the German Workman's Insurance. GEFFCKEN.

1.—Curschmann discusses the difficult subject of **pus formation in appendicitis.** In the course of 2½ years he has had the opportunity of carefully examining 60 cases of this disease, and believes that he has reached certain positive results. Accepting 8- to 10,000 leukocytes in the cubic millimeter as normal for adults, he found that in the great majority of all cases from the beginning of the process, or at least from the beginning of the formation of the exudate, an increase in the number of leukocytes could be recognized. If during the first days of the attack the number of leukocytes remains normal or shows only a transitory increase, it may be concluded that the exudate is slight, is not purulent, and that the course of the disease will be mild and brief. He reports 3 illustrative cases. If in the very beginning the leukocytosis is high and then rapidly decreases, the prognosis is still good, and he reports 3 illustrative cases of this condition. In all, however, the leukocytes did not exceed 20,000. When this number is exceeded, abscess formation is almost invariably present, and if the number of leukocytes varies between 25- and 30,000 surgical intervention is practically always indicated. Often in the latter cases the course is apparently mild and the fever is slight, and the differential diagnosis between this and the benign forms can only be made by the investigation of the blood. He reports 2 cases in which high leukocytic counts were considered an indication for operation, and in both of which pus was found. And even in those cases in which the disease had lasted for some time before the patient came under observation and the course had been apparently chronic or mild, an extreme degree of leukocytosis was an indication for operation. [J. S.]

2.—Lindner reports the following extraordinary case: A man of 62 with a large tumor of the right kidney, that had been diagnosed as carcinoma, was operated upon, and the tumor found to be readily removable. When the tumor was removed there suddenly occurred a terrific hemorrhage from the vena cava. The 2 ends were, however, immediately grasped with the forceps and ligated so that they remained protruding from the wound as 2 huge blue sausage-like structures that appeared with every pulsation of the heart. Unfortunately air had entered the central stump and the patient died on the table, although severe anemia had not occurred. Subsequent examination showed that the vein was extensively infiltrated by the carcinomatous growth, and had therefore ruptured when the tumor was removed. He collects from the literature a number of cases in which the **vena cava was injured by operation,** and in some of which it was rapidly controlled by suture and the hemorrhage overcome by ligatures. He also reports the case of a servant, 19 years of age, who had fallen from a ladder, a distance of about one yard, to the floor and struck upon the right side. Immediately there was pain in the left side, and the patient was brought to the hospital. She was anemic; there was dulness in the left flank without fluctuation, and moderate fever. As the condition grew gradually worse, operation was decided upon, and the left kidney found surrounded by blood. The wound was packed, and later a urinary, and still later a fecal fistula developed in it. The patient finally recovered completely. [J. S.]

3.—Flockemann gives a brief report of the effect of **ovarian preparations in 135 cases of bilateral ovariotomy.** The most important symptoms are the vasomotor disturbances, such as flashes of heat, congestion in the head, etc. Sometimes there is depression, but the true cachexia does not occur. He used ovarian tablets prepared by Merck, and reports 6 cases in which the symptoms were controlled; 4 in which they were partially controlled; 9 in which they were very slightly relieved; and 9 in which they were not benefited at all. In none of the cases, however, were any disagreeable symptoms recognized that could be ascribed to the medication, and therefore Flockemann believes that their use is indicated. [J. S.]

4.—Wolff replies to Doerffler's article upon **amputation in blood poisoning.** Doerffler has maintained that whenever general symptoms arise amputation can no longer be of benefit, and may in fact contribute to the death of the patient. Wolff, on the other hand, believes that in certain cases amputation is the only resource by which life may be saved. In progressive suppuration, malignant or fulminant gangrene he believes amputation should be performed in the following conditions: When in spite of previous thorough opening of the infected area the phlegmonous condition continues to progress and the general symptoms indicate that the organism is likely to succumb; or if the phlegmonous infiltration has ceased to progress, but the general symptoms indicate that in spite of the best obtainable drainage the infectious products are being absorbed; or if a long persisting suppuration, in spite of all measures, continues to have periods of exacerbation, and the general

condition grows worse and worse; or finally if the function of the extremity, either from severe primary injury, or subsequent destructive processes, indicates that the value of the limb will be slight, and its restoration will occupy a very long period of time. He believes that the amount of shock produced by the operation is slight, and is greatly over-valued by many persons. He reports a number of illustrative cases including those of phlegmonous infiltration, in one of which there was a general streptococcic bacteremia, and yet the patient recovered rapidly after the operation. In another case staphylococci were found in the general circulation as a result of osteomyelitis, and the patient also recovered. It is interesting to note that in several of these cases cultures showed the presence of the bacteria in the blood for considerable periods of time after the amputation. Wolff believes, therefore, that amputation is not to be discarded as a curative measure in such cases.

[J. S.]

5.—Marckwald reports an interesting case of a woman brought to a hospital suffering from **epidemic dysentery.** A month later she was delivered of a child which lived only 2 hours. At the autopsy the child showed a moderate quantity of turbid fluid in the abdominal cavity. Cultures from the heart blood gave a typical growth of Kruse's dysenteric bacillus, and the same microorganism was detected in the feces of the mother. Microscopical examination of the intestinal tract failed to show any ulceration, although there was some swelling of the mucous membrane. There was round cell infiltration, and hyperplasia of the lymphoid follicles. In the exudate numerous bacilli could be detected. The case apparently represents transmission of dysentery from the mother to the fetus. [J. S.]

6.—Kruse has studied the question of the **antagonistic relation** supposed to exist **between cancer and malaria.** In those countries in which malaria is rare there is sometimes a slight increase in the proportion of deaths from cancer, but in Italy where malaria is very common the proportion of deaths from malignant tumors is still quite high. The Italian statistics seem to show that in those provinces in which malaria is most common malignant tumors are least common. These statistics, however, are shown to be quite valueless when a careful study is made of the distribution of cancer and malaria in small areas. And when other countries are taken into consideration it appears that the antagonistic relation cannot exist at all. A careful study of the Italian statistics with reference to the size of the individual shows that the development of malignant tumors bears a close relation to the size of the body, the larger races having a much higher mortality from these causes. It appears probable that there is some congenital relative immunity in the tropical races against cancer. [J. S.]

7.—Kuhn considers that we cannot be too careful in **injecting** a substance of such doubtful preparation as **commercial gelatine.** He employed it in the case of a boy 17 years of age who was a hemophilic and suffered from adenoid vegetations in the post-pharyngeal region. When these were removed by operation a severe persistent hemorrhage occurred for which 50 cc. of a 2% solution of gelatine were injected. This injection caused local gangrene and on the 5th day trismus appeared followed by the characteristic symptoms of tetanus, and the patient died before tetanus serum could be injected. Animals were injected with heart's blood, with cultures from the wound, and with fragments of tissue from the wound. The last group developed tetanus and died, proving that the disease was due to infection at the site of injection. It therefore seems important that for the purpose of arresting hemorrhage, only gelatine that has been prepared from the cartilage of healthy animals, should be used. [J. S.]

8.—Selo reports the case of a boy of 11, who had taken .05 grms. of **sulphate of atropine.** Three hours later when first seen he was maniacal, the pupils were dilated ad maximum, and any attempt to test them with a strong light increased the maniacal condition. As an attempt to wash out the stomach failed, he was given some vinegar water and a clyster containing .5 grms of chloral hydrate and he slept for about 2 hours, after which the maniacal condition returned, but the patient gradually recovered. Ten days later he had headache, dryness in the throat and disturbance of vision. [J. S.]

9.—Kurz has devised an ingenious instrument which consists essentially of a pair of **forceps,** one blade of which carries a short bent needle, and the other blade is so fashioned as to grasp firmly the end of the needle when it has been pushed through the tissue. This enables sutures to be placed exactly where the operator wishes in the most remote and difficult situations. He has employed it for 4 years and finds it entirely satisfactory. It is particularly valuable in the vaginal extirpation of carcinomatous uteri.

[J. S.]

REVUE DE MEDECINE.

October, 1901. (21 me. Année, No. 10).

1. A Study of the Hereditary Anomalies of the Jaws and the Teeth. V. GALIPPE.
2. A Study of Primary Carcinoma of the Bile Ducts: Common Bile Duct, Hepatic Duct and Cystic Duct. DEVIC and L. GALLAVARDIN.
3. A Study of Some Rare Complications of Dysentery. P. REMLINGER.
4. Hysterical Stammering. G. GUILLAIN.

1.—Will be abstracted when finished.

2.—The monograph by Devic and Gallavardin was begun in the July number, was continued in the August number, and is finished in the current number. It is always difficult to determine the nature and the origin of chronic icterus. When, by exclusion, a given case is decided to be one of obstructive jaundice, the question arises: Is this obstruction due to gallstones or to carcinoma? Even when the diagnosis of carcinoma has been made, further studies must be undertaken to determine the seat of the new growth, which may be in the lymph-nodes, in the head of the pancreas, in the ampulla of Vater or in the bile ducts. The wisdom of the adoption of surgical procedures depends upon the differential diagnosis of the location of the growth. The authors publish the history of a case of carcinoma of the inferior portion of the common bile duct and that of a case of carcinoma at the point of union of the hepatic and the cystic ducts. The study concerns **primary carcinomata of the extrahepatic bile channels,** the cystic duct, the hepatic duct and the common bile duct. From an exhaustive review of the literature and from personal experience the authors draw the following conclusions: (1) Primary carcinoma of the biliary canals is not a very rare affection, as the 55 cases referred to indicate. (2) The etiologic factors presiding over the development of this condition are not the same as those responsible for carcinoma of the gall bladder. Whilst in the latter disease, women are attacked 4 or 5 times more frequently than men, in the former disease men are greater sufferers than women, (30 men to 16 women). Biliary lithiasis is only mentioned in 1/5 of the cases of primary carcinoma of the bile ducts, while it is much more frequent in carcinoma of the gall bladder. The disease is of greatest frequency between the ages of 50 and 70 years. (3) The primary tumor may develop at any point in the excretory tract for the bile. Out of 53 cases, this tumor was situated on the common bile duct 22 times, 15 times in the neighborhood of the point of union of the cystic and hepatic ducts, 16 times on the hepatic duct and its branches. The macroscopic appearance of the carcinoma is quite variable; it makes a voluminous tumor in rare instances, but usually takes the form of a neoplastic collar or of a small tumor, projecting into the lumen of the canal; more rarely, that of a thick and rigid tube, and, exceptionally, that of a villous carcinoma. The tumor may cause an absolute physiologic obstruction to the flow of bile, or it may not encroach upon the anatomic permeability of the duct. In one case out of 5 it presents a tendency to generalization and in such cases the liver appears to be the exclusive seat of the visceral generalization. (4) The study of the condition of the gall-bladder in the course of primary carcinoma of the bile ducts presents a peculiar interest: for there is a carcinomatous obstruction to the bile path that does not always obey the law of Courvoisier-Terrier. From this viewpoint two parts of the bile tract may be distinguished: a supraduodenal portion, comprising the entire common bile duct, and a subhepatic portion, comprising the cystic and the hepatic ducts and the branches of the latter. Now, if dilation of the gall bladder is the absolute rule in carcinoma of the supraduodenal portion

(17 out of 18 cases) nondilation is the rule in carcinoma of the subhepatic portion. This nondilation is noted in ½ the cases in which the carcinoma affects the union of the hepatic and cystic ducts and in the majority of cases of carcinoma of the hepatic duct and its branches. (5) The liver is very often hypertrophied. This increase of volume appears more frequently than in cases of carcinoma of the head of the pancreas. The spleen, also, may become palpable. (6) Primary carcinoma of the bile passages is essentially characterized by a chronic icterus of insidious onset, of progressive increase. It may be or it may not be accompanied by digestive disturbances or by pains. The symptoms of cachexia and of progressive weakness are rapidly added to the jaundice and the disease ends in death within six months. The abdominal syndrome developed by physical examination is neither as typical nor as constant as in carcinoma of the head of the pancreas. The primary tumor has never been felt by abdominal palpation. (7) From the signs furnished by physical examination of the abdomen several clinical forms of the disease may be distinguished. (a) The common form with hypertrophy of the liver and enlarged gall bladder, in which are found nearly all the cases of carcinoma of the supraduodenal segment and some of those of carcinoma of the subhepatic segment; (b) an atypical form with hypertrophy of the liver or with normal liver and atrophy of the gall bladder, in which are found the majority of the cases of carcinoma of the subhepatic segment, notably of the hepatic duct; (c) a form simulating hypertrophic biliary cirrhosis, on account of the splenohepatic hypertrophy; (d) an anicteric form, of which a single case has been observed. (8) The diagnosis of primary carcinoma of the bile ducts from hypertrophic biliary cirrhosis will ordinarily be easy. Between this condition and obstruction of the common bile duct by a gall stone the differentiation is difficult, but usually possible. As to the differential diagnosis between this affection and carcinoma of the ampulla of Vater, a neoplasm of the head of the pancreas or compression by degenerated lymph-nodes, there are no precise signs upon which to base an opinion, at least when the carcinoma affects the supraduodenal portion of the bile tracts. One will be authorized, however, to consider the possibility of carcinoma of the subhepatic segment when, in the course of a carcinomatous obstruction of the bile paths, dilation of the gall bladder does not occur. (9) The treatment ought to be surgical. Up to the present time, however, only palliative interventions have been attempted and curative operations in relation to this disease are only theoretical. [J. M. S.]

3.—Remlinger contributes a paper on **the rarer complications of dysentery.** In Tunis, during the years 1897, 1898, 1899, he treated 281 cases of this disease. He opens the paper by stating that he has never been able to isolate any other organisms than the harmless varieties of the colon group, to which he denies all pathologic role. He has never found amebæ. One patient, a soldier, aged 24 years, suffered from dysentery and, during the course of the disease, developed edema with joint and muscle pains in the lower extremities, edema of the upper extremities and pain in the joints of the neck. Dyspnea was marked, the urine contained albumin; and there was diarrhea. The patient died and at autopsy the lesions of acute epithelial nephritis with intense glomerulitis were found. This case demonstrates that dysentery, like all infectious diseases, may be the cause of an acute nephritis. The series of cases studied furnishes 2 instances of anasarca of dysenteric origin. One patient was a soldier, aged 26 years, who contracted dysentery but who neglected himself. About 4 months after the beginning of the attack his feet began to swell and the day following the appearance of this symptom his entire body was found to be edematous. The anasarca disappeared in about 5 weeks, to return again soon after the patient left the hospital. The urine did not contain albumin. Under treatment by sodium iodide, milk diet and rest in bed the patient passed 8 quarts of urine in 24 hours and the edema rapidly disappeared. The kidney eliminated methylene blue very irregularly and the elimination was prolonged. The patient recovered. The other patient was also a soldier, 24 years old. In this patient the edema appeared first about 20 days after the beginning of the attack of dysentery. This edema progressed until it became generalized anasarca. There were no signs of nephritis. This patient received 2 mg. of crystalized digitaline daily, which produced polyuria and this was followed, in 3 days, by disappearance of the edema. Elimination of methylene blue in this patient was delayed and prolonged. The patient recovered. The author supposes that the toxins of the unknown microorganisms of dysentery produce renal lesions that determine a defect of the elimination of methylene blue. In a soldier, aged 22 years, an attack of dysentery of medium intensity was followed, during convalescence, by a dysenteric arthritis involving the right knee. The knee joint was punctured and 200 cc. of serum were withdrawn. Following this operation peculiar nervous symptoms developed. The patient assumed a position of opisthotonous, there were large movements with the arms and legs, the face made varied grimaces and there were movements of diduction of the jaws. The patient died and at autopsy the joint lesion was shown to be purely synovial. The nervous symptoms were probably due to cerebral anemia, which in turn was produced by the small size of the cerebral vessels. The author reports 2 cases of epididymitis which developed during convalescence from dysentery. One patient was a soldier, 29 years of age, who had never suffered from venereal disease. He had a typical attack of dysentery which, after a duration of about 25 days, was complicated by a well-marked epididymitis of the left side. The second patient was also a soldier, 24 years of age. There was no venereal history in this patient. The attack of epididymitis followed dysentery, which was contracted in 1896. There was some question as to whether the inflammation of the testicle was due to the attack of dysentery or whether it was tuberculous. A native soldier who suffered from dysentery had an attack of phlebitis of the veins of both inferior extremities. A soldier, aged 22 years, who was suffering from dysentery, presented chills, fever and sweating. The blood contained neither plasmodium malariæ nor pigmented leukocytes. There were sharp pains in the region of the spleen, and, later, generalized abdominal pain with hiccough and vomiting of a greenish material, indicating peritonitis, from which the patient died. At autopsy, the peritoneum was found to be the seat of a generalized, purulent inflammation due to the rupture of an abscess of the spleen. [J. M. S.]

4.—Guillain reports the case of a man, aged 48 years, who had complained of difficulty of expressing himself since 1896. He had been in the army and after the expiration of his term of service he returned to his trade of painter. He had had one attack of lead colic and one attack of paralysis of the extensor muscles of the fingers. Following the death of his wife, he became nervous and emotional. Several years later he had a fall in a badly lighted street. 48 hours after which he was paralyzed in all 4 extremities and found difficulty in expressing himself correctly. This paralysis disappeared suddenly, but the disorder of speech persisted. The latter disorder was polymorphous, and resembled stuttering. There were, in addition to disorders of speech of the dysarthric order, intermittent disorders in the grammatical construction of phrases. Words were forgotten in repeating sentences, in writing as well as in spontaneous speech. The tongue could not be protruded from the mouth, could not be moved from side to side, and, when an attempt was made to protrude it, it became the seat of a persistent spasm. The condition was considered to be an example of hysterical stammering.

[J. M. S.]

An Abortive Case of Addison's Disease.—Jacquet and Tremolieres report a case of phthisis in a man of 32 with paroxysmal gastroenteralgia, possibly due to a gastric ulcer, a cavity in the right apex, pleural symphysis, probable localized epigastric tuberculous peritonitis, marked asthenia, general cutaneous and neuro-muscular hyperesthesia, etc., in whom hot applications of mustard plasters caused pigmentation. These applications kept up a week caused marked pigmentation upon the abdominal wall, the right hip, the shoulders, and the calves. Slight pigmentation appeared spontaneously upon the patient's forehead before these experiments were tried. The same experiments produced pigmentation upon a patient with Pott's disease in whom the autopsy showed tuberculosis of the suprarenal capsules. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, July 25, 1901, No. 26.) M. O.

Special Article.

LOEB AND THE NEW BIOLOGY.

Dr. Jacques Loeb, Professor of Physiology in the Chicago University, is now attracting the attention not only of the world of science, but, through the magazines and newspapers, of the world at large. Whatever may be the final decision regarding him, it must be admitted that he has given a new impetus to biological studies. It is difficult within the limits of a brief article to even sketch his work and his views. A few features are however salient: his investigations into animal tropisms, his application of Faraday's theory of ions to the explanation of life phenomena, and his theory of associative memories.

As shown by his studies on lower forms of life, he believes that the responses to stimuli are not conditioned by some special action of the nervous system, but are due to chemical and physical processes common to all protoplasm. As the leaf turns to the sun because of its heliotropism, so does the moth to the flame. As the roots of plants turn downward in response to geotropic irritability, so the Cerianthus, placed on its head, rights itself. This animal, having turned its foot earthward because of its geotropism, stays in this position a relatively short time when suspended, but when it burrows in the sand it remains indefinitely because of another property, that of stereotropism or contact irritability. When a galvanic current is passed through the larvae of amblystoma, sent in one direction the animal curves dorsally, sent in another it curves ventrally. The crayfish responds in the same way. The process is one of galvanotropism. The conduction of the current takes place through ions.

This question of ions holds a high place in the investigations of Loeb. Sodium chloride dissolved in water separates into its constituent ions of sodium and chlorine. These are atoms bearing electrical charges. The ion which goes to the anode or positive electrode is the anion, that which goes to the negative electrode or cathode is the cathion The play of ions in the tissues of the body causes electrical currents and resultant phenomena. The excised muscle or even the excised heart of an animal can be made to contract in the proper solution, and this, according to Loeb, independently of its nervous system.

Irritability and conductibility, which belong to all protoplasm are the only qualities essential to so-called reflexes. The nerves are only sensitive and very quick conductors. Reflex action is simply conduction inward plus conduction outward. The cell body exercises no controlling or other peculiar influence. All the elaborations of structure in the central nervous system are for purposes of better conduction. Instincts are not the result of inherited reflex mechanisms; the different forms of tropism play the most important part in their explanation. The nervous system, according to Loeb, is of comparatively little importance in heredity. The egg must contain substances which will produce certain tropisms and the conditions for producing bilateral symmetry of the embryo; this is all that is required for the inheritance of instincts, and for higher inheritances not much more. It is conceivable, according to Loeb, that inherited forms of insanity are inherited chemical diseases.

Loeb takes an abrupt leap from his studies of lower animal forms to the consideration of the faculties of the human brain. He believes that psychic phenomena are invariably due to what he terms the activity of the associative memory. A process occurring in the nervous system leaves an impression which can be reproduced; two processes which occur about the same time leave traces which fuse together, so that if one is repeated the other will be repeated also; the same is true of several or many processes. The mechanism of these processes is associative memory. Loeb cannot see any reason for believing in what he terms psychic localization, although he is somewhat obscure and contradictory in this connection. He admits an anatomical localization, and sometimes speaks of a physiological localization, but inveighs against psychic localization. He has much to say in his writing about others playing on words, but in his use of this word psychic, as in many other cases, one can see only or chiefly a play on words. He surely does not imagine that any intelligent believer in cerebral localization holds to the homunculus theory of brain centres, and yet it would seem at times that he has some such idea. He speaks of associative memory, but does not make clear where the memories which are associated reside. He recognizes a complex neural mechanism, and gives some inkling of constituent mechanisms, but gives no importance to the structural elaboration and functional value of special parts of these mechanisms.

Dr. Mathews, Assistant Professor of Physiological Chemistry in the University of Chicago, a disciple and colleague of Loeb, turns his attention especially to neural phenomena. The nerves are colloids in suspension; their atoms are charged with electricity; nerve action is simply electrical action: negative ions are released where nerve blends with muscle. Ion after ion is precipitated, and in this way neural conduction takes place. In the development of the subject, various special theories enter, as Lamores' theory of electrons which rotate around ordinary matter. An important conclusion of Mathews is that nerves are stimulated by negative ions.

No limits seem to be set to the possibilities of the new biology. A substance is toxic or antitoxic according to its ions, and a little addition or subtraction of properly charged ions solves the problems both of poisons and of doses. Life is manufactured in the laboratory. The unfertilized eggs of the sea urchin, under the magic of a little magnesium chloride, develop into living beings. The homunculus of Faust is in sight, but it may be a matter of atoms as well as of ions. Death, like the ganglion cell, is dethroned

C. K. M.

Original Articles.

THE USE OF METHYLENE BLUE AS A SEDATIVE.

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The use of methylene blue in the diagnosis of nephritis and in distinguishing the different forms of this disease has been carefully studied by several clinicians. Cabot and McGirr, in an article in the *St. Paul Medical Journal* for December, 1898, report a series of valuable observations upon the subject. Ehrlich and Guttman ascribed to methylene blue a chemical affinity for the axis-cylinder of nerves, and reasoned from this that it must exert some definite action upon the nervous system, and proposed its use as a sedative in nervous or mental excitement. But Combermarle's investigations proved that the chemical affinity existed only for dead tissue. Bourge demonstrated its power as a vaso-constrictor, and no doubt it is to this property that it owes any sedative action it may have. Bodoni, working in Morsilli's clinic, while giving the drug to differentiate the forms of nephritis, observed that each patient was depressed while taking it, and proposed its use in mania, puerperal mania, and the excited states of paretic dementia. He accordingly tested it in fourteen cases, of which he gives a detailed report in the *Klinisch-Therapeutische Wochenschrift*, No. 21, 1899. His cases were mania with frenzy, having a basis of degeneration, two cases; mania with fury, mania simple, mania periodic, mania congestive (alcoholic), each one case; and mania chronic, two cases; also melancholia periodic with maniacal outbreaks, paranoia with delirium, dementia secondary, the insanity of hystero-epilepsy and puerperal mania, each two cases. Each patient was so satisfactorily subdued by it that Bodoni proposed to place methylene blue in the list of sedatives with trional, sulphonal and chloralamide and like drugs. The drug has now been used in twenty-two cases in the insane and detention wards of the Philadelphia Hospital,, and while the results were not so uniformly good as in the cases reported by Bodoni, it has led to the hope that a greater number of trials may demonstrate that in particular cases the value of the medicament as a sedative may be established. Many of the histories following are given more fully than is the custom in such reports, in order that a clear picture of the mental condition may be understood by the reader. The development of abscesses was an annoying and painful complication in the first cases in which the drug was used by the hypodermic method. Although the usual antiseptic precautions had been observed, it had been forgotten that methylene blue often contains many bacteria. Boiling the bottle containing the solution prevented the abscesses afterward. A further trial is being made with the drug, the results to follow in a subsequent report.

CASE 1.—B. K., female, aged forty-six years; married; Russian; nine children, the oldest thirty years and the youngest twelve years; admitted July 31, 1899, being her third admission, the first in 1894 and the second in 1897. She was wildly maniacal, scolding in a shrill voice, hostile, abusive, profane and obscene, scratching and spitting upon any one coming near her, and most destructive, tearing her clothes and bedding into fragments so that it was impossible to keep her clad or covered. She refused medicine and food, declaring that it was poison and horse-blood.

There were constantly auditory hallucinations, excitement and insomnia. The physical complications were an unhealthy fistula in the median line of the epigastrium (the sequel of an operation for hernia two years before); a severe gastro-enteritis and a severe grade of nephritis; a temperature ranging from 99° to 103° and irregular was no doubt toxic and due to the discharging fistula or to the gastro-intestinal condition. The urine was acid, 1032, contained much albumin, many wide and narrow hyaline and granular casts, and the amount voided in twenty four hours was but fourteen to twenty ounces.

From August 31st to September 12th the usual sedatives were used by the hypodermic method and by enemata, but failed to control her restlessness or to produce sleep, and she was rapidly losing flesh and becoming exhausted. She was nourished by enemata. Three Widal tests were negative.

At 12.30 P. M., September 12th, one grain of methylene blue, in aqueous solution, was injected deeply into the gluteal mass by means of an antitoxin syringe. About 3 P. M. the patient began to grow quieter and at 5.30 P. M. answered a few questions respectfully, the first since her admission. Urine voided at 5.40 P. M. was of a dark bluish-green color and showed no changes in character except that some of the hyaline casts were lightly stained green. She slept six hours during the night, being quiet when awake until 7 A. M., when she became restless and talkative. One grain was injected at 9 A. M. and another at 6.30 P. M. She was quiet after 11.30 A. M., and took some milk and vino kolafra. She remained awake all day, but slept seven and one-half hours the following night. Each of the next six days one grain was injected at 9 A. M. and at 6.30 P. M., with most satisfactory results. She took food and medicine well, was quite pleasant to the nurses and interested in the other patients about her, but was still hostile to her husband and children, scolding and ranting at them for "trying to put her away."

Two days after the first injection an induration developed at the point of puncture and at the side of each subsequent puncture a like node formed. They were very loose, pale-red and neither painful nor tender. They were painted with iodine and ice was applied. The redness faded and they diminished in size but remained when she was paroled three months later.

On account of the indurations the injections were discontinued until the 24th, when she again became restless, abusive and destructive.

From September 24th until October 2d, morning and evening, doses were continued, the good effects being apparent after the first dose. She was then quiet, docile and cheerful. The temperature was normal after September 22d. She took food and medicine well and permitted antiseptic dressing to the fistula, which soon became healthy, and was entirely healed when she left the hospital.

Every known precaution was taken in giving the injections and in caring for the points afterward but these now studded the buttocks and thighs and varied from 1 to 5 cm. in diameter, they were anesthetic and gave the patient no inconvenience whatever. On October 5th she showed signs of restlessness and one grain was injected daily until October 10th. The quieting influence of the drug was manifest after the first dose. From this time she was kind and helpful in the ward, grateful for what had been done for her, and she seemed to have lost all her delusions except those concerning her husband. The condition remained unchanged when she was paroled. She has since visited the institution and seems quite rational.

CASE 2.—B. W., female, aged thirty-two; single, [illegible] domestic; admitted November 28, 1899; case of acute mania complicated by severe nephritis, the urine containing albumin and hyaline granular and blood casts, the amount voided daily being but fourteen to

seventeen ounces. She was greatly emaciated and very restless. One-grain doses of methylene blue injected into the thigh daily produced a quieting and calming effect which was noted after the second dose; but five days after the administration a deep-seated abscess developed at the point of injection in the left thigh, and on this account the drug was discontinued. The abscess began as a dense induration similar to those described in Case I.

The habits of this patient were most uncleanly and undoubtedly the puncture-wound was infected by herself. The abscess healed slowly; the patient responded poorly to other sedatives and continued disturbed until she died of her nephritis, three months later. In this case the urine voided six hours after the first dose was colored dark bluish-green, and thirty hours after the last dose was free from color.

CASE 3.—L. G., female, aged twenty-nine years; single; Russian; admitted August 27, 1889; a case of recurrent mania, the outbreaks being of six to fourteen days' duration and occurred always at the menstrual epoch, but not at every period. One-grain doses of methylene blue were administered hypodermically for three days, and then the same dose twice daily for three days, without effect. The indurations formed as in the other cases, but did not suppurate. At the end of two months they had disappeared.

CASE 4.—L. D., colored, female, aged forty-four years; married; admitted August 10, 1899; a case of chronic mania complicated by nephritis and phthisis pulmonalis. She was always noisy, destructive and hostile, and from the time of her admission had been a most troublesome patient. One-grain doses of methylene blue, administered twice daily, produced a marked quieting effect, shown after the second dose; but on the fourth day an abscess began to form, and the injections were discontinued on the seventh day of treatment. The abscess was a very small and superficial one, and promptly healed. Accurate record of the color changes in the urine could not be kept in this case on account of an obstinate diarrhea.

CASE 5.—M. B., female, aged forty-three years, a Philadelphian, married and a patient of the insane department almost constantly since July 16, 1887, being a case of periodic mania complicated by nephritis. After a short parole to her family she was returned in a greatly excited condition, talking rapidly and constantly, incoherent and restless. One-grain doses of methylene blue, given twice daily, produced a prompt quieting effect, apparent after the third dose, but on account of the formation of an abscess in the thigh the drug was discontinued on the fifth day. Until after the third dose the patient would not permit the protective dressing to remain over the point of puncture, and her habits were very uncleanly, which would account for the infection.

CASE 6.—H. O., female, aged forty-one years; Irish; single; admitted October 31, 1896; a case of recurrent mania of twenty years' standing, she having spent almost this entire period in the hospital. Her attacks were always most violent and of several weeks' duration, and occurred at intervals of from five to seven months. After having been quiet and industrious for several months she was paroled to her family January 1, 1900. Four days later she was returned in a wildly maniacal state, screaming, abusive, assaulting, tearing her clothes and hair, profane and resistive. January 18, 1900, the daily administration of one-grain doses of methylene blue was begun and continued for two weeks, producing a prompt controlling influence, which was apparent after the third dose. Until the present time there has been no return of her mania, this being an unusually long interval.

CASE 7.—E. S., female, aged thirty-three years; married; Russian; admitted December 28, 1899; a case of chronic mania. She was treacherous and cruel, with almost daily outbreaks. One-grain doses of methylene blue were administered twice daily; they controlled her frenzy, but she continued to be stubborn and resistive. The drug was given twenty-two days in this case without any untoward symptoms, the patient steadily gaining flesh and color, and an obstinate insomnia was broken up.

CASE 8.—S. H., female, aged twenty-seven years; married; Russian; admitted April 7, 1900; a case of puerperal mania of six months' duration. She refused food, was restless, sullen, obstinate, and resistive, and had most uncleanly habits. One grain of methylene blue was administered twice daily for four days, when a large bleb formed at the site of one puncture. After the second dose the patient relaxed and became more tractable and ceased to scream, but continued to be sullen and morose.

CASE 9.—A. C., female, aged forty-three years; widow; Irish; admitted March 2, 1899; a case of mania epileptica and a very vicious, treacherous and dangerous patient when excited. Her convulsions, fortunately, were infrequent, but they were always followed by violent mania, which persisted for several weeks. One-grain doses of methylene blue, given twice daily, produced a calmative effect, noted after the second administration, and after the fourth she was kind and cheerful. From May 2 until May 27, 1900, one-grain doses were given daily, with several two to four days' intermissions, when the patient always became restless and noisy, but grew quiet when the drug was again given. Indurations appeared at the points of puncture, but they were small and soon disappeared. At this time it was decided to change the mode of administration—partly on account of the indurations and partly to test its efficiency when given by mouth. A capsule containing two grains of methylene blue with aloin was used. In this case, and all other subsequent cases, the capsule was given first twice, then three times daily from May 28th until June 8th. May 30th she had a convulsion, followed by a half-hour's period of excitement, which was much milder than former attacks. She steadily gained flesh and color, and no unpleasant symptom was noted at any time.

CASE 10.—E. M., female, aged thirty-five years; married; admitted October 28, 1898; a case of recurrent mania complicated by severe nephritis. The two-grain capsules administered three times daily for four days were without effect. This patient, however, was not quieted by any other sedative except a combination of morphine and hyoscine, and continued disturbed until her death, two months later, of nephritis.

CASE 11.—A. S., female, aged thirty-seven; married; admitted May 23, 1899; a case of recurrent melancholia with periods of agitation occurring at each menstrual epoch and requiring bed-treatment for about one week, when she was noisy, talkative, incoherent, sleepless, untidy and vicious. When in an excited state (June 9, 1900) she was given the two-grain capsules three times daily. The following day she was much quieter, and the third day was out of bed and usefully employed. No unpleasant results followed, and the capsules were continued over the next period, which passed with one day's bed-treatment, with little agitation.

CASE 12.—J. K., female, aged forty-five years; married; Hungarian; admitted May 30, 1900; a case of acute melancholia with maniacal outbreaks. After a period of depression she suddenly became noisy, restless and hostile. This was on July 11, 1900, and the two-grain capsules of methylene blue were given three times daily until July 17th, when she complained of nausea. She was quiet after the first dose, and after the third took a pleasant interest in her surroundings. She developed dysentery (then prevalent in the hospital) on July 18th, and the nausea may have been an initial symptom of the dysentery and not due to the methylene blue.

CASE 13.—C. J., female, aged fifty-six years; married; German; admitted February 5, 1898; a case of circular insanity of twelve years' standing and complicated by nephritis. May 18th she became excited and troublesome, talking incoherently, scolding, and pacing back and forth in the wards She was given a two-grain capsule of methylene blue at 7.30 P. M., was quiet at 9 P. M., and slept eight hours the following night, but was noisy after waking. The capsules were continued from May 18th to June 6th, with most satisfactory results. She was quiet and docile when under the influence of the drug, but became restless when it was withheld. On June 6th she complained of vertigo and the treatment was suspended until August 4th, when she again became restless and excited, and the capsules were given. While taking them she was somewhat disturbed on the fourth day, was dull and listless on the fifth day, bright and cheerful on the sixth day, but talked more than was natural, and was incoherent at times. After that time she was out of bed and usefully employed in the ward, where she now is a most faithful helper. In this

case two attacks have been aborted. After each of the two former periods of excitement some depression was noted, but it was very mild. Former cycles, which were frequent and most severe, had lasted from six to nine weeks, with a maniacal stage of about two weeks, when in her excitement she would beat herself, refuse food, and was very noisy, especially at night.

CASE 14.—R. D., male, aged forty years; married; American; bookkeeper; admitted April 4, 1900. History of profound melancholia of several months' duration with an active suicidal impulse. He believed that it was said that he had signed certain papers, causing a loss to his employers of many thousands of dollars, and that he had benefited by the irregular transaction. He had the most woe-begone expression, was resistive, refused food, refused to talk or to walk. If any attempt was made to force him to dress or leave his bed or walk, he would grow angry and shout and swear, and if still further forced (without violence, of course), he would grow very violent and strike the nurse. He refused food and medicine, and for weeks was fed with either the nasal or oral tube. For four weeks after his admission he didn't take a drop of water or other liquid voluntarily. He suffered greatly from insomnia. He lost flesh rapidly and it was feared he would die from inanition, as the tube-feeding did not supply sufficient nourishment. Sedatives by the hypodermic method, bowel and tube, made no impression upon the mental condition. After six months' treatment all other medication was stopped and he was given one grain of methylene blue in aqueous solution by the hypodermic method. The next day he was given one grain in the same manner night and morning, and so on for the next six days. On the morning of the third day of the new treatment he drank a glass of milk and a glass of iced water. On the next day he ate for his breakfast a bowl of crackel wheat with milk and drank a cup of coffee. At the end of six days the injections of the methylene blue were reduced to one a day of one grain each. He was now eating his meals regularly, was sleeping well, was respectful in conduct, had grown much less restive, and the terrible agonizing expression of the face with the large number of transverse wrinkles of the forehead had disappeared. At the end of another six days he was able to sit up and dress himself and would answer a few questions. The injections were now given every other day for another six days, when they were discontinued. In two months from the time of the first injection of the methylene blue he was eating regularly, sleeping well, talked a little and fairly rational with his wife, but more rationally with his special nurse, walked each day in the yard and occasionally looked at a daily paper. He also took his medicine regularly and without opposition or a sense of fear. The change in his condition was simply marvellous, and an early recovery was anticipated. But at the end of the tenth week he had a severe maniacal outbreak, shouting, cursing, striking, and pulling his hair and mutilating his face, and demanding his immediate discharge, refused food and medicine, and was wakeful for two nights, when he was again given a hypodermic injection of methylene blue in aqueous solution of one grain each morning, and at the end of seven days he was again quiet and had returned to the mental state he was in before this last outbreak. He was now given the methylene blue in capsules of one grain each, night and morning for three weeks, after which it was stopped. He is now quiet and orderly, eating, sleeping and talking well, and seems to have begun a permanent convalescence. The urine always, within four hours of an injection or five hours of a capsule, showed the staining of the drug, which only gradually disappeared, not altogether for a week or more after the drug was discontinued.

CASE 15.—C. L., male, aged thirty-one years; clerk; admitted September 12, 1900, to detention ward, in condition of delirious mania, resistive, spitting at physicians and nurse, refusing food and liquids and tossing and shouting constantly. Mouth dry, eyes blood-shot, skin bathed in profuse perspiration. Urine and stools voided in bed. Force required to hold patient for initial injection of one grain of methylene blue. No effect was noticeable, and in five hours the injection was repeated, at which time it was first noticed that the urine voided was slightly stained. Within a half hour after second injection patient was quiet but still resistive. A quiet, but sleepless, night was passed and once patient took bovinine in hot milk. A third injection of one grain was administered the following morning, twelve hours after the second, which was followed by a restless sleep of four hours, and on awakening, he answered few questions, protruded tongue, permitted sponging and took a quantity of milk. Towards evening, again became restless and resistive, and had to be held for the fourth injection, which was soon followed by a quiet sleep. Upon awakening was very rational, permitting attention to toilet, and took a fair meal. For the next three days two injections per day, morning and night, were given, and the patient passed into a quiet convalescence, and on the fourteenth day was removed to his home in another State, having had one injection daily until discharge. The history obtained from friends showed the attack to have suddenly followed the loss of considerable property through deception of relative. There was a distant hereditary taint.

Case 16.—A. R., female, white, aged twenty-eight years; domestic; admitted to detention ward in condition of violent acute mania. Incoherent, hallucinatory, and delusional. Face flushed, eyes injected, tongue heavy, brown, dry fur, skin dry, bowels costive, bladder atonic, catheter necessary. Urine showed albumin, specific gravity 1028, urates, hyaline casts. Methylene blue in aqueous solution (one grain) injected, and four hours after, no benefits shown, the injection was repeated. At the end of ten hours the maniacal condition had increased, with evidences of exhaustion. Pulse, 120; respiration, 32; temperature, 103°. A third injection was given, and four hours after a fourth, but all without effect. The condition of patient growing more serious, morphine sulphate (one-third grain) and hyoscine hydrochlorate (1/100 grain) were added to the fifth dose of the methylene blue. The combination produced fitful sleep of two hours, the patient awakening as maniacal as ever. Uremia being considered the cause of the mania, a free venesection was performed, followed by the injection under the skin of two pints of a normal salt solution, and free purgation continued. After the withdrawal of the blood the mental symptoms were much improved, but the patient continued restless. Six injection was given, which was followed by a restless sleep of four hours. Upon awakening the patient was greatly exhausted, the pulse reaching 150; the respirations, 40; the temperature, 100°. Stimulants were boldy pushed with injections of strychnine sulphate; the patient grew less excited and restive. Ten hours after patient was given another injection of methylene blue and within half an hour was sleeping quietly. It was considered advisable to awaken the patient in three hours for nourishment and stimulants. As soon as taken again went to sleep and was awakened in four hours for food, quiet but incoherent. Continued much in this condition for three days longer, sleeping quietly greater portion of time. On the seventh day the temperature suddenly rose to 107°, the patient becoming rapidly comatose, death soon following. The urine showed the blue staining within six hours after the initial dose and continued so until death. Autopsy showed parenchymatous nephritis.

CASE 17. J. W., white, aged thirty years; American; painter; married; admitted to detention ward September, 1900 in condition of violent acute mania. Unable to secure any coherent statement, continually chattering, flying from topic to topic and jumping from bed, struggling and gesticulating wildly, refusing food and medicine by mouth or enema. Pupils dilated, eyes staring, face flushed, tongue dry and coated, abdomen distended. Urine voided involuntarily. Impossible to secure temperature, pulse and respirations. At three o'clock he was given hypodermically methylene blue (one grain), which was repeated in five hours. Slept one hour after second dose, but balance of time noisy, spitting and biting when approached. At seven in the morning, at noon, and at seven in the evening, one grain of methylene blue was again administered hypodermically. On this evening he accepted eight ounces of milk in which had been placed calomel and bicarbonate of soda, each five grains. Slept portion of the night quietly, and when awake was quieter and more coherent. For the next four days had one grain morning, noon and night, gradually growing more quiet and coher-

ent, and by end of the week was entering mental convalescence. He was discharged in the fourth week fully recovered. The urine became of a dark bluish-gray color eight hours after the first injection, and continued discolored, gradually lessening, for sixty hours after the last dose was given. The sedative result in this patient was the most prompt and decided of any to whom the drug was given.

CASE 18.—H. G., negro, aged thirty-three years; native of South Carolina; waiter; admitted July 16, 1899, suffering from dementia paretica with maniacal outbreaks, during which he struck wicked blows and was very destructive. It was only safe to keep him in a ward with other patients by the use of large doses of sulphonal or chloralamid. On October 5th he was placed upon capsules containing one grain methylene blue, with one grain salol, three times daily. The outbreaks became much milder and at wider intervals. The drug exerted no influence over the downward course of the disease, but for the next six months he was a fairly quiet patient. The urine remained stained during the entire course of the drug, but no untoward symptoms developed.

CASE 19.—B. O. T., white, aged fifty-eight years, American. In hospital five years. Homicidal mania with epilepsy. Every two or three weeks had been having violent maniacal outbreaks. For one year had been taking a nightly dose of chloralamid (forty to sixty grains), which checked the violence and impulsiveness of the outbreaks to a great extent, and permitted his being in a general ward, but under watchful eye. July 10, 1900, he was ordered methylene blue (one and one-half grains) in capsule with aloin (1/20 grain) three times daily. No change was noticed in his disposition for two weeks, from which time until this report, three months after, he had no outbreaks and was of a more pleasant disposition. The urine did not show the discoloration for fourteen hours after the beginning of the drug.

CASE 20.—W. M., male, white, aged thirty-six years; laborer; admitted, 1900, with history of epilepsy of seven years' duration following immediately after attack of typhoid fever; also intemperate. Until September, 1899, had been confused only after convulsions. From this time on was violent and destructive after each paroxysm, lasting for several days. Epileptic paroxysms also increasing in frequency and severity. He was placed in turn upon bromides, sulphonal, hyoscine and chloralamid, without result. In September, placed upon a capsule containing methylene blue (one and one-half grains) and aloin (1/15 grain) three times daily. For the month he had but ten paroxysms against an average of thirty the months before, and but one excited spell, and this without the impulsive violence of before, and with a decided improvement in the condition. The further results must await another report, as this one goes to the printer. The urine was first stained ten hours after first was taken.

CASE 21.—G. S., female, white, aged twenty-three years; American; maid; admitted to detention ward with history that for two weeks had been mentally disturbed with alternating periods of depression, with weeping and wailing, followed by attacks of mania. Delusions of poisoning and other injuries by her family. Upon admission incoherent, auditory hallucinations, excited, restless, throwing arms in every way continually, and attempting to jump from her bed, so that restraint was necessary. Two hours after admission was given a hypodermic injection of methylene blue (one grain). No effect observed in four hours, and patient growing more excited and restless, the injection was repeated, and in two hours a third injection, and in four hours a fourth; the patient beginning to show marked signs of exhaustion, a hypodermic injection of morphine sulphate (one-third grain) with hyoscine hydrochlorate (1/100 grain), which was almost immediately followed by a heavy sleep. Methylene blue was not again used. The urine of patient was, upon admission, of a heavy color, with a muddy sediment, specific gravity 1030, containing albumin, granular casts and much epithelium. Urine was decidedly stained five hours after first injection, and was clear twenty-hours after the fourth and last injection. The patient made a slow recovery under the usual treatment employed in the insane wards.

CASE 22.—S. M., white, aged thirty-three years, married. An elder sister had had an attack of puerperal mania. Patient had mild attack of puerperal mania four and one-half years before, fully recovering. Present attack began suddenly by patient declaring she heard her father and mother crying, and asking those about her if they also did not hear them. Declared some one was going to die, and insisted on going home, talked strangely, growing incoherent and maniacal, constantly talking and striking anyone coming near her. If offered food or medicine would bite and spit and strike. Insomnia most decided, screaming for hours and hours at a time. Immediately after admission was given hypodermic injection of methylene blue (one-grain), which was repeated every four hours for three days without any quieting effect whatever. Exhaustion being imminent, morphine sulphate and hyoscine hydrochlorate were used by the hypodermic method with the result of giving a few hours' restless sleep, but the maniacal excitement being as intense as ever on awakening. The patient suffered from a severe nephritis, and to increase the flow of urine normal salt in pint amounts was injected under the skin every few hours. The patient developed pneumonia, dying on the ninth day after admission, during which time she had had ten hypodermic injections of methylene blue without showing any benefit. She also had four doses of sixty grains of chloralamid on the fifth day after admission, deriving no benefit from the drug.

These were nearly all cases of wild excitement when the drug was used, and in but six did it fail to produce a calmative effect which did not resemble the sedative action of other drugs, but seemed rather a natural quietude—the patients were relieved of excitation, but without dullness or hebetude. The effect was noted three to four hours after a dose was given and lasted from fifteen to twenty hours.

No depression resulted at any time except in case XIII. In each case the patient slept well at night, but in none did it produce sleep in daytime. In but one case was there any unpleasant symptom (vertigo) which could be surely attributed to the drug, although in case I it was given hypodermically for fourteen consecutive days, and in other cases, forty-two, thirty-nine, twenty-two, twenty-one, and fifteen days, by mouth, proving that, at least, it is a safe drug. Only two of the patients (cases III and VII) could be considered healthy, and each improved physically while taking it.

The records of cases IV and XII were incomplete on account of diarrhea. The times at which the color appeared and disappeared in cases III and VII were so uniform with those in which there was nephritis that careful urinalyses were made, but they were always negative. Cabot gives the average time at which the color disappeared as sixty-four hours; in these cases it was seventy-two hours and fifty-six minutes.

The quieting effects of the drug by stomach administration, as shown in cases XVIII, XIX and XX, followed without derangements of the gastro-intestinal canal, and if future administrations confirm these results, a most valuable addition has been discovered for controlling many annoying chronic incurable mental cases, whose excitement is a source of so much annoyance in hospitals for the insane.

The results from treatment in these few cases entitle the drug to further study, and give it a place in the ever-growing class of sedatives. It is now being tested in additional cases in this hospital.

The changes noted in the urine, with the compli-

cations in each case, are summarized in the following table:

	Time after last dose when color appeared Hrs. Min.	Time after last dose when color disappeared	Physical Complications
Case I.	First administration. . . . 4 50	Hrs.	
	Second administration. . . .	7	Nephritis, lastric and gastro-enteritis.
	Third administration. . . .	80	
Case II.	7 15	80	
Case III.	2	32	Parenchymatous nephritis.
Case V.	7	72	None.
Case V.	6	61	Interstitial nephritis.
Case VI.	5	48	Nephritis.
Case VII.	10	63	None.
Case VIII.	2 10	63	Gastro-enteritis.
Case IX.	8	78	Nephritis.
Case X.	4	98	Nephritis.
Case XI.	4	42	Gastritis.
Case XII.	8	Not recorded.	Gastritis.
Case XIII.	First administration. 4	68	Nephritis.
	Second administration. . . . 8	96	
Case XIV.	4	104	None.
Case XV.	5	50	Gastric Catarrh.
Case XVI.	6	Death.	Nephritis and Uremia.
Case XVII.	8	60	None.
Case XVIII.	12	60	Paresis.
Case XIX.	14	80	Epilepsy.
Case XX.	10	Still using.	Epilepsy.
Case XXI.	5	55	Nephritis.
Case XXII.	8	20	Puerperal

THE IMPLANTATION OF THE TUBERCLE BACILLUS.

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By implantation of the tubercle bacillus I mean the entrance of the bacillus into a host and its deposit in some tissue or organ for the purpose of germination and colonization.

For elucidation of the subject it is necessary to consider:

1st. The source of seed supply for the new implantations.

2nd. The mode of entrance of the bacillus into a host.

3rd. The forces within the host concerned with deposit of the bacillus.

4th. The conditions which influence deposit in a particular organ or tissue and the mode of deposit.

5th. The necessary conditions for germination and colonization.

Further it is of value constantly to keep in mind that the tubercle bacillus is a vegetable parasite, subject to the fundamental laws of organic life, and dependent, for the running out of its life course, upon a specific soil and a specific temperature, which ordinarily can be obtained only in a living organism of the highest order, called a host.

The source of seed supply for new implantations of tuberculosis unfortunately is still a burning moot question. Certain facts about it are agreed upon; others are disputed with ardent advocates on both sides. It is agreed that the tubercle bacillus finds a congenial soil in man and many domestic animals and an efficient soil in all of the higher representatives of the animal kingdom; that the bacillus is for practical purposes a true parasite, which means that it has no vegetative existence outside of a host; that when given off by a host in the matured state it is imbedded in broken down tissue which serves as a caché or shield against the elements whilst outside; that it is non-motile and therefore dependent upon extraneous forces for transfer from one host to another; and that its existence outside of a host ordinarily is in broken down tissue which has been thrown off by a tubercular subject. The chief moot points are the intertransmissibility of human and animal tuberculosis and the power of resistance of the tubercle bacillus against the germicidal qualities of the elements.

Upon the subject of intertransmissibility of human and animal tuberculosis we have much scientific knowledge but not enough to warrant final conclusions. Dr. Theobald Smith[1] and after him others have shown that there is a difference in form between the tubercle bacillus which grows upon man and that which grows upon animals. A host of investigators have demonstrated that animal tuberculosis of one species of animals can be inoculated into animals of other species[2]; that human tuberculosis can be inoculated into animals of different species[3]; that animal tuberculosis of one species of animals can be conveyed to animals of other species by feeding[4]; that human tuberculosis can be conveyed to animals of different species by feeding and by inhalation[5]. It has been demonstrated by accidental inoculation that animal tuberculosis can be inoculated into human beings[6]. Up to the present time it has not been *demonstrated* however that animal tuberculosis can be conveyed to human beings by feeding or by inhalation. There are a number of observations on record which strongly point to the conclusion that animal tuberculosis can be conveyed to human beings by feeding, and some of these observations are as convincing as they can be short of demonstration, but they lack the one essential element namely absolute exclusion of human seed supply[7]. So stands our knowledge of intertransmissibility of human and animal tuberculosis.

Upon the other mooted point, namely the power of resistance of the tubercle bacillus against the germicidal qualities of the elements, we have as yet comparatively little exact knowledge. It has been demonstrated that sunlight, air, and water are inimical to the tubercle bacillus and can devitalize it when it has been deprived of the protection given by the broken down tissue in which it is imbedded. The three elements possess germicidal powers relatively in the order in which they have been enumerated. How long the bacillus may retain its viability when well protected by its caché has not yet been demonstrated, but the work which has been done seems to indicate that it is for a very long time, probably for many years. To what depth in the caché sunlight can exercise its devitalizing powers and in what length of time are still matters for demonstration. Air and water are probably largely concerned in breaking down the caché. Apparently the only inferences which we are warranted in drawing from what has been done up to the present time are first that the tubercle bacillus outside of a host dies immediately when deprived of its caché, and secondly that broken down tubercular matter is available as a seed supply for new implantations relatively in proportion as it is deposited where sunlight, air, and water cannot get at it.

From what has been said it must be plain that out

of our knowledge derived from the laboratory alone it is not possible to determine with any degree of exactness the sources of seed supply for new implantations of tuberculosis in human beings. Fortunately for preventive medicine clinical observations pretty fully fill in the gaps left by laboratory work. It has been clinically demonstrated by myself in my study of tuberculosis in the fifth ward of the city of Philadelphia[9], by Dr. Chapin in his topographical study of tuberculosis in Springfield, Massachusetts[10], by Dr. Louis S. DeForrest in his study of tuberculosis in New Haven, Connecticut[11], and by Dr. Hermann Biggs in his topographical study of tuberculosis in the City of New York[12], that at least sixty per cent of all cases of human tuberculosis can be traced to a human source of origin from prolonged intimate contact with consumptive relatives or occupation of houses which previously had been occupiel by consumptives, This leaves forty per cent to be accounted for. Prolonged intimate association with consumptives in occupation and prolonged intimate social relationship with consumptives, such as takes place when a consumptive pays a long social visit to a friend, undoubtedly are a prolific source of new implantations. It probably would not be too high an estimate to place this at twenty five per cent of all cases. This leaves fifteen per cent to be accounted for. Out of this fifteen per cent must be taken further as of human origin those cases which are derived from tubercular sputum which is ejected in saloons, churches, public places, schools, street cars, railway cars, streets, etc. Saloonkeepers, janitors and teachers occupy a front rank in the order of susceptibility to tuberculosis. They no doubt frequently contract the disease in the places in which they are employed. Street cars, railway cars and streets are not a prolific source of seed supply for tuberculosis, although tubercular sputum is frequently ejected in those places. In an experience of many years I can recall having encountered but two car conductors with tuberculosis. Cornet found upon a most careful investigation that the street cleaners of Berlin, who hold their positions for life, were freer from tuberculosis than were any other class of workmen[13]. These seemingly paradoxical statements become quite consistent when we bear in mind the germicidal qualities of the elements. What part of these fifteen per cent which cannot definitely be accounted for, may be derived from the human sources of seed supply just enumerated it is impracticable to determine, but the probabilities are that it is the greater part.

The only media through which animal tubercular matter is apt to be brought to human beings are meat, milk, butter, and cheese. It has been proven that all of these substances, as they appear in the markets, may contain tubercle bacilli[14]. Meat, except in the form of glandular tissue such as liver and kidneys, usually has the bacilli on the outside and not in its meshes. Muscular tissue ordinarily is not the seat of tuberculosis; but contamination from diseased organs may take place in the butcher shop. Ordinarily, therefore, the preparation of meat for food subjects it to a high enough temperature to sterilize it against tubercle bacilli at least. Milk is a medium of conveying tubercle bacilli when the cow which gives the milk has tubercular mastitis in the stage of softening and possibly also when the cow which gives the milk has advanced general tuberculosis[15]. Vastly the majority of the men who have made original research upon this subject hold that milk becomes contaminated only when the udder is diseased[16]. Making some allowance for elimination of advanced cases of tuberculosis from dairy herds on commercial grounds inasmuch as cows with advanced tuberculosis are not good milkers, it would be a high estimate to place the number of cows which can give tuberculous milk, even according to the views of those who say that the udder needs not to be involved, at ten per cent of all milch cows. The estimated proportion of cows which have the udder involved is from two to four per cent. When tubercular matter it suspended in a liquid it has a strong tendency to settle to the bottom. It is fair to assume therefore that when tubercular matter contaminates milk at the time of milking a considerable proportion of it is lost through precipitation and straining before the milk reaches the consumer. In the household there must be further loss by precipitation. As the milk finally goes into the stomach, even though it comes from a herd which contains cows that give tuberculous milk, its contamination ordinarily must be so attenuated that the gastric juice can readily devitalize any bacilli which it may contain. Gebhard has demonstrated that attenuation of 1 to 50 practically sterilizes tuberculous milk even for inoculation on the guinea pig, and the Stores Agricultural Experiment Station, of Connecticut has shown that the undiluted milk of tuberculous cows is sterile for feeding to calves. Butter and cheese, being the products of milk, cannot contain more bacilli than milk, but may contain fewer. In the process of butter making, tubercular matter is apt to be separated from the fat and to be thus kept out of it. In the cheese making process the tubercle bacilli, unless well protected by broken down tissue, are apt to be devitalized by heat and fermentation. Considering all the facts bearing upon the contamination of meat, milk, butter, and cheese with animal tubercular matter, the preparation of these substances for food, and the manner of using them as food, it certainly does not seem probable that the substances named constitute as fruitful a source of seed supply for tuberculosis in human beings as does the ejection of human tubercular matter in saloons, churches schools, public places, street cars, railway cars, streets, etc. Of the fifteen per cent of all cases derived from these two sources, undoubtedly, the greater part comes from the last.

The deduction that tuberculosis in the human being is nearly always derived from human seed supply as apparently warranted by the clinical facts bearing upon the spread of tuberculosis among human beings just presented, crystallizes out even more strikingly in a statistical test. It is admitted by all that tubercular sputum is a seed supply for human tuberculosis. It therefore becomes axiomatic that a consumptive is a centre of distribution of seed supply, and that the nearer this centre is to new

soil, the better are the chances of a new implantation of tuberculosis. Prolonged intimate exposure to such a centre undoubtedly would give a better chance for implantation than random use of tuberculous meat, milk, butter and cheese. Now, although there are on an average five prolonged intimate exposures to such a centre for every case of consumption in existence, yet we have at present less than one new implantation of tuberculosis for every case in existence. Surely, if intimate prolonged exposure to the most potent centre of seed distribution of which we have any knowledge fails to produce an implantation in four out of every five exposures, it is not likely that intermittent exposure to an attenuated source of seed supply will often produce such an implantation.

Thus it will be seen that the subject of seed supply for new implantations of human tuberculosis, whilst still in the arena of debate, is pretty well settled for the hygienist. It cannot be said truthfully that tuberculosis cannot and is not conveyed from animals to human beings; but it may be said that practically it seldom is so conveyed. This does not mean that the stamping out of tuberculosis among domestic cattle should be abandoned; only that it should stand upon its own merits. Stamping out tuberculosis in the human race and stamping out tuberculosis in domestic animals are undertakings which should run along parallel lines and not at cross-sections. They do not depend one upon the other, nor should they be allowed to interfere one with the other. That they may help each other is plain enough, and science may yet demonstrate that this help is of more importance than it now appears. In this connection the work of Ravenel and his colaborers is of great interest. These investigators have shown that the tubercle bacillus regains potency by grafting[17]. From other sources we know that either the tubercle bacillus becomes attenuated in virulence by prolonged growth on the same soil or the soil wears out[18]. May it be that, in both man and the different species of animals, the tubercle bacillus has maintained its virulence by occasional grafting from some other soil. If so then even the occasional seed supply from animal sources for human tuberculosis means a great deal.

Probably no part of the subject of tuberculosis is more involved in error than that which bears upon the mode of entrance of the tubercle bacillus into a host. The errors on this part of the subject moreover have been made the basis of error on others.

The prevailing opinion is that the tubercle bacillus *usually* is carried into the system through the lungs, *occasionally* through the alimentary canal, and *quite rarely* through the skin; where it gets in through the lungs, implantation takes place upon an abraded surface of a bronchiole, when through the alimentary canal on an abraded surface of the intestines, and when through the skin on an abraded surface of the skin. It is difficult to comprehend how this opinon came to prevail for it is at variance with our knowledge of anatomy, physiology and biology, and cannot be harmonized with the phenomena of tuberculosis except upon assumptions without warrant and by resort to fiction. It goes counter to propositions which either are self-evident or have been demonstrated. These are: First, that the function of the respiratory tract is limited, anatomically and physiologically to the admission into the organism of gaseous substances only. Second, that the alimentary canal exists anatomically and physiologically for admission into the system of all substances which are of a solid, semisolid or liquid character. Third, that the tubercle bacillus is a solid and is imbedded in a solid or semisolid. Fourth, that the tubercle bacillus is immotile and therefore dependent upon forces extraneous to itself for entrance into a new host. Fifth, that the tubercle bacillus requires a definite soil, definite temperature and rest for colonization.

The following assumptions upon which the opinion is predicated are unwarranted: First, that the primary seat of tuberculosis is nearly always in the lungs. Second, that an abraded surface is necessary for implantation. Third, that the location of the disease is an indication of the port of entry. For the assumption that the lungs are nearly always the primary seat of tuberculosis we have nothing but the common experience of physicians who usually first discover the disease there; and this should not weigh too much because the average physican does not discover tuberculosis until it is far advanced. Even in cases in which tuberculosis is discovered in the lungs early there may have been a colony in some other part of the body at an earlier period; for we know that the tubercle bacillus may colonize in some tissues without setting up clinical symptoms. Careful examination into every case of lung tuberculosis will frequently reveal evidence of a prior colony of the tubercle bacillus in some other part of the body, sometimes antedating the one just discovered by many years. In reality we have very little scientific evidence of the primary colonization of the tubercle bacillus in the parenchymatous tissue of the lungs, probably because in the nature of things such evidence is difficult to obtain. All that we have has been obtained on the autopsy table and in the dissecting room and consists of healed scar tissue, and even this evidence is alloyed with uncertainty as to the existence of tuberculosis in other parts of the body. The occurrence of primary tuberculosis in the bronchial lymphatic glands has been demonstrated, but the bronchial glands are not, strictly speaking, part of the lungs. In striking contrast stands the cumulative and most conclusive proof of the occurrence of primary tuberculosis in almost every other tissue of the body; in the lymphatic glands of every part of the body; in the serous membranes of every part of the body; in the skin; in the periosteal tissue; in the intra-abdominal organs; in the intracranial tissues; in the reproductive organs including the mammary glands; in the mucus membranes of the nose, throat, and ear; in the tonsils; in the mastoid cells, and in the eye. From the number of such cases reported in current literature one might well conclude that fifty per cent of all cases of tuberculosis begin in some other part of the body than the lungs.

An abraded surface is unnessary for the implantation of tuberculosis. There is a physiological way for the tubercle bacillus to enter a host. This may

be by the lungs or by the alimentary canal, but whichever the way, the real gateways are the lymphatics and the lacteals. When the tubercle bacillus, imbedded in small particles of broken down tissue, is carried into the body with the inspired air, its progress may be arrested in the nose, in the pharynx, in the larynx, on the walls of the trachea or away down in the bronchioles, according to the size of the particle of broken down tissue. If the foreign matter thus introduced is large enough to excite an expulsive cough or sneeze, it may be expelled at once; if not large enough to produce such an effect, it stimulates secretion of mucus, which when it has accumulated may be expelled and carry with it the foreign matter, or if not expelled may macerate the tissue in which the bacilli are cachéd and set them free. All along the course of the respiratory tract there are innumerable lymphatic mouths in the mucous membrane which take up any bacilli which may have escaped expulsion. From these mouths the bacilli are carried into the lymphatic glands by the lymph ducts,— from the upper air passages into the lymphatic glands of the neck and thorax and from the lower into the bronchial lymphatic glands. In the lymphatic glands the bacilli may be destroyed or may colonize according to the condition of health of the person invaded and the number and virulence of the bacilli that get in; or having found temporary lodgement they may be carried from thence into the thoracic duct and by the way of the vena cava into the circulation of the blood. As corroborative of what anatomy and physiology teach us in this connection, we have the investigations of Papavoine[19], Bollinger[20] and Loomis[21], who found in autopsies on persons, who had died of other diseases than tuberculosis, colonies of tubercle bacilli in the bronchial glands in various stages of development when no evidence of the existence of tuberculosis in the lungs themselves could be found.

When the tubercle bacillus finds its way into the stomach in food, or in pulverized tubercular matter which has been deposited upon the pharynx in respiration and is carried down with food, or in mucus which drops from the nose and post nasal cavity and is swallowed with saliva, it encounters the germicidal powers of the gastric juice.* Here, if digestion is normal and the bacillus-bearing matter is subjected thoroughly to the gastric juice, the bacillus is set free and is apt to be destroyed; but if digestion is incomplete and the bacillus-bearing matter is passed intact into the intestines, the intestinal juices liberate the bacilli and the churning of the intestines mix them with the chyle. Then the lymphatics and lacteals may take them up and carry them into the mesenteric glands and thoracic duct. Those which reach the mesenteric glands may be destroyed, colonize or be carried into the thoracic duct; those which reach the thoracic duct whether from the mesenteric glands or the lacteals are carried into the circulation by way of the vena cava. The tubercle bacillus is much smaller than oil globules and lymph corpuscles; if these can be taken up by the lymphatics and lacteals, why not the tubercle bacillus? Inasmuch as the venous blood is carried through the lesser circulation in the lungs for oxidation before it passes into the general circulation, the lungs bear the brunt of exposure to the tubercle bacilli which come in by the thoracic duct, and act as a strainer to the general circulation. This no doubt accounts for the frequency of tuberculosis of the lungs and for the primacy of the apices as the seat of the disease. In the apices the circulation is apt to be torpid, thus facilitating deposit and colonization.

The hypothesis that an abraded surface on the mucous membrane is the port of entry of the tubercle bacillus is moreover discredited by bacteriology and pathology. The tubercle bacillus requires rest, a definite temperature and a specific soil for colonization—conditions which do not exist on the mucous membranes of the respiratory tract and alimentary canal. The constant motion in these parts and the presence of secretions and gases are not conducive to implantation and growth of the tubercle bacillus. Besides, nature has well protected mucous membranes against abrasions and has made ample provision in the lymphatic system against admission of parasites into the circulation of the blood when abrasions do occur. The pathologist rarely records the existence of abrasions on the mucous membranes of the respiratory tract and alimentary canal, and, what is more remarkable still, he has many times told us that tubercular ulcers do not occur upon the mucous membranes of the respiratory tract and alimentary canal except in the most advanced stages of tuberculosis, when practically every organ and all the tissues of the body have been invaded by the bacillus[22]. In such cases it is fair to assume that implantation has taken place from within through the circulation and that colonization has occurred in the deeper tissues and not upon the mucous membrane.

The location of tuberculosis is not always an indication of the port of entry of the tubercle bacillus. In fact there are but two places in which deposit points unmistakably to the place of entrance, namely the bronchial lymphatic glands and the mesenteric lymphatic glands. There is no way by which the tubercle bacillus can get into the bronchial lymphatic glands except by way of the respiratory tract, nor into the mesenteric lymphatic glands except by way of the alimentary canal. But when the tubercle bacillus has been carried to its place of deposit by the blood, it may have come in either through the alimentary canal or the respiratory tract. The shortest and quickest way into the blood is by way of the alimentary canal, and the probabilities are that this is the very way by which the tubercle bacillus most frequently gets in. The route by the stomach, intestines, lacteals, thoracic duct and vena cava is continuous and direct, and substances which go in by it can reach any part of the body in a few hours. Entrance by way of the lymphatics, on the other hand, always means a delay in the lymphatic glands.

It is an error, however, to assume that because the tubercle bacillus has come into the system by way of the alimentary canal it has necessarily been derived from animal sources. Tubercular matter from human sources readily finds its way into the

*G. Carriere has recently demonstrated that the gastric juice attenuates but does not devitalize the tubercle bacillus

stomach, with food and with secretions of the nasopharynx. The occurrence of primary tuberculosis in the abdomen has been misconstrued both by the adherents and opponents of the view that animal tuberculosis is a source of seed supply for human tuberculosis. The adherents have quoted the frequency of abdominal tuberculosis in children, as proof that the seed comes from the cow because children use milk[23] and the opponents have quoted the infrequency of abdominal tuberculosis in children as proof that the seed does not come from the cow because children use milk[24]. Abdominal tuberculosis undoubtedly is of more frequent occurrence in children than is lung tuberculosis, but the occurrence of abdominal tuberculosis in children does not indicate that the seed supply comes from the cow. In deciding this question many things must be considered. Of the children who are artificially fed a fair percentage are of tuberculous mothers; artificial feeding of infants predisposes to abdominal tuberculosis by reason of the hyperemia which is set up in the abdominal organs and tissues by overfeeding and improper feeding; and children who are exposed to human tuberculosis are much more likely to get the tubercular matter into their stomachs than into their lungs because of the disposition of infants to put everything into their mouths. We have clinical data to show that tuberculosis in children, in whatever part of the body it may occur, nearly always is derived from tuberculosis in adults. This was graphically brought out in my study of tuberculosis in the fifth ward of the city of Philadelphia for the year 1888[25]. Of the twenty-two deaths from marasmus and tubercular meningitis, which occurred in that ward during that year, seventeen took place in houses in which previously there had been deaths from tuberculosis of the lungs or bowels in adults. This is nearly eighty per cent.

The mortality statistics which recently have been quoted extensively to prove that abdominal tuberculosis is grown from animal seed supply[26], also clearly have been too narrowly interpreted. The gist of the argument drawn from those statistics lies in the fact that the reduction in the death rate from marasmus has not kept pace with the reduction in the death rate from lung tuberculosis. Now in the first place the relative frequency of abdominal tuberculosis as compared with lung tuberculosis cannot be determined by the relative number of deaths from marasmus and phthisis. Medical nomenclature is pliable enough to serve every grade of practitioner of medicine from the charlatan to the skilfull diagnostician and represents the truth more nearly in proportion, as the standard of medical education gets higher and the methods of making diagnosis get better. Hence a careful scrutiny of the nomenclature will show that the name marasmus, as now used, represents diseases which were formerly returned under such indefinite terms as inanition, debility, teething, dyspepsia, disease of the intestines and atrophy[27]. Much of the increase in the death rate from marasmus therefore is due to better diagnoses. On the other hand, the death rate from phthisis, if anything, has been decreased by this same cause. Deaths which formerly were returned as phthisis because the patient had had a cough and had been emaciated are now sometimes more correctly ascribed to cancer of internal organs and certain forms of heart and kidney disease.

From what has been said it follows that as yet no exact formula defining the mode of entrance of the tubercle bacillus into the system can be laid down. It seems justifiable however to reverse the relative positions of the alimentary canal and respiratory tract as ports of entry and to place the alimentary canal in the first position. Further the statement may be ventured that the tubercle bacillus goes in by way of the alimentary canal in all cases in which *primary* deposit is made by the blood current.

The forces within the host concerned with deposit of the tubercle bacillus undoubtedly are the blood current and the lymph current. In fact these are the only forces in the body which can move substances from one part to another, and as the bacillus is immotile it is necessarily dependent upon them for motion. The blood current is the greater of the two forces and in a sense includes the lymph current as the latter empties into it through the thoracic duct. The lymph current, however, has by far the more extensive communication with the outside world and might in a sense be regarded as the headwaters of the blood current. Indeed, if we include the lacteals in the lymphatic system, as properly we should , we may regard the lymphatic system as the gateway by which the tubercle bacillus invariably enters the host. With distribution of bacilli throughout the body, however, the lymphatic system only can be concerned to the extent of carrying them either into lymphatic glands or into the blood current. Deposits in lymphatic glands are made by the lymph current and cannot be made in any other way; but deposits in other tissues than lymphatic glands are probably always made by the blood current.

The conditions which influence deposit of the tubercle bacillus in a particular organ or tissue and the manner in which deposit takes place are as yet largely matters of speculation. Clinical experience would lead us to believe that those organs and tissues which have had their circulation disturbed by traumatism, disease, or functional disorders are most prone to become the seat of deposit. Thus we find, for example, that a bruised periosteum is sometimes followed by tubercular periostitis, an inflamed testicle by tubercular orchitis, and an inflamed tube by tuberculosis of the tube. Passive hyperemia from any cause whatsoever seems to prepare a part for tubercular deposit. For an explanation of the manner of deposit we will probably have to look to the vasomotor system. It is quite possible that a blood stasis in the arterioles has much to do with it.

For germination and colonization of the tubercle bacillus a proper soil is necessary. Much seed no doubt falls by the wayside and upon rocks and much is destroyed by phagocytosis. Our knowledge of tuberculosis as gathered from the bedside, the autopsy table, the laboratory and from statistics leaves no doubt about the fact that for every tubercular deposit which germinates and colonizes a

large number fail. Just what constitutes soil for the tubercle bacillus we do not know. Whatever it may be it undoubtedly exists in a greater degree in some families than in others and can be transmitted from parent to offspring. Apparently it also wears out in time and gives place to a partial or complete immunity. The children of consumptive parents, who were conceived while the parents were consumptive, seem to be less susceptible to the disease than were the parents[28]. Partial immunity undoubtedly exists in families and races and apparently it has been the outgrowth of prolonged exposure and resistance. Failure in germination and colonization is probably also due at times to attenuation of virulence in the seed.

The conclusions which may be drawn, from our present knowledge, upon the implantation of the tubercle bacillus may be summarized as follows:

1st. The seed supply for new implantations of tuberculosis is derived, almost entirely, from human sources, especially the sputum of consumptives.

2nd. Seed supply for new implantations of tuberculosis can be derived from animal sources.

3rd. The tubercle bacillus enters a host through the lymphatic system in the alimentary canal, the respiratory tract, and the skin.

4th. The forces which convey the tubercle bacillus to its place of destination within a host are the lymph current and the blood current.

5th. The place of deposit is no indication of the port of entry of the tubercle bacillus except when deposit has taken place in the bronchial lymphatic glands or in the mesenteric lymphatic glands.

6th. Interference with the circulation of a part whether by traumatism, inflammation, or vasomotor disturbance prepares the part for tubercular deposit.

7th. Germination and colonization do not always follow tubercular deposit.

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THE VARIOUS METHODS OF VACCINATION AND THEIR RESULTS; WITH A SUGGESTION AS TO BEST METHODS.

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Vaccination is being practised so universally at the present time that a discussion of the various methods employed is worthy our attention. Having been convinced that the present diversity of methods results in many infections, and through this means the cause of vaccination is injured, and that, in this way, such epidemics as the present one are made possible; having seen during this present epidemic many bad ulcerations from the employment of the old methods, and having had absolute success with the method advocated, I herewith present it for the consideration of the profession. We shall consider vaccination from the standpoint of the operation itself.

Scarification.—The old method, and the one used most universally, is that of scarification. The lancet is used, and an area of from a half inch to an inch is scraped free of scarf-skin, till serum exudes. Others continue the scraping until the blood oozes from the surface. This method is open to objection because it finely pulverizes the scarf-skin and carries it down to the serum or blood surface. This outer skin is always germ-laden. Streptococci at times, and always staphylococci, may be found here. It is a well-konwn fact that it is next to impossible to sterilize the skin surface, and should this be accomplished by the use of an antiseptic this renders vaccination impossible, since all antiseptics destroy vaccine, except glycerine, and glycerine is out of the question, requiring days to render skin surface sterile. The finely powdered skin, due to this scarification, carries down with it the germs therein, forming a pus layer beneath the scab of the vaccine sore; when the dressing is removed, the scab comes away, leaving a typical pus-infected ulcer open, resulting in multiple axillary abscesses, and following paralysis, or in erysipelas, and at times even general infection and death. The old scraping method of scarification was abandoned long ago by those who prepare animals and manufacture vaccine, because these manufacturers lost too many calves by pus infection. They now employ safer methods. Why should we physicians also not abandon it? Another method, which is perhaps not quite as dangerous, but open to objection, is that of cross scarification or cutting, in which marks similar to the tit-tat-to mark are made on the skin. These marks are usually made by a pronged lancet, they cross each other usually at right angles, and isolate islands of skin surface, which are thus cut off from the nourishment of the minute capillaries, and hence die. Dead tissue is always a feast for pus and other germs. Sloughing occurs, leaving beneath a bad ulcer, with results similar to those following the first method. This method was also formerly employed by those who prepare vaccine and was also abandoned because of pus infection and death of the animals vaccinated. This way of vaccination should also be abandoned by physicians. The best and possibly

the most practical method of scarification is that of making one single scratch with a sterilized cambric needle. This opens an area of the skin and allows the serum to exude, without carrying in any of the outer skin or in any way endangering the patient to an infection. The use of the needle is preferable, because it can be more rapidly and readily sterilized by passing it through a flame, thus avoiding the destruction of a good lancet. The resulting vaccination is a typical pock, the lips of the scratch are soon sealed by serum, infection shut out while vaccine remains within. The pock is thus covered by healed skin as soon as formed, and when carefully protected, the scab soon desiccates and healing is complete.

The Vaccine.—The old method of obtaining the virus was from the scab. These were taken from the arms of healthy individuals, pulverized and the powder blown upon the scarification from a quill. This method has been well nigh abandoned on account of a large number of syphilitic and tubercular infections resulting therefrom. The present method of preparing the virus is by inoculation of calves The virus is collected from the vaccine sores of calves which have been subjected to a rigid process of cleansing and surgical preparation for vaccination. The skin is washed from udder to nates, shaved, and then cleansed with sterile water. The calves are tested with tuberculin. The vaccine is inoculated into parallel incisions, which are made without drawing a drop of blood. On the fifth or sixth day the virus is taken. The vaccinated surface is first washed with sterile water to remove scab, the pulp, or pearls of vaccine are then scraped off with a sharp spoon and ground between sterile glass rollers and finally suspended in glycerine and kept in cold storage. Glycerine acts slowly as an antiseptic and by the end of 40 days has starved out any pus germs which may have been present in the pulp thus prepared. This fact is rendered certain by animal inoculation and by culture tests. The vaccine thus prepared is that which we are now using. There can be no doubt that the vaccine which is prepared in sealed glass tubes is the safest to employ. Though like results have been obtained in this epidemic from the glycerinated lymph on ivory points. The latter are the easier to employ, as they require less manipulation and dry more quickly.

The Dressing.—In the "olden time," you have heard it, so have we all, "in the olden time we didn't use any dressing. We simply scraped the arm, applied our vaccine, and vaccinated them by the hundreds, and never heard of a bad arm." The present demands different methods. In "the olden time," when much of the practice was country practice and when city practice was not in cities of such dimensions and when population was not so crowded, and when asphalt pavements and driving dust were things unknown, when every particle of city dust was not packed with germs virulent in character, truly those were other times. Were cities ideal and clean now, possibly vaccination could be done without dressing, but not in Camden, nor in Philadelphia, nor in Chicago. We even dare to doubt the statement of the old physician who said he had no bad arms when vaccination was done without dressing, for we can see that even then there was pus infection, as evidenced by the huge scars on the arms of our parents and grandparents. But to-day we must have a suitable dressing to protect our vaccinations, hence the shield. But the shield must also go, since it has proven its uselessness by aiding in the increase in the number of sore arms and the danger of infection. The shield, no matter of what form, must contain air holes or be open at the top; this permits the lint from the underwear, which is impregnated with dust from the streets and scales of the scarf-skin, which are full of germs, to settle upon the sore. The shield also acts as a cup over the sore, squeezes out the serum, lint and serum mingle, germs find here everything suitable for their growth, and soon infection follows.

The best, most practical, most easily applied dressing is a small piece of dry sterile gauze, fastened by means of a plain bandage, pinned to the undershirt from the outside with a safety pin, or fastened to the arm by a piece of non-irritating adhesive plaster. This dressing insures good ventilation, absorbs all secretion and keeps out all foreign substances. The entire method of vaccination is very simple. The most practical method for the physician to employ in his daily practice is here given. The arm is cleansed with alcohol alone, or with soap and boiled water. A little rubbing is desirable in order to bring the blood to the surface. An ordinary cambric needle is used, this is held in an alcohol flame till red hot; as soon as it is cool again the arm is scratched just once, the attempt being made to scratch so light a scratch as not to draw any blood, for if blood is drawn the vaccine may be washed out, and vaccination fail. The virus is then applied and rubbed in well with the ivory point. When the arm is dry, apply a piece of plain sterile gauze two inches square, fastening it to the arm by nonirritating zinc oxide adhesive plaster or by bandage. A new dressing is required as soon as the sore is made uncomfortable by the discharge, one new dressing being usually all that is required. Such a vaccination usually heals and the scab drops within three weeks, only a small scar resulting, which will be scarcely visible five years hence. One other method of vaccination remains to be mentioned, it is the hypodermic method. It is perhaps the best and safest method when large numbers are to be done in succession and when means are present with which to carry it out. The glycerinated lymph is used, this necessitates the use of a sterile needle at every vaccination, and requires the possession of two dozen needles, twelve to be in process of sterilization, while other twelve are in use. This method obviates the possibility of infection of the arm, if the arm is properly cleansed before the injection. It is perhaps the ideal method when used by the physician who understands surgical cleanliness and carries it out to the letter. It also has the advantages of being rapid and accurate in its results; there being no possibility of the patient escaping the action of the virus either by washing it off after the vaccination or by absorption through any dressing.

FINGER AMPUTATIONS.*

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It has been but a comparatively few years since the surgeon who could remove a limb with the fewest strokes of the knife and in the quickest possible time was considered the best surgeon. If we refer to some of the treatises on surgery written as late as fifteen years ago, we will find that the treatment advised for compound dislocations, compound fractures into joints and compound comminuted fractures, was amputation. To-day, since the introduction of antiseptics combined with other ever advancing scientific methods, the surgeon who practices the greatest conservatism, who knows best how to save a limb rather than how to remove it, should be considered the ideal surgeon.

Although the laity, as a rule, look upon a mutilating amputation as a wonderful and important operation, the surgeon with the most experience will be the one who has done the fewest amputations, other things being equal. It is upon amputations of the fingers that the surgeon should practice conservatism to the highest degree, for a fraction of an inch saved may mean a great deal to the patient. The old teachers taught that the amputation should be made as far away from the body as is compatible with the complete removal of the diseased focus. Although this rule does not hold good as applied to some parts of the body, it answers admirably when applied to finger amputations.

There are definite rules given in most text-books for finger amputation, but when we stop to think, there is no other portion of the body that affords more opportunities for atypical amputations. The fingers, being richly supplied with blood vessels and nerves, have a remarkable recuperative power, and before removing a finger the surgeon should exercise his greatest ingenuity in making use of every available piece of tissue, providing it will contribut to give the patient a more useful member, as no appliance can replace the tactile sense or the prehensile power of a lost finger.

The conditions that call for amputation of fingers are:

1. Those resulting from injury, as severe crushes, avulsions, etc.

2. Those resulting from disease, as gangrene, bone disease, malignant tumors, etc.

3. Deformities—either congenital or acquired. In those cases in which the bone is greatly comminuted, the soft tissues, including the blood vessels and nerves, severely contused and lacerated, primary amputation is clearly indicated. In other cases the bone may not be injured, but the soft tissues so badly torn and contused that amputation will be necessary. At first sight some cases may appear to be so severely injured that amputation seems almost inevitable, but these, under judicious antiseptic treatment, may regain their vitality, and amputation thus be avoided. Again, cases which at first seemed trivial have become through carelessness and neglected treatment cases for amputation, and a member has thus to be needlessly sacrificed. These are points which call for the nicest judgment on the part of the surgeon, and if the conservative surgeon be at all in doubt, he will give the benefit of such doubt to the patient and treat the injured member antiseptically, hoping that nature will restore it to a useful part.

In cases of avulsion of the fingers the question arises how to use the torn surfaces to the best advantage in making the flaps in order that the patient may receive the most useful stump. In cases of gangrene the conservative surgeon will usually wait for the line of demarkation to form before amputating, this applies especially to dry gangrene; in the moist form of gangrene when sepsis is threatened, an earlier operation is justifiable. Bone disease may become so prolonged and extensive that excision or arthrotomy is out of the question and amputation is called for. Although tumors of the fingers are not common, this condition may occur and call for amputation, providing the tumor cannot be removed without destroying the function of the part. In those cases of deformed fingers in which the deformity renders the part not only useless, but an incumbrance, they should be removed. If after injury or disease of a finger it is liable to become ankylosed it should be dressed in a partly flexed position, as this will increase the grasping power of the hand.

By saving as much bony framework of the hand as possible, sometimes by plastic operations or by skin grafting, the usefulness of the hand may be increased. For amputation of the fingers or parts of the hand but few instruments are required; a few hemostats, a bone-cutting forceps, a bone-holding forceps, a pair of small-toothed retractors, periostal elevator, small saw, one or two small knives, a pair of scissors and a pair of dissecting forceps. In preparing the patient for operation the part should be thoroughly scrubbed with green soap and then rendered as clean as possible, after which a wet bichloride of mercury dressing should be applied and left on until the time of operation. In those cases in which the pain is too severe this primary cleansing will have to be omitted. In all cases the part should undergo a final cleansing after the anesthetic has been administered. In those cases in which a rubber constrictor can be applied about the finger without interfering with the seat of operation, there is no objection to using a local anesthetic. This may be done by injecting with a small hypodermic needle one of the local anesthetics now used for such operations. In patients of advanced years, especially if their blood vessels are atheromatous, general anesthesia is to be preferred, as in such cases gangrene may follow the use of a local anesthetic.

In amputating through the joints of the fingers the operator should remember that the prominence in each case is formed by the head of the proximal bone. Thus the knuckle is formed by the head of the metacarpal bone, the metacarpophalangeal joint lying one-third of an inch to the distal side; the interphalangeal prominence by the head of the proximal phalanx, the joint being one-sixth of an inch to the distal side; and the distal prominence is formed by the base of the second phalanx, the joint

*Read before the Northwestern Medical Society, December, 1901, Symposium on Minor Surgery.

lying one-twelfth of an inch below. The shape of the joint should also be constantly borne in mind. In the metacarpophalangeal joint the concavity is on the first phalanx and faces the wrist; in the interphalangeal joint the concavity is on the first phalanx and faces the finger tips; in the distal joint the concavity is on the second phalanx and faces the finger tips. The tendon sheaths run from the bases of the distal phalanges up into the hand and forearm. On account of the readiness with which these canals conduct septic material along the tendons, Treves advises that the theca should be closed with fine catgut stitches.

As I have said, the rule to save as much of the finger as possible should be constant. The following are the usual methods used:

1. A long palmar flap. 2. A long palmar and a short dorsal flap. 3. Two lateral flaps. 4. A long lateral flap. 5. Two equal antero-posterior flaps. Of these methods the first two are to be preferred, as, when the stitches are introduced the scar is on the dorsal aspect of the finger and not apt to be injured by contact, and as the most sensitive tactile nerves are in the palmar flap, the sense of touch is thus well preserved, both very desirable features.

When amputating near the distal joint the operator should save, if possible, the base of the distal phalanx as the long flexor and extensor tendons are attached at this joint and their function is thereby preserved. In amputating at any point above the distal joint, the cut ends of the tendons should be stitched either to the periosteum or to the flap, thus preserving their function. Senn says, in amputating a finger below its base the extensor tendon should be sutured to the flexor tendon over the articular end or sawn surface of the bone. This will prevent undue retraction of the flap and furnish the cut ends of the tendons with a permanent point of anchorage. The teaching has been to amputate the middle and ring fingers at the metacarpophalangeal articulation. The surgeon should save as much of these two fingers as possible, for by the above method of fastening the tendons the stumps of these fingers become useful; the interossei muscles too are supposed to play part in flexing these fingers.

It is advisable to saw through the bone, instead of cutting with the forceps, as the latter procedure is liable to splinter the bone. Before sawing through the bone the periosteum should be reflected in the form of a cuff, after the bone is divided the periosteum should be pulled down and sutured with fine catgut over the end of the bone. It is unnecessary to round off the edges of the bone as these are readily absorbed. The cut nerves should be drawn down as far as possible and cut high; this will prevent the nerve from being caught in the scar and causing the condition known as painful stump. The arteries should be left as long as possible and by twisting them sufficiently ligation may not be necessary. If an elastic constrictor has been used, this should be removed suddenly, the old notion that the elastic tube should be removed slowly, thus being apt to cause hemorrhage, is erroneous. Before closing the wound it should be thoroughly washed with hot saline solution and should be perfectly dry. Drainage should usually be introduced, either in the shape of a small tube or a strip of gauze. The cut edges should be accurately approximated and stitched with silk-worm gut; use as few stitches as are necessary to bring the flaps into apposition. By inserting too many stitches the part becomes constricted, the blood supply shut off, drainage is prevented, and the tension causes pain. In the perfect stump the flaps are freely movable over the end of the bone.

Always immobilize the stump by placing the hand on a splint, this is very essential to secure absolute rest. If for any reason the stump should become infected, remove the stitches and make free longitudinal incisions into the stump, if there is any swelling. In disarticulating the fingers at the metacarpophalangeal joint, the lateral flap method is perhaps the best. This is done by making two separate incisions, beginning about three-quarters of an inch above the head of the metacarpal bone and extending around to meet on the palmar aspect of the base of the first phalanx. In case it is necessary to remove the metacarpal bone, this can be done by extending the incision just described, up the dorsum of the metacarpal to the carpometacarpal joint. The operator should make the knife hug the bone as closely as possible to avoid cutting the palmar arch or other structures in the palm. The surgeon should be extremely conservative in operating on the thumb, as this is the most important finger on the hand. It is advisable to try excision on the bones of the thumb before resorting to amputation.

Bell and Ferguson report cases of excision of the first phalanx and of excision of the metacarpal bone with excellent results. When it becomes necessary to amputate the whole hand, there is no advantage in trying to save the carpal bones, as they may become diseased, besides the stump formed by leaving these bones *in situ* has no advantage over the radiocarpal amputation.

A great deal more might be said about operations upon the hand. I trust, however, that what I have said will impress upon you the importance of conservative surgery of this part of the body and that it will be of some guidance in your future treatment of these parts.

THE YOUNG PHYSICIAN.

By EMIL AMBERG, M. D.,

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"Conscience is the law of laws."—Lamartine.

The Present Medical Conditions are Unhealthy.

The medical literature of our age bears witness that clouds are gathering on the professional horizon which must create in every physician gloomy views about the future. It is natural, as proved by history, that the interests of individuals, though they may be strictly within the law, will sometimes place a whole class of men in a position which cannot be recognized as healthy and in accord with the general welfare, even when viewed from a moral standpoint by the individual members of the privileged

class themselves. History shows that under these circumstances the moral law exerts its right, with irresistible power, and declares unlawful to-day what has been regarded as lawful yesterday. More and more the principle is recognized that the individual who forfeits his right forfeits the right, which principle has been so excellently expounded by the great teacher Jehring.

The status of the medical profession in our country of to-day will, I hope, in the future be understood and excused only by virtue of the historical method. There is nobody more proud than I of the illustrious achievements of our own medical men; but, unfortunately, we have to-day an oligarchic state of affairs. I am speaking of the great majority and try to compare in my mind the medical conditions of to-day with the state of affairs which could exist if medical matters were arranged according to the intellectual and moral standard of well educated and conscientious American citizens. It is not my intention to take up your time with generalities; I shall try to remind you of a few facts known to all of us which show that it requires only some good will to make great advancement. I cannot demonstrate this fact better than by speaking of the young physician who starts to practice medicine.

The Young Physician Confronted With Conditions Caused by the Overabundance of Medical Colleges.

After the young man has received his diploma he may or may not become an interne in a hospital, or he may travel, in order to add to his knowledge and skill. After a little time he will settle down to practice, or, rather, he will try to do so. Wherever he may look for a location in our country he will immediately be confronted with the fact that there is very little room for him. I am speaking of general, and not of exceptional circumstances. That there exists an illegitimate over-production of physicians in our country only ignorance can deny. Who is responsible for this state of affairs? We read, in the "*Journal of the American Medical Association*" of July 27th, page 270 in part:

"Our 160 medical colleges, however, turn out annually a crop of nearly 6,000 graduates or over 2,000 more than can thus be provided for.

"It is certain that the multiplication of doctor factories has gone far enough in this country, though, as yet, it does not seem to have been checked."

A young man entering a medical college should have proved by his record that he is able to undergo the hard study of medicine. Is this always the case? Dr. Henry Beates (see *New York Medical Journal* of August 10th, 1901, page 200) says:

"It is the commercialism of the medical schools that is the cause of so many rejections. The papers of this examination prove clearly that the medical colleges continue to admit students who are utterly illiterate. The students cannot pass even the simplest rudimentary examination, and to them medicine is a study entirely beyond comprehension. Just so long as these colleges admit men of little or no preliminary education there must be a large percentage of rejections when they take the Board examinations. I wish to say, emphatically, that the granting by a college of diplomas to such men is a fraud."

Medical Colleges Responsible to the Public and to the Physicians.

The college faculty, to some extent, is morally responsible in two ways: 1. To the community. 2 To the student. The community expects a medical school of to-day to furnish only physicians able to fulfill their duties properly.

The student who places his whole future, practically, in the hands of the faculty must expect to be able to make a decent living afterwards. The medical schools of to-day have a great influence in this respect.

In the announcement of a medical college for the Session 1901-1902 we read, in part: "Nearly all the medical colleges in the United States are now associated in four separate organizations for the purpose of raising the standard of medical education. One of these, the Association of American Medical Colleges, embraces the majority of the regular medical schools in good standing and, while it possesses no licensing power, it exercises, nevertheless, a potent influence upon the future career of graduates."

Until we see still more of the results, we must keep in mind what the committee on organization, of the American Medical Association, said in their preliminary report (*Journal of the American Medical Association*, May 25th, 1901, page 1441): "The physicians connected with the medical colleges organized some time ago a medical college association, and this body has done much good, but it is realized by those connected with it that it has failed in some of the important measures it undertook to carry out."

The mere fact that a medical college belongs to the Association of American Medical Colleges is not a proof of its sufficiency. The medical boards cannot conscientiously recognize the College Association. This could only be the case if a permanent joint committee would continually inspect the colleges. On the other hand, we should keep in mind what Dr. Albert R. Baker, ex-president of the College Association, says: "As long as we have forty or fifty examining boards, many members of which are appointed solely as reward for political service, there will be need of watchful oversight."

We know that the medical faculties of our country, who control the output of the material, have been so thoughtless in their conduct that the young man finds little room for work. It is easily understood that great harm is done thereby in various ways. The young physician's ability is diminished through lack of exercise. Undoubtedly he loses some of his training and the community is a direct sufferer, because the services rendered by the young man cannot be so good now that he has become rusty. That science is a loser need not be mentioned. We all know how discouraged these young men become and to what means they take recourse to keep themselves above water. The ideal side of our calling is lost sight of under such circumstances. The medical autocrats, the college professors, the

beati possidentes thrive anyway, but the young doctor almost starves. It would be well to establish living insurance companies for young physicians as we have life insurance companies.

Dr. Philbrick, in an article in the "*Journal of the American Medical Association*, of June 15th, 1901, says, in part:

"Medical colleges exist far in excess of any public need. Like the country store which doles out inferior wares at every cross-road, a so-called "Medical College" is found in almost every town of generous size; and to obtain a medical degree is within the possibility, intellectual and financial, of any youth, however lacking in mental and moral fitness." "In the majority of cases they possess few facilities for demonstration, are located in towns where there is not a sufficient number of dependents to furnish requisite clinical material, and generally have as instructors men of mediocre or less ability."

"Professional welfare is not a desideratum in the founding of most medical colleges, they being merely reflectors of personal ambition."

"So irrationally have medical schools been established in our large cities that it is recognized by sociologists and charity workers as one of the most potent causes at work to undermine the sense of economic independence and self-respect in the community. The clinics must be filled; hence the ability of those seeking relief to pay cannot be questioned." "Not alone are the laity pauperized; the young practitioner walks long and wearily in the borderland between inanition and starvation. My statements are facts, not fancy." Dr. A. N. Ellis, in the *Cincinnati Lancet-Clinic*, of August 24th, 1901, says in part:

"I have heard a great deal about there always being room at the top. I don't believe a word of it. I know lots of young men of skill, learning and industry in the city of Cincinnati who do not make a decent living, and why? Because the supply exceeds the demand."

It is imperative that steps be taken by the people and by the well-meaning members of the profession to remedy the abuses by early and energetic action.

Reciprocity and Uniform Medical Legislation.

The communities are beginning to apply vigorous remedies through the medical boards. Only recently the importance of Medical Examination Boards has become more recognized. They are now pretty well established in their own divisions and by the universally demanded reciprocity between them the requirements will become more stringent until uniformity is reached. Reciprocity is not dependent upon the will of the Boards, because the Boards are only the executors of the will of the people. As soon as it is understood that the life of a citizen in one political division is worth just as much as the life of a citizen in another, and as soon as the very simple deductions from this principle are made by the people who are most concerned, a change must come. It is only natural that divisions which are medically equally strong will form groups. Reciprocity furnishes the means of raising the standard of medical education, of making it uniform and of doing away with illegitimate over-crowding. Overcrowding in itself is at present beyond our control, but the fact should be emphasized that we should and can prevent illegitimate and fraudulent over-crowding. What a deplorable law exists even in Massachusetts, where a man can be admitted to examination for the State license who has not graduated from a medical college. It will be absolutely necessary that in the future in nearly all political divisions the State Board of Health and the State Examining Boards form two distinct bodies, and that, as a rule, no physician shall hold office in both Boards simultaneously.

The question of reciprocity and uniform medical legislation is inseparably connected with the national welfare and will stand so long before the people and the medical profession until it is solved. The approval of reciprocity and uniformity by almost every intelligent physician must be acknowledged with satisfaction.

It is the young physician of to-day who is necessarily the most interested in the question of uniformity, because, according to the laws of Nature, the future belongs to him. The gray-haired members of our profession, however, who still possess young hearts, will be with us.

Medical Schools Must Become State Institutions.

The tyranny exercised by so many medical schools over the medical profession must first be broken by united efforts before we can speak of the independence of the medical profession in the United States. Paternalism of the worst kind must be overcome. The medical profession is strong enough to act; we should not be intimidated by remarks to the contrary. The people will stand on our side. If there exists the necessity for a combination in the form of a union it should be a combination of physicians against the medical schools of a low standard. The standard approved of by the Association of American Medical Colleges cannot be accepted as sufficiently high. Medical schools should be state institutions, and special privileges should not be enjoyed by private medical school corporations. Institutions of the character of medical schools are too important a factor in the constitution of a nation that any community can afford to give the control over the same to private parties however trustworthy they may be. No state, for example, would dare nowadays to entrust to a corporation the right to form an army and to carry on a war. The sound mind of the people I hope will in time remedy this abuse of a personal liberty in a free country. There does not exist the least doubt in my mind that private medical schools before long will not be tolerated. So far as the profession is concerned we may say that the Declaration of Independence of the medical profession has not yet been pronounced. The most important part of it will read: "Medical schools shall be state institutions."

If it should be the case that the American Medical Association cannot act, I think it would be advisable that the independent members of the medical profession form an association of their own. However, I hope this step will not be necessary.

Many of the medical schools have acted to their pupils, and later physicians, like stock companies

which have watered their stock. They did so by turning out many inefficient men, increasing the number of so-called physicians, who, rather unscrupulous in their methods, help to make the medical profession of to-day appear in the eyes of the public as resembling a diluted and rather unreliable mixture. That such a proceeding is detrimental in every respect need not be dwelt upon. It lowers the professional standing, it prostitutes science and introduces a commercial spirit which no code of ethics can successfully combat. The code of ethics has become almost powerless nowadays.

Commercialism and Advertising.

What does the young physician do in order to succeed in his chosen profession? If he has means enough to spend two to six years in his office in practically solitary confinement, he may expect to succeed. Others travel for pharmaceutical and other concerns and give up their professional career. The young man who sticks to his calling is sometimes obliged to call the attention of the public to his existence as a medical man by resorting to ways and means which are entirely unprofessional.

Only recently we read that a young physician in Michigan accepted the position as community doctor for 240 families at the rate of fifty cents a month per family. If such a plan is carried out in other places and under present conditions we may soon expect to hear that other physicians will take care of a certain number of patients if their office rent, board and laundry bills are paid and if they receive some pocket money. Many physicians nowadays will be glad to work under such, or worse, conditions, and I do not blame them. That the public will be the ultimate sufferer if such a procedure becomes popular need not be mentioned. We know that in a foreign country just such a state of affairs has led to much trouble.

A peculiar movement was started in one city when an association was intended to be formed by the aid of which some thought thumb-screws could be put on the patients. It had been entirely forgotten that the over-crowding of the medical profession is the cause of so many evils, which cannot be corrected by squeezing the public in any such manner. It requires, however, action, to go at the root of the evil. Renan says: "In morals, like in art, talking is nothing, doing is everything."

So much is said about advertising, especially about the advertising of one's specialty. How eager are some specialists to prevent a young man from becoming known as a specialist, and yet, time and again, do not the same men have the attention of the public called to their specific calling, in college announcements, hospital reports, and in other ways? Sometimes a great indignation is expressed when a physician's name appears in the daily press, and yet often we are obliged to think that most physicians decry the appearance in the daily papers of a physician's name only if that name does not happen to be their own.

Furthermore: does there exist a commercialism more pronounced than that exhibited by some oculists who procure eye-glasses for their patients and then sell to them at an advanced price? Such a procedure works harm in both ways: First, it degrades the profession, and, second, it is deceiving by making the world believe that the specialty is so very successful in itself, whereas, it seems to be so sometimes only by taking refuge in commercialism. I do not blame the individual oculist; I only want to show what fruit grows on the tree of over-production. It has gone so far that nowadays we frequently must not speak so much of the "survival of the fittest," but of the "survival of the shrewdest."

No one can learn to master a specialty in a few weeks. It should be required that a man, before he is allowed to practice a specialty and make such known, should give proper evidence either to the State Board or to some recognized medical society, that he is entitled to it. It would be of great interest to learn how the many eye, ear, nose and throat specialists acquired their knowledge and received their training, especially in the latter mentioned specialties. It is absolutely impossible that these specialties can be learned out of books, and it is imperative that thorough and personal instruction is received in these branches like in any other, in order that the mistakes which experience learned to avoid are not made over again. This can only be reached by actual training. That we have, in this respect, room for much improvement must be admitted.

How frequently has the attention of the medical profession been called to the lack of respect exhibited in the court room when a physician is called upon to give expert testimony, and how often has it been admitted that this lack of respect is merited to a great extent. A lack of confidence in the medical profession is amply shown by the fact, as Dr. McClintock remarks, that drugs were purchased after physicians' prescriptions to the amount of ten million dollars within a year, whereas one hundred and sixty million dollars' worth were bought directly by the public.

Our Hope Rests with the Reorganized American Medical Association.

The laity and the medical profession are beginning to realize that modern medicine should be based on solid ground, that it must be studied systematically, and that it requires the whole energy, perseverance and time of its well-trained exponents. Only by devoting practically his whole time to professional work will the average physician be true to his calling. Our possibilities are limited according to the nature of men and things. It is inhuman to limit them still more by unprofessional methods.

The field of medicine becomes larger every day. Thorough training in physiology and pathology becomes more and more recognized as indispensable for correct and independent thinking in medicine. The means which lead to a differential diagnosis become more exact. Preventive medicine has become the pass-word of our time. The methods of treatment embrace means hitherto only little employed. A greater familiarity with psychology, hydrotherapy, massage and gymnastics, and their proper application, will quickly diminish the number of faith healers and osteopaths and strengthen the confidence of the public in the profession. Thorough training in a professed specialty will more and more be insisted upon. May the young physician quickly adapt

himself to modern demands. He is more free to act because he is not so much hampered by tradition and old associations.

At present the future of American medicine lies in the hands of the House of Delegates of the American Medical Association. Great responsibilities are placed upon the shoulders of the Delegates, who are confronted with serious problems. The endorsement of the plan of reorganization of the American Medical Association, at the meeting at St. Paul, awakens great hopes. Medical Education, Medical Legislation and reciprocity have been mentioned as essential parts of the work before the new body. May the Delegates find a solution in the near future and may they feel sure of the assistance and co-operation of every clear-minded and well-meaning physician in this our great country.

JOURNAL DES PRATICIENS.

December 21, 1901. (15me. Année, No. 51.)

1. Herpes Zoster in Tuberculosis. ERNEST BARIE.
2. Lumbar Puncture in Cranial Injuries. TUFFIER.
3. Vesical Diverticula. ALCEE DURRIEUX.

1.—Barié reports a case of **herpes zoster in a phthisical patient with cavities,** in the sixth right intercostal space. It is very rare, generally found in chronic pulmonary tuberculosis, in the advanced stages. It was noted upon the thorax in 17 out of 34 cases reported. Pain generally precedes the eruption of the vesicles. It lasts less than two weeks, the diagnosis is not difficult, and its appearance is an unfavorable sign in tuberculosis. It is symptomatic of a trophic alteration of the nerves. In the treatment Barié advises a simple dusting powder. [M. O.]

2.—Tuffier has performed **lumbar puncture in 10 cases of cranial and spinal injuries.** He collects the cerebro-spinal fluid extracted in three separate test-tubes, for accurate examination. Both cerebral contusion and hemorrhage, as well as fracture of the skull, can cause a sanguinolent cerebro-spinal fluid. In the treatment of pressure symptoms in cerebral injuries he considers lumbar puncture of value. [M. O.]

3.—**Diverticula of the bladder** are formed by the expansion of parts of the bladder wall. They may be congenital, or acquired, when they are due to hypertrophy of the prostate, stricture of the urethra, or vesical calculi. They are small and multiple, frequently found in old men, while congenital diverticula of the bladder are rare. Diverticula are found generally near the ureteral openings. When many are present, they vary in size, with walls thinner than those of the bladder. Cystoscopic examination confirms the diagnosis. When the diverticulum is single and large, urination occurs in two parts, the second micturition being accompanied by abdominal pressure and the emission of purulent urine. Calculi may form recesses in the bladder walls which Durrieux calls pseudo-diverticula. Cystitis or cystocele of the diverticulum may occur, making the prognosis unfavorable. In the few cases in which palliative treatment causes no improvement, an operation may be considered. But with cystoscopy, irrigation is easy and the results are as a rule good. [M. O.]

Herpes Zoster.—Charles Dopter reports the results of the examination of the cerebro-spinal fluid of a man with herpes zoster of distinctly metameric distribution, on the fifth day after the appearance of the eruption. There had been slight fever during the first 24 hours only. An average number of lymphocytes was found, some epithelial cells, and diplobacilli which clouded bouillon, liquefied gelatine, and stained by Gram's method. The bacillus was found in animals inoculated, the animals dying a few hours after being injected. Simonin found microorganisms in the cerebro-spinal fluid in herpes zoster, as have Achard and Loeper also. *Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris*, July 25, 1901, No. 26). [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ending March 15, 1902:

			C.	D.
	SMALLPOX—United States.			
CALIFORNIA	Sacramento.	Feb. 2-Mar. 1	1	
	San Francisco.	Feb. 23-Mar. 1	4	
COLORADO:	Denver.	Feb. 24-Mar. 1	4	
DISTRICT OF COLUMBIA:	Washington.	Mar. 1-8.	3	
ILLINOIS:	Belleville.	Mar. 1-8.	4	
	Chicago.	Mar. 1-8.	19	
INDIANA:	Crawfordsville.	Mar. 1-8.	2	
	Evansville.	Mar. 1-8.	8	
	Indianapolis.	Feb. 2-Mar. 8.	2	
	Terre Haute.	Mar. 1-8.	1	
IOWA:	Ottumwa.	Feb. 1-Mar. 1.	2	
KENTUCKY:	Covington.	Mar. 1-8.	2	
	Lexington.	Mar. 1-8.	4	
MAINE:	Portland.	Mar. 1-8.	9	1
MASSACHUSETTS	Boston.	Mar. 1-8.	17	9
	Cambridge.	Mar. 1-8.	4	1
	Chelsea.	Mar. 1-8.	1	
	Lawrence.	Mar. 1-8.	3	1
	Malden.	Mar. 1-8.	1	
	New Bedford.	Mar. 1-8.	1	
	Quincy.	Mar. 1-8.		1
MICHIGAN:	Detroit.	Mar. 1-8.	5	
	Ludington.	Mar. 1-8.	2	
MINNESOTA:	Minneapolis.	Feb. 22-Mar. 8.	26	
	Winona.	Mar. 1-8.	4	
MONTANA	Butte.	Feb. 22-Mar. 1.	2	1
NEBRASKA:	Omaha.	Mar. 1-8.	2	1
NEW JERSEY:	Camden.	Mar. 1-8.	1	
	Harrison.	Mar. 1-8.	1	
	Hoboken.	Mar. 1-8.	2	
	Jersey City.	Mar. 1-8.	9	1
	Kearney.	Mar. 2-9.	1	
	Newark.	Mar. 1-8.	22	3
	Union.	Mar. 1-8.	1	
	West Hoboken.	Mar. 1-8.	3	
NEW YORK	Binghamton.	Mar. 1-8.	1	
	New York.	Mar. 1-8.	29	10
OHIO.	Cincinnati.	Feb. 22-Mar. 1.	1	
	Cincinnati.	Feb. 28-Mar. 7.	15	
PENNSYLVANIA.	Philadelphia.	Mar. 1-8.	9	11
RHODE ISLAND	Providence.	Mar. 1-8.	3	
SOUTH CAROLINA	Charleston.	Mar. 1-8.	2	
SOUTH DAKOTA	Sioux Falls.	Feb. 22-Mar. 8.	2	
TENNESSEE.	Memphis.	Mar. 1-8.	4	
TEXAS:	Houston.	Mar. 1-8.	12	
UTAH:	Salt Lake City.	Feb. 22-Mar. 8.	9	
WASHINGTON:	Seattle.	Feb. 22-Mar. 8.	2	
WISCONSIN:	Green Bay.	Mar. 1-8.	1	
	SMALLPOX—Foreign.			
BELGIUM:	Antwerp.	Feb. 15-22.	4	3
	Ghent.	Feb. 1-22.		6
BRAZIL:	Rio de Janeiro.	Jan. 18-Feb. 8.		23
CANADA.	Halifax.	Feb. 22-Mar. 8.		
	Quebec.	Feb. 28-Mar. 8.	1	
	Winnipeg.	Feb. 15-Mar. 1.	7	
COLOMBIA	Cartagena.	Feb. 1-28.		1
CUBA	Guantanamo.	Feb. 22.	1	
FRANCE:	Amiens.	Feb. 15-22.		1
	Paris.	Feb. 15-22.		3
GIBRALTAR:		Feb. 9-16.	1	
GREAT BRITAIN:	England—			
	Birmingham.	Feb. 15-22.	1	
	Liverpool.	Feb. 15-22.	1	
	London.	Feb. 8-15.		34
	Manchester.	Feb. 15-22.	1	
	Southampton.	Feb. 15-22.	1	
	Scotland.	Feb. 15-22.		8
	Glasgow.			
INDIA:	Bombay.	Feb. 4-11.		11
	Madras.	Jan. 31-Feb. 7.		2
ITALY:	Brescia.	Feb. 17.	176	
	Naples.	Feb. 8-15.	11	
	Naples.	Feb. 15-22.	2	
	Palermo.	Feb. 15-22.		6
MALTA		Feb. 15-22.	1	
MEXICO	Mexico.	Feb. 22-Mar. 1.		1
	YELLOW FEVER.			
BRAZIL	Rio de Janeiro.	Jan. 18-Feb. 8.		14
MEXICO	Vera Cruz.	Feb. 15-Mar. 1.		
	CHOLERA.			
CHINA:	Canton.	Mar. 2.	2	
		Feb. 22-Mar. 8.	2	
INDIA:	Bombay.	Feb. 15-22.		4
	Calcutta.	Jan. 18-Feb. 8.		24
	Madras.	Feb. 1-7.		4
STRAITS SETTLEMENTS:	Singapore.	Jan. 11-18.		2
	PLAGUE—Insular.			
HAWAII:	Honolulu.	Feb. 22-Mar. 1.		3
	PLAGUE—Foreign.			
BRAZIL:	Rio de Janeiro.	Jan. 18-Feb. 8.		11
CHINA:	Shanghai.	Jan. 1-31.		2
INDIA	Bombay.	Feb. 1-8.		30
	Calcutta.	Feb. 1-8.		124

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The Diagnosis of Cardiac Lesions.—An instructive, carefully prepared, and interesting article appeared in the London *Lancet* on February 1, 1902, on "the heart of the child," by Dr. D. L. Lees. The author calls attention to the necessity of examining carefully the child's heart, which is so often neglected, and he thinks that this subject should receive more accurate study. Many points of great practical importance relating to the methods of physical examination are cited. The child's heart can be examined by the same methods that are employed for the adult's heart, and it is even more accessible than the latter, as the chest walls are thin, subcutaneous fat is rarely excessive and emphysema is uncommon. He cautions the practitioner not to be rough and awkward and frighten the child, for he may make difficulties for himself. The author's views of percussion in cardiac diagnosis are interesting and appear to be based upon an abundant experience. We are informed that almost nothing can be ascertained by outlining the superficial area of cardiac dulness and he further emphasizes that indeed little or nothing can be determined by percussion about the size of the left auricle, and only an approximate idea can be formed of the size of the right ventricle. He, however, believes the size of the right auricle and that of the left ventricle can usually be made out with some degree of accuracy. The use of such instruments as pleximeters is condemned and upon this point he writes as follows: "The child will not object at all to percussion if it be done lightly and with the fingers only, but he will not tolerate the forcible hammering which some medical men call percussion, and those illusory instruments known as pleximeters will certainly make him cry."

We heartily concur in Dr. Lee's views, for undoubtedly the outline of the heart is with difficulty determined by percussion on account of its position and its changeable form and size. Many clinicians appear to lay much stress upon the value of percussion in cardiac diagnosis. Some clinicians even object to the use of the term "finger breadth" to designate an increase or decrease of cardiac boundary or displacement of the apex. Dr. Lees comments as follows: "If any one objects to the term "finger breadth" as unscientific, he may use instead "two centimeters," but he does not thereby make the measure more accurate, he only introduces a false idea of mathematical precision." While he considers the signs of percussion somewhat misleading and often possessing little practical value, he condemns the physician who relies solely upon the auscultatory phenomena in cardiac diagnosis and emphasizes that the methods of physical examination should always be complete and should consist of inspection, palpation, auscultation and percussion. He is convinced that every case of rheumatism demands a thorough examination, for in this disease "there may be little or no arthritis, or soreness of the throat, no eruption, or only a small patch of erythema, no subcutaneous nodules, no chorea, or only slight nervous twitching, but the cardiac rheumatism may be nothing less than deadly."

Discussing the treatment of cardiac inflammation in the course of rheumatic fever, he contends that leeches will diminish congestion of the heart when applied directly over that organ or some distance from it, and that the ice bag applied over the precordium depresses cardiac inflammation. Hypodermic injections of strychnine are useful for ventricular dilatation and enfeeblement caused by rheumatic toxemia. He is an advocate of venesection when failing compensation shows itself. Digitalis, as a rule, is of little service in the treatment of rheumatic cardiac inflammation in the child, but this drug renders great service after the acute manifestations have subsided, when the mechanical action of the heart becomes impaired. After a careful perusal of this interesting paper we feel that Dr. Lees' views are founded upon an extensive clinical experience.

Plague Under the United States Flag.—According to the *Public Health Reports*, there was a death from plague at Berkeley, California, on February 22. This is the first case of plague reported outside of San Francisco, but it serves to fulfill the predictions of those who were competent to prognosticate, made after watching the attitude of the politicians of

California toward the recommendations of the Plague Commission. We believe this case of plague at Berkeley to be an ill omen for the country. It is possible that the coming summer will find plague permanently domiciled in the United States, unless health authorities throughout the land shall put the public good before individual interests. The methods of combating the spread of this disease are too well known, or, if they are not well known, are too easily accessible to those whose duties should make the knowledge of interest, to be repeated here. If we add to the fatal case of plague at Berkeley the cases reported in *Public Health Reports* by the Marine-Hospital Surgeons in the Hawaiian Islands and in the Philippine Islands, a thoughtful person will recognize the signal for precaution. Dr. Cofer reports a death from plague at Honolulu on January 23, and one on January 24, and nine deaths from the same disease at Eleele, Kanai, between January 10 and February 1. Dr. Perry reports that plague has reappeared in Manila, where four fatal cases occurred in the two weeks ending December 28, 1901. Dr. Perry finds that 5 per cent. of all rats caught and examined are infected with plague. Let us profit by the experience of other nations and not wait until the horse is stolen before locking the stable-door. Ships reaching any port in the United States should not be allowed to discharge cargo until they have been freed from rats and have been disinfected.

The Health of Philadelphia.—The citizens of Philadelphia have the Anglo-Saxon virtue of proclaiming their public ills. They grumble so much that the world at large has begun to take them in earnest, and the result is that some misconceptions get abroad about the health of this city. The truth is that Philadelphia is *not* sorely stricken with pestilence; although the fact is not to be denied that the city has had more smallpox and typhoid fever this past winter than its due share. We are happy to state that the latest reports show that both these diseases are declining.

The following authoritative statements from the Bureau of Health are of value, because they deal with exact facts, and not with mere rhetoric. In considering them it must be recalled that they refer to a city of about one and a third million inhabitants. The figures for the present year are not given.

During the year 1901 there were 1059 cases of smallpox reported in this city, and 156 deaths. The method pursued by this Bureau in the control of this disease is as follows:

A case being reported, an assistant medical inspector is immediately sent to verify the diagnosis; if this be doubtful, the chief medical inspector is called in conference; when the diagnosis is confirmed the premises are quarantined and the patient is sent to the Municipal Hospital if required. The premises are then fumigated with formaldehyde gas and thoroughly cleaned, and the bedding and infected materials treated at the city's disinfecting plant, then re-fumigated, and every person known to have been exposed is vaccinated and subjected to strict quarantine until the vaccination demonstrates their immunity, when the premises are again fumigated, and the quarantine is raised. Should a subject be treated at home, the quarantine is continued until the stage of desquamation is complete, when the final fumigation is given.

It is believed by the Bureau of Health that this process of treatment is entirely in accord with the most approved sanitary methods, and it has been the experience of the Medical Staff that the disease has not spread from centres of infection which have been thus treated. The disease is to some extent pandemic; some 12,000 cases were reported during the month of February in the United States. There is reason to believe that this disease was introduced into Philadelphia by persons coming from other infected localities; and the absence of a compulsory vaccination-law, the fear of vacccination, the confusion and doubt as to its protective value, in this as in other cities, are obstacles which confront the Bureau in its control of the disease.

As to typhoid fever, there were 3227 cases in 1900, with 449 deaths, and 3669 cases, with 444 deaths, in 1901. Assuming to be correct the generally accepted ideas concerning the propagation of this disease through the water and food supplies, the Bureau of Health, through its various divisions of Medicine, Bacteriology, Disinfection, Nuisances, Drainage, and Milk Inspection, is working diligently, and it is believed, effectually, to cut off every possible avenue of infection that can be covered by a most careful administration of these departments; and in any discussion of this subject, as related to the water supply of this city, it should be distinctly noted that the Bureau's control is limited to the City Line, and it is a fact that within the limits of that control no known pollution is permitted to enter the water supply.

It is to be regretted that legislation favoring the purity of water supply streams, and imposing severe penalties for their pollution, cannot be made more pronounced and effective, and that cities are not given power to protect more fully the sources of their water supply. It is, however, confidently believed that the filter plants now in the course of construction will relieve much that is still a source of complaint.

Tu Quoque.—For a city that undertakes to read the riot act to another city for the latter's sanitary sins, the city of Baltimore is itself not remarkably free from sanitary shortcomings. The *Maryland Medical Journal* has delivered a jeremiad against Philadelphia, on one page, and printed a woeful statement of Baltimore's lack of ordinary quarantine, on another page. The latter we print farther on, not in order to hold Baltimore up to scorn (for we have no such wish), but simply to remind our excellent contemporary of the old adage about glass houses and throwing stones. Baltimore's Quarantine Hospital, which would be overcrowded with "sixty patients," is in sad contrast with the splendid facilities which Philadelphia possesses for the treatment of such cases. The management of the epidemic of smallpox in this city this past winter has been in every way admirable. We should indeed be sorry for Baltimore if she had to face a similar epidemic in her present unprepared state.

A Diploma Mill for Trained Nurses.—In an editorial on the trained nurse question published in our columns two weeks ago, we made casual mention of an institution which professes to turn out trained nurses in three months' time, and has its rooms in a down-town office building in this city. It is not connected with any hospital, and so far as is known, none of the student nurses have any opportunity for practical work. We spoke of this institution in a rather condemnatory manner. We have since received several protests in which exception was taken to our statements, and the institution was particularly recommended because, among other things, it was endorsed by the clergy. Whether in such an institution a woman can be adequately trained to nurse the sick; whether in three months' time, without any practical experience, she can become the equal of her sister who spends three years in a large general hospital equipped with all modern appliances, is not a matter of opinion, it is simply a matter of fact, that ought to be readily demontrable. The presumption is, of course, against it, and, therefore, the burden of proof would apparently rest with the school. So far as we know, no proof of any kind whatever has been offered that the persons bearing its diplomas are qualified trained nurses. If such proof ever were offered we can conceive of no greater sufferers than the hospitals. Their training schools would be immediately depopulated, for what woman, eager to secure her livelihood, would spend three years in a hospital and subject herself to all the labor, anxieties and annoyances that are the portion of the student nurse, if, in three months, with a minimum amount of exertion on her part, she could attain the same result by attending some lectures in a room rented in an office building? If, however, it can be shown —and it is our belief that it merely requires investigation to show it—that these women, granted diplomas as trained nurses, are not capable of fulfilling the duties of their profession, then a grave injustice is done to the women who conscientiously prepare themselves for their calling, and a still graver injustice is done to the invalid, who, believing in the exhibited diploma, engages a woman whose ignorance may be the cause of increased suffering and even of death. The *New York Tribune* takes a sane view of the question. The diploma of the trained nurse should not be cheapened.

Post-Graduate Instruction at the University of Pennsylvania.—Someone has said that, in view of the large amount of capital invested in our leading universities, these institutions do not always work their "plants" up to the full capacity that is desirable. This criticism has been aimed especially at the long idleness during the various holidays and at the tendency to narrow the work too exclusively in certain routine and limited channels. We are convinced that any such criticism applies less and less every year to our more progressive institutions. These great schools are more and more alive to the necessity of showing a large productivity.

In no university is this wholesome activity more manifest than in the University of Pennsylvania. In accord with this spirit the University has just established a course of post-graduate instruction for such physicians as wish to keep themselves abreast of the progress of scientific medicine. It must be the experience of many active and conscientious practitioners that, either because of defects in their early medical training, or because of their location away from great medical centers, and of the rapid changes in and progress of medical knowledge, they realize that they do not and cannot maintain that degree of culture which their ambition and the exigencies of their work demand.

The University now comes to the aid of such physicians, and offers them the splendid opportunities that are to be found in her lecture-rooms, laboratories and clinics. A schedule has been arranged on the most liberal scale. This includes instruction in all the important specialties, and this instruction is to be given by the best teachers in the faculty of the University. This latter feature is especially noteworthy; for such extra courses are sometimes assigned too exclusively to the junior teachers.

We see in this plan not only a source of credit to the University of Pennsylvania, and an additional advantage to Philadelphia as an educational center,

but especially a benefit to a large class of physicians who may be able to avail themselves of it.

Medical Progress in China.—That the remarkable opening of the doors in the Far East has not been confined to political and commercial lines, is amply demonstrated by the perusal of a recent number of the *China Medical Missionary Journal*. The prejudices of that interesting people, the Chinese, against all innovations, and especially those originating among the "foreign devils," are surely, and now not slowly, being overcome. As is well known, the Chinese are averse to exposing their women to the medical care of male physicians. In addition, they are known to be most strenuously opposed to the use of the knife. A more than passing interest, therefore, attaches to the report of a case of Cesarean section contributed to the *Journal* by Dr. Lucy B. Harris. The patient, a scoliotic individual of 20 years, with pronounced contraction of the pelvic outlet, was eight months pregnant, and at the time of delivery had been for six days and five nights in labor. As was to be expected, there were pronounced vulvar edema and beginning vaginal gangrene. Spontaneous delivery being impossible, it was decided to admit the woman to the London Mission Hospital at Chungking in order that a Cesarean section could be performed. To both these propositions the relatives and friends of the patient eagerly assented. The operation was performed by two male surgeons, Drs. Wolfendale and Kilborn, a dead and macerated fetus extracted, a uterine rupture repaired, and the patient returned to the ward. Unfortunately a fatal termination ensued in fifteen hours. Laying aside all criticism of the method of treatment adopted in the given case, it still remains true that the report is unique in that it demonstrates the awakening of the Chinese people to modern medical and surgical methods. It is unfortunate that the moral influence of the case could not have been enhanced by recovery of the patient. The conditions, however, were most adverse—a protracted labor, sloughing of the soft parts, maceration of the fetus, degeneration and laceration of the uterine tissues, and beginning sepsis. Under such a combination a fatal result must have been anticipated. The barriers are breaking down, however, and it will not be many years, or even many months, before the large seaboard cities of China will witness as good surgery as is now done in western lands.

The Teaching of Operative Medicine in Some American Universities.—Under this title Dr. Henri Hartmann, of Paris, who recently returned from a visit to America, has published his impressions of surgery as taught in America, in *La Presse Médicale* (March 5, 1902). Hartmann was especially struck with the fact that the degree of M. D. in America was only of value at the university at which it had been conferred. For, large or small, each university or medical school gives its graduates an M. D. He explains what the State Medical Examining Board is, believing it to be "composed of the most distinguished medical men of the State." He found an especial professor of surgical anatomy in Philadelphia only. Our post-graduate instruction impressed him also. As a general rule, Hartmann found that our dissecting rooms were inferior to those in Paris. The same was true of the material for dissection. He comments unfavorably upon the absence of plaster casts and charts in the class rooms. But he admires our means of keeping cadavers in cold storage, even though all the medical schools which he visited did not understand embalming. He calls the Medico-Chirurgical College the College of Physicians and Surgeons of Philadelphia, his only slip, *mirabile dictu*. Of all that he saw, he suggests but one improvement for the Paris Medical School, viz., cold storage for the dissecting material during the summer months.

Damages for the Morphine Habit.—The English medical journals contain reports of a curious lawsuit which has just been on trial in an English court. A nurse brought action against her physician for alleged malpractice in prescribing morphine for her in therapeutic doses, and thereby inducing in her the morphine habit. The doctor was accused of negligence and a desire to get rid of a troublesome patient! It is to the credit of the jury that, having heard the plaintiff's side of the case, they stopped the trial, and expressed the opinion that the action ought never to have been brought.

The case suggests some rather curious reflections. We do not doubt that some physicans are sometimes rather careless in prescribing such drugs as morphine and cocaine; but it would be difficult to apportion the exact degree of responsibility and the exact amount of damages, if every morphine fiend were to have redress in court from every physician who had ever prescribed a dose of such drugs for him or her. The precedent established by one such case would be rather disquieting to every doctor in active practice. In this English case the fact that the plaintiff was a nurse, and knew well the dangerous effects of the drug which she continued taking of her own accord, should have been enough to satisfy her lawyers that she had no claim either in justice or in law. Such remote consequences are hardly to be appraised at a money value, or to be ascribed to the fault of a physician who had merely given the drug in therapeutic doses.

The automobile record in Paris for two weeks just passed, was two persons killed outright on the streets and a lot more injured. One of the persons killed was a poet. An engine or motor with a capacity for sixty miles an hour is a doubtful benefit on the streets of any city or town. It is too much to leave the running of such machines to the discretion of any and every hare-brained chaffeur.

Among the foreign exchanges we find a new Spanish journal, *Medicina y Cirurgia*, published trimonthly at Barcelona. Barcelona is the most progressive city of Spain, and the new journal is an evidence of the advancement that is taking place in the intellectual development of the Spanish people

Current Comment.

TRAINED AND UNTRAINED NURSES.

What "The Philadelphia Medical Journal" regards as an abuse which calls for legislative correction is the issue of diplomas to nurses after an inadequate or partial training.

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It insists that diplomas shall be given only to those who have had a thorough training. The doctrine is perfectly sound. The possession of such a certificate is a guarantee of character, temperament, education and experience, and the document should be issued with the utmost caution and a high sense of responsibility to the medical profession. When a physician calls upon an institution to supply a "trained nurse" for a patient he should be no more uncertain about her qualifications than he is about the strength of a drug which he prescribes. The standards of a training school should be as well established and uniform as those of the United States Pharmacopœia. A doctor should know precisely what he is getting, in one instance as well as the other. So, too, in hospitals, either a nurse without a diploma should be employed or one whose diploma means something. There should be no chance for any misunderstanding. Whether it is necessary to resort to legislation to effect this reform or not is doubtful, perhaps, but a free discussion of the subject cannot fail to do good.

—*The New York Tribune.*

TYPHOID FEVER AND FILTERED WATER.

The Superintendent of the Water Bureau of the Department of Public Works of the City of Albany has issued the following statement:

As a result of the information obtained from physicians concerning typhoid fever in this city, and the effect of the filters, we are able to give the following records of typhoid deaths:

	1st year filtered.	2d year filtered.	Average before filtration.
On unfiltered supply	1	2	
On mixed supply	5	8	
On filtered supply	8	7	
Alien cases	13	8	
Doubtful cases	4	2	
Total for one year	35	27	84
Per cent. reduction	58.34	67.86	

The water service is divided into three sections, approximately as follows: all west of Swan street receives filtered water; all between Swan and Pearl, and also the part between Pearl and Broadway from Clinton to Madison avenue, receives four-fifths filtered and one-fifth unfiltered stream water from Rensselaer lake; all the balance of the city from Pearl street to the river, including all of North Albany, receives unfiltered stream water.

Albany Medical Annals.

BALTIMORE'S UNPREPAREDNESS.

One of Baltimore's chief distinctions just now is her apparent immunity to smallpox. Preparations for the anticipated epidemic of 1902 were begun nearly four years ago. While the results up to the present time have been all that could be desired, it is by no means certain that our defenses are good enough for any probable emergency. The very recent landing of infected persons from two ships following each other at but a week's interval from the same British port has again called attention to our serious lack of facilities for handling any considerable number of sick or exposed persons. Sixty patients will crowd the Quarantine Hospital. There is no place for the detention of suspects or contacts. The Quarantine officer has one small tug for all the services of his station, including the transportation of patients. It is evident, therefore, that we are unprepared for a contingency which is perhaps rather near.

—*Maryland Medical Journal.*

PHILOSOPHY AND DIET.

In Mr. Graham's recently published work on "Scottish Men of Letters," (A. and C. Black), the following story is told of Dr. James Hutton and Dr. Joseph Black, two Edinburgh worthies of the time of Adam Smith: "They had argued themselves above all popular prejudices on diet, and resolved to carry their opinions into practice. Since the ancient world partook of testaceous creatures of the sea as delicacies, why turn up the modern nose in abhorrence of those that crawl on dry land? Why not eat snails? They were wholesome; they were nutritious; and did not epicures of old prize the molluscs fed in the marble quarries of Lucca? The two emancipated philosophers determined, therefore, to have snails for supper. They sat down to the feast. Silently they looked at the dish; shyly they refrained from looking at each other; slowly each took a mouthful—their gorge rising in flat rebellion as they did so. At length Dr. Black, in slow, delicate, tentative voice, remarked in his gentlest manner, 'Doctor, don't you think they taste a little—a *very* little queer?' 'Queer!—dawmed queer! Tak' them awa'! Tak' them awa'!' vociferated Dr. Hutton, rising in loathing." The "emancipated philosophers" made no further attempts to demonstrate the absurdity of "popular prejudices on diet."

The Polyclinic. (London).

Correspondence.

SHOULD WE LICENSE TRAINING SCHOOLS FOR NURSES?

By JOHN H. JOPSON, M. D., of Philadelphia.

To the Editor of the Philadelphia Medical Journal.

In the editorial entitled "The State Control of Trained Nursing," which appears in the Philadelphia Medical Journal of March 15th, the writer, while pointing out certain abuses of the present system of training nurses, draws what appears to me to be very erroneous conclusions as to the causes and remedies. Among the arguments which he offers to prove that the present system is pernicious are—that many of the training-schools are maintained from motives of economy and profit, and offer a short and easy route to a diploma; that as a consequence the profession is overcrowded; that owing to the multiplication of training-schools the average ability of the candidates for admission has been lowered, and the number applying is insufficient to fill the schools. Also that a positive injury is threatened the community at large by the graduation of

nurses insufficiently prepared. That some of these assertions are true or partly true, I do not wish to deny, although as to the overcrowding of the profession there is considerable room for doubt, as most good nurses find little difficulty in establishing themselves in a good practice; and the examples of abuse of training-school privileges are probably less common than the writer would have us believe. Whether the State is justified in intervening and granting only to certain hospitals the right to maintain training-schools, as well as to dictate the minimum period of training of student nurses, is open to discussion. There is much to be said in favor of some system of State supervision. When, however, the writer of the editorial attempts to saddle much of the responsibility for the need of such supervision on hospitals devoted to special branches of medicine, viz.: obstetrics, children's diseases and surgery, and calls for "the rigid exclusion of all special hospitals from the privilege of having a training-school," he does much by the sweeping nature of his charges to nullify the force of his arguments. It is in the abuse and not the proper use of diplomas from such schools that the evil, if any exists, arises. The Children's Hospital of this city will serve as a conspicuous example of the special hospital maintaining a training-school. This school was organized in 1895, and has therefore been in operation for seven years, during which time it has graduated forty-four nurses and has at the present time thirty pupils in training. Its maintenance has been a source of much increased expense to the institution, and motives of economy cannot therefore be attributed to the management of the hospital. The course is two years in length and the instruction is under the direction of three graduates of long experience. The training is most thorough in all branches pertaining to the nursing of children's diseases, both medical and surgical. The number of applicants is far in excess of the accommodations of the school and the class of applicants is a very superior one. Graduates register at the nurses' directories only for the care of children, and the demand for their services is so great that it is difficult to secure them when desired. The training which they receive in certain essentials cannot be equalled in any general hospital in this city, among which might be mentioned the care and feeding of cases of gastrointestinal diseases in infancy, of the preparation according to the most modern and scientific methods of the milk mixtures for artificial feeding, the care of contagious cases, the nursing of cases of tracheotomy and intubation, and last but not least the invaluable practical knowledge and self-confidence which alone come with long experience in the constant care and the observation of the symptoms of the sick of tender years. The injustice to the hospital and still more to the community, of suggesting the revocation of the right to maintain such a training-school will be apparent to the most prejudiced, as well as the error of imputing to it as a special hospital any of the errors of the present system of training nurses. The great reputation of the training-school of the Orthopedic Hospital might well be cited as a further proof of the usefulness of the special training-school if such proof were needed, and still other examples might be easily mentioned. My only excuse for challenging the statements of the author of the editorial from which I quote is, that the influence of the **Philadelphia Medical Journal** among the profession is too great to allow them to pass uncontradicted, when they appear in its editorial columns.

Reviews.

A Medico-Legal Manual, by William W. Keysor, Omaha; Burkley Printing Company, 1901.

The average physician is so poorly informed upon the legal aspect of medical matters, that a presentation of this subject, lucid and condensed, such as we find in the present volume, cannot but be of value. In works upon medical jurisprudence, attention is mainly given to the medical facts, such as symptoms of poisoning, signs of assault and post-mortem findings; the subject is rarely treated from the legal standpoint. In our experience, physicians are as a rule well informed upon these subjects, or, if not, the numerous special treatises upon chemistry, toxicology and pathology, serve as all-sufficient guides. Judge Keysor seems to have grasped the needs of the situation admirably, for he supplies the very elements which are wanting in the physician's training. Physicians ordinarily have very vague and imperfect conceptions of law and of their rights and legal responsibilities, and still less of the nature of evidence. It is just this want which this treatise supplies.

Judge Keysor begins with a brief chapter on law and its agencies in which he clearly sets forth the elementary facts as to the nature of law. Interesting chapters follow upon the legal duties of physicians, upon the contracts of physicians and upon the nature of malpractice. The legal duties, as defined by Judge Keysor, while having a general application, have a special application to the laws of Nebraska; notwithstanding, they are well worth careful reading and consideration. On the chapter on physician's contracts we are informed that it is indisputed law that a physician or surgeon may respond to such calls for his services as he chooses. He cannot be compelled by legal means to attend in his professional capacity upon any person whomsoever; further that "A doctor who on his own motion, or on the application of a stranger, attends a case in an emergency, or who gives medical assistance to one who is in immediate need thereof and is incapable of selecting a physician, would not be deemed to be serving intrusively or gratuitiously. A promise made by a patient after the rendition of medical services that he will pay therefor, will sustain a suit for the recovery of their reasonable value, even though they were voluntarily, intrusive, or gratuitious." It is also made clear that an oral guaranty of payment for services rendered by a physician to a third person cannot be enforced; but where the services are rendered to a third person at the request and on the credit of the promisor, the undertaking is original and need not be in writing. An original promisor is defined as a man who employs a doctor to attend his wife or his child, because he is legally bound to furnish them necessaries; and he may be compelled to pay for such services, when necessary, even when rendered against his orders. A master is bound to furnish medical service to his apprentice, but not to his servant or his employé. In cases of accidents and injuries to passengers, a common carrier is not liable for the services of surgeons rendered to them; unless the surgeons were employed by the carrier, or an authorized officer or agent thereof.

In the chapter upon malpractice, it is interesting to note that the doctor cannot exempt himself from the legal consequences of his negligence by any contract or arrangement with his patient whatever. We are also informed that the doctor is liable for damages for malpractice whether he is a licensed practitioner or not, or a member of any school, and further that he must also respond in damages for his negligence in his duty for even gratuitious service. "It would be manifestly very unjust to gauge the knowledge, skill and diligence of a physician in any particular case by the principles and methods pursued by practitioners of other schools. A patient may rightfully expect the mode of treatment approved by the school of medicine to which the physician he has called belongs; and if that method be employed in his case, even though it appear to be a dangerous one, he cannot complain in a court of justice. This is well illustrated by an Iowa case[1] in which a physician who had been called to a case of confinement thirty-six hours after delivery and then removed the placenta, testified that, according to regular practice, it should have been removed earlier. The defendant who was sued for malpractice offered to prove that he was a botanic physician, that his school considered it improper to remove the placenta and that it ought to be left to be expelled by nature. This evidence was ruled out by the trial court. But the supreme court said on appeal that it ought to have been admitted and the court held in effect that the defense was valid if true. The following is quoted from page 251, Ewell's Medical Jurisprudence: "The old Mahomedan case cited by Puffendorf is very much in point. A man who had a disorder in his eyes, called on a farrier for a remedy, who gave him one commonly used upon his quadrupedal patients. The man lost his sight, and brought an action against the farrier for

1. Bowman vs. Woods, 1 Iowa, 441.

damages, but the judge held that no action would lie, for if the complainant had not himself been an ass, he never would have employed a horse doctor. Indeed, it is generally held to be negligence, if the physician or surgeon does not use the method recognized by his school, especially if there be but one; for the law will not suffer a doctor to experiment on a patient to his injury."

The chapter upon evidence is equally clear and interesting. One of the disadvantages from which physicians suffer when on the witness stand, is a lack of knowledge concerning the nature of evidence, and especially of the difference between non-expert and expert evidence. We are told "among the distinctions between experts and non-experts are the following: First, the non-expert testifies to facts, or to effects on his senses; the expert, to inferences, or to the results of reasoning. Second, the non-expert can base his opinion, when allowed to give it, only on facts of his own observation; the expert may found his opinion on facts observed by others as well as himself. Third, the opinions of non-experts may be verified by other testimony of facts, as that a man supposed to be drunk had or not had access to liquor; but the opinions of experts can be verified or refuted only by other opinion evidence." Further, "if the facts are undisputed and the witness had personal knowledg of them, he may give his opinion without a re-statement of them in the form of a question. Thus, a physician may testify immediately as to the cause of the death of a patient, or in a case in which he has conducted a post-mortem examination. But if the facts are disputed, or are unknown, and he is acquainted with them, he may first testify to them as a non-expert, and then express an opinion thereon as an expert. A physician may acquire personal knowledge of the facts of a case from his attendance on or examination of a patient; or from a patient's statements to him; but not from what others, not even doctors or nurses, tell him.

If a physician has heard the testimony of another witness, or of witnesses, who do not contradict each other, he may base an opinion upon it.

If the expert does not personally know the facts, or if they are disputed, they must then be stated to him in an hypothetical question. An hypothetical question is one which asks for an opinion on a state of facts which it contains and which are assumed to be true. When the facts are controverted each of the opposing attorneys has the right, and usually exercises it, to put a hypothetical question which states the facts as he claims them to be."

It is noteworthy that Judge Keysor maintains that expert witnesses should be called by the State or by the trial judges, not as friends or supporters for either side, but as advisers of the court. "Their fees should be paid out of a general fund, and should not depend on the result of the case. Indeed, so far as may be, they should occupy a position as independent and impartial as that of the judge or jury." This position has also been earnestly advocated by the reviewer.[2]

Next the various special subjects of medical jurisprudence proper, such as the transfer of property, life insurance, insanity, identification, marriage and divorce, foeticide and infanticide and post-mortem examinations are considered. It is noteworthy that while special weight is given to the legal aspects, the medical facts whenever touched upon are scientifically and accurately stated. On the whole we regard this treatise as possessing a special value and cannot too strongly recommend it to physicians. Every physician is liable to be summoned to court, and we know of no treatise in which the legal relations of physicians are so clearly and so briefly set forth and in which well needed advice is so well given. Too often the physician, although possessed of the requisite scientific knowledge, cuts but a sorry figure upon the witness stand or involves himself in unpleasant legal complications. Certainly every practitioner should be forearmed for the various legal emergencies to which he is liable and it is equally important that he should clearly understand the extent and limitations of his responsibilities to his patients. [F. X. D.]

2. Expert Evidence from the Standpoint of a Witness. The Albany Law Journal, April 2nd, 1898.

Clinical Hematology. By John C. DaCosta, Jr., M. D., Assistant Demonstrator of Clinical Medicine, Jefferson Medical College; Hematologist to the German Hospital, etc., Philadelphia. P. Blakiston's Son & Co., 1012 Walnut Street. 1901.

The careful clinical study of the blood during recent years has resulted in a large amount of technical and pathological information which, being scattered through journal literature from which it can be collected only by careful compilation, has stimulated various workers to publish their notes together with their own experiences in the form of hand-books.

It is such a compilation, to which considerable good individual work has been added, that is before us. It has about the same scope and volume as the well-known work of Cabot.

The book deals with the entire subject of Clinical Hematology, including in Section I, The Examination of the Blood by Clinical Methods—examination of fresh blood; estimation of the percentage of hemoglobin; counting the erythrocytes and the leukocytes; microscopical examination of stained specimens; counting the blood-plaques; estimation of the relative volumes of corpuscles and plasma; estimation of the specific gravity; estimation of the alkalinity; determination of the rapidity of coagulation; spectroscopic examination; bacteriological examination, and determination of the serum reaction.

From this very good survey of the technic in which the methods employed are carefully described, the writer enters upon Section II, The Blood as a Whole, and discusses the general composition, color, odor and viscosity, reaction, specific gravity, fibrin and coagulation, oligemia, plethora, hydremia, anhydremia, lipemia, melanemia, glycemia, uricacidemia, cholemia, acetonemia and lipacidemia, bacteremia and anemia.

Section III deals with the Hemoglobin, Blood, Plaques and Hemoconia; Section IV, with the Leukocytes. Section V, considers the Diseases of the Blood—Chlorosis, Pernicious anemia, Splenic anemia, Secondary anemia, Post-Hemorrhagic anemia, Leukemia, Hodgkin's disease and the Effect on the Blood of Splenectomy. Section VI, takes up the Anemias of Infancy and Childhood; Section VII, General Hematology. In this last section of the work the author considers the blood condition in LXVIII different diseases, treating of each exhaustively.

While the work contains no striking departure from conventional ideas and is, therefore, very similar to the other well-known works upon the same subject, it is probably the most elaborate and imposing work yet published and on account of the great amount of matter compiled by the author, cannot but prove to be a useful and desirable book. [J. McF.]

The Standard Medical Directory of North America, consisting of Twelve Parts, including Directory of Physicians of North America, Medical Colleges, Medical Service of the United States, Medical Societies, Medical Practice Act, Medical Publications, (including Books and Periodicals) Mineral Springs, Drugs and Medicines, Medical and Surgical Products, Manufacturers and Life Insurance Companies. Handsomely bound in red buckram, 824 pages, imperial octavo. Price, $10.00. G. P. Engelhard & Co., Chicago.

The importance for an accurate compilation of addresses representing the location of the physicians of the United States has been acceptably recognized as indicated by the Standard Medical Dictionary of North America. This valuable volume of reference not only is of use as a means of securing professional identification, but it includes the practicing physicians in Canada, Cuba, Mexico, and Central America. Information regarding the medical officers of the public service, hospitals, colleges, medical laws, State boards, etc., can be readily referred to, and will undoubtedly assist in obviating considerable correspondence for the purpose of securing such information. The work under consideration is the result of much conscientious and thorough labor, and both the authors as well as the publishers are deserving of congratulation. [M. R. D.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

University of Pennsylvania Medical School.—Beginning April 28, 1902, the University will open a spring course in Medicine, designed especially for practitioners, but open also, in the laboratory courses, to advanced students in Medicine. It embraces almost the entire curriculum of Medicine, and has been devised to meet the requirements of a wide group of practitioners and students of Medicine. The course will extend over a period not exceeding six weeks. The laboratory courses will begin April 28th and close on June 14th, and the clinical courses will begin on May 12th and close on June 28th. This arrangement will permit the anticipation of clinical courses by work in the laboratories, and concentration, toward the conclusion of the term, upon the clinical branches. In designing the instruction offered in the spring course, the needs of the practitioner have been kept in view and, so far as possible, the work has been made of purely practical character. While this feature is emphasized in the clinical branches and specialties, it has not been lost sight of in the laboratories. In all the courses the work is of a nature to appeal to the surgeon and general practitioner who wish to revive or complete their knowledge of certain subjects, and to advanced students in medicine who may not have had equal opportunities to pursue these courses of study. The number of attendants upon certain clinical courses will be necessarily limited in order that close personal attention may be accorded the patients. This number will vary with the nature of the course, and the admission, under these circumstances, will be made in the order of application. The fee for the entire spring course is one hundred dollars. This fee permits attendance upon all laboratory and clinical courses and upon the specialties so far as the conflict of hours does not make this impossible. While the hours of instruction have been chosen so as to avoid, as far as may be possible, such conflict, yet, where so much is offered, interference obviously could not be entirely avoided. The fees for individual courses will be $15 and $25, depending upon the nature and duration of the work.

Children's Hospital, Philadelphia.—The following appointments have recently been made: Dr. James P. Hutchinson has been elected visiting surgeon, and Drs. Henry Norris and George M. Coates have been appointed upon the dispensary surgical staff.

A New Trephine.—At the last meeting of the Academy of Surgery, Dr. J. Chalmers Da Costa exhibited a new trephine invented by Dr. T. C. Stellwagen, Jr., a dentist and junior medical student at Jefferson Medical College. The instrument was demonstrated by the inventor, and although not perfected, is very ingenious, being especially adapted for cutting osteoplastic flaps. It consists of a handle and shaft like an ordinary trephine, but carrying an extensible arm at right angles. This carries at its outer end a detachable knife or saw for cutting scalp or bone. The shaft has a center pin or can be rotated on a metal plate having a depressed center, it being fastened to the skull by points on one side long enough to be driven through the scalp to the bone. Dr. Da Costa has already used the instrument with successful results.

Society Meetings Next Week.—The following societies will hold meetings next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Wednesday evening, April 2, College of Physicians, and Thursday evening, April 3, Obstetrical Society.

An Appointment.—Dr. J. Alison Scott was recently elected professor of clinical medicine and therapeutics at the Philadelphia Polyclinic, to fill the chair lately made vacant by the resignation of Dr. Solomon Solis-Cohen.

Northwest Medical Society, Philadelphia.—At the next meeting, to be held April 1, Dr. Frank Massey will read a paper upon the "Mechanism of Valvular Lesions of the Heart." Among those who will take part in the discussion on heart disease will be Drs. W. E. Robinson, Judson Daland, Samuel Wolfe, I. N. Sniveley, and H. S. Anders.

Medical Laboratories, University of Pennsylvania.—Two gifts, one of $10,000 and another of $5,000, were received last week for the new medical laboratories of the University of Pennsylvania.

Philadelphia County Medical Society.—At the last meeting, held March 26, Dr. William Osler, of Johns Hopkins University, read a paper, by invitation, upon "Amebic Dysentery." After the meeting a reception was given to Dr. Osler at the University Club.

NEW YORK.

Cancer Investigation.—Provision has been made for investigations upon the best methods of treating cancer, by an appropriation of $15,000, in the Annual Supply Bill recently passed by the New York State Senate. The money is to be spent at the Gratwick Laboratory, Buffalo.

Dr. Knapp's 70th Birthday.—Dr. Herman Knapp, a graduate of the University of Giessen in 1854, professor of ophthalmology at Heidelberg from 1864 to 1868, who has lived in New York City since 1868, and is now director of the New York Aural and Ophthalmic Institute, celebrated his 70th birthday, March 17. In 1904 will occur his 50th anniversary as a medical practitioner.

King's County Medical Society, Brooklyn.—At the last meeting, March 18, Professor John C. Hemmeter, of the University of Maryland, delivered an address upon "Autointoxication From the Digestive Tract." A dinner was given in his honor the same evening.

New York State Diphtheria Antitoxin.—The State Department of Health has announced that it is prepared to furnish diphtheria antitoxin for the treatment and immunization of persons ill from or exposed to diphtheria. Any person suffering from or exposed to the disease who is unable to purchase this remedy is entitled to receive it from the State.

Healthful Milk for Babies.—Preservation of milk by the use of formaldehyde or salicylic acid is forbidden by a bill passed by the New York State Senate, March 20. These substances have been shown to be injurious to health, especially among infants.

Smallpox in New York.—There is no doubt that the smallpox epidemic is continually decreasing. The McCabe Compulsory Vaccination Bill failed to pass the New York Assembly. On account of the discovery of a case of smallpox in the Tombs Prison, 392 prisoners were recently vaccinated. It has lately been discovered that a wake was held in Jersey City, a few weeks ago, over the body of a patient supposed to have died from acute nephritis. At least six of the persons who attended the wake have developed smallpox. The Jersey City Health officials are investigating it.

NEW ENGLAND.

School Children Less Acute in High Classes.—That the children of Maine become less keen in observation as they grow older would seem to be proved by a novel test made by Professor Richardson, superintendent of the public schools. He procured copies of uncorrected newspaper proofs and distributed them among the classes, with instructions that the pupils mark the errors. Out of 37 scholars in the ninth grade, an average number of 25 errors were marked. The highest number of these was discovered by a girl aged 12, who found 52 in all. The lowest in this class marked ten errors in the proof. The average age of the class was 14 years. The same proofs were distributed among the sophomore and freshmen classes in English of the High School, and here an average of only twelve mistakes was found, the highest number of forty-three being pointed out by one pupil and the lowest finding only three errors. The actual number of errors as corrected by a professional proof-reader was forty-one. The difference between the highest number found by the scholars and the proof-reader was due to capital letters used by the author to personify ideas.

Civilization Brings Insanity.—That insanity is almost unknown among negroes is one of the developments arising out of the investigation into the reason for the great number of insane persons in Massachusetts institutions, it also having developed that the average of curable cases is under 20. President G. S. Hall, of Clark University, Worcester, makes this statement: "It has been observed that insanity is almost unknown among negroes. The expla-

nation is suggested that insanity is one of the age-marks of a race, for it is certain that what the world looks on as the newer races of men, such as the negroes, because of their only recent remove, comparatively speaking, from the savage state, are not susceptible to mental disorders as the white race, which has run through so many different civilizations and crucial experiences."

Harvard Medical School.—The large and courageous plan for the establishment of the Harvard Medical School on a foundation that will give it pre-eminence among similar institutions is certain of realization. The gift of $25,000 from Mrs. Collis P. Huntington, recently announced, more than completes the sum of $765,000 required to secure the money offered by John D. Rockefeller, of New York, for the enlargement and endowment of the Harvard Medical School. Mrs. Huntingdon's subscription is specifically for the erection of a building in memory of her late husband, to be called the Collis P. Huntingdon Laboratory of Pathology and Bacteriology. With Mr. Rockefeller's gift and the pledge made by J. P. Morgan last June to give three buildings at a cost exceeding $1,000,000, an aggregate of $2,821,225 will be available for the use of the medical school. What has now been pledged, in addition to the former endowment and property of the medical school, more than equals the $4,900,000 which was estimated to be required for the proper installation of the school on its new site.

An Epidemic of Chickenpox.—Dr. Morse, of the Massachusetts State Board of Health, recently visited Gilbertville, where it was rumored an epidemic of smallpox existed. He found, however, but one case of smallpox, all the other patients, numbering almost 40, having chickenpox.

He Did Not Prove His Theories.—Dr. Immanuel Pfeiffer, who for ten weeks has been ill with smallpox, has officially been declared well by the State Board of Health, and the four guards, who have been on duty during his illness, have been removed. Dr. Pfeiffer's case has caused unusual attention, because he contracted the disease at Boston's Hospital, where he went voluntarily on a tour of inspection among the patients in order to prove the truth of his anti-vaccination theories.

Smallpox at Woonsocket, R. I.—Five additional smallpox cases were discovered March 16, in two new sections. Seven cases were reported, all of which, except one, were in old centres. There are now 96 persons in quarantine, 50 of these being in the hospital. During the week 30 persons were discharged as cured, and 15 houses released from quarantine. The situation is encouraging, as there are less cases.

WESTERN STATES.

The Insane in Wisconsin.—Judge Lyon, of the State Board of Control, has prepared a table showing the increase in the number of inmates in the county and state institutions for the insane since 1882. He has some interesting facts in regard to the increase of insanity in Wisconsin. In 1882 there were 1893 inmates, and in 1901, 5023. There are now 28 county asylums in the state in addition to the two state institutions. The average number of inmates in a county asylum is 135. The figures pertain only to those insane persons who are in the institutions. Those retained in private homes are not included in the number.

Western Ophthalmological and Oto-Laryngological Association.—The seventh annual meeting of this association will be held in Chicago, April 10-12, under the presidency of Dr. C. R. Holmes, of Cincinnati. A large and varied programme has been provided.

St. Louis Not Liable for Damages.—Circuit Judge Fisher has decided that the city of St. Louis is not responsible for damages in the deaths of the thirteen children, who succumbed some time ago to tetanus, caused by the administering of antitoxin from the Board of Health. Judge Fisher holds that the city acted for the State of Missouri, which should be held liable for the acts of its agents. The city, however, cannot be held liable.

Children's Hospital, Milwaukee.—The directors of the Children's Free Hospital are attempting to raise the sum of $25,000 this year, in order to erect a building for the hospital as soon as possible. In the present quarters but 20 children can be accommodated. When more are admitted they are put into baby carriages.

An Appointment.—Dr. Frederick C. Heath, Secretary of the Indiana State Medical Society, has been elected professor of ophthalmology in the Central College of Physicians and Surgeons, of Indianapolis. He has already begun his course of lectures.

Smallpox in Nebraska.—The Surgeon General of the U. S. Marine-Hospital Service has been asked by the State Board of Health of Nebraska to aid that State in stamping out smallpox, there being 764 cases within the State limits.

SOUTHERN STATES.

The Annual Meeting of Military Surgeons.—The eleventh annual meeting of the National Association of Military Surgeons of the United States will be held in Washington next June. This organization is composed of medical officers of the Army, Navy, National Guard, and Marine-Hospital Service of the United States. The fourth annual meeting was held in 1894. The founder of the association was Surgeon-General Nicholas Senn, of Illinois. He was its president up to 1894. The president of the association now is Colonel John Van R. Hoff, on duty in Washington. The committee of arrangements for the June meeting is: Major George Henderson, surgeon-general, D. C. N. G., chairman; Major F. P. Reynolds, surgeon, U. S. V., secretary; Lieutenant C. R. Luce, surgeon, D. C. N. G., assistant secretary; Major Louis A. La Garde, surgeon, U. S. A.; Major W. C. Borden, surgeon, U. S. A.; Surgeon S. H. Dickson, U. S. N.; Captain E. L. Munson, assistant surgeon, U. S. A.; Surgeon L. L. Williams, U. S. M. H. S; Dr. Wallace Neff, late surgeon, U. S. V.; Dr. George M. Kober, late surgeon U. S. V.; Dr. J. Ford Thompson, late surgeon, U. S. V.; Dr. H. A. Robbins, late surgeon, U. S. V.

Columbian University, Washington, D. C.—Plans have just been completed and contracts let for the erection of a new hospital building, medical and dental schools, on H street, N. W., between 13th and 14th. The buildings will be colonial in style, the hospital having a frontage of 50 feet, and the medical school building, 50x144 feet, will be five stories high. The building will contain large laboratories, thoroughly equipped for modern work, with well lighted lecture and reading rooms.

McKinley's Doctors' Bills.—The bills of the physicians and surgeons who attended the late President McKinley at Buffalo have been forwarded to Washington and will soon be transmitted to Congress. We hear from Washington that the bills are exceedingly moderate, and can in no wise be looked upon as excessive. Instead of being $100,000, they aggregate about $50,000, and in this total are included not only the bills of the physicians, but also those of the nurses, the telegraph companies and the undertaker.

The Death of Dr. W. W. Johnston.—Dr. W. W. Johnston, of Washington, D. C., died at Atlantic City, N. J., March 22, aged 59 years. He has had a large practice and has been actively at work all winter. He had a sudden attack of indigestion two weeks ago which confined him to bed, but he grew so much better that he went to Atlantic City. Heart weakness caused his death. His father, Dr. William P. Johnston, was a prominent physician, and the son succeeded to his father's practice, occupying a high professional position for thirty-five years. He was president of the Medical Society, head of the Columbian University Medical School, and was connected with many institutions. He was an intimate friend of the late Dr. William Pepper, of Philadelphia, and is said to have been associated with him in literary work. Dr. Johnston was born in Washington in 1843. He was graduated from the medical department of the University of Pennsylvania in 1865, and afterwards studied at the University of Edinburgh and in Paris. He leaves a widow and five children. He was especially well known as a heart specialist.

MISCELLANY.

Notes.—The largest cemetery in the world is said to be at Rockwood, Australia, which covers 2000 acres. Only a plot of 200 acres has been used thus far, in which 100,000 persons of all nationalities have been buried.—The cutting of the body in mourning for the dead has been prac-

tised by the people of many nations.—Far away from civilization, gesture language is still extant in Australia. Some of the tribes possess an excellent code that is almost as efficient as the spoken language.—The population of Australia has increased by 19 per cent. during the last decade.—Hitherto blackwater fever, the terrible scourge of Central Africa, has been without remedy, but one has been discovered, in a native decoction made from the roots of the cassia tree.—The English language contains forty-one distinct sounds.—On the eastern coast of Ireland it rains on an average of 208 days in the year; in England about 150 days; at Kazan about 90 days, and in Siberia only 60 days.—Eight in every 1,000 wounded soldiers get lockjaw and 70 per cent. of lockjaw cases are fatal.—Cabbage is an old cure for drunkenness. The Egyptians ate it boiled before their other food, if they intended to drink wine after dinner, and some of the remedies sold as a preventive of intoxication on the Continent are said to contain cabbage seed.—The growth of girls is greatest in their fifteenth year, of boys in their seventeenth.—In epilepsy the statistics of America show only 2 per cent. recoveries, while in Europe they report 2½ per cent. recoveries.—The worst mosquito-infested neighborhood in the world is the coast of Borneo. The streams in that region are at certain seasons unnavigable because of the clouds of mosquitoes.—The sudden deaths among men are eight times greater than those among women.—A physician calculates that it takes eight times the strength to go upstairs than is required for the same distance on the level.—The smallpox epidemic has cost London $5,000,000.—Of 140 epileptic patients in London whose histories were carefully followed up, 90 proved to be descendants of alcoholic parents, a proportion of 64 per cent.—Sugar is an ancient luxury. The Chinese have been eating it for at least 3000 years.—The King of England has sent a bounty of £3 to the Liverpool woman who recently gave birth to triplets.—The deaths from chloroform anesthesia are one to each 3749 administrations.—The average height of the human race is, for men, 5 feet 6 inches; for women, 5 feet 2 inches.—A law has been promulgated in the official journal of France which makes vaccination against smallpox compulsory in the first year of a child's life, and requires revaccination at the age of 11 years and also ten years later. It is the most sweeping vaccination law yet promulgated anywhere.—France has 16,000 physicians; their incomes average but $600 a year.—Between 1821 and 1899, 5,079,362 German immigrants landed at American ports.—There are about 900,000 more women than men in the German Empire.—Among Russian towns whose populations have most rapidly increased the Polish center of Lodz is conspicuously the first. Fifteen years ago the so-called Russian Manchester was a place of some 25,000 inhabitants; it now contains an industrial population of 315,000 souls.—For the first time in France, an apparatus for the sterilization of suspected meat has been set up in a city. This occurred recently in Roubaix, whose administration deserves much credit. —Russia's death-rate is 51 per 1000, and is increasing, according to the imperial registrar-general's latest annual report.—Dr. Minin, of St. Petersburg, has announced that blue rays have the power to allay the pain of open wounds. He gives two cases in which large cuts were rendered absolutely painless by ten minutes' exposure to blue light.—Moscow has the largest hospital in Europe, with 7000 beds. There are 96 physicians and 900 nurses, and about 15,000 patients are cared for annually.—In 1871 Germany had only eight cities with over 100,000 inhabitants. Now there are thirty-three.—Judging by the yearly amount exported it is estimated that no fewer than 2,000,000 women annually procure false hair from Marseilles.

Foreign Universities for Women.—It is announced that two foreign universities for women will be opened next year, one at Tokio, and the other at Moscow. The Russian University for Women has been endowed by a wealthy merchant, M. Astraknoff, with 5,000,000 rubles. It will contain for the present only three academical faculties, medical, mathematical and physical science. The Russian Minister of Education, whose sympathy has been gained, cannot see his way as yet to the concession of a legal faculty.

The Tallest Man.—*The Philadelphia Times* recently announced the arrival of a passenger at New York, March 2, from Europe, 21 years old and 8 feet 4 inches high. This gentleman, who is an Englishman, named Frank Rennicks, says that he is still growing.

Yellow Fever in Rio de Janeiro.—The number of cases of yellow fever is constantly increasing, over five new cases being reported daily. In spite of the daily increasing number of cases, the Brazilian Government has just published a decree declaring that there is no epidemic in Rio de Janeiro. This decree evidently refers merely to the disappearance of the plague.

Pulque for Consumptives.—One of the reasons why Mexico is taking the lead as a health resort, is due to the fact that the national intoxicant of Mexico, pulque, made from the agave or century plant, is one of the best remedies in cases of asthma and consumption known. Unfortunately, pulque is only good when freshly fermented and will not bear transportation, and for that reason one has to go to Mexico to drink it. The value of pulque in consumption was discovered several years ago by American invalids, who went to Mexico for their health, and who were almost cured by drinking small quantities of liquor at stated intervals. It is now recommended by physicians to all persons troubled with pulmonary complaints.

Smallpox in the United States.—The weekly report of the Marine Hospital Service shows 24,157 cases of smallpox in the United States last week, of which 707 were fatal, as compared with 11,496, 149 of which ended fatally, last year during the same period. This is an increase of almost 2000 cases over the week previous.

Rio de Janeiro's Sanitation.—A European syndicate has proposed to the Brazilian Government to improve the sanitary conditions of Rio de Janeiro by the construction of works in the harbor and by a canalization of the city.

Cholera is still epidemic at Mecca and Medina, where 1129 deaths are reported. Cholera has also broken out in Manila, where 49 cases, with 39 deaths, have so far been recorded. No white person has been stricken with the disease. Japan has declared a quarantine against Manila on this account.

The Plague at Lahore.—A recent London dispatch states that 2000 deaths are occurring at Lahore, India, daily. This outbreak, the worst on record thus far, is attributed to non-interference in caste customs.

Plague in Japan.—A cablegram from Yokohama, March 13, announces the outbreak of bubonic plague in Nagasaki

Obituary.—Dr. A. Philo Drake, at Hastings, Mich., March 10, aged 74 years.—Dr. Andrew J. Bowers, at Moore's Hill, Ind., March 6, aged 76 years.—Dr. Andrew B. Chapin, at Mt. Clemens, Mich., March 9, aged 64 years.—Dr. Louis B. Tuckerman, at Cleveland, Ohio, March 5, aged 54 years. —Dr. John H. Morton, at Courtland, Cal., March 2.—Dr. A. Lee at Sweetwater, Ala., March 7, aged 30 years.—Dr. Charles D. Hill, at Bethel, Maine, March 7, aged 47 years. Dr. William W. Collins, at Albion, Mich., March 7, aged 77 years.—Dr. Jarvis E. Smith, at Clyde, N. Y., March 9 aged 73 years.—Dr. Hunter St. John, at Pittsburg, Pa., March 2.—Dr. N. A. Lancaster, of Palmyra neighborhood, La., March 12.—Dr. Joseph P. Kelley, at Providence, R. I., March 6, aged 37 years.—Dr. Alpheus H. Julian, at Janesville, Cal., February 22, aged 49 years.—Dr. William H. Chapman, at Geneva, Ala., March 5.—Dr. Thomas Cave, at St. Louis, Mo., March 6.—Dr. Joseph T. Kirkpatrick, at Tunnell Hill, Ga., March 1.—Dr. Andrew C. Rankin, at Chicago, Ill., March 5, aged 75 years.—Dr. Charles Blank, at St. Louis, Mo., March 9, aged 80 years.—Dr. W. F. Ball, at Darrowville, Ohio, March 1, aged 65 years.—Dr. Alfred H. Blackman, at Junction, Ark., March 4.—Dr. Elias Smith, at Whitmore Lake, Mich., March 6.—Dr. Marc Levingston, at San Francisco, Cal., March 14, aged 45 years.—Dr. Leonidas H. Eaton, at Oshkosh, Wis., March 16, aged 54 years. —Dr. John J. Stafford, at Baltimore, Md., March 19, aged 70 years. Dr. Edward S. Oliver, at Saranac Lake, N. Y., March 18, aged 30 years.—Dr. George W. Cushing, at Brooklyn, N. Y., March 20, aged 53 years.—Dr. Oren Day Pomeroy, at Whitestone, L. I., March 20, aged 68 years.—Dr. Robert G. Ellegood, at Concord, Del., March 22, aged 74 years.—Dr. Harry Whitesell, at Pittsburg, Pa., March 23.—Dr. Gerhard Loeling, at Philadelphia, Pa., March 23, aged 69 years.—Dr. Daniel W. Richards, at Easton, Pa., March 23, aged 64 years.—Dr. Thomas S. Butcher, at Monterey, Nuevo Leon, Mexico, March 24, aged 55 years.—Dr. W. W. Johnston, at Atlantic City, N. J., March 22, aged 59 years.—Dr. H. H. Hogan, at Reno, Nev., March 17.

GREAT BRITAIN, ETC.

London Hospital's Fine Record.—It is not surprising that the personnel of the London Hospital are proud of their institution, and recent statistics seem to support their claim that it is not only the largest but the busiest hospital in the world. Last year no less than 13,000 in-patients were treated there, and in addition to 3,591 minor operations, the surgeons performed 2,439 of a more hazardous nature, thus averaging eight of the latter for every day in the year.—*Baltimore American.*

American Physicians in Australia.—It is not generally known that the medical laws of Australia grant licenses only to physicians who have taken a five-year-course in medicine before receiving their degree. This law was passed in 1901. We learn from a correspondent that by this law no graduate of an American medical school is permitted to practise his profession in Australia.

Memorial to the Late Sir William MacCormac.—A general committee of the graduates of St. Thomas' Medical School was formed March 11, for collecting subscriptions and making arrangements for the production of a bust of Sir William MacCormac to be placed in the central hall of the hospital.

Scarlet Fever on a Training Ship.—The scarlet fever epidemic on H. M. S. training ship *Impregnable*, stationed at Devonport, has in no way diminished. On this account the boys and crew have been transferred to the *Inconstant*, in order to allow thorough disinfection of the *Impregnable*.

Essays and Addresses of Sir James Paget.—A collection of selected essays and lectures by the late Sir James Paget has just been edited by his son. A number of the essays have not been hitherto published. Many of his addresses, while familiar to the older medical men, will prove good reading to the men who have graduated in the last 15 years. This book forms an excellent memorial of a great man.

Owens College, Manchester.—A portrait of the late Dr. F. J. Leech, professor of materia medica and therapeutics, was hung in the Christie Library, March 4. A number of addresses were made. The portrait, painted by T. Harcourt, is an excellent likeness.

Obituary.—J. L. Propert, a graduate of King's College Hospital and the University of London, died March 7 in London, aged 67.—P. R. Fort, a graduate of St. Mary's Hospital, died at Standerton, South Africa, February 10, of typhoid fever. He was serving as civil surgeon on the hospital ship, *Simla*.—The death is also announced of Dr. James Loudoun, a graduate of St. Andrew's University, in Hamilton, Lanarkshire, aged 78.

CONTINENTAL EUROPE.

Kussmaul's Festschrift.—In honor of Kussmaul's 80th birthday, which was celebrated February 20, the 73rd volume of the *Deutsches Archiv für klinische Medizin*, has appeared as a "Festschrift." It contains a photograph of Kussmaul, a sketch of his life, and a number of works by his former pupils and others. Among these may be mentioned Bäumler, Ewald, Gerhardt, Penzoldt, Edinger, Erb, Baumgarten, A. Fraenkel, and von Leyden.

Institute for the Treatment of Lupus.—It is announced that the Emperor of Austria has donated the sum of $2,000 for the foundation of an institute for the treatment of lupus, in Vienna.

Society Meetings Next Week.—The Sixth French Congress of Medicine will meet at Toulouse, April 1.—The German Society of Orthopedic Surgery, founded last September, will hold its first annual meeting in Berlin, April 1.—The 31st Congress of the German Surgical Society will also be held in Berlin, April 2-5.

University Notes.—Berlin: February 20, Dr. Adolf Kussmaul, the chief of the German clinicians, completed his 80th year. On the same day Dr. von Leuthold, surgeon-general of the German army, celebrated his 70th birthday.—Dr. Beckman, of Leipsic, has been appointed professor of pharmaceutical chemistry in charge of the new institute in Dahlem.—Dr. Ernst von Leyden, professor of the theory and practice of medicine, will celebrate his 70th birthday, April 20.—**Breslau:** Dr. Theodor Polack, who celebrated his 80th birthday November 10 last, expects to retire from the directorship of the Pharmaceutical Institute and professorship of pharmacy this spring.—**Budapest:** For the first time in the history of Hungary, a woman, Dr. Lea Lorand, has been made assistant in pediatrics in the medical department at the University.—**Giessen:** The well-known physiologist, Konrad Eckhard, professor and director in the Physiological Institute, celebrated his 80th birthday, March 1.—Dr. von Herff, of Basel, has been called to the position of professor of gynecology left vacant by the death of Dr. Löhlein.—**Greifswald:** Dr. Kraus, professor of medicine in the University of Graz,, has been offered a similar position at Greifswald to fill Dr. Krehl's place.—**Lausanne:** Dr. E. Bugnion, professor of anatomy, has been retired after 24 years' service.—**Leyden:** Dr. Siegmund Rosenstein, professor of medicine, celebrated his 70th birthday, February 20.—**Munich:** Dr. Joseph von Bauer has been appointed director of the Municipal Hospital in place of the late Professor von Ziemssen. His place on the medical committee of the university has been taken by Dr. Heinrich von Ranke. The position of professor of clinical medicine in the second medical clinic will be filled by one of the following: Dr. Fredrich Müller, of Basel, Dr. Krehl, of Tübingen, or Dr. Stintzing, of Jena.—**Nantes:** Dr. Eduard Vignard has been appointed professor of clinical surgery from April 1, replacing Dr. Heurteaux, who is then to be retired.—**Odessa:** Dr. Lyssenkow, of Moscow, has been appointed professor of operative surgery, Dr. M. Michailow, professor of physical diagnosis; Dr. D. Kischenski, of Moscow, professor of pathological anatomy in the Military Medical Academy, and Dr. Sapjeschko, professor of surgical pathology.—**Rostock:** Dr. Wolkers, of Bonn, has been appointed professor of dermatology and syphilography.—**St. Petersburg:** Dr. Bertenson has been made director of the new French Hospital, the corner stone of which was laid by the late President Felix Faure.—**Tuebingen:** Dr. von Jürgensen, director of the Poliklinik, is seriously ill from an apoplectic stroke.—**Vienna:** Dr. Leopold Oser, professor of diseases of the stomach, early in March celebrated his 30th anniversary as a teacher of medicine.—**Wuerzburg:** Dr. Julius Jolly, professor of Sanskrit, has received the honorary degree of M. D. from the University of Göttingen, on account of his works upon the history of medicine.

In Koenig's Honor.—Volume 66 of the *Archiv für klinische Chirurgie*, just published in Berlin in one volume, is dedicated to Franz König, professor of surgery in Berlin, whose 70th birthday was celebrated February 16, last. The volume contains a photograph of Professor König and 36 articles by his former pupils.

Obituary.—The death is announced of Dr. Emil Holub, of complications of malaria, in Vienna, in his 55th year. Soon after graduating from the University of Vienna, Dr. Holub left for South Africa, where he was well known as an explorer.—The death is announced of Dr. Bouqué, professor of surgical pathology at the University of Ghent.—The death is also announced of Dr. Secondo Laura, founder and medical director of the Children's Hospital, Turin; Dr. Benedetto Mircoli, professor of clinical medicine and general pathology in the University of Camerino; and of Dr. Deschamps, surgeon to the Liège Hospitals.

Influenzal Spleno-pneumonia.—Manquat reports a case of spleno-pneumonia of the upper lobe of the left lung in a boy of 15. He was subject to urticaria and antipyrin always produced a general erythema. He had a slight cough, chills, headache, coryza, pain in the left chest, and fever, with absolute dulness, egophony and pectoriloquy over the left upper lobe posteriorly. All breath sounds were absent for two weeks. Then he recovered rapidly, being ill only five weeks. Manquat believes that such a condition, congestion absolutely limited to the left upper lobe, is unique, and he considers it worth nothing that the signs were tpical of interlobular pleurisy; that there was at no time any expectoration; that the percussion dulness and the absence of the breath sounds did not change; and that the pulse varied from 52 to 160, without dyspnea or change in the excellent general condition of the patient. The treatment followed was milk diet, rest in bed, mustard applications, quinine, and sodium iodide. He considers this spleno-pneumonia a pseudo-pleuritic pneumopathy secondary to influenzal infection. (*Bulletins et Memoires de la Societe Medicale des Hôpitaux de Paris*, July 25, 1901. No. 26). [M. O.]

The Latest Literature.

BRITISH MEDICAL JOURNAL.

March 8, 1902.

1. A Clinical Lecture on Two Cases of Spinal Cord Disease Consequent on Syphilis. T. R. BRADSHAW.
2. Abstract of the Hunterian Lectures on the Anatomy, Physiology and Pathology of the Imperfectly Descended Testis. W. McADAM ECCLES. (Lectures II and III).
3. The Influence of Phosphorus on Organic Substances in Pills. W. H. MARTINDALE.
4. Puerperal Insanity. ROBERT JONES.
5. A Case of Tumor of the Cerebral Cortex. H. CECIL BARLOW.

1.—Bradshaw reports the case of a man, 40 years of age, who was suffering from **locomotor ataxia** in characteristic form. The author cannot recall a single instance of the disease during the past 10 years in which he failed to elicit a fairly clear history of **syphilis.** In the patient referred to, infection had undoubtedly taken place, but in an irregular maner. He also reports the case of a man, 46 years of age, who gave a clear history of **syphilis** 23 years before. He seemed, however, to have had no further manifestations of the disease until 12 months before Bradshaw first saw him, when he had some form of amblyopia of the left eye, which got well under mercurials. Subsequently he suffered from pain in the right lumbar region, his right leg began to get weary on exertion and, a fortnight before admission, it dragged as he walked. Quite recently he felt some weakness in the left leg. On admission to hospital he walked with marked dragging of the right leg, the toes had a tendency to catch in the floor and the movement was characteristically spastic. The symptoms presented by the patient might be very well accounted for on the supposition that there was a small **gumma** situated **in the pia of the** right side of the cord near the upper end of the lumbar enlargement. In its neighborhood there would probably be a good deal of thickening of the meninges, which might even encircle the cord. The lesion would naturally press upon the more superficial parts of the cord, including the crossed pyramidal fibres which lie directly beneath the pia, and would also interfere with the nerve roots. [J. M. S.]

2.—Eccles gives an abstract of the second and third Hunterian lectures on **imperfectly descended testes.** Double arrest or ectopia associated with want of development of the testes usually implies sterility. It is doubtful whether a testis arrested at birth, but brought down into the scrotum in early life, ever develops sufficiently to become the seat of active spermatogenesis. Many instances of want of general growth of the body are accompanied in the male by arrest of the growth of the testicles. This is particularly the case in the horse. Experience has shown that a single normal testicle is sufficient to supply all that is needed for the proper growth of the individual. The bearer of undescended testes may be totally incapable of producing spermatozoa, yet be possessed of enough virility to copulate. Undescended testicles associated with lack of development are accompanied by a small prostate, a contracted saccular seminal vesicle, diminutive Cowper's glands, and a flaccid, shrunken penis. The pubic hair is feminine in arrangement, the pelvis tends towards the female type, and the voice remains high in pitch. Sexual perversion is sometimes noted. Orchitis is much more likely to occur than in the normally situated organs. When inflammation attacks an imperfectly descended testicle, complete atrophy almost invariably follows. There may be repeated attacks of inflammation which are not only harassing but often extremely dangerous, peritonitis may ensue, owing to the fact that the processus vaginalis communicates with the general peritoneal cavity. Of all the recorded cases of torsion of the spermatic cord, 50% are associated with imperfectly descended testis, and in the other half there is usually some abnormality of the testis or its anexa. Among the causes of torsion may be mentioned imperfect descent of the organ, a long mesorchium, a practical absence of the mesorchium, action of the gubernaculum testis, a congenital twist of the cord, a roomy tunica vaginalis, and a flattened condition of the imperfectly descended organ. In some cases there are two cords supporting the testicle, one consisting of the vessels, the other of the vas deferens. Exciting causes are muscular effort, a mechanical twist, action of the cremaster, application of a truss, attempts at reduction of a hernia, and possibly the enlargement of the organ at the aproach of puberty. Torsion of the cord leads to atrophy or to gangrene. Four varieties of cyst may be developed in connection with a testis that has failed to reach the scrotum: (1) Cysts formed upon the epididymis; (2) testicular cysts proper; (3) cysts due to fetal remains; (4) dermoid cysts and teratomata. Small cysts in the epididymis of the fully descended testicle are uncommon before the age of forty and are almost unknown before puberty. In the imperfectly migrated gland they may appear earlier and more frequently. They may be sessile or pedunculated; when pedunculated, they occasionally become detached and form loose bodies in the tunica vaginalis. They are either involution cysts due to the distention of previously existing cavities or they are connected with some fetal remains. Cysts may originate from the testicle proper or be derived from the tissue forming the corpus Highmori. Cysts due to fetal remains are derived from the hydatid of Morgagni, the Wolffian tubules, the vasa aberrantia, or from the paradidymis. Eccles has not been able to trace a record of a true dermoid cyst of an imperfectly descended testicle in the human subject, but there are several recorded in animals, especially the horse. Of 38 cases of sarcoma of the testicle in over 60,000 males, only one was in a testicle that had not fully descended. Infection of the lymph glands and metastases generally take place before there has been much local extension. Carcinoma is comparatively uncommon, because there is so little active epithelium present in the poorly developed organ; when cancer does occur, it runs quick and fatal course. When the testicle is arrested in the abdominal cavity, no tunica vaginalis is developed except in rare cases in which a processus vaginalis is drawn down through the inguinal canal by the gubernaculum. The varieties of hydrocele that may occur are: Inguinal, scrotal, bilocular, trilocular, perineal, and those in Scarpa's triangle. An inguinal hydrocele may be further subdivided into that in which the testicle is in the abdomen and that in which it lies in the inguinal canal. More than half of the cases of imperfectly descended testis are accompanied by hernia. The rupture occurs as a bubonocele, or as a scrotal, interstitial, cruro-scrotal, or superficial perineal hernia. By a cruro-scrotal hernia is meant a hernia which distends not the scrotal tissues, but the fold of skin which is found between the scrotum and thigh. [F. T. S.]

3.—The opinion of chemists and pharmacists has been that **alkaloids and other organic substances** are not affected by **phosphorus.** In order to test the reliability of this opinion, phosphorus pills were prepared with the addition of strychnine, morphine, quinine sulphate, nitroglycerine, and zinc valerianate. Examination of the pills showed the absence of any considerable interaction or decomposition between phosphorus and the alkaloids, and no great amount of oxidation of the phosphorus when combined with other organic substances except in the case of the zinc valerianate. [J. M. S.]

4.—Those who have studied the reproductive life of woman admit that gestation is attended with much nervous disturbance in many and some nervous disturbance in all; the intimate sympathetic connection of the mammæ with the gravid uterus gives rise in normal persons to various forms of neuralgia, severe headaches, dizziness and insomnia; whereas, in highly susceptible persons these changes of disposition and character become so marked that irritability, fractiousness and despondency may and do amount to actual insanity. Although this period of life is less liable

to insanity than any other, the dynamic changes in the nervous currents are so great that insanity does actually occur about once in every 700 confinements. The report of the Lunacy Commissioner for 1900 shows that the yearly average number of hospital admissions of insane patients for 5 years, due to pregnancy, parturition, the puerperal state and lactation bears the ratio of 7.2, in the private class, and 8.41, in the poorer class, to the total yearly average of admissions. The customary classification of puerperal insanity is (1) that which occurs during pregnancy; (2) that from the date of parturition to 6 weeks after confinement, puerperal insanity, and (3) insanity occurring during lactation, dating from 6 weeks after confinement. This classification must be taken as suggesting a type of insanity. The condition is more common in women who are illegitimately pregnant than in those who are married. Taking single and married together, they suffered in about equal proportion from melancholia and mania, but the acute form of melancholia was more intense than that noticed in mania. Especially was the insanity of an unfavorable form among single women. The onset, in the puerperal cases, was sudden more often than gradual, and the gradual onset characterized the advent of melancholia twice as often as mania. Jones thinks the strain during the last months of pregnancy and immediately before parturition, is more likely to unbalance a mentally unstable woman than that attending the early changes of pregnancy, and this applies equally to the single and the married. The first symptoms of puerperal mania in 58% of the 120 cases occurred within the first 3 weeks after confinement. The almost universal early symptoms of insanity in puerperal cases are loss of sleep, then a feverish and anxious restlessness, a busy concern about trivial details, distrust, a suspiciousness, loss of appetite, and a readiness to take offence when none is meant, an exacting irritability and ready reaction to outward stimulus, culminating in wild delirious excitement and mania. For this reason early attention should be given to sleeplessness and headache after delivery. Suicidal promptings are most common in the lactation cases. Infanticidal promptings are also relatively more common in the lactation cases, and in married rather than in single women. Delusions as to place and surroundings are not uncommon. Thirty-three percent of cases followed the first pregnancy. Nearly 50% of the patients had some hereditary predisposition either physical or mental; the greatest incidence was between the ages of 25 and 29 years, both for the insanity of pregnancy and that of the puerperal period; whereas, the greatest incidence in lactation cases was between 30 and 34 years, a fact which supports the view that the latter form is closely related to exhaustion and occurs most commonly immediately after the best period of life. The shame and worry of an illegitimate pregnancy must exercise a considerable influence as a moral factor in the production of insanity, but it is difficult to state upon which age-extreme of the reproductive life this is greater. Of the puerperal cases, 48% were described as cheerful, 15% as reserved, 7.5% as unstable, and 8% as excitable. Of the lactation cases, 42% were described as cheerful and 18% as reserved. Of the pregnancy cases 41% were cheerful, 23% reserved, and 9% excitable. The majority of patients had brown hair and brown or gray eyes. [J. M. S.]

5.—Barlow reports the case of a man, aged 57 years, who was suddenly seized with convulsions affecting the left side of the body, beginning in and mainly confined to the face, but also involving the arm. During the attack he was perfectly conscious, but was unable to articulate distinctly. The attack lasted for about an hour and then he appeared to be quite well. Later, he had another attack and when Barlow examined him, he was standing with his head and shoulders bent forward, perfectly conscious, and appearing to understand all that was said to him; but he was unable to articulate distinctly. There were frequent and marked spasms of the left facial muscles, of the left arm and, to a less extent, of the left leg. The mouth was open, the tongue protruded, and saliva flowed from the mouth. The grasp of the left hand was decidedly weaker than that of the right. The deep reflexes were very brisk on the affected side, while sensation was markedly dulled and delayed to pain and touch on that side. The pulse-rate was 78 and he appeared free from pain. The attack came on while in bed and the twitching began in the face. In the intervals between the spasms left facial palsy was obvious and the left arm was decidedly weaker than the right. There was no discharge from the ears and no pain or tenderness of the head; but systolic bruit was neard loudest at the aortic cartilage. The patient died suddenly, without any preliminary coma, apparently from heart failure. At autopsy the surface of the cortex over the right Rolandic area was found considerably softened and, for a distance of ½ inch around it, there was a perfectly circumscribed, firm tumor the size and shape of a walnut. The main bulk of the tumor was situated in the lower portion of the ascending frontal convolution. The tumor was an alveolar sarcoma. The absence of optic neuritis, vomiting and the very slight pain in the head seemed to negative a cerebral tumor. The short duration of the illness, 33 days, and the sudden termination without any preliminary stage of coma are points deserving of notice. [J. M. S.]

LANCET.

March 8, 1902.

1. An Address on the Results of Operation in 60 Cases of Malignant Diseases of the Breast. A. MARMADUKE SHEILD.
2. Three Lectures on the Blood-Vessels of Mammals in Relation to those of Man. F. G. PARSONS.
3. A Contribution to the Study of Intestinal Sand, with Notes on a Case in which it was passed. SIR DYCE DUCKWORTH and ARCHIBALD E. GARROD.
4. Some Experiments to Determine the Actual Efficacy of Izal Oil as an Intestinal Disinfectant. M. H. GORDON.
5. Two Cases of Lupus Vulgaris Successfully Treated with Urea Pura and the X-Rays. EDWARD SWALES.
6. Abdominal Hysterectomy for Cancer of the Uterus; with Notes on Two Cases. ROBERT O'CALLAGHAN and HENRI DARDENNE.
7. Electric Shocks. F. B. ASPINALL.

1.—A. Marmaduke Sheild discusses the results obtained in 60 operations for cancer of the breast and presents a table of 40 cases, the others having been operated upon too recently to be of statistical value. To Moore and other English surgeons he gives the credit of the great improvement brought about in late years in the method of operating for cancer of the breast, although mention is made of the work done by Gross and Halstead in this country. Stress is laid upon the fact that in the majority of cases cancer of the breast in its commencement is insidious, quiet, and often quite painless. The slightest "hardness" or "thickening" in the breast of a patient past 40 years should be looked upon with the greatest suspicion. Sheild looks with more confidence to the macroscopic appearance of the tumor than to the microscopic examination. Involved glands which can not be felt through the skin or perhaps when the axilla is opened are frequently found after division or removal of the pectoral muscles. The author's experience with and observation of double ovariotomy for recurrent cancer of the breast has not been such as to cause him to put any confidence in this treatment. Immunity for three years after operation is not considered indicative of a cure, as recurrences have frequently taken place 5 years after operation. In discussing the method of operating Sheild says that he always employs for anesthesia gas and ether followed by chloroform in the later stages of the operation. Drainage of the wound is strongly advocated. Reference is made to the error of mistaking a soft carcinoma of rapid growth for an abscess. Before operating for malignant disease a careful examination of the

other viscera should be made to discover whether or not dissemination has taken place. Since the modern thorough operation has been employed, local recurrence is very rare, and, when it does occur, can be easily removed. Edema of the arm which was formerly so frequently encountered is now seldom met with, as the glands which produce the pressure are removed. Of the 40 cases tabulated 8 were well 5 years after operation; 4 four years after; 7 three years, and 11 two years. Some of the cases of local recurrence have been operated upon a second time and are now free from any trouble. Sheild lays stress upon the importance of not keeping the arm bound down for any length of time after operation. He always begins the gradual elevation of the arm at the end of the first week so as to prevent axillary adhesions. [J. H. G.]

2.—This article is an abstract of three lectures delivered before the Royal College of Surgeons of England, by F. G. Parsons, **on the blood vessels of the mammals in relation to those of man.**

3.—Duckworth and Garrod contribute **a study of intestinal sand and report a case of true enteric lithiasis.** They remark that the literature on this subject is almost a blank, but that quite a number of cases have been reported on the Continent. Their case occurred in a married woman, 33 years of age, who, in 1900, while under the care of Dr. D.E. Surridge, suffered from diarrhea. No cause could be found for this ailment. The patient had always been in good health. There appeared to be no points of interest in the family history bearing on her trouble. Her weight in the summer of 1899 was 9 stones 2 pounds. Very intractable diarrhea began in January, 1900, and at this time she also complained of internal rumbling and purring noises. The diarrhea continued throughout the month of February when she was compelled to take to her bed. On a diet of milk and lime water, the diarrhea subsided somewhat. On March 18th sand was discovered in the motions, and it was also found at every subsequent examination. In April she consulted the authors who report the case. At this time 2 or 3 motions were passed daily; they consisted of loose brown material which contained a sediment of about a teaspoonful gritty sand. The patient was emaciated and very pallid; the thoracic organs appeared healthy; the colon and its sigmoid flexure were palpable and the right kidney was movable. The intestinal sand was soluble in boiling nitric acid but failed to dissolve in cold or boiling liquor potassæ. Under a low magnification, the particles of sand varied in size and shape; they were reddish-brown in color and translucent. Under treatment, the patient gradually improved but was never free from diarrhea. During October there were alternate attacks of diarrhea and constipation and, on the 12th of that month, she passed a considerable quantity of sand. She had regained some of her weight. Tenderness on pressure existed about the splenic flexure of the colon. The patient had the majority of the symptoms common to enteric lithiasis excepting severe pain. Pain is a marked feature of the cases of enteric lithiasis that are on record. It occurs in paroxysms and lasts several hours. An examination of the intestinal sand from the case under consideration showed that it consisted of the following: Water, 12.40; organic material 26.29; inorganic material, 61.31. The organic material was composed largely of bacteria. The inorganic residue was found to have the following composition: Calcium oxide (CaO), 54.98; phosphorus pentoxide (P_2O_5), 42.35; carbon dioxide (CO_2), 2.20; residue containing traces of magnesium and iron, 0.47. The authors think that there are 2 varieties of intestinal sand, namely false intestinal sand, which is composed of the remains of vegetable food, and true intestinal sand, composed largely of inorganic material. They believe that the large intestine is probably the seat of the formation of true intestinal sand. [F. J. K.]

4.—Gordon has conducted experiments **to determine the actual efficacy of izal oil as an intestinal disinfectant.** He gives a brief history of the use of izal as a germicide *in vivo* and mentions that, unfortunately, the preparation is a proprietary article. Dr. F. W. Tunnicliffe first introduced izal as a medical disinfectant. He finds that the results justify the inference that not only does the ingestion of izal oil, in doses that give rise to no untoward symptoms, diminish the number of microorganisms in the feces, but that it does so to a very striking extent. He further concludes that, as in the case of other remedies, the scope of izal as an intestinal antiseptic is a matter that can only be established at the bar of clinical experience. Possibly other drugs may be still more efficacious for the purpose stated; but his observations, so far, with salol and with naphthol *in vitro* have not led him to form the opinion that they are likely to be included. This opinion, however, is advanced with all reserve, as he has not yet tested these drugs *in vivo* as he has izal. [F. J. K.]

5.—Swales reports **2 cases of lupus vulgaris successfully treated with urea pura and the X-rays.** The results of Dr. H. Harper, of Nottingham, in the treatment of phthisis with pure urea suggested to the author the use of this drug in the treatment of lupus vulgaris. Two very bad cases of lupus vulgaris were given the following treatment: Daily x-ray exposure lasting for 7 minutes, and urea in 20-grain doses, 3 times a day. The first case was that of a woman, 30 years of age. In this instance the lupus extended from ear to ear, spreading out like the wings of a butterfly, and ulcerations were so pronounced that the nasal bones were visible through the weak and indolent skin. Adenitis was also present. A suspicion of tubercle was found at the right apex. All signs of the disease disappeared after a rather prolonged treatment with urea and the x-rays. The second case was that of a woman, 30 years of age. The entire face was one mass of ulcerations and scabs. All signs of the disease disappeared in this case. The author remarks that he particularly wishes to emphasize that he employed low pressure tubes, thereby preventing severe dermatitis in the neighboring healthy skin. There was little trouble in carrying out the treatment, which was of comparatively short duration, and the patients' general health improved. The scars which remained did not present the marked puckering and unsightly contractions so commonly seen in cases treated by the old methods of scarification. The expense of the urea is the only objection to the method. [F. J. K.]

6.—O'Callaghan and Dardenne record 2 **cases of abdominal hysterectomy for cancer of the uterus.** One case was remarkable in that after 17 years of barrenness the woman became pregnant after amputation of her cervix for malignant disease followed by a thorough use of the cautery. Labor came on at 7 months and lasted for 18 hours. Operative procedure was required and the patient died in 48 hours. Post-mortem examination revealed a new growth in the right breast with involvement of the axillary glands. [W. A. N. D.]

7.—Aspinall discusses the subject of **electric shocks** in order to obtain particulars from medical men concerning severe electric shocks that have not proved fatal. He discusses the following questions: (1) Is everyone susceptible to an electric shock? (2) Is a person suffering from a disease more liable to be fatally injured by an electric shock than a person in good health? (3) Does the physiological condition which a person is in at the time of his receiving a shock make any difference? (4) Does the path which the current takes through the body have any effect as regards the shock proving fatal? (5) Does the question of the contact made, and whether burning takes place or not, have any effect upon a person's chance of being killed? (6) Can a person receive a fatal shock without giving the "cry," and also can he speak after receiving a fatal shock? (7) Is an alternating or direct current shock more likely to prove fatal? (8) Cannot medical men give us a more certain method of ascertaining whether a man is dead or not? (9) Cannot something more be done to help those who receive a shock? He believes that electric shocks not only affect different people differently, but also vary in the same individual under different conditions. He believes that a diseased person may be either more or less suscep-

tible, depending upon the disease from which he is suffering. An individual who is perspiring freely, he thinks, is less susceptible to an electric shock than one whose skin is dry. He holds that the left side of the body is more vulnerable, because the valves of the heart are easily damaged by an electric shock. He believes that the path which the current takes in the body is a most important factor. He holds that burning of the surface of the body at the point of contact is a wonderful provision of nature to protect the individual against fatal shocks, because the burning not only numbs the nerves but also increases resistance, thus preventing the current from passing. He believes that an individual may receive a fatal shock without giving a "cry" and that it is also possible for one to speak after a fatal shock has been received. He is inclined to the view that an alternating and direct current are both equally dangerous and that the question is one purely of voltage and of favorable conditions. Finally, the author discusses the treatment of electric shocks. [F. J. K.]

MEDICAL RECORD.

March 22, 1902.

1. Are Vessels Infected with Yellow Fever? Some Personal Observations. HENRY R. CARTER.
2. Pathology of Appendicitis. J. COPLIN STINSON.
3. The Disadvantages of Gauze Packing in Appendicitis Work. ROBERT T. MORRIS.
4. A Plea for Specific Plans of Treatment Other Than by Single Drugs. LOUIS FAUGERES BISHOP.
5. What is Chronic Rheumatism? EDWIN M. MERRINS.
6. A Simple Test for Equilibrity of Eye Muscles in Binocular Vision. FREDERICK C. RILEY.
7. Static Wrinkles. HENRY G. PIFFARD.

1.—H. R. Carter presents some personal observations dealing with the question: "Are Vessels Infected with Yellow Fever?" He concludes as follows: That vessels aboard which yellow fever has been contracted have not been rare at southern quarantine stations. He states that such vessels are rarer since 1893 and are not very common now. This fact he attributes to the sanitary measures for avoiding exposure to infection in foreign ports and to the substitution of steam for sailing vessels. To some degree the falling off of vessels from Brazilian ports is also a factor. He declares that a case of yellow fever developing aboard a vessel plying between southern ports of the United States and the tropics will probably infect the vessel, so that other cases can in time be contracted aboard her. Such vessels, however, if not more than 10 or 12 days *en route* after the occurrence of a case of yellow fever, will, in general, be disinfected at southern quarantine stations before any other cases have been contracted aboard, although harboring infected mosquitoes. A case so occurring aboard a vessel from a northern port of the U. S. would be able to infect her, or not, according to whether she had acquired the *stegomyia fas.* in the tropical port. It is, in general, necessary to disinfect all vessels running between southern ports of the U. S. and tropical ports, if a case of yellow fever occurs on board, no matter where it be contracted; while vessels running between northern ports and the tropics may, through precautions in tropical harbors, have no *stegomyia* aboard and are thus not infectable by cases of yellow fever occurring aboard. Some vessels giving no history of yellow fever in port, *en route*, or on arrival, are nevertheless infected and may communicate the fever to those who go on board. This is probably due to the infection (infected mosquitoes) in parts of the vessels unfrequented by the crew while *en route*, or to the crew being all immune to yellow fever. [T. L. C.]

2.—J. C. Stinson discusses the **pathology of appendicitis, with special reference to foreign bodies in the appendix** and he draws the following additional conclusions to those he has already published in the *American Medico-Surgical Bulletin*, June 13, 1896: (1) That, as appendicitis is strictly a surgical disease, the earlier it is operated upon the better for the patient. (2) That cases operated upon early should have no mortality. (3) That during all appendicitis operations the appendix should be removed, provided irreparable damage is not done in attempting to find or remove it. (4) That where there is a local or general infection the abscess cavity or cavities should be freely opened, all adhesions separated, all pus, shreds, etc., cleaned out, all inflamed or pathologic omentum excised, and all pathologic intestines and infected portions of the abdomen freely irrigated with hot water or hot saline solution till the fluid comes away clear. The intestines, etc., are then dried with sponges and returned to their normal positions. (5) That fecal concretions are more apt to be present as exciting causes of appendicitis than foreign bodies. (6) That foreign bodies are sometimes present in the appendix, and are exciting causes of appendicitis. (7) That when the appendix contains foreign material it is more likely to be a pointed or heavy body. (8) That fecal concretions closely resemble some foreign bodies of light weight, *i. e.* grape seeds, cherry stones, etc.; and that when one is in doubt whether the material is a concretion or foreign body, it should be carefully examined microscopically and chemically to determine the exact characters. (9) That operations, such as appendicitis or somewhat similar operations, *i. e.* those involving laparotomy, can be as readily, quickly, safely, and cheaply performed at the patient's home as elsewhere. [T. L. C.]

3.—Robert T. Morris discusses the **disadvantages of gauze packing in appendicitis work.** He believes that under the most careful aseptic and antiseptic precautions infection will be bound to follow the introduction of gauze even into the abdominal cavities of healthy men, and he further states that when **iodoform gauze** is used we add another element of danger in the likelihood of inducing **iodoform poisoning** which is often so insidious. He refers to the excellence of Tait's results as well as to Clark's statistics. He does not believe that gauze packing should be given up at once: it is too closely a part of the method of to-day. It is better to say that one should work toward the point of giving up gauze drainage as rapidly as experience proves that it can be done safely. [T. L. C.]

4.—L. F. Bishop makes a plea for **specific plans of treatment other than by single drugs.** He believes that physicians are waiting too inactively for the multiplication of specifics rather than employing well thought-out and well-developed plans of treatment which certainly act as specifically in many forms of disease as single remedies which are known as specifics. We must hold fast to the inductive method. Facts must be the foundation of theories and not the reverse. He advocates greater cooperation among those who have the opportunity of testing therapeutic plans. [T. L. C.]

5.—E. M Merrins discusses the **nature of chronic rheumatism.** Examining the personal records of 37 recent cases with a history of pain in one or more joints, he found that 4 were due to traumatism; in 2 cases with painful ankles and feet, the patients had **flat-feet;** 4 were afflicted with **rheumatoid arthritis;** and 6 were distinctly **gouty.** In the remaining 21 cases, all complaining of chronic **rheumatism,** or of an excess of uric acid in the system, there was a previous history of 5 cases of **acute articular rheumatism,** in one of **smallpox,** in 8 of **gonorrhea,** in 2 of **syphilis;** one was **tuberculous** and in 4 cases no satisfactory previous history could be obtained. Of the above 21 cases, indistinguishable as far as clinical appearances go, no less than 17 gave the history of having previously suffered from some disease of microbic origin. Some recent contributions to the literature of this subject are referred to, dealing especially with the results of infectious disease producing subsequent joint lesions. A clear classification of joint affection may be made according to their pathogenesis in one or other of the following divisions or combinations of them: (1) **traumatism,** (2) **bacterial infections,** (3) **toxins and other chemical irritants,** (4) **nerve degeneration.** [T. L. C.]

6.—F. C. Riley advises a simple test to determine the **equilibrium of the eye muscles in binocular vision.** In place of the ordinary **Maddox rod** he uses a small vial filled with water, or preferably any red-colored liquid, the vial should be surrounded by paper upon both sides of which an opening has been left, these openings should be opposite each other. [T. L. C.]

MEDICAL NEWS.

March 22, 1902. (Vol. 80, No. 12).

1. Malnutrition as Shown in Congenital Syphilis. CHARLES GILMORE KERLEY.
2. The Necessity for Sanitary Safe-Guards on the Central American Canals. GEORGE A. SOPER.
3. A Report on the Use of Antiphthisic Serum T. R. EARL SPRAGUE BULLOCK.
4. Simple Traumatic Synovitis of the Knee. WILLIAM S. THOMAS.
5. The Therapeutics of Cutaneous Diseases. ALBERT E. CARRIER.

1.—C. G. Kerley reports 6 cases of **malnutrition due to congenital syphilis.** He requires all his cases of apparently cured congenital syphilis to report every third month. He suggests that, if in a family in which the father and the mother are of average health and strength and in which there is a negative family history, the children are delicate, undersized and under normal weight, with a lack of endurance, low vitality, indifferent food capacity and poor appetite, mercury bichloride or potassium iodide should be added to the treatment, regardless of the social standing of the parents. He has always had gratifying results from the practice of this rule. He also states that he looks with suspicion upon the puny, delicate children of parents who have average good health, in whom there is no discoverable reason for malnutrition, and who persistently resist well-directed hygienic and supporting measures. [T. M. T.]

3.—E. S. Bullock reports a number of cases treated with **antiphthisic serum T. R.** and divides them into 3 classes: (1) Those in which the serum was discontinued on account of an apparently permanent rise of temperature; (2) those in which there was little or no change during the period of treatment; (3) those in which there was failure during the period of treatment. All the cases treated with this serum, with few exceptions, were favorable. In a certain proportion of cases there was improvement; in others the condition remained about the same; and in still others there was retrogression. In the authors' opinion the results obtained with this treatment were nearly comparable with those obtained without it, and for this reason, he believes, that those who have spoken favorably of this treatment have unwittingly interpreted the natural occurrences of proper hygienic surroundings as the effect of this serum. [T. M. T.]

4.—William S. Thomas, in his article on **simple traumatic synovitis of the knee,** advises the following treatment: The remedial measures are mainly mechanical. Rest, complete or partial, counts for more than do all other means combined, but it is often discontinued too soon. In cases of simple traumatic synovitis of the knee it is certain that, unless the symptoms are unusually severe, little is to be gained by absolute rest. When the patient can earn his living with the joint immobilized, he should be allowed to walk about while wearing the customary splint. A plaster splint encasing the leg and thigh from ankle to perineum is all that is required in the way of apparatus. Rest in bed or extension is not needed; and for this reason the contact of the condyles with the head of the tibia as in standing, or their impact while walking, is not the factor which keeps up the synovitis. It has been seen that the ligamenta alaria and mucosa and their folds are the parts most inflamed and not the articular surfaces of the bones. Moreover, the patient will not show pain if the bottom of the heel is smartly struck, or if he steps heavily upon his heel while the knee is extended. The rest employed as treatment need apply only to flexion and rotation, for it is clearly these motions that stretch or subject to strain those structures which were injured during the initial traumatism and which should now be at rest. If properly applied, the plaster splint may be worn for three or four weeks; it is then removed and the joint examined, and, if necessary, the old cast may be reapplied or a new one substituted. It is idle to temporize with these cases of traumatic synovitis of the knee; they must be immobilized so long as there is any excess of fluid in the joint or a point of distinct tenderness about the ligaments; to discontinue immobilization too soon commonly results in a fresh recurrence of symptoms, or, at best, a protracted course of those already present. If the patient is seen within the first 24 hours, massage may be employed gently over the joint itself, but more vigorously to the thigh above to promote the absorption of the effusion. The procedure is also decidedly grateful to the patient. During the stage of active inflammation there must be rest; later, when the active symptoms are subsiding or when of more than 6 weeks' duration, with effusion still present in a flabby capsule, massage without motion of the joint hastens absorption. It is at this stage that tight strapping and counterirritation are of real service, but they must be continued for sometime, a week at least. During the first few hours after injury rest in bed, wet dressings, cold applications, etc., are, of course, demanded, if the pain, redness and swelling are severe, but such cases are usually accompanied by more serious lesions than the sprains or contusions resulting from simple synovitis. Aspiration is required only in rare cases of excessive distention and tenderness, and should be done aseptically and be followed by firm strapping and bandaging. [T. M. T.]

5.—In A. E. Carrier's article on the **therapeutics of cutaneous diseases** he divides the dermatological affections into 3 classes: (1) Those that are self-limited, usually running a definite course, attended by mild or severe subjective symptoms, and ending in recovery; (2) those that are benign in character but incurable and those that are fatal in spite of all medication; and (3) all other cutaneous diseases. In this class we find our opportunity to cure. The author also makes a few suggestions concerning the principles of local therapy. (1) The removal of all sources of irritation to the skin. Inquiry may show that the occupation of the patient, the methods and materials used for the purpose of keeping the skin clean, or the clothing that is worn, are the cause of skin affection, or of continuing such a disease when it occurs from some other cause. (2) Absolute cleanliness. This means rendering the skin aseptic. The removal of all disease products from skin lesions lessens the liability to secondary germ infection, while their decomposition furnishes an added irritant. A process of cleaning should be accomplished with the blandest of material and the utmost gentleness to avoid irritation. (3) The relief of such distressing subjective symptoms as pruritus, smarting or pain. An infant suffering from eczema will do more harm in a minute by its efforts to relieve the itching by scratching than the physician may be able to overcome by a week of appropriate treatment. (4) The selection of the proper vehicle for the incorporation of the drug to be used and a proper preparation of the application. Ointment and powders require the exercise of brain and muscle, if they are properly prepared, and a limited experience with pharmacists will convince any one that there is a great difference among them regarding the way in which these applications are prepared. Success or failure in local treatment will largely depend upon properly-compounded applications, and the writing of a prescription does not end the duty of a physician to his patient. (5) The proper application of the remedy. A fact that should always be remembered is that the intermittent application of even soothing remedies will have an irritant action upon the lesions. Hence, ordering an ointment of zinc oxide for eczema, and directing that it be applied morning and night would be improper, because, if the remedy is indicated, the application must be in constant apposition to the diseased part so long as the indication lasts. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

March 22, 1902. (Vol. LXXV, No. 12).

1. Epignathus. CHARLES JEWETT.
2. A Skiagraphic Study and Researches in the Direction of Obtaining Pictures Which are Both Shadow and Substance of Bone, Muscle, and Ligaments. J. RUDIS-JICINSKY.
3. Remarks Concerning the Practice of Aseptic Surgery. CHARLES McBURNEY.
4. Tuberculous Joint Disease. H. AUGUSTUS WILSON.
5. Tripartition in the Study of the Female Pelvis. A. ERNEST GALLANT.

2.—J. Rudis-Jicinsky advises that in photographing thick parts of the human body, such as the shoulders, the chest, the pelvis and the buttocks, which necessitate a great distance of the tube from the object, 2 intensifying screens should be used for the purpose of considerably reducing the time of exposure. These screens are a distinct im-

provement and, with a good tube at its best, may help to produce marvellous pictures. The prepared side of the screen is placed against the prepared face of the photographic plate, so that the susceptible side of the screen rests on the sensitive surface of the plate. The plate is placed, together with a screen, in a casket or wrapped in envelopes. The sensitive side of the plate, together with the screen, lies upward. For precluding the diffused X-rays, we have to use a lead box with diaphragms. The X-rays undergo against all substances a strongly diffused reflection, the consequence of which is that, at the corners or edges of an insusceptible substance, the rays appear diffuse. This diffused reflection of light is particularly strong in the flesh of the person under operation. From every minute part of the flesh exposed, rays are independently directed from the tube upon the dry plate, and this is the reason that photographs of the buttock appear sometimes with so little contrast. To obviate this evil, care must be taken not to illuminate a greater part of the body than appears absolutely necessary to bring the entire plate under exposure. By imagining the tube to be at a distance of 60 cm. from the plate, it will be clear that, by introducing a diaphragm of lead at a distance of 30 cm., a hole of only half the size of the plate will be necessary to direct the operating cone of rays upon the plate with their full effect. [T. M. T.]

4.—H. A. Wilson mentions 2 very serious errors committed quite often in the **treatment of tuberculous joint disease.** (1) To anesthetize a patient with a suspected tuberculous joint will remove the one symptom which is constant and unvarying in the incipiency, namely, muscular rigidity, and leaves the way open for more or less severe traumatism from forcible manipulation. Not finding any abnormity, the physician is prone to ignore the serious importance of the previously and subsequently existing muscular rigidity. (2)To press forcibly upon the head and shoulders of a patient who is suffering from suspected spondylitis, or to strike upon the heel or knee of a patient with supected coxalgia, will provide the traumatism which the intuitive muscular rigidity is guarding against, a traumatism that every indication decries, that is never essential, and that at the most is simply confirmative of an opinion already formed from a study of symptoms and signs associated with the joint. Tuberculous hip disease may be confounded with syphilitic coxitis, typhoid arthritis, psoas abscess, lumbar Pott's disease, disease or injury of the knee-joint, rheumatism, phimosis, adherent prepuce, adherent clitoris, sarcoma, acute synovitis of the hip, chronic synovitis of the hip, infantile paralysis, epiphysial hyperemia, congenital dislocation of the hip, hysterical joint, periarthritic disease, Charcot's joint, coxa vara, sacro-iliac disease. Tuberculous disease of the spine, according to its location, may be confounded with sprains, torticollis, inflammation of the cervical glands, scoliosis, rachitic spine, hip disease, paralysis, bronchitis, colic, acute abdominal disease, cystitis, hyperesthetic spine, railroad spine, malignant disease of the spine, traumatic spondylitis, syphilis of the spine, osteomyelitis, rheumatoid arthritis, sacro-iliac disease, perinephritis and aneurysm of the abdominal aorta. [T. M. T.]

5.—A. E. Gallant concludes his article on **tripartition in the study of the female pelvis** as follows: It is hoped that the foregoing outlines will be the means of stimulating teachers to greater activity in systematizing their subjects (1) as conducive to consecutiveness, conciseness and clearness; (2) as an aid to the student in comprehending, noting and fixing; (3) as a means of simplifying its application to the living patient. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 20, 1902.

1. Osteo-Arthritis of the Spine, etc. JOEL E. GOLDTHWAIT.
2. Privileged Medical Communications; A Rejoinder. DAVID W. CHEEVER.
3. Cases of Extra-Uterine Pregnancy Illustrating Difficulties in the Diagnosis of the Condition. EDWARD REYNOLDS.
4. Case of Combined Extra- and Intra-Uterine Pregnancy. H. P. PERKINS.

1.—Joel E. Goldthwait contributes a second paper on **osteo-arthritis of the spine; spondylitis deformans,** a disease which according to the author has been commonly classed with chronic rheumatism. In osteo-arthritis there is a marked proliferation of the edges of the articular cartilages with ultimate ossification of the proliferative portion, together with certain portions of the fibrous or ligamentous tissues. In spondylitis deformans the process always begins upon one side anteriorly except in the cervical region, and extends up and down along the anterior lateral ligament. The disease may only be detected in the course of examination for some other disease, although pain, limitation of motion, muscular contractions, referred pains due to pressure upon nerve roots, are common. The symptoms are discussed in detail. The treatment of osteo-arthritis is more important than commonly believed, and is partly of a mechanical, local and medicinal nature. As the disease is probably in part a trophic process, debilitating remedies should be avoided. Nourishment, stimulation and careful attention to elimination are essential. Iron, arsenic and strychnine are valuable drugs to employ, and for increasing elimination phosphate of sodium and bicarbonate of potassium are to be employed. Cod liver oil and alcohol in medicinal doses are useful. The medical treatment essentially comprises the employment of some variety of support that will limit motion at the seat of the disease. [M. R. D.]

3.—Edward Reynolds reports 6 cases of **extra-uterine** pregnancy as illustrations of the difficulties in diagnosticating the condition. In the first case the symptoms justified operation, but upon opening the abdomen no extra-uterine pregnancy was found. In the second reported case the patient presented no sign of pregnancy, had no amenorrhea and had had no pain except rectal tenesmus accompanied by diarrhea, signs which led one to believe that the symptoms were indicative of pressure on the rectum from a **new growth.** The latter could even be palpated on examination under ether. On opening the abdomen the only abnormality was an extra-uterine gestation, of the size of a hen's egg, in **Douglas's fossa,** free from adhesions and on the point of rupture. The third patient presented no symptoms of pregnancy, but was a woman who had been subjected to impregnation, had menstrual irregularity, followed by sharp pain and collapse, and a gradually developing tumor in the left flank. The condition proved to be an **acute hydrosalpinx,** alongside of a small ovarian cyst. Case four, a chronic invalid, presented no signs of pregnancy of any consequence, but did have an ectopic gestation 5½ cm. long and near the point of rupture. Case five had only had a menorrhea of two months duration, diffuse abdominal pain with tenderness and vomiting. A **small macerated** fetus was found in Douglas's fossa. Case six was considered one of extra-uterine gestation without symptoms. [M. R. D.]

4.—H. P. Perkins reports a case of **combined** extra- and intra-uterine pregnancy occurring in a patient, 26 years old, married five years, and who had had a fairly normal menstrual life. Symptoms demanded operation, and an ectopic and entopic gestation was found. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

March 22, 1902.

1. The Prostate. JOHN B. MURPHY.
2. Prolonged Intubation. EDWIN ROSENTHAL.
3. An Operation for Spina Bifida. With Report of a Successful Case. LEONARD FREEMAN.
4. The Case of Thomas B. Boden, the Consumptive Irish Immigrant, etc. S. A. KNOPF.
5. The Use of Tropa-Cocaine in Spinal Anesthesia. WILLIAM P. ILLING.
6. Our Hospitals. H. D. NILES.
7. A New Method of Dealing with Bowel Perforation Communicating with Pelvic Abscesses. THOMAS W. HUNTINGTON.
8. A Case Illustrating Plastic Surgery of the Eyelids. GASSIUS D. WESCOTT.
9. The X-Ray in Determining the Limits of the Frontal Sinus. JOHN HAROLD PHILIP.

1.—This article will be abstracted when concluded.

2.—Rosenthal discusses **prolonged intubation** and points out a number of cases in which this operation was neces-

sary. He contends that the conditions which require prolonged use of the tube are chronic croup, paralysis and edema, and holds that our aim should be to end the intubation as quickly as possible. If other conditions exist beside the ones mentioned, intubation should become tracheotomy, as the longer the tube is used, the worse the result, as it produces irritation. He summarizes as follows: "Intubation of the larynx has taken the place of tracheotomy in the treatment of diphtheria. It is now used to a greater extent than ever before. Those most familiar with its use should define certain rules of practice, and these should be sufficiently plain for a novice to follow. The rule that he would lay down is: The tubes should be clean; if metal, they should be regilded; if rubber, a new one should be provided for each case; if the tubes are smooth, clean and correctly applied, the greatest part of the operation is attained, and that is, a clean, smooth surface, undefiled, which can remain in the larynx a week, or even two, and do no harm. Hence, if the intubation is prolonged, the reason will be in the type of the disease, and no fault of the operator." [F. J. K.]

3.—Leonard Freeman discusses the **treatment of spina bifida and reports a successful operative case.** The condition is present once in from 800 to 1000 births and constitutes about one-sixth of all congenital deformities. The treatment by aspiration and compression is unsatisfactory and should be confined to tumors of small size and slow growth with a covering of comparatively normal skin. Or these measures may be employed temporarily to prevent rupture until the child is in a condition to stand a radical operation. The injection of irritating fluids is accompanied by considerable risk, particularly if the spinal opening is large. This treatment should be employed in pure meningoceles with small openings or with pedicles which can be compressed during the injection. Setons or any other form of continuous drainage should never be used. Clamping or ligating the sac of a pedunculated tumor is very apt to give rise to sloughing and infection of the membranes of the cord. The open method of operating upon these deformities is the most rational form of treatment and if properly done is perhaps not more dangerous to life than the older procedures. It is suggested that this form of hernia should be treated as any other form. The greatest care must be taken regarding asepsis. The method of closing the opening into the canal will have to be selected according to the age and resisting power of the patient. The plan of closing the opening by means of a piece of bone or periosteum or muscle is preferable to attempting an implantation of these structures from an animal or to the employment of a celluloid plate. Freeman recommends and used in the case reported, a fine silver wire passed repeatedly across the opening. He does not think it necessary to suture the spinal membranes in the majority of cases. The Trendelenburg position which is recommended by Marcy is thought to be objectionable, as it increases intracranial pressure and in consequence is likely to force the cerebrospinal fluid out of the opening. The patient operated upon was seven weeks of age, and the operation was done under chloroform anesthesia. The tumor was the size of a goose egg, but was only about the size of the end of the thumb at the time of birth. It was sessile and the integument covering it was translucent and very thin. When the sac was opened the elongated conus was separated from its attachment to the sac and replaced together with some nerve filaments. The sac was then cut away near its base, its neck was freed from surrounding tissue and pushed into the canal. The aperture was then crossed repeatedly by No. 27 silver wire, the superficial tissues were closed with silkworm-gut and a collodion dressing applied with a compress. The wound healed primarily and the child made a good recovery. Attention is called to the fact that frequently after the cure of a spina bifida the patient may succumb to hydrocephalus. [J. H. G.]

4.—Knopf reports the case of Thomas P. Boden, the consumptive Irish immigrant now detained by the Immigration Authorities, because he is consumptive. This case, which involves an issue of great moment, is in the hands of Francis Tracy Tobin, counsel for Thomas P. Boden, who will try to bring the case before the Supreme Court of the United States. Mention is made that the Surgeon-General of the Marine-Hospital Service has declared pulmonary tuberculosis as a dangerously contagious disease, and he has issued an order that, in the future, immigrants with tuberculosis of the lungs must be debarred from all ports of the United States regardless of the Boards of Special Inquiry which heretofore had used their discretion in the matter. Knopf contends "there is no scientific basis on which to classify pulmonary tuberculosis among the dangerously contagious diseases, and it is contrary to the results of experience and experiments of all who have studied the question thoroughly." He quotes the view held by Dr. T. Mitchell Prudden, of New York, who declares pulmonary tuberculosis a communicable, but not a contagious disease. He also cites the views of other prominent medical men who think that, from the sociological and humanitarian aspect, consumptive immigrants, who can give evidence that they will not become a burden to the community as paupers, are fit subjects to be admitted into our country. [F. J. K.]

5.—The **use of tropa-cocaine in spinal anesthesia** is discussed by Illing, in a paper read before the Arkansas Medical Society. His experiences with spinal anesthesia have been quite extensive. In his paper he discusses the use of tropa-cocaine which he employed in 49 cases. He mentions that this drug admits of thorough sterilization by boiling, but he has found that boiling prolonged for from 15 to 20 minutes lessens the anesthetic power and he prefers sterilizing the tropa-cocaine solution in an autoclave or water-bath which is brought to 176° F. for fifteen minutes and then allowed to cool three hours. This procedure is repeated four or five times. In this way a thoroughly sterile solution is obtained. Tropa-cocaine is much less toxic than cocaine hydrochlorate and recovery from its effects is much more rapid. He believes that tropa-cocaine is far superior to eucain B. and cocaine hydrochlorate for spinal anesthesia. He predicts a very large field of usefulness for spinal anesthesia in surgery, but does not believe it will ever be successfully used in abdominal surgery on account of the tendency to vomit and intestinal peristalsis. [F. J. K.]

7.—Thos. W. Huntingdon discusses the **treatment of fistulous opening between the bowel and pelvic abscess cavities,** calling attention to the difficulty frequently met with in attempting to close these openings because of the inflammatory changes in the serous membrane about them. The suggestion made by Huntington and carried out in one case is that it is preferable to bring such a bowel to the abdominal wall and suture it there, thus establishing a fecal fistula which will later close itself or can be closed. In the case reported the sigmoid flexure was thus treated and subsequent to the first operation a resection of this bowel was done with a satisfactory ultimate result. [J. H. G.]

8.—C. D. Wescott presents **photographs and reports a case** illustrating what can be done to correct **deformities of the eyelids** resulting from contracting cicatrices. [J. H. G.]

9.—J. H. Philip suggests the **employment of the X-rays in determining the limits of the frontal sinus,** after first calling attention to the great frequency of anomalies met with in this region. [J. H. G.]

AMERICAN MEDICINE.

March 22, 1902.

1. On the Diagnosis of Bilateral Cystic Kidney. WILLIAM OSLER.
2. Skin Eruptions in Malaria, with Report of a Case of Urticaria. DAVID RIESMAN.
3. A Simple Exploratory Laparotomy as a Palliative and Perhaps Curative Measure in Inoperable Carcinoma of the Breast. EUGENE R. CORSON.
4. Some Facts in the Chemistry of the Stomach, with

Special Reference to the Qualitative and Quantitative Analysis of Organic Acids in the Stomach. MARK I. KNAPP.

5. Respiratory Gymnastics; Methods. ALBERT ABRAMS.
6. Pneumogalactocele of the Breast, with an Unidentified Organism. J. MLTON MABBOTT.
7. Notes of an Army Surgeon in the Recent War; the Devitalization of the Fifth Army Corps. C. L. G. ANDERSON.

1.—William Osler discusses the **diagnosis of bilateral cystic kidney** and presents clinical notes of 2 cases which illustrate the general features of **polycystic kidney**, and one of them the facility with which the diagnosis can be made in the presence of a characteristic combination of symptoms: These are (1) **the presence of bilateral tumors in the flanks**, the condition is rarely unilateral; (2) **the cardiovascular changes of interstitial nephritis**; (3) **the condition of the urine**, which is that of an **advanced interstitial nephritis**; (4) **hematuria**, which may recur in **paroxysms** and be associated with great pain. [T. L. C.]

2.—David Riesman discusses **skin eruptions in malaria** with the report of a case of **urticaria**. His conclusions are: (1) Skin eruptions are not rare in malarial infection. (2) The most frequent are herpes and urticaria. (3) Neither of these presents any specific characters. (4) Both may occur in any stage of malarial paroxysm, although urticaria is most frequent in the febrile, and herpes in the sweating stage. (5) In obscure cases, herpes and urticaria, especially the former, may have considerable diagnostic value. (6) Three types of urticaria are recognizable : That accompanying the paroxysm, usually the febrile stage; that taking the place of the chill; and that substituting the entire paroxysm. (7) In their appearances, these three do not differ among themselves, nor from urticaria due to other causes. (8) In cases of urticaria of obscure etiology, the blood should be examined for plasmodia. Whether found. or not, quinine is worthy of a trial. [T. L. C.]

3.—E. R. Corson reports a case of **simple exploratory laparotomy**, as a palliative, and perhaps curative, measure in **inoperable carcinoma of the breast**. He suggests that possibly the value of **Beaston's operation** is not from the removal of the ovaries, but simply the effect of opening the abdomen as in cases of tuberculous peritonitis. He also suggests that it is not unlikely that the beneficial effects of **opening the abdomen** and **letting in the atmospheric air** is greater when the peritoneum is not disturbed. [T. L. C.]

4.—Mark I. Knapp reports some **new facts in the chemistry of the stomach**, with special reference to the qualitative and quantitative analysis of organic acids in the stomach. The object of his experiments was to determine whether his **floating method as a test for lactic acid** was characteristic solely of lactic acid. In the course of his work he has found an **easy method of detecting succinic acid** which he here describes. He has also found the **best indicator** for free HCl to be a **saturated alcoholic solution of tropaeolin 00**. [T. L. C.]

5.—Albert Abrams presents a paper on the **methods of respiratory gymnastics**. He effects increased development of the lungs **by action on the cutaneous sensory nerves; by forced voluntary breathing; by developing the muscles of respiration; by converting costal into diaphragmatic breathing**, and **conversely diaphragmatic into costal breathing**; and, finally, by **eliminating a definite group of synergetic muscles** concerned in **inspiration**. [T. L. C.]

6.—J. M. Mabbott reports a case of **pneumogalactocele of the breast with an unidentified organism**. A bacteriological report by Dr. J. L. Berry is included. The writer believes that the clinical history suggests that the *bacillus mucosus capsulatus* is most probably responsible, but Dr. Berry considers this extremely unlikely. [T. L. C.]

THE PRACTITIONER.

December, 1901.

1. Pregnancy and Albuminuria. D. BERRY-HART.
2. The Ocular Symptoms in Bright's Disease. WALTER H. H. JESSOP.
3. Bright's Disease in Children. HENRY ASHBY.
4. Some Affections of the Nervous System in Connection with Renal Disease. F. E. BATTEN.
5. The Treatment of Bright's Disease. WILLIAM HALE WHITE.
6. The Treatment of Chronic Nephritis by Mineral Drinking Waters and Mineral Baths. J. M. GROEDEL.
7. Therapeutic Institutions. DAWSON WILLIAMS.
8. The Case of the Invalided Soldier. ALFRED HILLIER.

1.—D. Berry-Hart presents a paper on **pregnancy and albuminuria**. As to the pathology of the condition he gives a sketch of Schmorl's work and from it deduces the working theory that some irritant is developed in connection with the placenta which perhaps is normally neutralized by the action of the liver. When this action fails the poison accumulates and causes, according to its amount, the various changes of albuminuria, more marked kidney irritation, eclampsia, coma, etc. A review of the various pathologic theories shows that pathology has had more influence on treatment than is generally supposed, and even when the pathological view has been abandoned its effect as to treatment remains. He mentions how much the influence of the **uremic theory** has modified treatment, and he points out the lesson to be learned from the present state of our pathological knowledge which is the practice of simplicity of treatment and the avoidance of violent and depressing remedies, whose use is based on a rash and crude pathology. The clinical features which may be found in the case of a pregnant woman with albuminuria are: (1) **Slight albuminuria**, slight edema of feet and ankles. (2) **Marked albuminuria with considerable anasarca.** (3) **Marked albuminuria with headache and eye symptoms** which may go on to blindness. (4) **Vomiting** or even convulsions with at first no albuminuria; the albuminuria soon comes on. Such cases are rare and the author has seen but two. (5) **Marked suppression of urine** with abundant albumin, blood and tube casts, granular and hyaline. Convulsions supervene, and coma may come on. (6) **Premature labor with twins**, no symptoms at time of labor, but coma comes on after it is over. Inquiry into history will show previously neglected symptoms, such as headache, scanty urine, and mental confusion. These varying conditions may be correlated if we suppose that they are due to a varying amount of the hypothetical irritant. In the first two we have kidney changes of a mild type—chronic kidney disease of pregnancy—in the others the kidney irritation is acute. The author discusses the character of the albuminuria, the convulsions, diagnosis and treatment. As to treatment we must bear in mind that the kidney lesion is not the primary one, that in eclampsia the liver is affected with necrotic changes, the lungs and myocardium, possibly with some inflammatory mischief, and that we do not know the nature of the hypothetical irritant, or by what organ it is eliminated, or indeed if it is eliminated by any organ. The physician should examine routinely the urine of pregnant women and after the sixth month, if its amount is not diminished, milk diet and rest in bed with attention to the bowels and an occasional hot bath are all that is necessary. When, however, headache or eye symptoms appear, and the urine remains albuminous, induction of labor is indicated. The important and urgent complication is **eclampsia**. The administration of powerful purgatives, the use of pilocarpine or venesection, are apt to undermine the patient's strength and, in the author's opinion, should be abandoned. The treatment he recommends is a third to a half-grain of morphine hypodermically repated in two or three hours if necessary (in quarter-grain doses); not more than one or two grains should be given in the twenty-four hours. The effect of the morphine is much more lasting than chloroform. Chloroform by inhalation, and chloral by the rectum, are excellent remedies, but it is doubtful if much of the chloral is absorbed. The author states that morphine is usually withheld in states of coma but he sees no theoretical reason why it should not be used even here. He next administers a large saline injection by the bowel and then, if no improvement follows, a submammary transfusion of two or three pints of saline solution (in the strength of one dram of salt to the pint) should be used or, if the conditions are severe, the saline may be injected intravenously. He has seen much

good follow the use of the hot pack, but has not observed special benefit from oxygen inhalations. [T. L. C.]

2.—W. H. H. Jessop states that the **ocular symptoms** met with in **Bright's disease** may be divided into three chief groups: those to be seen in the external parts of the eye; those to be seen by the ophthalmoscope of which the most important is **retinitis**, and finally the condition of **uremic amaurosis**. The retinitis associated with Bright's disease is as a rule bilateral. Occurring most frequently with chronic interstitial nephritis, it is also found in parenchymatous nephritis, especially when associated with pregnancy and scarlet fever. The patients in whom this occurs are generally over forty years of age. Exceptionally, children are affected. It is doubtful if the retinitis ever precedes the albuminuria in chronic nephritis, although it may be its first symptom. The severity of the retinitis bears no relation to the intensity of the kidney trouble nor to the amount of the albuminuria. The vision is not as a rule greatly affected except when optic neuritis, extensive hemorrhages, or changes about the yellow spot are present. In most cases there is little or no alteration in the fields of vision, color perception, or light sense. In the **retinitis** associated with pregnancy there is a tendency towards partial or complete recovery of any vision lost. In **chronic nephritis**, especially in granular kidney, the vision when affected tends to deteriorate steadily, but it is a rare occurrence for patients to lose their sight totally, except from **uremic amaurosis**. This latter condition is, as a rule, bilateral, is characterized by great loss of vision, sometimes amounting to complete blindness, and generally has a sudden onset. The attacks are usually transitory and clear up in one or two days with partial or complete restoration of sight. The writer mentions that he has observed two cases in which **hemianopsia** was developed, but this condition is very rare. Occasionally, the **amaurosis** occurs unexpectedly without any marked symptoms of uremia. Jessop describes minutely the **ophthalmoscopic changes** which are found in various conditions associated with Bright's disease, as well as their **prognosis and differential diagnosis**. [T.L.C.]

3.—Henry Ashby discusses **Bright's disease in children**. The common form of nephritis at this period is the acute or sub-acute type of inflammation with exudation of blood and fibrin which more or less choke the tubules; the urine, in consequence, is dark in color and albuminous. **Chronic nephritis** is much less common and is usually the result of sub-acute attacks, each of which has left the kidney in a worse condition and with more or less degenerated epithelium, dilated tubules and fibroid thickenings. The granular **contracted kidney** which is always associated with **cardiovascular changes** occurs but rarely in early life. **A septic type of nephritis** is sometimes encountered which differs in the respect that the inflammation is local rather than general, while the chief feature is an exudation of leukocytes from the vessels and there are often minute points of suppuration. Mention must also be made of the **toxic degenerative changes** which are associated with the acute febrile disorders, especially diphtheria though these can hardly be classed with nephritis. The forms of kidney disease outlined above are described in detail and a brief outline of treatment is given. [T. L. C.]

4.—F. E. Batten describes some **affections of the nervous system in connection with renal disease**. The most common are **uremic convulsions** which as a rule are similar to an ordinary **epileptic seizure**. The attack may, however, be unilateral, resembling the Jacksonian type, or it may be limited to certain groups of muscles or to a single muscle. The presence of **aphasia, word blindness, loss of vision, hemiplegia**, or, in rare cases, **loss of power** on the one side and **spasmodic twitching** on the other, have all been observed. **Aphasia** may be the only manifestation of an attack or it may be the aura of an attack or it may be the only symptom left, after the attack has passed off. An illustrative case in which the aphasia was the sole manifestation of the attack is described. The question of the **association of albuminuria and insanity** is one of great importance both as to treatment and prognosis. It may be dealt with from two different points of view. Those cases in which insanity supervenes upon Bright's disease, and the admitted frequency of renal disease among the insane. [T. L. C.]

5.—W. H. White, dividing Bright's disease from the point of view of treatment states that it is necessary to separate the cases into those suffering from **acute Bright's disease**, from **chronic tubal nephritis** and from **chronic interstitial nephritis**. He discusses the therapy of these conditions at length. Speaking of the diet of sufferers from **chronic tubal nephritis** he states that it is frequently misunderstood and confined too strictly to milk. When taking milk diet they often feel depressed and languid, and the pulse is feeble: but as soon as they are allowed a little plain meat, some bread and butter, and some simple pudding, they begin to improve. They do not require much food, nor should they have large meals at a time. Much has been written about the diet of chronic Bright's disease and frequently the importance of it has been much exaggerated. The dietary for Bright's disease aims to diminish the risk of uremia, but we have no certain knowledge of the cause of uremia and therefore we can hardly hope to influence it by diet. Discussing **albuminuria**, the writer states that while it is invaluable as an aid to the diagnosis of Bright's disease, in that the gradual diminution in the amount of albumin often shows that the patient is gaining ground, otherwise the presence of albumin in the urine is unimportant. Treatment directed to the diminution of the albumin alone is unscientific. There is no evidence that it is correct to try to diminish its amount, and even if this were true, the author has found after repeated trials that we cannot do it with any certainty by varying the diet. During two years he made observations on the effects of a **milk diet** on patients of this class and was unable to discover that the administration of milk in any certain way led to a diminution of the albumin excreted, and indeed that often the reverse was the case, but, apart altogether from its influence on albumin, milk is by no means a satisfactory diet for sufferers from chronic Bright's disease. Indigestion and constipation as well as a loathing for milk will often follow its use. The chief guide of the diet should be the state of the pulse. **Renal extract** has been introduced as a remedy for **chronic Bright's disease** and while its use is not unwarranted we have yet to determine whether it is of value. [T. L. C.]

6.—I. M. Greenfield discusses the treatment of chronic **nephritis by mineral drinking waters and mineral baths**. He quotes the opinions of von Noorden and Ziemssen on the advisability of this treatment and states for himself he never saw any distinct gain result from a course of mineral drinking waters in any form of Bright's disease, but in several cases he has observed that the condition of the heart became critical during this treatment. Also that excessive quantity of milk administered to patients proved injurious to the heart. He does not however agree with von Noorden as to the "prophylactic" restriction of fluid food. He advises a moderated milk cure as well as the drinking of weak alkaline and muriated alkaline waters to a certain extent, but never allows a patient with Bright's disease to take such a quantity of fluid as is often recommended. He is in the habit of making a marked reduction in the first table as soon as any embarrassment manifests itself in the heart is apparent. Discussing the value of the bath treatment he believes that the Nauheim baths are **contraindicated in:** (1) Cases of **chronic parenchymatous** nephritis, and such cases as occasionally result from the first, in which from time to time there are augmented quantities of albumin in the urine. (2) Cases in which very **advanced arteriosclerosis** is combined **with contracted kidney**. (3) Cases of **contracted kidney** in which the circulation is so far impaired that with marked dilatation and insufficiency of the heart general symptoms of venous congestion in different organs, extreme dyspnea, loss of appetite, etc., are present. Patients with nephritis should not be subjected to the bath treatment if they have already suffered from an attack of **acute edema of the lungs** or, however slight, an **apoplectic seizure**. Only those cases of **contracted kidney** are amenable to this treatment in which none but the first and slighter symptoms of cardiac complication are evident and more particularly those in which the disease shows a tendency to run a slow and lingering course. [T. L. C.]

7.—Dawson Williams presents an address on **therapeutic institutions**. This contains an interesting historical résumé of the subject and closes with suggestions as to

as saphrophytes. (3) The disease is probably the result construction and management of a seaside hospital. [T. L. C.]

8.—Alfred Hillier discusses the duty of the British government to the invalid soldier. See editorial, Philadelphia Medical Journal, January 4, 1902. [T. L. C.]

UNIVERSITY OF PENNSYLVANIA MEDICAL BULLETIN

January, 1902.

1. The Pathology of Diabetes. SIMON FLEXNER.
2. Cervical Rib. HENRY K. PANCOAST.
3. Cerebral Lesions in Experimental Lead Intoxication. D. J. McCARTHY.
4. A Review of the Literature of Ovarian Transplantation. WILLIAM R. NICHOLSON.
5. Observations on the Nature and Diagnosis of Acute or Infective Endocarditis. ALOYSIUS O. J. KELLY.

1.—Simon Flexner states that although the pancreas has been shown to influence and regulate carbohydrate metabolism it is by no means proven that the cause of diabetes is always resident within that organ. Extirpation of the pancreas in dogs and certain other animals causes without exception diabetes of severe grade. Incomplete removal is not necessarily followed by diabetes. One-fifth of the gland have been followed by glycosuria or diamay avert it. Diabetes the result of total extirpation of the pancreas is fatal. No other organ can act vicariously in regulating the carbohydrate metabolism of the body. It does not follow, however, that the pancreas is the only organ, the disturbance of whose functions is capable of producing diabetes. There are no records of complete removal of the pancreas in human beings. Partial resections of the gland have been followed by glycosuria or diabetes after varying intervals. There are numerous observations going to prove that the pancreas in human beings shows marked pathologic changes in cases of diabetes. Of these changes the chief cause is found in concrements in the ducts. The changes in the pancreas itself consist of secondary atrophy. Next in frequence occur the primary atrophy, fibrous indurations and instances of interstitial lipomatosa. Flexner discusses the condition of cachexia which may be the result and not the cause of diabetes as another possible explanation of pancreatic atrophy. As to the cause of pancreatic diabetes, the theory, which is purely hypothetic and largely supported, is that the removal of the pancreas causes the abolition of the regulation of the carbohydrate metabolism. It appears to be beyond doubt that diabetes results from the failure of a special internal function of the pancreas and that it is not due to nerve lesions or to the absence of digestive secretion of the pancreas. It is probable that the disease can also result from pathologic conditions of the liver, the pancreas remaining normal. It is also established that pathologic conditions of the central nervous system and perhaps of the sympathetic and larger peripheral nerves may give rise to glycosuria and diabetes. The existence of a renal form of diabetes is still unproven. [T. L. C.]

2.—H. K. Pancoast discusses the condition of cervical rib and reports an operative case of this condition with an accompanying radiograph. This anomaly is frequent, but only a small number of cases require any relief for uncomfortable or dangerous symptoms arising from the condition. The symptoms may vary from trivial to serious results that may arise from the pressure on the subclavian vessels or the brachial plexus. The patient may be annoyed by the presence of a projecting bony mass in the neck over which the skin may be tender from pressure from the end of the rib, or friction of the clothing. Or the pulsation of the artery in its abnormally elevated position may prove annoying. Pressure symptoms may be due to interference with the circulation, or to stretching of, or pressure on the brachial plexus. There is apt to be more or less wasting of the arm which may be due to disuse on account of pain, paralysis or a decreased blood supply. [T. L. C.]

3.—D. J. McCarthy discusses the cerebral lesions in experimental lead intoxication. Experiments were conducted on dogs. In the first examined no lesions could be observed macroscopically. Under the microscope the lesions were very marked and mainly confined to the cerebral cortex and especially to that part of the cortex around the gyrus cruciatus, corresponding in man to the motor area. There was a marked degeneration of the ganglion cells followed by vacuolation. Even more striking than the cell changes were those found in the cortical and subcortical capillaries. Small hemorrhages were also noted in the cortex. The changes described above represent the findings in a dog taking a large amount of lead acetate over a period of two months and dying as a result of the intoxication. The dog after several weeks of drugging was seized with a general convulsion lasting several minutes; on the following day, while walking across the floor, he staggered suddenly and was seized with a general clonic convulsion. There was no tonic stage as in epileptic attacks. The clonic movements lasted several minutes, the dog appeared to be unconscious and was dazed sometime after they had ceased. Death occurred four days later. In none of the other animals were symptoms referable to the nervous system observed. The dogs were all killed witnin a month after beginning the experiment and most of them in two or three weeks. In the latter animals only slight changes were noticed and consisted mainly in an accumulation of cells along the walls of the radiating subcortical vessels. McCarthy states that the same pathological processes occurring in a human being could give all the symptoms, including the convulsion, in a case of paresis, and it can be easily understood why some cases of progressive chronic lead poisoning present the clinical picture of general paralysis of the insane. Vacuolation of the cell due to the action of lead is well known, but McCarthy has been unable to find any reference to experimental conditions in the cerebral capillary system after the administration of lead. [T. L. C].

4.—Nicholson gives a review of the literature on the subject of ovarian transplantation, and remarks that there has been a decided measure of success attending this process in so far as it relates to animal experimentation. Beginning with the work of Knauer, who made a series of experiments upon animals, the ovary being grafted into some other situation in the same animal in one class of cases, while in another class the attempt was made to transplant it from one animal to another, Nicholson reviews the work of Hegar, Halban, McCone, Morris, and others up to the present time. The practical application of the method in a woman has not been largely attempted. Dudley and Glass have performed this operation with a certain degree of success. Nicholson sums up the results of the work as follows: Transplantation of the ovaries either homoplastically or heteroplastically is possible, and pregnancy will follow in a small proportion of cases. There is without doubt an influence inherent in the ovaries beyond the mere process of ovulation which is very important for the development of the genitalia and also for their conservation. Whether this is strictly an internal secretion or not remains to be proven, but there seems to be a considerable number of facts pointing to this as the solution. There is reason to believe that the influence of transplanted ovaries may be most beneficial in the prevention of degenerations of the genitalia, but as yet there have been far too few cases reported to formulate any conclusion as to this fact. [W. A. N. D.]

5.—A. O. J. Kelly presents some observations dealing at length with the nature and diagnosis of acute or infective endocarditis. The notes of three cases are given. Kelly mentions the diagnostic importance of leukocytosis, of the results of bacteriologic examination of the blood, and of a peculiar arrhythmia or instability of the heart. The leukocytosis found usually reveals a relative increase in the polymorphonuclear neutrophiles. Regarding the classification sometimes adopted for acute endocarditis, the septic, typhoid, cardiac and cerebral types, etc., Kelly states that the so-called septic type cannot be differentiated from septicemia, but this he does not regard as a matter of importance since the occurrence of endocardial complications in septicemia is more or less accidental. [T. L. C.]

6.—George B. Wood, in a study of the pathogenesis of lacunar keratosis of the tonsil concludes as follows: (1) The disease commonly called mycosis pharyngitis leptothricia is a true keratosis of the epithelium lining the crypts of the tonsils. (2) The leptothrix buccalis maximus, the bacillus buccalis maximus, and like organisms, do not possess any etiologic importance, but are present simply

of a moderate degree of inflammation of the parenchyma of the tonsil, causing an increased growth of the normal epithelium of the crypts. [T. L. C.]

DEUTSCHES ARCHIV FUER KLINISCHE MEDICIN.

Vol. 71. Heft 1.

1. Investigations Concerning the Condition of the Corpus Callosum After Extensive Lesions of the Cerebral Cortex. KATTWINKEL.
2. Investigations upon Metabolism in Acute Gout. VOGT.
3. The Occurrence of Genuine Peptone (Kühne) in Urine. ITO.
4. Notice of a Simple Procedure in Krytometry (Application of Plaster Bandages.) MAY.
5. A Double Stethograph; A Contribution to the Writing of Curves upon the Kymograph. MAY.
6. Contribution to the Knowledge of Alkaptonuria. MITTELBACH.
7. Contribution to the Question of Intestinal Fermentation in the Absence of Bile from the Intestines. BOEHM.
8. The Relation of the Normal to the Pathologically Increased Intra-Abdominal Pressure, and Its Effect upon the Arterial Circulation. QURIN.
9. Book Reviews.

1.—Kattwinkel describes the results of his investigations in 7 cases of extensive disease of one of the hemispheres, which had for their object the determination of the changes which occur in the corpus callosum. In the first case there was extensive disease of the cuneus, but absolutely no changes in the splenium, although this is contrary to the teaching of Déjerine. In the second case there was marked atrophy of the temporal region of the right hemisphere, but no secondary changes were found in the corpus callosum. In the 3d case there was a large area of softening in the parietal region of the left hemisphere, and an area of softening at the posterior portion of the Sylvian fissure of the right hemisphere involving the occipital lobe. No changes were found in the corpus. In the 4th case the internal capsule was destroyed by a hemorrhagic area in the left hemisphere. In this case also the corpus callosum was normal. In the 5th case there was a large depression in the occipital lobe of the left side, again without changes in the corpus; and in the 6th case there was a cyst in the 1st temporal convolution involving a considerable portion of the right hemisphere, without secondary changes in the corpus. In the 7th case there was an extensive lesion in the left hemisphere without secondary changes in the corpus. He also reports 6 cases in which the lesion existed in the corpus callosum itself. Aside from the lesion no changes could be found that could be ascribed to secondary degeneration. The sections were stained by the Weigert-Pal method or by the hemalum erythrosin method, and in some cases also by the Marchi method. Kattwinkel expressly states that he is not able to exclude resorption of degenerated fibres, but insists that actual distinct secondary changes could not be detected. [J. S.]

2.—Vogt having the opportunity of studying a characteristic case of gout attempted to determine whether a nitrogenous retention occurred, and if it did whether it was due to the retention of nucleins or of the purin bodies. He found that nitrogenous retention did occur, and that this was due to the increase in the nitrogenous tissues in the body, because there was equilibrium of phosphoric acid. It seems likely that the nitrogen was retained in the form of the purin bodies, that is to say, the nucleins are rapidly disintegrated, the phosphoric acid in them rapidly excreted, the uric acid, however, slowly excreted. It is not to be determined why this disturbance of metabolism occurs. [J. S.]

3.—Ito has investigated a number of specimens of urine in order to determine the presence of peptone. The method was as follows: In testing the usual methods were used for albumin and nucleo albumin and the biuret reaction was also used. About 300 cc. were saturated with ammonium sulphate at a temperature of from 60° to 70°, allowed to cool, filtered, made alkaline with ammonium carbonate, again saturated with ammonium sulphate and then filtered again. The filtrate was then neutralized with acetic acid, again saturated with ammonium sulphate, and again filtered after cooking. The filtrate is then diluted with an equal quantity of water, and the peptone precipitated by tannin. The precipitate was filtered the following day, dried, dissolved in baryta solution, boiled, filtered and the filtrate tested by the biuret reaction. In addition to the urine of patients suffering from various diseases, rabbits were fed upon peptone and their urine tested, and all the reactions were positive. His results on human beings showed 6 positive and 2 negative results in croupous pneumonia; 2 negative in suppurative pleuritis; 1 positive and 4 negative in suppurative consumption; 8 negative in ulcer of the stomach; 1 positive, 10 negative in cases of confinement, and 2 negative in cases of pregnancy. All these cases were also tested by the precipitation of peptone with alcohol, and the results were 17 positive and 21 negative, as compared with 8 positive and 30 negative by the method described. As, however, deuteroalbumoses were also precipitated by this method, it cannot be depended upon for the recognition of peptone. [J. S.]

4.—May uses a plaster bandage in order to obtain models of the contour of the thorax. For this purpose after carefully oiling the surface, he places a plaster bandage horizontally, pressing the bandage into the hollows by means of masses of flannel or cotton soaked in plaster laid over it, and when the layers are sufficiently thick he cuts the cast, opens it, and places it together again upon a horizontal surface. This forms a negative from which positives can be easily prepared. [J. S.]

5.—May describes an interesting apparatus that he has devised which consists essentially of 2 delicately balanced levers from each of which a long rod depends. This can be placed upon the thorax; the patient is laid horizontally; the ends of the rods placed upon symmetrical portions of the thorax; the other ends write upon the smoked surface of a revolving drum. The results show in graphic manner the differences in respiration on the 2 sides. Some illustrations of curves obtained by this instrument are given with the article. [J. S.]

6.—Mittelbach has had the opportunity of studying a case of alkaptonuria occurring in a man, 44 years of age, and apparently produced by severe injury to the lumbar region, although there was considerable doubt as to the accuracy of the history. In order to determine more nearly the nature of the obscure condition he undertook a series of experiments which consisted essentially in determining the influence of various normal conditions upon the amount of homogentisic acid and the effect of the administration of certain abnormal substances. A series of experiments showed that the presence of uric acid produced a considerable error in the results which averaged 6.1%. It was therefore necessary to precipitate the uric acid before making the estimation. The time of day appeared to exert no influence upon the amount of homogentisic acid excreted. In some cases it was more in the day-time, and in others more in the night. The average was practically the same. A heavy meal increases the quantity temporarily; this increase occurs almost immediately. A diminished amount of food, or a preponderant vegetable diet decreases the quantity. Fasting produces a very remarkable diminution. The administration of tyrosin apparently causes a temporary increase, although the quantity must be sufficient. Phenol propionate had no effect upon the excretion, phenol acetate produces a considerable increase. From these experiments it appears that there is some relation between the presence of tyrosin in the intestines and the homogentisic acid in the urine. There is reason to believe that the formation of homogentisic acid is due to a reduction process, and that it occurs only in a limited por-

tion of the intestinal tract. Its formation appears to be similar to the formation of the dark color that occurs in the juice of certain plants, as for example cabbage, potatoes and some of the fungi. This is due to the action of an enzyme that apparently has a function, in some instances at least, of reducing tyrosin to homogentisic acid. An attempt to explain the condition as the result of some infection, does not at present appear satisfactory. [J. S.]

7.—Böhm has examined 3 cases of **catarrhal icterus** in order to determine whether there was an increase in the **ethereal sulphates** in the urine, and in all found that a very considerable increase did occur. He concludes therefore, that the absence of bile from the intestinal tract causes considerable increase in the intestinal putrefactive change. [J. S.]

8.—Qurin has performed a number of experiments upon animals in order to determine the relation of intra-abdominal pressure to respiration. The method consists in inserting a glass cannula into the abdominal cavity, the free end connecting with a mynometer so arranged as to write upon a moving drum. There was considerable difference in different animals, but in general inspiration caused increase of pressure, and expiration, decrease of pressure. When, however, the breathing was labored, exactly the opposite results were sometimes produced. In pathological increased respiration, inspiration usually is higher, and expiration considerably lower than under normal conditions. In human beings with ascitic accumulation of fluid the pressure was estimated by plunging trocar and cannula into the abdominal cavity, withdrawing the trocar, and attaching the cannula to a tube filled with liquid. The ascitic fluid was then drawn off, and the differences in pressure carefully noted. It was found that the maximum pressure always occurred during inspiration, and in no case exceeded 28 mm. of mercury. Negative abdominal pressure may sometimes occur as a result of profound narcotization and complete relaxation of the abdominal walls. [J. S.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

No. 49.

1. The Treatment of Contractures and Ankyloses of the Knee Joint. O. VULPIUS.
2. The Diagnostic Value of the Röntgen Rays in Internal Medicine. H. HILDEBRAND.
3. The Results of Investigations upon 4 Cases of Microsporia and 81 Cases of Trichophyton. G. HUEGEL.
4. The Diagnostic Judgment of Inflammatory Processes Arising from the Cecum and Appendix. H. CURSCHMANN.
5. The Theory of the Anti Bodies: Bacteriolysis and Hematolysis. M. GRUBER.
6. The Nature and Principles of the German Workman's Insurance. GEFFCKEN.
7. Marcel von Nencki. HAHN.
8. Georg Näher. KRECKE.

1.—Vulpius discussing the **treatment of ankylosis of the knee** calls attention to the inconvenience of slow extension because of the time required, and the danger of forcible extension on account of the rupture of vessels and the opening of encapsulated areas, etc. The ambulant treatment with various forms of apparatus is suitable for some cases, but not for those in which there are cicatricial contractions or extensive dislocation. He therefore prefers operative methods, either the open section of the hamstring tendons, or osteoclasis. The latter, however, is rather undesirable on account of the resulting deformity, and may often be replaced with advantage by linear or by wedge-shaped osteotomy. These operations may either involve the joint or the supracondylar region of the bone, when through a joint the function of this structure is destroyed, but at the same time the residual foci of tuberculous infection are removed. The operation must of course depend upon the patient, the operator, and various other considerations, and Vulpius mentions certain indications in each form. [J. S.]

2.—Hildebrand has for 4 years employed the Röntgen rays in various forms of internal disease for the purpose of forming some estimate of their value. He believes that they are practically useless in the recognition of the early forms of tuberculosis, partly because these forms do not give a sufficiently distinct shadow; partly because they occur at the apex where the osseous structures are concentrated, and interfere with an accurate valuation of the pulmonary condition. In advanced cases, however, it is sometimes possible to recognize that the disease is more extensive than the physical signs apparently indicate. In cases of pulmonary gangrene, however, they are of the greatest value, and he reports 3 cases, in 2 of which the Röntgen rays indicated the site of operation, and both of which recovered, and in the 3rd the examination showed multiple foci, and an operation was therefore not performed. He also mentions a case in which pneumothorax was correctly recognized and appeared to be recurrent and without any satisfactory cause. [J. S.]

3.—In 4 cases of **microsporia** Hügel showed areas varying in size from a quarter to a silver dollar, in which the hairs were fragile and for a distance of 5mm. above the scalp surrounded by a grayish white sheath. The hairs were easily epilated, and the microscope showed that this sheath consisted of a great number of small spores. Cultures had the characteristic concentric disks; and in the hanging drop the growth of the mycelia could readily be seen. The disease corresponded to that described by Sabourand. In 81 cases of **trichophyton tonsurans** he invariably found the large spores of the trichophyton ectothrix. It was possible to inoculate guinea pigs and in one case a man was inoculated with his own consent. The prognosis in all cases was favorable. The interesting features were the discovery in Strassburg of the microsporia Audenii, and the fact that in all cases of trichophyton the same type of organism was found. [J. S.]

4.—Curschmann continues his article upon the value of **leukocytic counts in appendicitis.** He mentions a case in which the leukocytes became abnormally high, and investigation showed the presence of groups of pneumococci. For this reason operative interference was delayed although pus formation was recognized. After recovering from the pneumonia the operation was performed and pus evacuated, the patient recovering. It is interesting to note that on the 7 days preceding operation the temperature was normal in spite of the presence of pus. When, after operation, the leukocytosis remains permanently high, it is usually an indication that pus formation continues. When the leukocytosis is not excessive it usually indicates that the exudate is not purulent, and he quotes a case in which the maximum was 20,000, and the average below 15,000. The operation was performed, but only a serous exudate discovered. In another case the appendix was covered with a purulent exudate, and several days after a tampon had been inserted a fecal concretion was discharged through the wound. In another case spontaneous rupture took place into the colon and the patient recovered without operation. Curschmann believes that an examination of the leukocytes is chiefly of value when it is a question of recognizing the circumscribed inflammatory process. There does not seem to be very much difference in the results for different organisms. In the beginning of the disease a high leukocytic count is not significant; if it persists or if more than 25,000 leukocytes are observed the condition is probably serious. [J. S.]

7.—Hahn gives a sympathetic account of the life of **Marcel von Nencki,** the distinguished physiologist and chemist, the greater part of whose life was spent in Berne and St. Petersburg. It is interesting to note that prior to his medical studies he devoted himself almost exclusively to philosophy and the classical languages. [J. S.]

8.—Krecke describes eloquently the great value of the services of **Næher** to medicine, particularly with reference to the unification of the physicians of the city of Munich. By combining them into a united group he was able to secure to them many advantages. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

December 5, 1901. (XIV Jahrgang, No. 49.)

1. Secondary Squinting. PROFESSOR SCHNABEL.
2. The Albumins of Cows' Milk and Infant Feeding. FRANZ HAMBURGER.

3. Fanghi di Sclafani in Acne Rosacea.
OTTO VON FLEISCHL.

1.—When anything interferes with the vision of one eye, secondary squinting results; inward when under five years of age, outward when over ten years of age. While describing the case of a boy of 17, Schnabel disproves the theories advanced by Buffon, in 1743, who said that permanent strabismus follows the permanent overaction of one muscle; that this is caused by frequent strong, long-lasting contractions of the muscle which turns the eye from the object; and that, while these contractions are at first voluntary, they gradually become uncontrollable. But in Schnabel's case muscle and nerves were normal, while the amount of the strabismus showed no relation to the contraction of the squinting muscle. In this case the construction of the eye was abnormal, and squinting existed even before the injury which was supposed to have been its cause. While this secondary squinting is common in young hypermetropic individuals, it is also noted with amblyopia and amaurosis, and in persons over 60. Schnabel explains fully the mechanism of the occurrence of secondary squinting, the operation indicated, and whether one or both eyes need operation. The article is exceedingly technical. [M. O.]

2.—A specific precipitation occurs when the serum of cows' milk is added to the blood-serum of cattle. From a number of experiments upon rabbits, in which the casein and albumin of cows' milk, separated by precipitation with very dilute acetic acid, were injected, it became plain that the casein and albumin of cows' milk were different substances. While albumin only precipitated the serum of animals which had albumin injections, casein only precipitated the serum of those which had casein injections. For the milk and blood-serum of cattle are common to all cattle, but the casein and albumin of cows' milk are distinctly separate substances. Hamburger believes that the albumin of cows' milk irritates the stomach of the young infant, which then has to increase its secretion to cope with the poison. Hamburger's experiments, injecting cows' milk into young animals fed upon cows' milk, did not show that the injections increased the power of digestion or assimilation of cows' milk. [M. O.]

3.—von Fleischl describes an earth found in Sclafani, acid in reaction, and containing 79% sulphur. Detailed quantitative and qualitative analyses follow. The sulphur exists in very minute particles, and this fanghi, with water added, is applied to acne rosacea with good results. After giving four case-histories, von Fleischl advises fanghi di Sclafani in those skin conditions in which sulphur is indicated. [M. O.]

December 12, 1901. (XIV Jahrgang, No. 50.)

1. Agglutination Researches.
PHILIP EISENBERG and RICHARD VOLK.
2. The Function of the Pyramids in Man. A. PILCZ.
3. The Change in the Pulse Frequency from Mechanical Causes. ERNST URBANSCHITSCH.
4. Spinal Analgesia with Tropacocaine.
FRIEDRICH NEUGEBAUER.
5. Lateral Hernia of the Upper Abdominal Wall.
ERNST ZENTNER.

1.—Eisenberg and Volk report briefly the results of a long series of researches upon agglutination. The detailed account will appear shortly in the *Zeitschrift für Hygiene und Infectionskrankheiten*. Their conclusions are too technical for abstraction. [M. O.]

2.—After thoroughly reviewing the literature of the subject, Pilcz states that the lesions affecting the medulla may be traumatism, hemorrhage or softening, inflammation and tumors. Such lesions may be purely pyramidal, with or without paralysis, extrapyramidal, with or without paralysis, or mixed lesions. No conclusions can be drawn from mixed lesions or from injuries, since they cannot be accurately studied. The histories of five cases of pure pyramidal lesions with paralysis, of one case of pyramidal lesion without paralysis and of three cases of extrapyramidal lesion with paralysis, the pyramids not being at all involved, follow in detail, the only typical cases found in the literature. There is no longer any doubt that, in animals, the pyramids are not the only conductors of voluntary motor impulses. Pilcz's cases show that this is also true in human beings, since cases both with and without pyramidal lesions may show paralysis, as may extrapyramidal lesions.
[M. O.]

3.—Urbanschitsch tells of the changes in the frequency of the pulse due to slight mechanical conditions, change in the position of the body, the ingestion of food, respiration, pain, and compression, by ligature, corsets, etc. He believes that the higher pulse rate of women may be due to their clothes alone. [M. O.]

4.—Will be abstracted when concluded.

5.—Zentner, after a review of the literature, reports a case of lateral abdominal hernia in a girl of 6, following chronic bronchitis. After a fall though no injury was noted, a tumor appeared in the left lumbar region. Upon coughing, this always increased. Fraenkel's operation for the radical cure of the hernia was a complete success. The condition was found to be a true hernia of the peritoneum through the transversalis abdominis muscle. [M. O.]

December 19, 1901. (XIV Jahrgang, No. 51.)

1. Sterility. R. CHROBAK.
2. Hypertrophy of the Breasts with Auxiliary Breasts, During Pregnancy. ARTHUR FOGES.
3. A Case of Primary Ascending Genital Tuberculosis.
HERMANN von HAUSCHKA.
4. Spinal Analgesia with Tropacocaine.
FRIEDRICH NEUGEBAUER.

1.—Chrobak deplores the lack of detailed research on the normal ovary. There seems, however, no doubt that a poor general condition, chlorosis or anemia, the ingestion of iodides, mercury, morphine, etc., and the occurrence of one of the infectious diseases all predispose to sterility. Hydrotherapy is of especial use in these cases, with iron-containing waters. When sexual feeling seems lost in a woman with sterility and some uterine hypoplasia Chrobak applies electricity, suction, massage, sounds, pessaries, tupelo tents, etc., in the treatment, generally with good results. In many cases some spermatic fluid is lost, flowing from the vagina, and sterility is the result. Sterility is also found with congenital retroversion of the uterus. For women from whom spermatic fluid escapes, Chrobak advises gymnastics, pessaries occasionally, or colpoperineorrhaphy. In some cases rugae can be made in the vaginal walls by vaseline injections. In the treatment of the great majority of cases discission of the uterine neck is the successful operation. But in every case the general condition of the woman, not only of the uterus, must come into consideration. [M. O.]

2.—Foges found 36 cases of diffuse hypertrophy of the breasts in the literature and reports a case occurring in a woman of 18, married 8 months. Four months ago her breasts began to enlarge rapidly, and menstruation ceased. When four months pregnant, her breasts were enormous, [illegible] grams each. She recovered and a healthy child was born at term. Histologically the breasts contained hypertrophic glandular and connective tissue, differently arranged in the four separate tumors, as there were also two hypertrophied auxiliary breasts. This case was noteworthy in that the breasts grew so rapidly during pregnancy, in the presence of the auxiliary supernumerary glands in the operation being pregnancy with its good results: and in the slight histological variations in all four glandular tumors removed.
[M. O.]

3.—von Hauschka reports a case of primary ascending genital tuberculosis in a woman of 29 who had amenorrhea [illegible] seven years ago and contracted [illegible] Both ovaries and tubes were removed and tubercle bacilli were found in them. As the uterus was not diseased, von Hauschka believes that the infection started there and spread up the Fallopian tubes.
[M. O.]

4.—Will be abstracted when concluded.

BERLINER KLINISCHE WOCHENSCHRIFT.

December 30, 1901. (38 Jahrgang, No. 52.)

1. The Origin and Prevention of Precipitated Oxalic Acid in the Urine. G. KLEMPERER.
2. The Active Motion of Lymphocytes. ALFRED WOLFF.
3. A New Method of Treating Essential Epilepsy. M. LION.
4. The Treatment of Vasomotor Rhinitis with Swollen Lower Turbinate. W. LUBLINSKI.

1.—From 30% to 50% of renal calculi contain **oxalic acid.** When spinach is ingested, some oxalic acid is found in the urine and feces, and the rest is destroyed by the bacteria in the gastro-intestinal tract. When oxalates are injected subcutaneously, the entire quantity is found in the urine and feces. Yet even when no oxalates have been taken, oxalic acid is found in the urine, probably arising from the creatine of the muscles. The excretion of oxalic acid is increased after glycocoll has been ingested. The presence of more magnesium than calcium will prevent the precipitation of insoluble calcium oxalate, since soluble magnesium oxalate will be formed. Klemperer prohibits milk, eggs, tea, cocoa, spinach, cabbage, and most vegetables, allowing such cases meat, fat, bread, pastry, rice, apples, and pears. Coffee and alcohol are permitted, and Epsom salts and much water advised, to prevent the formation of oxalic acid calculi in the urine. [M. O.]

2.—From Wolff's investigations upon the blood of a case of lymphatic leukemia it is shown that **leukocytes first contract** in response to stimulation, **then changes of form occur, with slight locomotion.** These are evidences of lymphocytic life, not of the degeneration or approaching death of the cells. From this, Wolff believes that in tuberculosis an active lymphocytosis occurs. [M. O.]

3.—Lion reports the results of **Poehl's opocerebrin in epilepsy.** In 20 old cases of epilepsy this remedy effected rapid recovery, especially in cases without attacks of "petit" or "grand mal," in whom all symptoms disappeared. In the cases with "petit mal" and convulsions, the number of attacks grew decidedly less, and each succeeding attack became less severe. When opocerebrin was given (3 grains b.d.) with bromides, all attacks ceased almost immediately. The histories of two cases follow, showing wonderful improvement upon this treatment in two or three months' time. Two cases of delirium tremens were cured in three days on opocerebrin. [M. O.]

4.—**Vasomotor rhinitis** is generally found in anemic women, with red or "doughy" noses. They complain of occlusion of one nostril, using but one nostril for breathing. Iron and arsenic are indicated, with massage of the lower turbinate, which is swollen, with menthol ointment, (¼ to ½%) two or three times weekly for 5 to 10 minutes. The same solution should be used for cleaning the nose. Rarely the galvano-cautery or injections of a 10% zinc chloride solution will be necessary, after eucaine anesthesia. A description of the technique of the proceedings follows. [M. O.]

ARCHIV FUER EXPERIMENTELLE PATHOLOGIE UND PHARMAKOLOGIE.

Bd. XLVI., Heft 5 and 6.

1. Concerning the Influence of Pharmacological Preparations Upon the Excretion of Uric Acid. ULRICI.
2. The Influence of Changes of Temperature Upon the Effect and the Coefficient or Combining Power of the Narcotics. MEYER.
3. The Manner in Which Chloral Hydrate and Acetone Dispose Themselves in the Organism. ARCHANGELSKY.
4. On the Absorption of Manganese. HARNACK.
5. Experimental Contributions Concerning Fever and Diabetes Mellitus. NEBELTHAU.
6. On the Mechanism of Swallowing. SCHREIBER.
7. A Protozoon Found in a Case of Acute Dysentery. EBSTEIN.

1.—Ulrici considers that in determining slight degrees of leukocytosis one should learn the relation between the red and white corpuscles, rather than make a count of the actual numbers of white corpuscles. The latter is likely to give unreliable results, because the distribution of the white cells can vary so readily through accidental influences. He, therefore, believes that much of the work that has been done on the relation between leukocytosis and excretion of uric acid is not trustworthy. His own work was on the **influence of benzoic acid, gallic acid, chinic acid, tannin and salicylic acid, upon nitrogen metabolism, phosphorus metabolism and uric acid excretion.** The patients were put upon a definite diet and the amount of nitrogen and P_2O_5 ingested was regularly determined. Benzoic acid caused a slight reduction of the nitrogen metabolism and a decided reduction of the uric acid excretion; but the latter could not reasonably be attributed to pairing of the benzoic acid with glycocoll and a reduction of uric acid synthesis in this way, because the excretion was apparently only temporarily reduced, and afterwards increased to above the normal. Gallic acid had a similar effect. Chinic acid had no effect of importance upon either nitrogen metabolism or uric acid excretion. The same was true of tannin. Salicylic acid caused a distinct increase in nitrogen metabolism and in P_2O_5 excretion and also a distinct increase in uric acid excretion, which must be attributed to a specific effect of the salicylic acid upon the excretion of uric acid, as it was apparently not due purely to a freer excretion of uric acid already present. Hence, **benzoic acid and gallic acid have an influence which is directly contrary to that of salicylic acid.** The author draws no further conclusions from his results. He ends by giving his results in two cases in which he compared the leukocyte count with the uric acid. There was no distinct relation to be seen between them. [D. L. E.]

2 and 3 considered editorially.

4.—Harnack finds that **manganese is absorbed from the intestine,** but not in such amounts as to make it possible to produce manganese poisoning in animals, even when the administration is continued for a long time. The excretion of the manganese that was absorbed occurs chiefly through the intestine, and practically not at all through the kidneys. With the subcutaneous injection of permanganate, a great part of the substance injected was at once changed to insoluble compounds at the point of injection: but some of it was absorbed, and this was **excreted purely in the feces,** not at all through the kidneys. The manganese, therefore, follows a course much like that of iron. [D. L. E.]

5.—Nebelthau has studied the **influence of the administration of the toxins of diphtheria and tetanus;** and the use of **cultures of these organisms and of tubercle bacilli;** and also the effects of the infection which often occurs spontaneously, **upon the excretion of sugar in experimental diabetes** following pancreas extirpation. He finds that the toxins, although causing decided fever, have no influence that can be definitely determined upon carbohydrate metabolism; nor do acute infections with any of the microorganisms investigated. In one case, however, of slowly progressing tuberculosis associated with very marked emaciation, he found that the animal excreted less and less sugar, and finally none; and he decides from this that, under the influence of tuberculosis, and, perhaps, with other slowly progressing infections, the diabetic organism has time and opportunity to develop powers which enable it to reduce the sugar excretion through the urine. He believes that these powers are attained through the development of a new ability to oxidize sugar; this he attributes to the fact that the fats are so greatly reduced that the organism is under such stress that it again acquires the power of oxidizing sugar. [D. L. E.]

6.—Schreiber decides that **the act of swallowing** into the pharynx, barring accidental factors, is executed: First, by contraction of the mylohyoid and hyoglossus, directly followed by contraction of the geniohyoid and thyroid, the latter following so closely upon the former that it is doubtful whether the first is really the chief act in the process of swallowing; directly after this, the esophagus opens, and the mylohyoid and pharyngeal constrictors force the mass into the esophagus. It is not determined whether this is done chiefly by the mylohyoid or by the constrictors, but it is more probable that it is mainly done by the latter. There is, at the same time, an increase in pressure in the esophagus, which forces the contents on; and there is actual contraction of the esophagus itself. But Schreiber believes it is probable that the **negative pressure in the thorax is of much importance in carrying fluids and gases,** at any rate, through the esophagus. There are, then, two forms of peristalsis following this: a rapid form, in the cervical portion; a slower one, in the thoracic portion. [D. L. E.]

7.—Ludwig Ebstein reports a case of acute dysentery in a girl of twenty-six, who lived in Breslau, and had apparently not been out of that district. The symptoms were those typical of acute dysentery, with mucus and bloody stools, and marked tenesmus. The patient recovered quickly, under the use of calomel and injections of tannin. The interesting part of the case was the discovery of **round or oval bodies, usually with an eccentric nucleus, and commonly containing vacuoles.** They varied in size between 5 and 8 microns. The plasma showed fine granulations. They were cultivated on alkaline bouillon, glucose bouillon, and hay infusion—very successfully and in large numbers on the latter, while the former two showed no growth, and no growth was obtained on straw infusion or Heyden bouillon, or on alkaline gelatine, alkaline agar, or acid media. They stained well with ordinary carbolfuchsin. They were not decolorized by Gram. Good preparations were obtained by hardening the stools and cutting sections from them. **Cats were infected with the stools and in several instances showed typical symptoms of dysentery.** In one case the stools contained large numbers of amebae; and from the stools of this cat, free growths could be obtained on glucose agar, and Heyden bouillon. The animals that had shown dysenteric symptoms were killed, and it was found that there were numerous ulcerations in the large intestine, and a few in the small bowel. The ulcers were infiltrated and, not rarely, undermined. No amebae could be found in the ulcers or in other parts of the section from the intestine. The amebae were not found in 10 other cases of diarrheal disease, nor in 2 persons with normal stools. The number of the amebae in both the cats and the patient was proportional to the activity of the disease, and in all of these instances they disappeared with the symptoms. **Ebstein believes that this ameba was the specific cause in the cases which he reports.** [D. L. E.]

LA SEMAINE MEDICALE.

November 27, 1901.

The Prophylaxis and Treatment of Whooping Cough.

By E. WEILL AND PEHU.

These authors review the literature upon the pathogenic germ of this disease. The contagious character of the malady is admitted but the period during which the patient may transmit the disease is fixed variously by different authorities. These authors have devoted especial attention to this subject during the past ten years, and have made careful observations on a large number of cases. They believe that attempts to determine the specific organism have given diverse results because these organisms disappear rapidly when the patient develops the paroxysmal cough. They hold that the **contagious period is during the bronchial stage.** When the characteristic cough develops, the likelihood of contagion is rapidly lessened and by the eighth day of the paroxysmal period the possibility of a child infecting others is no longer present. The specific organism will usually be found in cultures taken from the throats of the brothers and sisters of the child with pertussis, for these are likely to be in the early (i. e. **catarrhal**) period of the disease. They consider the treatment in detail, and do not advise the use of local applications on account of the untoward effect upon the nervous system of the child. **Isolation and disinfection** must be practiced thoroughly. **Quinine** they regard as useful and recommend its administration by suppository. They give a résumé of a number of remedies from the large list of drugs which have been recommended for whooping cough. **Bromoform** they regard as too poisonous for general use. One of them (Weill) advises the **internal use of antypyrin and inhalation of the vapor of quinolein.** From ten to twenty drops of this preparation to one hundred cc. of water for each child are boiled in a room in which the children assemble for twenty minutes four times a day. This method has been in use in the Lyons Hospital where it has proven especially effective. Weill states that infection by this means is rendered unlikely as the quinolein thoroughly disinfects the air passages and reduces the number of paroxysms, as well as their severity. [T. L. C.]

LA PRESSE MEDICALE.

December 28, 1901. (No. 104).

1. Intermittent Argyll-Robertson Pupils in Tabes. CHARLES MANTOUX.
2. Diatheses in the Predisposition of Certain Organs to Infection. JULES MASSELIN and PAULIN MOISARD.
3. Circular Amputation with Lateral Flaps. CHARLES DUJARIER.

1.—While certain signs of locomotor ataxia are always intermittent, the **Argyll-Robertson pupils are generally present.** Yet Mantoux gives the case-histories of four patients in full, in whom the Argyll-Robertson pupillary reaction was **found intermittently,** one of them being his own observation, the other three from literature. In all cases syphilis was probable. He concludes that the Argyll-Robertson and other pupillary symptoms may be intermittent in tabes; that the duration of these intermittences may vary from a day to months; and that their appearance and disappearance may be related to the appearance and disappearance of the gastric crises. [M. O.]

2.—While gout is considered unfavorable to the growth of tubercle bacilli, it seems to favor the growth of pneumococci and streptococci. Masselin and Moisard report the case of a **woman of 54 with renal calculi and gout,** who had had three attacks of renal colic. Cryoscopy showed renal and cardiac insufficiency. **Influenza occurred followed by pyelonephritis and death** from general infection. The urine and specimens post-mortem gave abundant **cultures of pneumococci** and a few streptococci. The pneumococci were extremely virulent, killing mice and guinea pigs inoculated. They believe that the gout and renal calculi so lowered the normal condition of the kidneys that influenza permitted infection with pneumococci, and pyelonephritis and general infection easily followed. [M. O.]

3.—Dujarier describes the **amputation of an extremity by the circular method with lateral flaps,** illustrating his description with several diagrams. The technique of the operation when one or two bones are included is given in detail. [M. O.]

JOURNAL DES PRATICIENS.

December 28, 1901. (15me. Année, No. 52.)

1. Chronic Intestinal Occlusion from Cancer of the Rectum. E. SCHWARTZ.
2. A Clinical Lecture on Therapeutics. H. HUCHARD.
3. The Treatment of Acute Pericarditis. M. DEGUY.

1.—Schwartz reports the histories of three cases of **cancer of the rectum** in patients aged 56, 74, and 50 years respectively, upon whom he **operated for chronic intestinal occlusion,** making **an artificial anus** in the left iliac region in each case. The technique of the operation, which he divides into two stages, follows in full. He employs a glass ring to hold the intestine outside the abdomen, thus forming the spur. He leaves 4 or 5 days between the two parts of the operation. [M. O.]

2.—Will be abstracted when concluded.

3.—The salicylates in rheumatism do not prevent the development of **pericarditis.** When it appears, it always develops upon the anterior surface of the heart first, and the inflammation becomes most intense there. When effusion follows, it is generally posterior. The infection may occur either through the blood or lymph vessels. Therefore in the prophylaxis caffeine, digitalis, milk diet, theobromin, and subcutaneous injections of normal salt solution are indicated. Calomel and counter-irritation may also do good. To prevent pulmonary complications Deguy advises warm baths and sodium benzoate. Should pericarditis occur counter-irritation is immediately advised, with the ice bag, salicylic liniment, digitalis, caffeine, sparteine, milk diet, theobromine, some hypnotic, trional, sulphonal, or bromides, and morphine to quiet pain. When the effusion becomes hemorrhagic, paracentesis pericardii is indicated, when purulent pericarditis. [M. O.]

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION OF ORTHOPEDIC SURGERY.

Meeting held January 17, Dr. G. R. Elliott in the chair.

Dr. W. R. Townsend presented a baby, four months old, showing **webbed fingers**, on the fore and middle fingers of one hand, and no other congenital deformities. Dr. Townsend presented a girl, four years old, whose right occipital, parietal and inferior maxillary bones appeared enlarged. There was no history of syphilis. The diagnosis was **hemihypertrophy of the bones of the head.** A boy of 8 was also presented by Dr. Townsend, with **hip disease** of one year's duration. There was an abscess which was aspirated three times. The abscess has not recurred. Dr. V. P. Gibney presented statistics from 23 cases treated by aspiration, 15 of which were cured. In all cases in which cure failed, no damage was done by aspiration. Dr. T. H. Myers is in favor of non-operative treatment when tubercular abscesses are not infected, and do not interfere with the patient's health or threaten another joint. Aspiration should be tried before more radical operation.

Dr. R. Whitman presented a boy of 12 years with **severe torticollis** treated by open incision with over-correction of the deformity. The operation resulted in correction of the deformity without limitation of motion. All resistant structures were divided, the two insertions of the sterno-cleidomastoid muscle and the cervical fascia being the most important. Dr. Meyers said the operation should be done early. Dr. Whitman presented a girl, 5 years old, with **congenital anterior displacement of the hip.** Dr. Whitman also presented a child, aged 3 years, with **congenital dislocation of the hip.** The bloodless operation had been performed one year previously. It was impossible to say from observation which hip had been originally displaced. Dr. Whitman then presented a girl of 7, upon whom he had operated by the open method three years previously. The patient now walks with but slight swaying of the body; lordosis has completely disappeared; and there is practically no restriction of normal motion.

Dr. H. L. Taylor presented a girl, 5½ years old, with **phocomelia.** When the child began to walk at fourteen months, a slight lameness on the left side was noticed, which has persisted. The left leg was two inches shorter than the right, the shortening confined to the femur; the trochanters were in normal position and the classical signs of congenital dislocation and coxa vara were absent. His diagnosis was congenital shortening of the left femur, confirmed by a skiagraph. Dr. Sayre considered that the term phocomelia should be restricted to the extreme cases in which the long bones were either absent or almost entirely so. Dr. Taylor stated that Kummel, Klaussner, and other authorities applied the term to such cases as the one presented.

Dr. A. H. Taylor presented a case of **webbed fingers,** some of the fingers showing the results of operation. The boy was born with three fingers of each hand entirely webbed to the tips. On the middle and ring fingers of both hands, the bases of the terminal phalanges had grown together, the little finger showing no bony union. An incision was made on the dorsum of one finger and palmar surface of the other, and flaps were bisected, using the opposite flaps to cover the fingers. In the little finger primary union was obtained. Instead of making a crosscut at the base of the flap or making a V-shaped flap, the incision was simply carried up toward the web in each case, then, by suturing the edges together, the edge of one flap would obliquely cross the edge of the other crossing in opposite directions, the two edges meeting in the middle. This method worked very well.

Dr. Sayre read a paper upon the **operative treatment of webbed fingers.** He reviewed the classical methods of operation, making a flap for one finger and grafting to cover the other, and taking an A-shaped flap from the dorsum of the hand, slipping it over and stitching it to the palm, to form the bottom of the web. Dr. Meyers considered grafting a great improvement over other methods. Dr. V. P. Gibney stated that he had always used the Didot operation, but thought Dr. Sayre's plan an excellent one. Dr. Sayre presented a patient upon whom he had operated for webbed fingers. The fingers were webbed to the tips and the phalanges united by bony union. The case illustrated the method of making a flap for one finger and using a skin-graft for the other.

NEW YORK OBSTETRICAL SOCIETY.

Meeting held February 11, Dr. Malcolm McLean in the chair.

Dr. Le Roy Broun presented a specimen of **primary epithelioma of the posterior wall of the vagina** in a woman of 37. An ulcer was found in the posterior wall of the vagina, which showed typical epithelioma. He also reported a case of **ruptured uterus,** six weeks pregnant, during divulsion with a faulty dilator. He found that the tear extended into the left horn of the uterus. The patient was put in the Trendelenburg position and the abdomen opened. The rent in the uterus was united with two layers of cat-gut sutures, the peritoneum being stitched over it. He had then made a little opening in the cul-de-sac, and filled the space with gauze. This was removed on the 7th. day and recovery was uneventful. Dr. Broun reported a case of **cerebral embolism** immediately following prolonged abdominal section in the Trendelenburg position. At the close of an ovariotomy the patient, aged 45, was in good condition. When she recovered from the ether she could not speak, her tongue was drawn to the right, and she could not close her left eyelid. There was also partial paralysis of the right side. The urine showed albumin, hyaline and granular casts. Five days later she could move the extremities, and gradual improvement followed. Dr. E. H. Grandin said that he had seen a colleague rupture a uterus with the same instrument which Dr. Broun had shown, the intestines coming down through the opening. Dr. J. R. Goffe defended the instrument criticised by Dr. Broun. Dr. Ralph Waldo had seen a uterus ruptured by a simple dilator without much force. Dr. H. J. Boldt opposed the use of the curette in a puerperal uterus for fear of perforating. In the majority of instances the dilator should be condemned. Dr. Joseph Brettauer said he agreed in the main with Dr. Boldt, but thought the instrument useful in rigid cervices preliminary to the introduction of the curette. Dr. J. E. Janvrin said that, in his opinion, the instrument in cases of abortion was an outrage.

Dr. Grandin presented a specimen of **carcinoma of the cervix with tuberculosis of the Fallopian tubes.** A woman of 36, who had been married twenty years, had two children and one miscarriage. For months she had suffered from hemorrhages. The cervix was found eroded anteriorly, the uterus movable, the appendages slightly enlarged. A section examined was reported to be carcinoma cervicis. Abdominal hysterectomy was performed.

Dr. Coe reported three cases of the varieties of **uterine fibromyomata** in pregnancy. One patient was a young woman, married five months, who had just aborted. Under chloroform a polyp the size of a golf ball was found with a long pedicle attached near the fundus. This was removed later. In the second case the patient was four and a half months pregnant for the first time, and was anxious to go to term. A sessile subperitoneal fibroid, the size of an orange, could be felt in the left side of the uterus. The third patient, who was nearly three months pregnant, was also a primipara desirous of having a child. A multilocular fibroid, partly interstitial, partly subperitoneal, as large as a cocoanut, was firmy impacted in the pelvis. Severe contraction pains occurred without hemorrhage, the uterus ruptured with profuse bleeding, but the patient made an afebrile recovery. Hysterectomy may eventually be necessary. Dr. Brettauer had operated upon a primipara, seven months pregnant, who complained of pain during micturition. A pedunculated fibroid was found in the pelvis, easily removed by excising the pedicle. Dr. Boldt recalled

a subperitoneal fibroid the pedicle of which was twisted, causing local peritonitis. Operation was performed, and the five months pregnancy was not interrupted.

Dr. W. E. Studdiford read a paper on the **anatomy of the levator ani.** This and the external sphincter, in a sheath composed of the pelvic fascia, formed the chief supporting structures of the pelvic floor. The levator ani forms a horse-shoe shaped muscle with its fellow of the opposite side, consisting of numerous thin flat bundles of muscular fibres often separated by connective tissue, the whole being bound together by the recto-vesical and anal fascias. The posterior portion, arising from the spine of the ischium, is inserted into the third or fourth coccygeal vertebræ. The middle portion arises from the dividing point of the pelvic fascia into the recto-vesical and obturator fascias. The two portions on section have the shape of a wide V, which narrows as the outlet is approached. The anterior part, the important portion of the muscle, arises from the pubic ramus, half an inch from the middle of the symphysis, three-fourths of an inch from its lower border. Its fibres pass almost horizontally backward, along the side walls of the vagina with which its fibres are strongly united. The belly of the muscle sweeps backward close to the external anal sphincter, and is attached to the rectum, where it unites with its fellow. The relations of the fibres to the external anal sphincter have never been sufficiently emphasized. These fibres interlace so intimately that separation of the two muscles by dissection is almost impossible. Sections parallel to the long axis show that the fibres do not form a sling-like muscle, but are more like a narrow V, the sides of which have a slight convexity toward the median line, the opening being at the tip of the coccyx. The vagina appears as a crescentic opening, the rectum as a slit parallel to the long axis. In the space between the vagina and rectum is a spindle-shaped band of tissue between the two halves of the levator ani. This band of tissue is made up almost entirely of involuntary muscle, the fibres running in every direction, closely attached to the levator ani. That these fibres are important, a study of their relations and their probable action will at once determine. Clinically, as shown by Dickinson, the levator ani muscles can be felt about half an inch inside the vaginal opening along the side of the vagina. Continuous with these, when the pelvic floor is intact, is a muscular band of tissue capable of great distension, with the power of marked contraction as seen in vaginismus. The posterior portion of the vagina is drawn upward under the pubis, and the two portions of the levator ani are drawn together, the muscles being in better position to draw the rectum and coccyx forward. These fibres are also in close relation with the anterior end of the external sphincter and tend to draw it nearer the pubis. This band of involuntary muscle shows that the levator ani physiologically furnishes continuous support. Emmet's operation, when properly done, is successful, because the sutures draw some torn involuntary fibres together and restore the relation of the external sphincter to the levator. During the past eighteen months Dr. Coe has performed the following operation with success: The usual triangular denudation is made; after drawing together its upper angles by Emmet's method, one or two sutures of cat-gut are buried in the following manner: The suture enters the upper margin of the external sphincter, the sphincter is drawn forward and the needle reintroduced under the denuded tissues, passing out through the muscles of that side, then down to the point of entrance; when this suture is tied, the pelvic floor is drawn up and the levator fibres are approximated. The mucous membrane is united by interrupted sutures, somewhat similar to the crown suture of Emmet, except that it has three definite points of attachment. Dr. Charles Jewett remarked that every gynecologist would be gratified to have the anatomy of the levator ani in its relation to pelvic floor injuries more clearly defined. All obstetric lacerations of the pelvic floor run up one or both vaginal sulci. Such injuries consist essentially in a partial separation of the levator from the other pelvic structures, by fascial tears. It may also be true that the involuntary muscle fibres have much to do with the matter. Dr. Coe had operated at least twenty times by this method and has been impressed with the fact that by tightening the circular suture he always obliterated the sulci and lifted up the anal sphincter. Dr. J. N. West stated that, in regard to the study of the perineal fascia or muscles, Emmet's work ought not to be forgotten. Dr. Studdiford said that his paper was simply a preliminary report. There can be no doubt of the unstriped muscular fibres. They apparently make part of the perineal body. Just how far anteriorly they run he was unable to say, as yet, but they probably run into and beyond portions of the triangular ligament; they certainly pass between the two portions of the levator ani muscle.

BOLNITSCHNAIA GAZETA BOTKINA.

January 2, 1902. (Vol. XIII, No. 1.)

1. The Eighth Pirogoff Meeting of Russian Physicians. N. A. DMITRIEFF.
2. The Scientific Principles Underlying Hospital Régime and the Acting Civil Hospital-laws in Russia. S. S. VIRSALADZE.
3. A New Method of Determining the Stability of the Blood. G. BIELONOVSKI.
4. One of the Questions of Public Hygiene. A. BALOFF.

3.—Bielonovski conceived the idea of **utilizing the stimulating effect of small doses of hemolytic serum on the blood-making organs for the treatment of anemia.** In the present preliminary communication he describes the method used in determining the hemolysis of human blood when brought in contact with goat's serum. His method is as follows: The blood obtained from the finger is taken up with a pipette and placed in a Petri dish where it is defibrinated by the same pipette. An emulsion of the blood is then made according to the method of Ehrlich and Morgenroth, adding 4 drops of blood to 2 c.c. of 0.85% solution of NaCl. From this one cc. is transferred to a small cylinder, and the remaining liquid diluted with another cc. of the salt solution. One cc. is taken from this and again transferred to a cylinder, and so on. The several cylinders thus contain various proportions of the blood. To each 1 drop of the hemolytic serum (goat's) is added and the cylinders placed in the thermostat for 12 hours, at the end of which complete hemolysis takes place. (Of course, everything used in the operation should be sterile). His observations on the blood of anemic persons showed that the **resistance of their blood is greatly diminished** (in 1 case 8 times). A detailed report of the experiments is promised. [A. R.]

4.—Baloff gives a graphic description of the Russian *kutuska* (police station) used for the detention of persons found in a state of intoxication. The dirt, darkness and extremely unsanitary conditions of these wretched dungeons fill one with repulsion and make him shudder at the fate of the unfortunate victims. [A. R.]

Necrosis of the Inferior Maxilla from Dental Caries.—In the *Revue Medicale* (September 21, 1901, 15me. Année, No. 75) appears a clinic upon necrosis of the lower jaw from dental caries, delivered recently by Professor Broca, at the Tenon Hospital. Even in children, carious teeth often cause true ostitis of the inferior maxilla. He showed a number of cases to illustrate this condition. One of the early symptoms is earache, worse at night. Later, swelling of the gums appears, and it is not generally difficult to find the tooth which is the cause of the condition. In some cases necrosis follows this acute ostitis, with the formation of sequestra, the condition running a subacute or chronic course. In one case a hyperostosis occurred. In all cases the offending teeth must first be extracted, then abscesses are to be evacuated, and packed, if necessary, with dry gauze. Antiseptic washes are advised, the best of which Broca considers to be a 1% solution of chloral to which a few drops of essence of peppermint have been added. Operative interference is often necessary early in the case. The majority of these cases recover very quickly after the removal of the tooth and the evacuation of the existing abscess. [M. O.]

Original Articles.

PARESIS.

A CLINICAL STUDY OF ONE HUNDRED AND FORTY-NINE CASES OCCURRING AT THE PHILADELPHIA HOSPITAL.

By WILLIAM PICKETT, A. M., M. D.,

of Philadelphia.

Registrar to the Nervous Department, formerly First Assistant Physician in the Department for the Male Insane, Philadelphia Hospital.

The science of psychiatry has been largely re-written in the past hundred years; and it is a striking paradox, that the one form of mental disease unknown at the beginning of the last century, is to-day the best understood of all, both clinically and pathologically, and is, as I have remarked in another place, the one unquestioned clinical form of insanity. The mania, melancholia, dementia and idiocy of Pinel might be likened to mere waves on the surface of the mind,—the conception of paresis as a distinct entity being the first successful sounding to any depth in the sea of psychiatry. It may be that in dementia praecox, as presented by Kraepelin, we are again reaching bottom; but however that may be, it suggests a comment that the shifting of views and the changing classification in mental medicine are not a reproach to it, but come from seeing various new outlines of things in an ever-growing light.

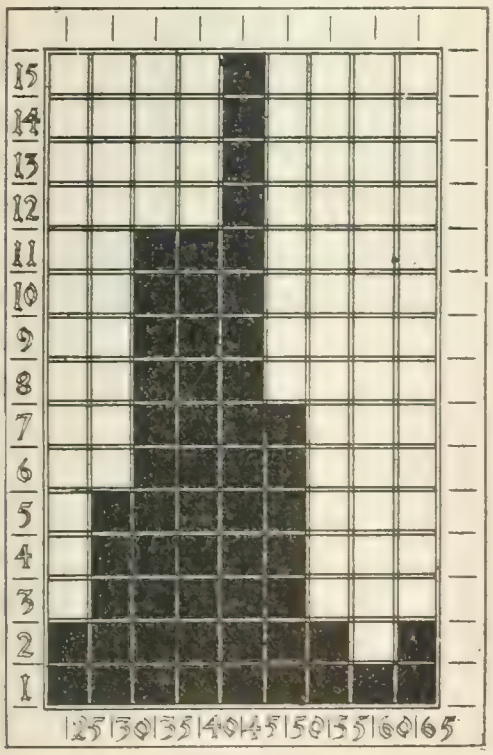


CHART III.

Classic Type of Paresis; 58 cases—both sexes.
The figures at the bottom represent the ages; those at the side the number of cases.

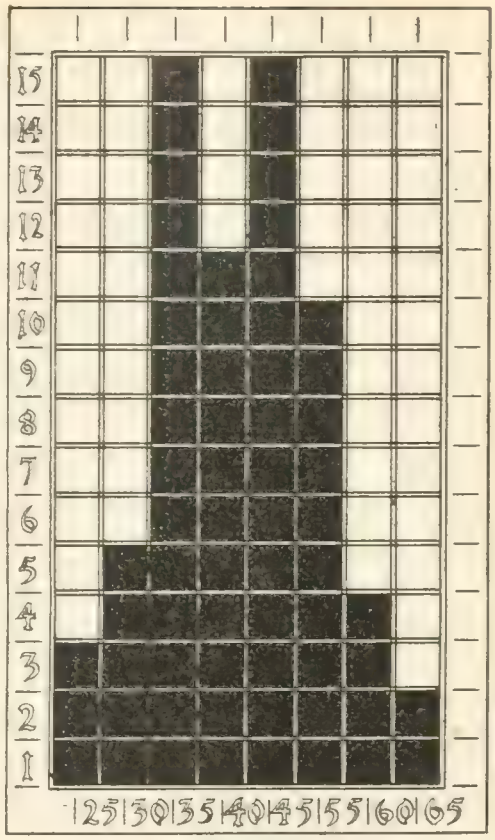


CHART IV.

Demented or Simple Type of Paresis; 65 cases—both sexes.
The figures at the bottom represent the ages; those at the side the number of cases.

While to Bayle is rightly accredited the first pronouncement of the entity of paresis, yet it is a question whether Esquirol did not comprehend the disease more nearly in the modern way, for he insisted that paralysis may be associated with any form of delusion—may "complicate" mania, melancholia (lypemania), as well as ambitious monomania, but

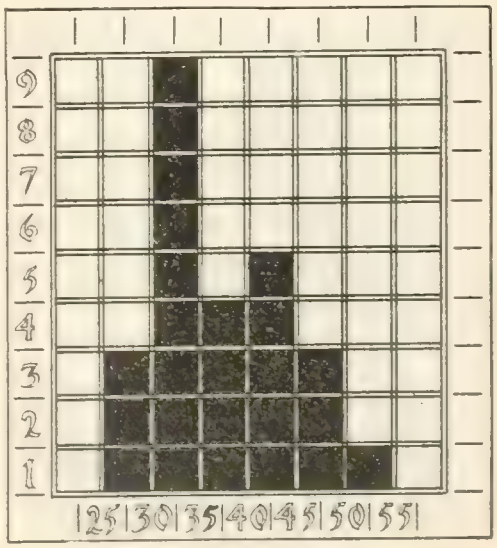


CHART V.

Depressed Type of Paresis; 25 cases—both sexes.
The figures at the bottom represent the ages; those at the side the number of cases.

more often the last; and he recognized a type without delusions. Bayle, it appears, made the delusion of grandeur the "necessary symptom" of general paralysis, and how wide of the mark that was, may be learned from Mendel's recent assertion that "two-thirds of the cases of paresis are of the simple demented form."

This statement of Mendel's is somewhat startling, but a glance at our charts 3, 4 and 5, will show that in Blockley the cases of simple demented form, or "simple form", as I, with the acquiescence of Dr. Dercum, propose to call the form without delusion, are at least more numerous than those of the classic type (65 to 56); a state of things which doubtless would have been astonishing in that institution twenty years ago, and which is particularly interesting in view of the wide-spread belief that the type of paresis is changing—that the simple form is growing in numbers—a belief entertained by D. E. Hughes. Again, in charts 1 and 2 we see a proportion of women to men (36 to 113) which is higher than in most of the older statistics; but that paresis is on the increase in women cannot be deduced from these statistics any more than the alleged increase of the simple form can be established by them. In truth, it is likely that the change is in ourselves more than in the disease; we are making the diagnosis of paresis to-day in cases which would have been called something else not many years ago. And while Mendel's statement quoted above will not be accepted without protest, yet it is doubtless a tack towards the true course, for it is probable that doctors in general are not sufficiently aware of the fact that *paresis without delusion is exceedingly common.* Too long we have been guiding ourselves by that old idea of Bayle's, that the delusion of grandeur is the "essential symptom" of paresis.

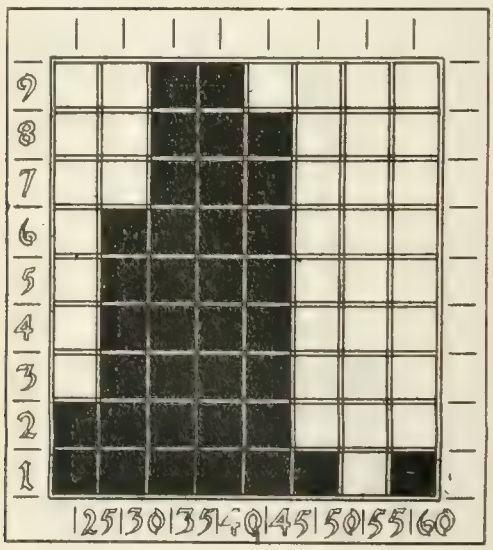


CHART I.

Women—36 Cases.
The figures at the bottom represent the ages; those at the side the number of cases.

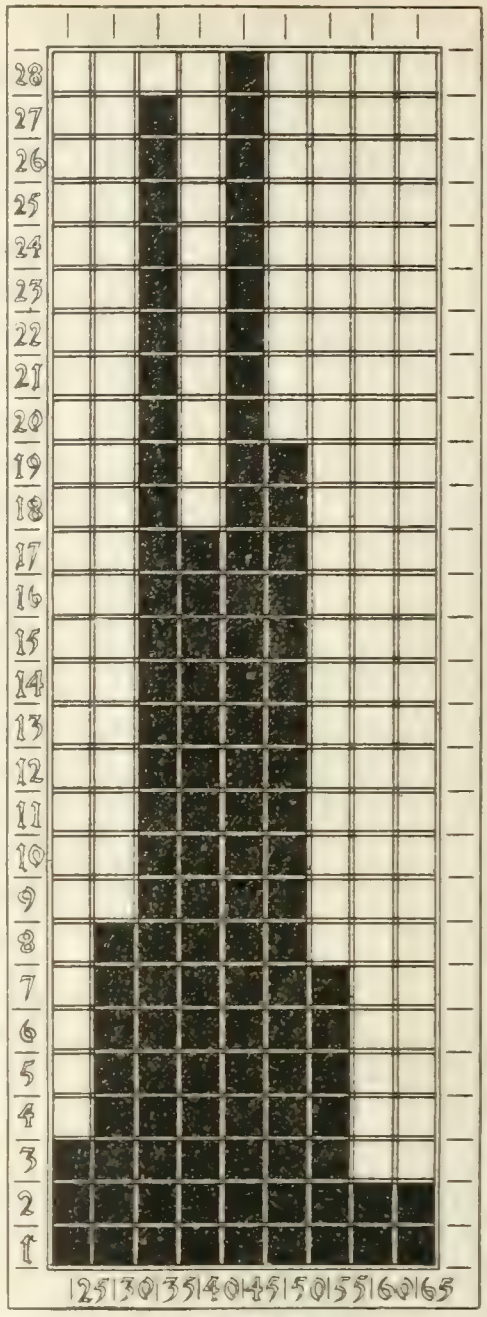


CHART II.

Men—113 cases
The figures at the bottom represent the ages; those at the side the number of cases.

Still this curious tendency of the disease is shown in the fact (table No. I) that 21 of our simple cases and 6 of the depressed had at some period a momentary kindling or slow smoldering of the delusion of grandeur; thus case No. 39, bedfast for some months, but aroused at the sight of a new patient struggling with the attendant, got out of bed as if to rescue his fellow patient, exclaiming, "I am the king!"—the only spark of exaltation he ever revealed; and case No. 71, a depressed man, several times amid his lamentations spoke of sums of money and fine clothes which he had at home—statements which we were able to disprove entirely.

TABLE No. I.

Personal histories in the several forms of Paresis with Symptomatology.

	Classic.		Demented.		Depressed.	
	Men	Women	Men	Women	Men	Women
Alcoholic	26	5	27	2	6	2
Addicted to Morphine	2	2				
Always eccentric	6	1	4	2	1	1
Head Injury	3		2			
Sunstroke			1			
Past Epilepsy	1	1	1			
Wandering from home	8	10	17	7	1	8
Homicidal	9	1	12	2		
Suicidal	4	2	4	3	4	4
Pyromania	2	1	3	1		2
Delusions of Persecution	6	3	2	4	5	3
Delus. Hypochon.	1	1	2	2	1	4
Delus. Grandeur	42	14	15	6	4	2
Delus. Pregnancy		5		5		
Hallucinations of Hearing	3	4	3	6	1	4
Hallucinations of Sight	2	1			1	1
Hallucinations S and H.	5	2	7	2	2	7
Aphonia	1		1			
Echolalia	1			1		
Aphasia	1		1	1		
Paraphasia		2		1		
Hematoma Auris			1	3		

Such fleeting delusions would not help us in diagnosis, especially in the scattered visits of private practice, nor would they affect the conduct or attitude of a patient; so that it seems quite practical to neglect them in classification and to place such cases in the simple or depressed class according as simple mental loss or melancholic delusions dominate the clinical picture. The actual number of cases in which the delusion of grandeur was absent throughout was 66; that is 44 per cent. of the whole series.

On the other hand, the occurrence of these transient delusions and still more the existence of an absurd childish happiness (euphoria) in many cases of the simple form, are much against the old *dualistic* theory of Baillarger, to which Regis and others still adhere. Between the simplest demented case, moping about the ward like an infant, and the "galloping" one wildly struggling and stammering forth tremendous ideas of his strength, wealth and greatness, there is every gradation in our series: to seriously contemplate a distinction between paralytic insanity, and paralytic dementia—that is a fundamental distinction—seems useless, to say the least.

If there be truth in our intimation that the alleged increase of paresis is apparent rather than real, what then was the disposition, nosologically, made of these simple cases which formerly were counted out of the pale of general paralysis—an invidious question perhaps, but one to be faced in the interest of correct diagnosis and prognosis. Charles K. Mills believes that Mendel, for instance, includes in the demented form of paresis many cases which in most institutions are classed as chronic dementias without other qualification.

From Blockley experience, I should say, that the forms of insanity most often confused with paresis of the simple form, are (1) the so-called organic dementias, chiefly those due to hemorrhage, thrombosis, embolism, etc.; (2) pre-senility; (3) dementia praecox; (4) even epilepsy and (5) alcoholic insanity.

(1) The episodes (apoplectiform and epileptiform attacks, etc.) of paresis are waterfalls in the downward current of the malady, leaving a patient weaker in body and duller in mind; and so, when an apoplectiform attack with transient hemiplegia or monoplegia happens to be the first urgent sign of the disease, it is not strange that the subsequent mental and physical decline is sometimes attributed to true apoplexy, etc. A number of our paretic patients came to us with the diagnosis of apoplexy, of brain tumor, of gross syphilis of the brain.

(2) Hoche in his paper on the early diagnosis of paresis says: "In a case of dementia coming on in the late fifties, it is not of much moment to decide whether it be late paresis or early senility"—a position disappointing in a scientific German, for though senility and paresis be similar in their pathology and though they be almost equally hopeless, yet there are peculiar traits in each which make a diagnosis important for its management; and moreover, the diagnosis can be made nearly always by the ordinary rules to be discussed below.

(3) Dementia praecox, (primary dementia) is common up to the age of 30, and occurs, according to Kraepelin, even in the fifties. Its dominant feature is, like that of paresis, dementia. In dementia praecox the pupils may be unequal; delusions may be present or not; and, when present, they may be as absurd, extravagant, changeful and "polymorphous" as those of paresis. Moreover, convulsions may occur. I have known even Charles K. Mills to postpone the diagnosis of a patient in this very dilemma.

(4) Epilepsy beginning in adult life and due to syphilis or alcohol, or beginning after middle life and referable to vascular changes in the brain—these are somewhat rare; and it is well not to make a diagnosis of epilepsy from convulsions occurring after 30, until every care has been taken to exclude paresis. Moreover, in case No. 125 of my series, we perceive the possibility of paresis supervening upon true epilepsy; this woman has had convulsions about once a month since her 14th year; she is now 43 years of age, and paresis was first suspected by Dr. Lovelace 13 months ago. The character of the patient's convulsions has changed somewhat in the past year; they are more prolonged, less severe, and are followed by stupor lasting many hours.

(5) In table No. I, it will be seen that alcoholism is predicated of 65 patients, more often of the simple form; and by "alcoholism" we mean pro-

longed, habitual overindulgence, not the lately-commenced drinking which is often a symptom of early paresis, arising from the "change of character"—the instability, of the first stage. Two of the women had been morphine-habitués for years; one man was an absinthe drinker.

This record is interesting because authorities are generally agreed at the present day that (in the language of Hougberg—"the etiology of general paralysis") "syphilis is the cause of paresis—alcohol, overwork, etc., being subsidiary." But even in a "subsidiary" role, alcohol demands consideration. The whole question of the relation of alcohol to insanity is in an unsettled state. In the German text-books particularly we discern a tendency to dwell less upon alcoholic insanity as a mental form *sui generis* but to distribute the alcoholic cases among the other classes; thus alcoholic melancholia, alcoholic paranoia, &c., are recognized—not because alcohol is the *essential* cause of the melancholia or of the paranoia, but because it is (1) apparently the exciting cause in these cases and (2) gives a characteristic coloring to them; and by similar reasoning we may speak of an alcoholic paresis. Consider for instance case No. 100 of our series, a man of 35, a hard drinker for many years, who 3 months before admission stopped work partly on account of tremors of legs and hands, partly through jealousy of his wife whom he thereafter followed about the house to watch. He heard voices reviling him and was in terror of being killed.

According to established rules of psychiatry, this patient would have been called a typical alcoholic delusional, had not the diagnosis been cleared up by physical signs including epileptiform convulsions, in one of which he finally died. We confess that frightful hallucinations do occur in paretics who are not alcoholic, as in case No. 53, a young colored man,* who would yell with terror at the imagined sight of a great dog, or sometimes of a snake, with its jaws open wide to swallow him; but the paretic hallucinations are ordinarily of a pleasant or indifferent character, which may account for their rarity in the statistics of some authors. In table No. I, it will be seen that hallucinations both of sight and of hearing were fairly common in our cases. We confess too that in case No. 100 mentioned above, there was a probable history of syphilis; and we do not say that paresis in this case was due to alcohol and not to syphilis. What we wish to contend is, that *exciting* causes cannot be ignored in relation to paresis, and that among them alcohol is the chief. I notice that in the section of Mental and Nervous Diseases of the American Medical Association this year, Mayer, of Pittsburg, called attention to the inadequacy of the evidence at present for declaring unreservedly that syphilis is the sufficient cause of paresis.

D. E. Hughes is fond of contrasting the great frequency of syphilis in the human race generally—greater than any statistics can demonstrate—with the rarity of paresis; and while such reasoning might easily carry us too far, still it must give us pause in our too hasty acceptance of syphilis as the *sine qua non* of paresis; for if only one in 20 or 30 syphilitics become paretic, there must be some special reason why this one is singled out by the disease. I do not offer in this paper any statistics regarding syphilis, because our records upon this point are very unsatisfactory. The percentage would not be so low as that given by Eickholt (11.8%); but our patients generally deny syphilis, and the various evidences of it, while always studied, were not recorded with the fulness which would make them authoritative.

The type of case which, for convenience, I have called above alcoholic paresis, has its converse in a case which I treated for delirium tremens in 1897 at the Philadelphia Hospital. On admission to the alcoholic ward, in the evening, he had great tremor, hallucinations of hearing and of sight, and showed the ordinary restlessness, sleeplessness and loss of appetite of the victim of acute alcoholism; but in addition he showed inequality of pupils, and was vehement in declaring himself a prince, owner of scores of horses, &c. The patient had a night's sleep under a hypnotic, and next morning D. E. Hughes went with me to the ward to see my supposed paretic, when to our astonishment, his pupils were equal, and his riches had taken wings. The patient was discharged cured of delirium tremens a few days after, and I have not heard of him since. Regis' idea that belladonna instilled into the eyes at an early stage of paresis may bring out a latent inequality of pupils, made us ponder the question whether alcohol can, in like manner, bring out mental signs in a *potential* paretic or in an incipient paresis.

This case is the only one in which we have had to contemplate the diagnosis of pseudo-paresis upon which the French dwell so much. In our experience the type of alcoholic insanity, as of lead insanity, which may be said superficially to resemble paresis, has been *confusional*;* and the crucial tests of paresis have, we think, been sufficient to enable us to decide.

What then shall we regard as the "crucial tests" of true paresis?

By general consent, the most important is *the state of the pupils*; and speaking broadly, for the sake of impressing the fact, we may say that any abnormality of the pupils, not accounted for by a local lesion, may serve as a sign of paresis. In table No. II, A.

*There were twelve colored paretics (11 men–1 woman) in our entire series.

*See also Dercum on Classification of Insanity Journ. Nerv. and Ment. Dis., Sept., 1901.

TABLE No. II.

A. Pupils in entire series		B. Pupils in series of 41 cases.	
Widely dilated	in 9%	Large 5% / Wide 12½%	17½%
Narrowly contracted	in 5%	Small 12% / Pin-point 5%	17%
Unequal in (R. larger in 32% / L. " 37%)	69%	40% / 30%	70%
Reactions apparently normal	in 4%		10%
No reaction to light or accom.	in 7%	One side only	12½%
Reaction sluggish to both L. & Acc.	in 24%		17%
Light reaction sluggish / Accom. normal	in 17%	One side only in 2%	15%
Argyll-Robertson	in 12%	One side only in 2½%	5%
Light reac. *nil*; accom. sluggish in		One side only in 7½%	17½%
Light Reac. slight; accom. fair		One side only in 2½%	17½%
Consensual reac. absent in one eye when light reac. present			10%
Consensual reac. slight in both eyes with light reflex good			21%

Argyll-Robertson *type* Proportion.

it appears that inequality is the most frequent change in the state of the pupils and doubtless this is the sign which the practising physician finds ordinarily most serviceable; for though inequality of pupils may occur in a great variety of affections, by far the commonest cause of it is paresis. On the other hand, abnormalities in the pupillary reactions are found to be the most frequent change when a very refined technique is employed in the examination of the eye. Table No. II, B. represents 41 cases (23 men and 18 women) in various stages of paresis, examined by my colleague, Dr. Elizabeth Lovelace and myself, especially to determine the frequency, in our Blockley cases, of reflex pupillary signs. One interesting fact revealed in this table (II, B) is, that while the pure Argyll-Robertson pupil is rather rare in paresis, the Argyll-Robertson *proportion*; namely, a more marked impairment of the light reflex than of the accommodative reaction—in other words, an Argyll-Robertson *type* of pupil—is almost the rule, since it occurred in 55% of our cases. Irregularity in outline of pupils, excentric position (most often *up* and *in*), springing mydriasis &c., are less frequent and less constant signs. It may be useful to mention what Hoche emphasizes, that reflex pupillary disturbances occurring in *one* eye have as great a value in diagnosis as the same condition occurring bilaterally.

As to the consensual reflex upon which, as an early sign of paresis, Berkley lays so much stress—we paid special attention to it in our series of 41 cases and found it to be an independent sign in a small percentage of cases; though this percentage would be nearly neutralized had we recorded several instances in which the consensual- appeared more active than the light-reflex.

Consisting as it does, in a momentary reinforcement of the light tonus of one iris on exposure of the other eye to light, the consensual-reflex doubtless follows the path of the light-reflex and, *a priori*, it would seem astonishing that its mechanism should be *selected* by degenerative lesions in any considerable number of cases. Moreover, it cannot often happen that being abolished early in paresis, it should return later;* so that, since in general the consensual-reflex corresponds closely to the light-reflex, we cannot agree with Berkley that the former possesses any decided advantage over the latter as a sign of paresis at any stage. I learn from Dr. G. E. de Schweinitz that this is the conclusion of Swanzy, of Dublin, regarding the consensual-reflex.

It may be noticed in table No. II, B, that the pinpoint pupil and the Argyll-Robertson pupil occurred in equal numbers of cases. Perhaps it is worth mentioning that these two signs, however, do not necessarily coincide. In fact, the "Argyll-Robertson type" of pupillary reaction in our series coincided rather more frequently with mydriasis than with myosis; and in patients with unequal pupils it was the wide one that showed impairment of reflexes more often than the narrow one.

It is a pretty well established law, that an abnormal knee-jerk accompanying any psychosis or neurosis in middle life suggests paresis. Our record of absent knee-jerks (31%) in table No. III. seems high, and

TABLE No. III.

Knee-jerks in entire series.

Increased in	49%	
Diminished in	10%	41%
Absent in	31%	
Normal	10%	

it may be questioned whether the Jendrassik method was always properly applied by us; but on the whole this table agrees with accepted teaching, particularly as to the greater frequency of *increase* of the knee-jerks. In three per cent. of the cases we found marked *inequality* of the knee-jerks, which has the same diagnostic importance as any other abnormality of this reflex. In five cases paresis supervened upon a distinct tabes dorsalis; in other words, the so-called ascending type of paresis occurred in 3.33% of our series.

In the every day life of the insane wards there is no more striking event than the "paralytic attack" of the paretic. That a strong man showing hitherto perhaps only slight or equivocal signs of paresis should suddenly be stricken with what resembles epilepsy or apoplexy, is always disconcerting and

*Although Dr. Wm. G. Spiller tells me that it is conceivable.

alarming; but to the diagnostician it is often a casting of the die. From long association with so practical a clinician as D. E. Hughes I know that, to him, no manifestation of paresis has so great *confirmatory* value; and in the light of modern teaching regarding even the tubercle bacillus in lung diseases and tubecasts in diseases of the kidneys, we may say that the paralytic attack of paresis is one of the most *significant* things in the whole range of medical practice—telling us finally that our patient has been drafted to "that war in which there is no discharge".

TABLE No. IV.

Episodes in 149 cases of Paresis.

	Classic.		Demented.		Depressed.	
	Men	Women	Men	Women	Men	Women
Epileptiform	11	5	20	4	5	4
Apoplect.	3	3	12	2	2	3
Maniacal	10	4	8	4	1	3
Stuporous.	3	8	2	5	0	4
Petit Mal.	4	2	2	3	2	1

Table No. IV shows what is commonly taught: that the epileptiform attack is commoner than the apoplectiform; and table No. V confirms the teaching that the former is also more fatal. That the "maniacal outbreak" is a true "episode" of paresis—in the same category with the epileptiform and apoplectiform attacks—has long been orthodox teaching. That there is a homology in these various episodes, is shown by the fact that all may occur in succession in one "crisis," epileptiform convulsions ushering in the apoplectiform state from which the patient emerges paralyzed in one-half of the body or in one member or set of muscles—the paretic hemiplegic or monoplegic attacks—while before or after these troubles he is maniacal, and through them all, commonly, he has a temperature elevation of from 1° to 6° or even more. And anyone of these epilept, apoplect, hemipleg. attack, maniocal outbreak, or *temperature-rise* may occur singly in the same patient at another time.

TABLE No. V.

Causes of death in 52 cases of Paresis.

	Demented.		Classic.		Depressed.	
	Men	Women	Men	Women	Men	Women
Epilept. Episod.	6	2	9	2	1	0
Apoplect. „	2	1	1	1	1	1
Stuporous Attack	2	1	0	0	0	1
Gangrene of lung, from Epil. Conv.			1			
Empyema	1	0	1	0	0	0
Phthisis Pul	1	0	1	0	0	0
Pneumothorax	0	0	0	0	1	0
Pneumonia	1	2	1	0	2	0
Dysentery	0	2	0	2	0	0
Pachymeningitis Hem	0	0	1	0	0	0
Meningitis	0	0	0	1	0	0
Nephritis	0	0	1	1	0	0
Intern. Hydroceph.	1	0	0	0	0	0

The matter of temperature in paresis is a mooted question. That there is any regular periodicity of temperature rise is held now by almost no one; paresis is not a febrile disease. But that an isolated temperature rise often represents an *abortive* episode is quite certain.

F. X. Dercum, in his lectures at the Jefferson College last winter, expressed the opinion that the apoplectiform attacks are commoner early in the course of paresis, the epileptiform prevailing later; and our records support this teaching to some extent. What is most striking in this regard is, however, that one form of episode tends to recur in any particular patient and so to characterize the case; thus case No. 42, of the demented type, had epileptiform episodes at frequent intervals in a period of several years; case No. 44 had occasional stuporous attacks resembling uremic stupor but with very little twitching of face muscles; case N. 82 never had any but wild maniacal outbreaks. But when we consider the "minor" episodes (which are much commoner than is indicated in table No. IV—"petit mal") we find that they are decidedly more frequent in the earlier part of the course and that while they may be followed later by apoplectiform seizures they tend to give place later to the "grand" attacks—the epileptiform convulsions. The analogy of this to the evolution of true epilepsy is striking, and it is not the only aspect in which a resemblance may be seen; for the "maniacal outbreaks" of paresis, seldom resembling true mania, are usually quite like the epileptic dream-state, or the twilight-state, as the Germans call the ordinary epileptic insanity.

The convulsion, itself, of paresis is often of "Jacksonian" type and is prone to occur in series with coma, resembling status epilepticus; and ordinarily the convulsion of paresis lasts longer than that of epilepsy, though there is no absolute truth in this. Probably it is wisest to confess, as Ballet does, that the *epileptiform episode of paresis may be entirely identical with essential epilepsy.*

The transient aphasia and paraphasia of paresis (table No. I) are in most cases connected with the minor attacks.

In order of *scientific* value for diagnosis, after pupillary disturbances, abnormalities of knee-jerks and paralytic attacks, come (1) tremors of face, lips and tongue, with resultant hesitation of speech and tremulousness of the voice, which lacks its normal fullness of tone—its *timbre*; and (2) impairment of consciousness and of judgment.

This impairment of consciousness and of judgment tinges the conduct of the earliest stage of the disease, being taken account of unconsciously by the experienced clinician; and, with the paretic speech disturbance, it composes the *paretic manner* of speech and action, which, after all, establishes the diagnosis in more cases than all other signs of paresis combined. In hospital association with clinicians

like Mills, Dercum, Lloyd, and D. E. Hughes I have been impressed with the importance which, whether they would confess it or not, they really attach to this which I have called the paretic manner; it is the shibboleth of paresis—to be appreciated only through experience.

The contributory symptoms of paresis are numerous and it is perhaps true that none of them is characteristic. Thus "wandering from home", mentioned in table No. 1, is a trait of the adolescent, of the senile, of the epileptic, of the confusional; but the first leaves home in a restless, persecutory mood—his "orientation" being preserved; the senile is easily recognized and his perambulations are habitual; the epileptic alone may give us great difficulty in the absence of a history. The wandering of the paretic seems to be the manifestation of a *confusional* attack in which there is a dominant impulse to ramble. It is the true "mania errabunda" of the older writers. In Blockley we have learned to suspect paresis whenever an adult patient is brought to us with this history of aimless, excuseless wandering from home.

The hypochondriacal delusions of paresis have considerable significance. They seem to be gradually evolved in the very earliest period of the disease, giving character to the next or "hypochondriacal stage"; and they are said thereafter to be prominent in the depressed form of paresis. In table No. 1 it will be seen that our patients betrayed hypochondriacal delusions. In each of the three forms of paresis, I may add, it was found at all stages. The delusion of pregnancy (table No. 1) a curiously common symptom in women, to which I have seen no reference in the literature, might be included under hypochondriasis. As Ballet first pointed out, it is one of the principal dilemmas in the diagnosis of paresis, to distinguish this disease at an early stage (the neurasthenoid stage of Dercum) from true neurasthenit; it appears sometimes to be impossible. Often the hypochondriacal delusion has the character of an obsession—in case No. 80 of our series, there was true *folie du doute*—so that some paretics are constitutional neurasthenics, in the sense of Morselli, and degenerates, according to Magnan's view of the obsessions.

In the forthcoming second volume of his work on Neurology, Charles K. Mills will declare his belief that paresis is due to syphilis on a neuropathic basis. This may be regarded as the very latest teaching upon the etiology of paresis; but it is more comprehensive than at first sight appears, as the history of this question shows.

Esmarch and Jessen first (1857) advanced the theory that paresis is due to syphilis (Hougberg); but not until 1878, when the great name of Fournier became associated with it did the theory attract much attention, and then a current of opinion, mainly German, set in towards the unitarian view championed by the great syphilographer. Regis, a partial convert, in 1888, proposed a compromise doctrine; that paresis is due to syphilis acting with a *hereditary disposition*; that is, syphilis in the hereditary degenerate. But since the conception of degeneration has undergone a metamorphosis at the hands of some very able members of the French school—who show that a like vulnerability of the nervous system may be acquired—the term *neuropathic* seems to be safer, as embracing both inherited and acquired susceptibility to nervous and mental disease. It is thus that Dr. Mills' statement in one way may be made to reconcile the older view that paresis is due to alcohol, overwork, &c., and the modern one that syphilis is essential.

That purely hereditary degeneration is a strong factor in the etiology of paresis, is shown in table

TABLE No. VI.

Family histories in 89 cases of Paresis.

	Father	Mother	Brother	Sister
Insanity	8	6	2	1
Suicide	1	1	0	0
Imbecility	1	0	1	0
Paresis	1	2	1	0
Epilepsy	0	1	0	1
Hysteria	0	0	0	1
Locomotor Ataxia	1	0	0	0
Cerebral Palsy	0	0	1	0
"Stroke"	7	8	0	1
Alcoholic	10	0	1	0
Chorea	0	0	1	0
Consumption	10	12	2	6
Cancer	2	3	0	0
Heart Disease	2	5	0	0
Asthma	2	1	0	0
Bright's	3	1	0	0
"Dropsy"	1	2	1	0
Rheumatism, Chr	0	1	0	0
Diabetes	0	1	0	0
Blind	0	0	0	2
Sun Stroke	1	0	0	0
Syphilis, Malignant	1	0	0	0
Lead Poisoning	1	0	0	0
Head Injury	1	0	0	0

No. 4, a summary of which reveals a percentage (75%) of vicious constitutional disease as high as that found in our Blockley statistics of dementia praecox, the several forms of which are recognized as peculiarly degenerative.

Grainger Stewart, it appears, was the first to conceive the idea that paretics free from this neurotic taint have greater chance of *remission*. It seems worth while to inquire into this, for remissions have considerable importance in prognosis. The mental excitement of the paretic is often in abeyance for weeks amid the quieting influences of the hospital, and may lead the friends to speak of the patient as "recovered"; though the clinician realizes that merely the foam has cleared from the surface—that (in terms of the dualistic doctrine) his patient is still

paretic dement, his paralytic insanity alone having undergone remission.

All authorities, however, recognize a true, well-nigh complete remission simulating recovery, and this constitutes one of the great problems connected with paresis; for to know how this Tantalus' Cup is held to our patient's lips for months—even years—(though it be always snatched from him at last) would be to know the secret of his disease and perhaps the cure.

Remissions occurred in the following cases of our series:

Case Number.	Duration of Remission.	Family History.
46	Two years	Neg.
80	Seven months	"
85	One year	Mother "stroke" Brother Chorea.
95	11 months	Pat. grandfather "stroke"
99	9 months	Neg.

The family history of these five patients, given in the right-hand column, contains no instance of the graver degenerative diseases; indeed some authors would not regard apoplexy as imposing any hereditary stigma whatever. At any rate the percentage of "vicious constitutional disease" in these five cases is much under that of the general record in table No. VI, and so may be said to support Grainger Stewart's view.

In case No. 95, the first signs of paresis were noticed a day or two after a collision between an automobile and the bicycle on which our patient was riding. He was treated in a hospital for bruises and shock. The latter induced a confusional state, in the midst of which tremor of the lips attracted attention, and shortly afterwards, inequality of the pupils. On admission to Blockley he presented the picture of classic paresis. There are other instances in our series (table No. 1) of this which some authors call traumatic paresis. In at least two other cases paresis *appeared* to originate in profound mental ("moral") shock. At most we may only admit these as "exciting" causes; but that trauma did play this role in Case No. 95 seems probable from the fact that the long remission was established only a few weeks after the accident.

If we look upon remission as a *tendency towards recovery*—a temporary triumph of the reparative processes—it is perhaps reasonable to suppose that *some element of the cause* of paresis is in abeyance in cases which have remissions, and, finding the neuropathic taint slighter, in such cases, we may logically conclude that neuropathy is a common etiological element of the disease. Thus remission may be regarded as a considerable argument in favor of the view held by Dr. Mills.

It may be profitable to suggest two lessons from our study of paresis. First, for our patient: That immunity from paresis rests not on freedom from the great infection alone, but, as the older writers believed, on abstinence from *all* excesses. Second, for ourselves: That diagnosis, the principal thing required of us in the present state of our knowledge of paresis, depends so much upon a practical acquaintance with the "paretic manner," that no amount of fine training in the best schools can take its place. Impressed with this fact by daily contact during several years, with some scores of the best graduates of our Philadelphia medical colleges, I would urge the importance of *teaching in the asylums*. An hour in the wards is of more value than many lectures.

SOMNOLENCE CAUSED BY AN EAR LESION.*

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With Remarks by CHARLES H. BURNETT, M. D.,
of Philadelphia.
Aurist to the Presbyterian Hospital.

W. A. R., aet. 13 years, came to the dispensaries of the Presbyterian Hospital, January 14, 1901, complaining of a tendency to sleep all the time.

The history was that without feeling tired or out of sorts in any way he would go to sleep whenever his attention was not aroused by action. When sent to the store he would fall asleep while his order was being filled; he would fall asleep at the dinner table; one day, indeed, he slept on the lounge from morning until evening and all night besides. The condition did not simulate petit-mal at all.

The disposition to sleep had existed a month when I first saw him. There were no other symptoms; no vertigo, no tinnitus, no nausea, no headache. Careful physical examination made by Dr. James Ely Talley as well as by myself showed an absence of defect of any kind except that I discovered a small impaction of cerumen in the left ear.

He was reasonably well nourished. The heart and lungs were normal. Eye grounds examined by a specialist were found to be normal. The examination of the nervous system was negative in result; station good, reflexes normal, gait natural. There was a slight trace of albumin in the urine; no casts, no sugar. Upon syringing the ear on the following day, the wax came out readily and a few drops of very fetid pus were found behind it. The drum was macerated and had a large perforation in the lower posterior quadrant. Within a day, without other treatment, the unnatural sleepiness disappeared; there was then no visible discharge from the ear. Seen on January 26th, the boy was apparently well. Careful inquiry into the past history of the patient developed the fact that five months previously he had been affected somewhat in the same way with sleepiness, but to a much less extent and had at that time an otorrhea; it had lasted a short time. The boy says that his ear had occasionally discharged ever since he had the measles as a "small child."

April 4th, some cerumen present with slight offensive discharge; large perforation as before. His mother says that there is some return of sleepiness, patient denies this statement. After cleaning, the symptom disappeared and has not returned.

April 10, 1901, Dr. Charles H. Burnett, aurist to

*Read before the Phila. Co. Med. Soc., Dec. 11, 1901.

the Hospital, examined the boy, but could find nothing to explain the somnolence. He suggested that it might have been caused by caries in the attic or possibly be due to some disease of the dura from carious bone. The case was seen by Dr. A. H. Cleveland also.

August 19, some foul smelling cerumen; no visible pus. Since that date I have removed the flakes of cerumen and epithelium as they collected.

Notes: Hearing in left ear 1-6. Not good for low tones. High pressure through Siegele speculum does not produce any symptom. Weber test tuning-fork heard better in left ear, Renné test—normal in right ear; reversed in left.

The case is an unusual one and I have not been able to find any similar one on record. My first thought was that the condition had been brought about by pressure. It may have been due, however, to meningeal irritation caused by absorption of minute quantities of pus. A low grade of periostitis, if not of caries, undoubtedly exists in the attic or antrum. This gives rise to no symptoms except those of odor and slight discharge until the discharge is obstructed in its exit, when absorption is increased and a slight degree of meningeal irritation is produced. The blood supply of the middle ear is intimately associated with the middle meningeal artery. The superficial petrosal artery, a branch of the middle meningeal, enters the middle ear through the bone wall above and supplies the malleus, stapes, etc. The stylo-mastoid enters below, also from the middle meningeal, veins and lymphatics accompanying the meningeal branches. This intimate relation makes the hypothesis of meningeal irritation a probable one. Usually meningeal irritation is accompanied by insomnia as a symptom. If, however, the irritation is very slight, it can be imagined that a slight contraction and ischemia might result and somnolence be produced. Knapp in the American Text-Book of diseases of eye, ear, nose and throat (p. 757) speaking of epidural abcess mentions somnolence as one of the indefinite symptoms of the disease.

If somnolence can result from slight meningeal irritation, we have conditions present to produce it in this case.

Pressure on the labyrinth fluid via the round window or the oval window or even through spots of bone made thin by caries, might produce faintness or even sleepiness. Erhard, of Berlin, in a book translated some years ago by Dr. Burnett refers to a case in which the occlusion of the Eustachian tube by the sudden inhaling of acetic ether made a robust healthy man fall senseless to the floor, absolutely deaf to the loudest noises and notes. He could be aroused only by shaking. Yet upon introducing air into the tympanum all these strange symptoms instantly disappeared.

This case is apropos as evidencing the enormous effect of the unsettling of the pressure equilibrium in the ears of some people.

That my case did suffer from somnolence I have every reason to believe and in view of his immediate recovery after the removal of the wax from the ear I am inclined to ascribe the symptom to either meningeal irritation from the absorption of pus or possibly to pressure upon the labyrinth fluid.

It occurred to me that it would be an interesting experiment, were it not dangerous, artificially to block the canal and observe the results; but it involved a risk that I was not warranted in taking.

Remarks by Charles H. Burnett, M. D.*

Somnolence from otitic influences is rare and its etiology obscure. There are few cases on record, and this is the only one that has come under my personal observation. Somnolent and syncopoid states dependent upon aural lesions may be divided into two classes, viz.; (1) Those depending upon otitic causes, and (2) those depending upon direct pressure upon and undue impaction of the stapes in the oval window of the labyrinth.

I. As to those dependent upon chronic purulent otitic lesions, a good description and summary of symptoms and causes are given by Hinsberg (*Archives of Otology*, April, 1901), as follows: "The extension of the suppurative otitic process may be diffused over any part of the cerebral surface, or we may find circumscribed collections of pus in the subdural space and in the interstices of the arachnoid. Autopsy may show that such circumscribed collections may be the later starting-point of a diffuse meningitis. Brieger calls this form of meningitis 'chronic intermittent,' and deems it of considerable importance. He gives two illustrative cases which are worth quoting: 'The first patient was a man who had had headache for about two years, with cholesteatoma of the temporal bone. The pain in the head varied, and there were occasional *somnolent periods*, combined with convulsive movements. Meningitis followed an operation [for relief of the cholesteatoma] and the autopsy showed that the labyrinth was the starting-point of the infection, and that there were many old (meningitic) lesions particularly in the pia of the cerebellum.'

"The second case reported by Brieger was that of 'a man who had had chronic discharge from the ear, and was subject to repeated attacks of intracranial inflammation, sometimes presenting symptoms of brain abscess, and sometimes those of sinus thrombosis. The patient was observed for two weeks, during which he complained of pain in the back and head, but presented no objective signs of meningitis. At the end of this period he began to have fever, stiffness of the neck, and *mental dulness*, and died in twenty-four hours. Autopsy showed old thickenings in the pia of the middle and posterior cerebral fossæ, adhesions to the dura, and a recent spinal meningitis. The labyrinth was the starting-point of the infection.'

"von Bergmann has found that the staphylococcus albus does not necessarily cause fatal meningitis, as he has found this bacterium in a case that recovered. The exact behavior of other bacteria is still undecided. Gradenigo mentions two cases with staphylococci in the cerebro-spinal fluid, and Hinsberg has seen one similar case, all of which recovered. The last-named author agrees with Oppenheim, that suppurative meningitis is not a disease of one type, and that the character of the infecting micro-organ-

*Died January, 1902.

ism makes a difference in the course of the disease and in the prognosis. Leutert believes that virulent bacteria cause diffuse meningitis when they puncture the dura, and ascribes the *circumscribed* abscess to a diminution in virulence in the infecting organisms, from decrease in number and power. The conditions may be considered analogous to what is seen in the peritoneum, which can dispose of infectious material up to a certain point. This is important in deciding whether it is worth while to remove the primary focus in the ear, in order to influence favorably the course of an already present otitic meningitis. If we could draw trustworthy conclusions from clinical symptoms as to the extent and character of the anatomical conditions, we should have gained much in the way of therapeutics.. This can be done in advanced cases, when the meningitis is diffuse; but it is then too late. We must therefore try to advance our knowledge of the beginning and circumscribed forms of the disease. Oppenheim calls attention to cases associated with otitis media and circumscribed areas of meningitis in the posterior cranial fossa and in the spinal canal. In such cases the spinal symptoms are most marked. In a case mentioned by Jansen and Oppenheim, with meningitis of the lumbar cord, the only symptoms were oral pains and incontinence of feces and urine. When there are circumscribed areas of meningitis over the cerebellum, all characteristic symptoms may be absent, though the diagnosis may be made by exclusion."

II. Respecting the second classification of cases, the syncopoid or semi-somnolent states—those dependent upon direct and undue inward pressure of the stapes—it may be said that they are more frequent and more easily explained. These may occur either in those with intact or perforated membrana tympani. In the *first* form any force that carries the drum-head and ossicles unduly inward induces excessive impaction of the stapes in the oval window and mediately irritative pressure upon the labyrinth fluid.

Compression of this fluid in the bony labyrinth, if not excessive, is compensated by recession of the membrane of the round window. If the compression of the labyrinth is more than can be counterbalanced by recession of the round window membrane, the terminal filaments of the ampullar branches of the auditory nerve in the semicircular canals are unduly compressed, and there are observed resultants, vertigo, syncope, and mental hebetude.

The boy whose case has been related by Dr. Harland may belong to the first class, his symptoms being due to meningeal irritation of otitic origin, caries having passed from the drum cavity into the labyrinth. He certainly bears watching, as any relapse or reappearance of somnolence in a subject of chronic purulent otorrhea, like him, would lead to the strong suspicion that he may be the subject also of a secondary and chronic, circumscribed meningitis, perhaps in the posterior cranial fossa.

A SECOND CONTRIBUTION TO THE STUDY OF ANESTHESIA BY NITROUS OXIDE GAS AND ETHER.

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It is the intention of the writer in this paper to give the results of his experience in the administration of ether preceded by laughing gas, the Goldan apparatus as shown in the illustration having been



employed for all cases. In his first article[1] were described the various kinds of apparatus, the safety and advantages of this form of anesthesia, the method of administration and its popularity in England and New York City. Numerous references have appeared in medical literature during the past year, all testifying to the growing popularity of this substitution of gas and ether for ether or chloroform alone. Howard A. Kelly and T. R. Brown, of Johns Hopkins, after relating their success with an eight months' trial, thus conclude:[2] "In our experience the method has seemed to possess so many advantages to the patient, operator and anesthetist, and so few disadvantages to any of these, that it has become an indispensable part of our operative technique; and that it has proved satisfactory can be easily judged from the fact that after over 200 anesthetizations with the method, our faith in it, instead of diminishing with experience, has increased a hundredfold." H. W. Carter[3] also writes in favor of gas and ether. Hewitt,[4] anesthetist to King Edward, continues to praise this method, esteeming it far superior to any other method which we possess at the present time. These are strong words from a man whose entire life has been devoted to the study of anesthesia, and whose book on the ad-

ministration of anesthetics is now in its second edition. In recent surgical text-books[5] are incorporated favorable comments concerning the use of gas and ether. A personal communication from Dr. G. M. Creevey, anesthetist to the New York Hospital, states that gas and ether are more popular than ever in all the New York hospitals and that McBurney, Bull, Weir, Markoe, Hartley and others employ this combination except when ether is contraindicated owing to disease of the lungs or kidneys. Dr. Creevey has given gas and ether in over 200 cases, has seen no bad after-effects, and has heard of no deaths caused by the use of this method. Nearly two years have passed since Dr. M. D. Mann gave gas and ether for the first time in Buffalo. That this combination has won favor with other Buffalo surgeons may be seen by reviewing the cases cited below.

The experience of the writer has been largely with patients whose physical condition rendered the giving of an anesthetic a dangerous matter, because of weak cardiac action, severe or prolonged illness, old age, or general ill-health. The majority of the patients were women or children. In one case death resulted later on owing to the condition of the patient and not to the anesthetic (see case 6). The writer has seen no ill effects since he learned the method while acting as house surgeon in Roosevelt Hospital, and has found no report of a death in the literature due to the administration of gas and ether. This safety seems to depend upon the small quantity of both gas and ether used. The patient never inhales sufficient gas to reach the typical condition of marked cyanosis, widely dilated pupils and cessation of respiration. Before that stage is reached the gas has been exhausted and the ether has replaced it. The very object of giving the gas would be defeated by allowing the patient to inhale too much of it, because the necessary removal of the apparatus would allow the patient to regain consciousness. The second element of safety is explained by the small quantity of ether inhaled. The smallest amount of ether used by the writer during an operation was two and a half drachms, the largest three ounces. Ordinarily one to two ounces suffice for an operation. The old objections to ether, *i. e.*, after-effects upon the respiratory organs and kidneys, are thus largely removed by reducing the quantity inhaled to one-third or one-fourth of what is usually given with the open cone. Kelly, of Baltimore, substituted the open cone after anesthesia was produced by gas for the closed inhaler and hence he reports the use of much larger quantities of ether, 50 to 300 gms. (one and one-half to nine ounces).

The closed inhaler in some cases caused no cyanosis, in others a mild cyanosis throughout the operation which is promptly relieved when the inhaler is finally removed. But once has the writer noticed marked cyanosis (case 3) after the patient, a large, heavy woman, had been kept in the Trendelenburg position for some time. Kelly considers that the degree of cyanosis largely depends upon the skill and experience of the anesthetizer. Undoubtedly two factors are in play, first the ether and secondly a certain amount of asphyxia. This second element is always under immediate control. It is the custom of the writer to remove the inhaler about once every two minutes to allow the patient one or two inspirations of pure air.

Subsequent nausea and vomiting have apparently corresponded to the quantity of ether inhaled. In other words, as less ether is required with this method, the patient is ordinarily less troubled with such unpleasant after-effects.

Nitrous oxide causes a rapid rise of blood pressure and a contraindication to its use has been an atheromatous condition of the arteries. This objection ought not to hold, in view of the small amount of gas inhaled (see case 4). Kemp has advised a hypodermic injection of nitroglycerine before giving gas to aged patients to avoid high arterial tension.

Observations on the pulse changes have been recorded by Kelly (*loc. cit.*). The ether stimulates the heart and the pulse is steadied and increased in volume.

A most interesting question has been raised of late years concerning the proper anesthetic to be given to patients suffering from the *habitus lymphaticus*. Hinkel,[6] in 1898, called attention to the large number of deaths resulting from the use of chloroform in cases of adenoids and hypertrophied tonsils. He reported one death occurring in his own practice and reviewed the literature, citing seventeen other fatal results from chloroform and but one death from ether. He was able to find but six authentic cases of death attributable to the adenoid operation itself, all from hemorrhage. He concluded that chloroform should never be given to patients of the lymphatic temperament but that nitrous oxide, ethyl bromide or ether should be substituted. T. H. Halsted,[7] after referring to Wyeth's and Kolisko's positive statements regarding the danger of chloroform and reporting the death of a patient from chloroform after removal of adenoids and tonsils, advises against ethyl bromide as being too great a cardiac depressant. He admits that nitrous oxide is useful but the period of unconsciousness is too short for effective work. He says, "At the same time there are many cases in which nitrous oxide gas would be sufficient, and it probably has a valuable place as a preliminary to etherization, though I have had no experience with it in this connection." Ether is his favorite and he has employed atropine gr. 1-300 to gr. 1-100, prior to the ether and swabbed the mucous membrane of the nose with a bit of cotton dipped in a cocaine solution. Lloyd[8] advises ether or gas and ether. At a meeting of the British Laryngological Association in April, 1897, a majority of the members stated that they made use of the gas followed by ether or gas alone for operation upon adenoids. Hopkins[9] reports a case upon which he was operating for adenoids and which almost died from the chloroform. Since that time he has advocated gas and ether. McCardie and Marshall[10] advise gas and ether, ether or the A. C. E. mixture. Goldan[11] remarks: "Ether is certainly far safer, particularly in this class of patients, throughout the narcosis."

Dr. Hinkel, of Buffalo, is now strongly in favor of the gas and ether, deeming it by far the safest and most satisfactory method for these throat cases. For an example see case 7. The induction of the anesthesia by the gas reduces the quantity of ether needed to such a small amount that the secretion

of mucus, the hemorrhage and the vomiting are greatly minimized.

The changes in the technique of administration which the writer has found to be of service since his first article are as follows: The rubber mouth-piece may be kept sterile by placing it in a weak formalin solution after each operation. The quantity of ether inhaled may be determined by using as a holder a graduated nursing bottle with a cork perforated by two metal tubes, such as ordinarily is used to drop chloroform upon a chloroform inhaler. Dr. Mann originated a little scheme for introducing the ether which the writer has found of great service. By boring a small hole in the metal cylinder which holds the gauze, and inserting into it the end of one of the tubes in the cork of the nursing bottle, the ether is allowed to trickle upon the gauze quietly and rapidly. About twenty seconds after starting the gas the first dose of ether may be run in, and at the end of the second minute, by which time the gas has made the patient unconscious, the gauze in the cylinder has been well saturated with ether. At the end of the fourth or fifth minute a return to semi-consciousness is sometimes noted, but continued small doses of ether quickly control the situation.

The following cases have been selected for special comment:

CASE 1.—September 4, 1900; female, aet. 22; appendicitis and pelvic abscess. Operators, Drs. Roswell Park and M. D. Mann. Operation had been repeatedly deferred owing to weak cardiac action, anemia and prolonged illness. Operation lasted one hour and the patient's condition was excellent throughout. About two ounces of ether were given. Recovery complete without sequelae.

CASE 2.—November 19, 1900; male, aet. 10. A nervous poorly nourished boy with weak heart action. Operation. Circumcision. Relaxation complete in three minutes when Dr. J. W. Putnam assumed charge of the anesthetic and the writer operated. An unusual amount of nausea and tympanites followed, due undoubtedly to a previous disturbed condition of the bowels.

CASE 3.—It is interesting to note that two members of the family to which this patient belongs had died during the administration of chloroform and within a month after this operation a cousin died while taking chloroform before being placed on the operating table. July 24, 1901; female, aet. 28. Recurring attacks of appendicitis. Operator, Dr. M. A. Crockett. Poor breathing and cyanosis were evident when the patient, a large heavy woman, was inverted in the Trendelenburg position. Otherwise the anesthetic was well taken.

CASE 4.—September 12, 1901; female, aged about 70, a patient of Dr. Charles G. Stockton. This woman had formerly been given gas and ether by Dr. Mann for another purpose. Operation, extraction of fifteen teeth. While the gas was being administered, enough ether was given to continue the anesthesia for about four minutes, during which time Dr. Eschelman promptly removed the teeth. Ten minutes afterwards the patient had recovered consciousness without any after effects, and all bleeding had ceased.

CASE 5.—September 13, 1901; female, aet. 28. A very large woman with weak cardiac action. Chronic appendicitis. Operator, Dr. J. C. Thompson. Three ounces of ether were used, owing to the size of the patient and to the fact that the operation lasted one and one half hours. Except for a certain amount of rigidity of the abdominal muscles the patient took the anesthetic very satisfactorily.

CASE 6.—October 23, 1901; female, aet. 25. Pelvic peritonitis and general septicemia. Patient in a most desperate condition, receiving stimulation freely. Operator, Dr. M. A. Crockett, who opened Douglas's cul de-sac and in e ted drain age. When the gas was inhaled, the patient's pulse rose from 140 to 180, but after the ether had been started and an additional hypodermic given, the pulse slackened and increased in volume. The patient died in two days from sepsis.

CASE 7.—December 14, 1901; female, aet. 6. Adenoids and hypertrophied tonsils. Operator, Dr. F. W. Hinkel. Unconsciousness ensued more slowly than usual with coughing, owing to the irritable condition of the pharynx. Altogether two and a half drachms of ether were required to obtain relaxation, which continued until Dr. Hinkel had completed the operation.

CASE 8.—February, 1900. A doctor's wife, who had been operated upon previously for pelvic disease. Present condition, ventral hernia and pelvic adhesions. Complications, weak heart action and deficient renal secretion. Operator, Dr. M. D. Mann. The patient was made to inhale nitrous oxide almost continuously during the operation, which lasted one-half hour. One-half ounce of ether was given in addition, to maintain unconsciousness. No congestion of the kidneys followed, and the patient made a complete recovery.

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THE SUPRAORBITAL REFLEX—AN EXPLANATORY NOTE.

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In the *Neurologisches Centralblatt*, September 1, 1901, I published what I considered to be a pure sensori-motor reflex in the distribution of the fifth and seventh pairs of cranial nerves. To this reflex I gave the name "Supraorbital Reflex," because it is most commonly, if not exclusively, in the vast majority of cases elicited by mechanical or other irritation in the distribution of the supraorbital nerve. The technique of producing this reflex is as follows: The patient is made to relax the facial muscles about the eyes as far as possible, and then a slight tap of the percussion hammer is made high up on the forehead beyond the fibres of the orbicularis palpebarum; almost instantaneously a quick fibrillary contraction of the individual fibres in the inferior half of the orbicularis palpebrarum will be seen. In some cases there will be an associated movement of the lids, but this is not the reflex reaction, and is not infrequently absent. In some cases, in which the reflex action is diminished, this reaction will only be obtained when percussion is made over the trunk of the supraorbital nerve. Usually the reflex can be obtained by tapping anywhere in the distribution of the supraorbital nerve. The semi-voluntary closure of the lids due to the fear or pain of the blow, and the movement of the lids due to irritation of fibres of the orbicularis, or branches of the facial nerve, are to be excluded. In very rare cases, when this reflex is greatly exaggerated, a contraction in the orbicularis may be obtained by per-

cussion over the malar arch. I have seen only one such case.

There are so many reflexes described from time to time that there must be some excuse for taking up valuable space in journals for the discussion of any new one. It may be said that wherever in the body the tendon of any individual muscle can be isolated and tapped, that a muscular reaction will follow. These are the "muscle-muscle jerks" of Weir-Mitchell. The periosteum and the skin in certain definite areas of the body when irritated will also give rise to muscular contractions. Such reflexes are of value just in so far as the reflex arc can be definitely determined.

One of my reasons for the publication of the supraorbital reflex was the fact that it was the only reflex in the body where irritation of a pure sensory nerve gave rise to a reaction from the nerve supply of a pure motor nerve (facial). It would therefore be the ideal reflex for the determination of the time limit of reflexes and the estimation of this limit would, I thought, have some distinct bearing on the much discussed subject of the discrepancy between the time required for the knee jerk, after the exciting stroke on the tendon, and the estimated time for an impulse to travel to the cord and back to the muscle. The estimation of the time limit of the supraorbital reflex is not yet finished, but I expect to report on it in a short time.

In my first paper I considered that I had definitely established the sensori-motor character of the supraorbital reflex, the reflex path, and the necessity of this path, or the reflex arc, as it is called, for the production of the reflex movement, for the following reasons:

1. That the reflex was abolished after section of the supraorbital nerve, in a case operated on by Dr. Frazier.

2. The absence of the reflex after section of the sensory root of the Gasserian ganglion in the Spiller-Frazier operation for trifacial neuralgia (**Phila. Med. Journal,** 1901). The man on whom this operation was performed is still anesthetic on the affected side and the reflex is still absent.

3. The reflex was absent in a case of gumma of the fifth nerve within the skull, in which there was almost complete isolated paralysis of the fifth nerve on that side.

4. This reflex was absent in a case of pontine, and meningeal lesion of Dr. Spiller's, in which the corneal reflex was still present but diminished.

5. It is absent in all cases of complete paralysis of the facial nerve peripheral in type.

After the appearance of my paper, Hudovernig (*Neurologisches Centralblatt*, September, 1901) came to the conclusion that this reaction was an overflow contraction transmitted from the occipito-frontalis to the orbicularis. In the patient on whom the Spiller-Frazier operation on the root of the fifth nerve had been performed, the muscular irritability of the frontal belly of the occipito-frontalis was markedly increased and in spite of this there was a complete absence of the fibrillary contraction in the inferior fibres of the orbicularis. Hudovernig's objection and explanation therefore must be incorrect. His statement that this reflex was present after removal of the Gasserian ganglion, I can only reply to by stating that in attempted removals of this ganglion in a great majority of the cases the ganglion is only partially removed (Keen and Spiller, *Am. Journal Med. Sc.*, 1895), and that in the only case of complete extirpation of the ganglion which I was able to examine, this reflex was absent.*

v. Bechterew, in two papers in the *Neurologisches Centralblatt* (1901, Sept.; 1902, Feb.), discusses the nature of this reflex and comes to the conclusion that it is only partially a true reflex, and that it is to a certain extent due to a transmission of the mechanical impulse along the different fasciæ and the muscle fibres. The results in the cases above mentioned of removal of the Gasserian ganglion, and section of its sensory root, and the absence of the reflex in paralysis of the facial nerve, where the muscular and fascial transmission should still persist, and the presence of a crossed reflex in the opposite orbicularis, while it is absent on the side irritated (this being generally admitted) is sufficient at least to raise some doubt as to v. Bechterew's conclusions. v. Bechterew also has insisted that this reflex could be elicited by percussion over the arch of the malar bone. I have seen this in only one case; a case of very marked exaggeration of this reflex. This, however, is not surprising when it is remembered that not infrequently in marked reflex excitability the knee jerk may be obtained by tapping over the tibial periosteum, the periosteum of the inner surface of the femur, and of the lateral surface of the patella, at a distance from the patellar tendon. This is also true of the Achilles jerk and biceps jerk.

In order to exclude the mechanical errors, at the suggestion of Dr. S. Weir-Mitchell, I tried irritation of the skin areas in the distribution of the supraorbital nerve by means of heat, cold and pain. In a case in which the reflexes are active the supraorbital distribution could be accurately outlined by means of the reflex action in the orbicularis after the application of the pin point, or a frozen or heated instrument over the supraorbital area. The reflex was not obtained outside of this area. The results in this series of experiments were so conclusive that I feel that not only is the same supraorbital reflex justified, but my original explanation of the phenomenon as a pure sensori-motor reflex is correct.

Sailer (**Philadelphia Med. Journal**, 1901) and Overend (*London Lancet*, Jan. 25, 1902) agree as to the reflex nature of the phenomenon. Overend suggests the name "ophthalmic reflex" and calls attention to the fact that he published, in 1896, what was to all intents and purposes the same condition as described by me, without, however, explaining its relation to the supraorbital nerve which he still denies.

The upper portion of the face is richly supplied with sensory nerve filaments from the fifth nerve, all of which are accessible to mechanical or sensory irritation. A careful study of the reflexes in this

*Phila. Med. Jour., 1901.

area will show that there are several independent and distinct reflexes, as follows:

1. A pure sensori-motor reflex, in the nature of a skin-muscle reflex, elicited from the supraorbital distribution exclusively.

2. A periosteal reflex may be obtained when there is an excited condition of the reflexes, by irritation (percussion) over the malar arch or the periosteum of the nose (v. Bechterew, Overend).

3. The corneal and conjunctival reflexes, by irritation of these structures.

4. The corneo-mandibular reflex of v. Solder, a lateral movement of the lower jaw produced by irritation of the cornea. (*Neurologisches Centralblatt*, 1902).

In the preparation of this paper I have been much indebted to Dr. S. Weir-Mitchell, the pioneer in this country in reflex research and still an authority on all that pertains to this subject, and to Dr. Spiller and Dr. Wm. J. Taylor for the use of their cases.

ARTERIOSCLEROSIS AND THE NERVOUS SYSTEM.*

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The term, arteriosclerosis, has been used somewhat loosely, but in a general way may be understood to mean a chronic progressive disease characterized by thickening and loss of elasticity of the vessel walls and ultimately deposit in them of lime salts, with a tendency to deformation and obstruction of their lumina. The process affects, in the main, the arteries, but may also extend to the veins (phlebosclerosis). The capillaries too are apt to suffer. The disease is also known as atheroma and arteritis deformans.

Of the causes of arteriosclerosis, advancing age is the most important. It is an old saying that "a man has the age of his arteries", and as Demange has expressed it. "Atheroma seizes upon old vessels as moss covers the bark of old trees". However, the disease is not confined to old age, but has been observed even in the latter part of the third decade. In these early cases heredity, and according to Edgren, more especially syphilis, plays an important part. Besides age a number of other factors have been accused. Edgren, after an exhaustive investigation, gives, in the order of their importance, syphilis, abuse of alcohol and heredity. Other causes, as exhausting mental or bodily work, bad food, chronic intoxications (as by lead), the gouty and rheumatic diatheses, he estimates as of minor importance. It is not the purpose of this paper to discuss the pathology and symptomatology of arteriosclerosis in general, but to consider briefly its effect upon the nervous system, mainly from the point of view of symptoms produced. As is well known, the distribution of arteriosclerosis is variable, all the arteries of the body being liable. Certain arteries, however, are oftener affected than others, and while the scale of relative frequency, as given by different authors, varies, next to the aorta and the renal arteries, in liability to attack, are to be placed the cerebral vessels. The changes in the vessel walls tend to produce loss of elasticity, diminished power of resistance and contractility, and alteration of calibre. The arteries tend also to dilate and to lengthen, the latter change being shown by increased tortuosity. The process affecting the media interferes with the action of the vaso-motor nerves upon the calibre of the vessels; and consequently, with regulation of the blood flow to different organs. A far greater influence, however, is exerted by the narrowing of the lumen through changes in the intima. In order to functionate properly, every organ needs a plentiful and well regulated blood supply. When this fails, functional insufficience occurs. This insufficience, which has been called by Huchard, "Meiopragia," plays an important role in the subjects of arteriosclerosis. In no organ is an intact blood supply more essential than in the nervous system, and many of the symptoms which we shall study may be considered as evidences of a "meiopragia" affecting the nervous system. When the nutrient arteries have their lumina permanently diminished, or are entirely occluded, to functional insufficiency of an organ anatomical change is added. The alteration of the intima not only tends to cause gradual narrowing, but favors the production of thrombosis. Where closure of the vessel occurs suddenly, acute necrosis in the territory supplied by it is produced. Where the stoppage is gradual, there is slow death of functionally active tissue, with connective tissue hypertrophy, a sclerosis. Certain sclerotic changes, not infrequently found in the spinal cord and brain in old people, are probably due to this cause. The increased liability to rupture of atheromatous arteries is known to every one, and nowhere does hemorrhage show more disastrous results than in the nervous system. It will be well here to review briefly the chief facts with regard to the blood vessels of the nervous system.

The nerves have a very rich blood supply. Each nerve receives its arteries from a constant source, but never all of them from one trunk. An artery frequently accompanies a nerve for some distance and gives off to it a series of arches, generally recurrent, which enter the nerve at an acute angle, and breaking up within it, form very free anastomoses. All the arrangements tending to prevent too prompt and brusque an afflux of blood, which are found in the central nervous system, are repeated in the nerves. On account of the richness of their blood supply, congestion makes itself quickly felt in nerves. There is close connection between the vasa nervorum and vasa-vasorum, so that it is hardly surprising that nerves may suffer in disease of the walls of adjacent vessels. The spinal cord has a twofold supply, from the anterior and posterior spinal arteries arising from the vertebral, and from branches of the intercostal and lumbar arteries, the anterior and posterior radicular arteries, which enter the spinal cord, with the nerve roots. These latter are much the most important source of supply. They form, with the branches from the vertebral, an anterior and a posterior anastomosis, the former consisting in the greater part of its course of a single main trunk; the latter of two or more parallel trunks. On account of the larger size of the radi-

*Read before the Medical Society of New Jersey, June 26, 1901.

cular arteries in this region, the lumbar cord has much the richest blood supply. Branches from the anterior anastomosis enter the anterior fissure, and dividing turn right and left, each division breaking up to supply the gray matter, especially that of the anterior horn. Branches from the posterior anastomosis pas directly to the cord, supplying the white matter, and eventually the gray matter. Since the latter anastomisis is so rich, the posterior columns are especially liable to be affected by changes in quality and quantity of blood. All of the vessels entering the cord are end arteries, and do not anastomose, so that in the case of one becoming plugged its territory must suffer.

The medulla, pons and midbrain take their blood supply from the vertebral and basilar arteries and their branches. The characteristic point is that they are supplied by a great number of very small and closely placed vessels with very rich capillary network, so that the important centres of this region are guarded from sudden variations of pressure, and though their arteries are end arteries, no important region is entirely dependent upon one vessel. The general blood supply of the cerebellum and of the cerebral hemispheres, through the three cerebellar, and the anterior, middle, and posterior cerebral arteries arising from the circle—or more strictly the polygon—of Willis, is familiar to all, and it is only necessary to allude to the arrangements for its distribution. The arterial branches anastomose freely in the pia, but the smaller twigs which pass from this membrane to the cortex are characteristically end arteries, and where one is plugged no compensation is possible, and local necrosis occurs. The important basal ganglia are supplied by a number of small arteries, arising from the middle cerebral in the anterior perforated space. These last are specially liable to be affected by arteriosclerosis, and of all arteries are most likely to burst. One in particular has been called, by Charcot, the artery of cerebral hemorrhage. Throughout the brain the familiar arrangements for preventing sudden changes of pressure, namely, tortuosity of arteries and division into many small branches, are found.

The symptoms produced by sclerosis of the vessels of the nervous system are variable, and not always proportionate to the extent of the vascular disease. In their production, neuropathic constitution and heredity are factors of importance. They are sensory, motor and psychical.

There are on record cases in which degeneration of nerves with sensory and other symptoms and atrophy of muscles have accompanied sclerosis of their vessels, and have seemed in all probability to be due to vascular change. This form of neuritis occurs mainly in elderly people, and has a much less regular distribution than the polyneuritis of toxic or infectious origin, hence lacks the characteristic grouping of symptoms of the latter. It is called by Gowers, "atheromatous neuritis," and is decidedly rare.

Functional disturbances are less infrequent. Temporary anesthesias are not uncommon and are sometimes accompanied by evidences of local asphyxia, the "dead fingers" of arteriosclerotics being a familiar example. Numbness and slight anesthesia are not necessarily of peripheral, but are probably more frequently of cerebral origin, however. Pain, often severe and persistent, usually worse at night and increased on movement sometimes occurs.

Neuralgia has been defined as the "prayer of the nerve for healthy blood", and it is not surprising that it occurs when the circulation is interfered with. It seems not unlikely that cases of severe neuralgia which are benefited by nitroglycerine, may be connected with the increased vascular tension of the early stage of arteriosclerosis. The motor functions suffer less frequently, though temporary pareses and paralyses occur. A very interesting symptom is "intermittent limping" (claudication), which occurs not infrequently in quite young people, and is pretty certainly due to a sclerosis (often very precocious) of the arteries of the foot.

Trophic changes, such as gangrene, are more likely directly due to the vascular disease than to the nerve involvement.

In the spinal cord, miliary aneurisms, so common in the brain, and hemorrhage and thrombosis (except of very fine vessels) are exceedingly infrequent. It is probable that temporary motor and sensory disturbances may be due to arterial disease in the cord, though it may be difficult to decide whether the change is in the brain, the cord, or the nerves. That sclerosis situated in the posterior or lateral columns, or diffused throughout the cord, occurs in connection with arteriosclerosis is shown by cases reported by Demange, Ballet, Déjérine, and others, and certain forms of myelitis seem due to obliterating endarteritis. Some of these cases have been marked by muscular rigidity and contractures. The senile paraplegia of Gowers, though by that author attributed to change in the motor cells, seems to the writer more likely connected with sclerosis due to arterial disease, and this view is supported by a case described by Kelly, in which there was perivascular sclerosis most marked in the posterior and lateral columns, especially in the dorsal region. In the case of a man of sixty-six, which I recently observed, there was marked arteriosclerosis and senile dementia, with recurrent epileptiform convulsions. The patient rather suddenly became paraplegic and could not walk. The knee jerks were slightly increased, sensation seemed little, if at all altered. Some dribbling of urine had been present prior to the attack. In about a week the patient had improved and could walk again. Temporary disturance of circulation seems the most probable cause of the attack. From an examination of the spinal cords of over thirty cases Sander finds that in old persons with arterial degeneration, sclerosis either diffuse or in foci, most commonly starting at the periphery, is apt to occur.

In somewhat younger subjects there are apt to be larger foci, with ascending or descending degeneration. The anatomical arrangement of the arteries of the medulla and pons, make hemorrhage and embolism comparatively rare, while chronic softening from thrombosis is not uncommon. It is not so rare to find in the subjects of arteriosclerosis some disturbance of function in the muscles of the throat and tongue, but this is probably a pseudo-bulbar, and not a true bulbar paralysis, and depends upon

lesions in the brain cortex. One of the most common symptoms of arteriosclerosis of the brain is vertigo. This has been thought by Mendel to be due to disturbance in the blood supply to the nuclei of the third, or to those of the eighth nerve, whose nutrient arteries are given off in the region of interference between the blood stream from the carotids and that from the vertebrals. It seems certain that convulsive seizures may be due to sudden interference with the blood supply of the brain, and it is the opinion of some authorities that the epileptic attacks, or at least the tonic spasms, may arise from the medulla and pons. The interesting Stokes-Adams symptom complex, a condition of exceedingly slow pulse with epileptiform or apoplectiform attacks, has been attributed to the coexistence of sclerosis of the arteries of the bulb with cardiac sclerosis.

Apart from furnishing conditions favoring rupture or plugging of the larger arterial trunks, whose symptoms are so well known as to need no discussion here, arteriosclerosis of the brain is responsible for certain general symptoms. Of these, vertigo, already alluded to, is generally earliest to appear. It is increased by sudden changes in position and may usually be brought out by having the patient lower his head to between his knees, then suddenly raise it. It may occur in attacks with tinnitus aurium, and in that case may be due to changes in the vessels of the inner ear. Numbness and tingling in the extremities, already alluded to, are frequently of cortical origin, as may be temporary paralyses and speech disturbances. A very important symptom is the occurrence in elderly persons with sclerotic arteries, of epileptiform attacks (such seizures never having occurred during early or middle life). This constitutes a special variety of epilepsy (senile or arteriosclerotic epilepsy). The possible dependence of these attacks upon sclerosis of the bulb has already been mentioned, they probably arise most frequently from cortical sclerosis. They may take the form of vertigo or "absence" (petit mal), there may be tonic and clonic spasm, followed by coma, one or the other of these may alone be present, the attack may be apoplectiform in character, or it may consist of some psychical manifestation, the epileptic equivalent. Some interesting cases of senile epilepsy were reported by the writer several years ago; and observation since then has convinced him that it is not so uncommon, especially among the senile insane. Senile chorea, paralysis agitans, and tremor have been attributed to cortical sclerosis of vascular origin, but direct proof of such connection is wanting.

Régis has brought forward the idea that there is a close connection between arteriosclerosis, generally precocious, and neurasthenia. He points out that neurasthenia and the early stage of arteriosclerosis have many symptoms in common, and expresses the opinion that the latter disease is present, often in obscure form, in many cases diagnosed as neurasthenia.

That the nutrition of the brain must suffer in advanced arteriosclerosis, is evident and it is not surprising that in the psychoses of old age arterial change plays an important role. In advanced cases the small arteries and capillaries, as well as the larger arteries, have undergone alteration and everywhere there are no large areas of softening, there are apt to be degenerative changes in both nerve cells and nerve fibres. A certain degree of forgetfulness and diminished soundness of judgment, often with insomnia and restlessness, is present in most people of advanced age. In those having unsound arteries, these symptoms may appear much earlier, and there may be true mental alienation. This may take the different forms of mania, melancholia or confusion, with hallucinations and illusions. There are usually marked egoism and hypochondrical delusions, but through all, the progressive mental enfeeblement makes itself evident, and probably the characteristic psychosis is dementia. A class of cases in which there is progressive dementia with apoplectiform attacks and other symptoms simulating general paresis, has been described. The diagnosis of arteriosclerosis of the nervous system is to be made by the evidence of arterial disease elsewhere, and by the general character of the symptoms. The superficial arteries are not always affected, and ophthalmoscopic examination of the retinal vessels is recommended. The prognosis in the advanced disease is unfavorable and it is only in the early stages that there is any hope of staying its progress. To this end general measures addressed to the arterial disease are appropriate. These consist, in the main, of suitable hygienic and dietetic measures, the avoidance of constipation, care of the skin, etc. Long continued use of potassium iodide in small doses is of undoubted benefit. Régis recommends a combination of sodium bromide and sodium iodide, and in the early stages, when lack of elasticity is the chief symptom, he gives a pill of hamamelis and ergotin three times a day. A treatment proposed by Rumpf has for its object the reduction of lime salts, on the theory that arteriosclerosis is a process tending to their deposit in the vessel walls. He rejects the commonly recommended milk diet and gives instead meat, fish, bread, potatoes and fruit, with distilled water as a beverage. To increase excretion of lime, he administers lactic acid as lactate of sodium.

The epileptiform attacks are not always controlled by the bromides, and in cases in which there is weak circulation, heart tonics, such as strychnine or caffein with nitroglycerine or nitrate of sodium may be indicated.

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A CASE OF HERPES ZOSTER OPHTHALMICUS.

By W. S. DURAND, M. D.,
of Everett, Washington.

In the September 28th number of the **Philadelphia Medical Journal** I note comments on herpes zoster ophthalmicus, and having at present a case on hand, I take liberty to report it. It is the second case that I have seen, having seen and treated with Dr. Wm. H. Young, of Nashville, Mich., during the winter of 1899 and 1900 the first case. The case seen and treated in Nashville, Mich., was under my care about six months, when I left there and have never heard of it since. The case was that of a woman about 45 years old, who suffered intensely with a long eruptive stage, intense swelling of the lids, especially the upper, conjunctivitis and keratitis, and though she was somewhat better when I saw her last, she still suffered much and was by no means well.

The case now under my care is that of a male: A. J. W., aet. 52, occupation, boatman. For about three weeks prior to the eruption of vesicles involving the left eye, summit or root of the nose and left half of the forehead to the vertex of the skull, there was extreme pain in the region of distribution of the left cervical plexus and through region of the eruption, although there was absolutely no sign of any eruption in the cervical region. The monolateral distribution of the eruption was as exactly outlined as one can ever hope to see. There was a vesicle in the median line on the summit or root of the nose and two or three larger ones reaching just to the middle of the forehead and along the sagittal suture. The vesicular eruption was profuse, reaching almost to the left ear, the ear and region of distribution of left cervical plexus remaining extremely painful.

I first saw the case September 7th in a drug store, and from a very short history obtained then I thought it to be some infection, as he told me he had been cleaning out some portion of a boat from which emanated a very foul odor, and he attributed it to this. I then prescribed an antiseptic salve, but on September 10th was called to his residence, when the involvement of the left eye with monolateral distribution of eruption and pain were so characteristic that the diagnosis of herpes zoster ophthalmicus was at once made. The history then taken with subsequent course was characteristic of the disease.

I have reported the case mainly because of treatment used. I had used a solution of adrenalin chloride, 1 to 1000, in normal sodium chloride solution with 0.5 per cent. chloretone in a few cases of conjunctivitis and rhinitis, and determined to give it a trial locally in this case. The left eye was completely closed, and as the man had lost sight in the right eye for some years, was unable to see. I dropped a drop of the above solution in the eye, repeated it in about a minute, and in about another minute he could open the eye, which had by this time completely blanched. The swelling had practically completely obliterated the fold in the upper lid, and the removal of congestion was so rapid that the fold reappeared. The use of the solution was continued, used generally diluted, 1 to 10000, four or five times a day, and, at times, particularly in the morning when the eye was completely closed, a drop or two of the 1 to 1000 solution was used. The 1 to 1000 solution was also freely applied with camel's hair brush or pledgets of cotton over the entire region of eruption two or three times a day, when pain returned, and in from one to two minutes after its application the superficial pain had entirely disappeared. The eruption rapidly subsided and completely healed in about ten days, except two lesions just above the prominence of the forehead and a little to the left of the median line, which were deep and have since healed, leaving scars. There remains now but little swelling of the eye and slight ptosis. The region involved in eruption still remains very painful, however, especially the eye and supraorbital regions, unless the solution of adrenalin chloride with chloretone is used, which, however, absolutely controls the pain.

The patient has described it from the first as though the surface of the brain was sore under the region of eruption. This certainly points "to the fact that the locus morbi must be deeper-seated" than the skin or superficial nerves. The sight in the eye has remained as good as it was and it seems the solution has done much in keeping the eye open, allowing the hyper-secretion freely to escape or completely stop it, and this has avoided untoward complications. I shall at once determine the amount of uric acid in the urine, and ,if of interest to the journal, will report the further progress of the case.

I may add that in addition to the local treatment I gave internally of each 10 minims of tincture of nux vomica and tincture of gelsemium, *t. i. d.*, for four or five days, then twice daily, and potassium iodide, gr. v, *t. i. d.*

Oct. 27. Resumed work as engineer on tug; Oct. 26th.

Oct. 31. Continually improving. Has practically no more pain except that it "smarts and burns some" over region of eruption, especially when exposed to heat as when he attempts to "fire" on the boat. No ptosis observable. "Eye feels as though there was sand in it." The bald region which was involved in the eruption has now considerable downy hair.

Nov. 12. Stopped working Nov. 9th because of eye inflammation. Conjunctiva over the cornea appears hazy, as if beginning to ulcerate over pupil. Adrenalin chloride 1-10.000 was continued as treatment.

Nov. 13th. Eye better, treatment continued. Urine examined: Clear, light straw, amphoteric, albumin and sugar absent. From the reaction I judged there was no excess of urates.

Nov. 14. Conjunctivitis still improving.

Nov. 29. Three small ulcers on the cornea could be seen, though the general appearance of the eye was better and I advised the patient to consult Dr. Kibbe, an eye specialist of Seattle. The patient was still using adrenalin chloride 1:10,000 locally, Donovan's solution internally. Dr. Kibbe advised a solution of atropine, gr. IV to the ounce to be dropped into the eye twice daily, and the adrenalin chloride was continued dropped into the eye 3 or 4 times daily, as the patient said it made the eye feel perfectly comfortable: absolutely controlled the pain.

Dec. 4. Eye shows mydriatic effects of atropine. Three small corneal ulcers seem to have healed. The general condition of the patient is very good as he says he has "never felt better." He has occasional diffuse pains in the region which was involved in the eruption, but these with

pain in eye are always absolutely controlled with the local use of adrenalin chloride. Region of pain has become more and more limited until now only the lid and a very small area about it are involved.

On this date the patient left to resume work as an engineer on a small boat some distance from here and I do not know whether I shall see him again or not.

During the entire time the patient's general condition was carefully looked after. He has taken Fowler's solution and Donovan's solution alternately, also nux vomica, cascara and pepsin as a digestive tonic and laxative. As before stated the patient on leaving said he had "never felt better." He gave me to understand that he would return to see me if at all possible.

RUSSKI VRATCH.

January 5, 1902. (Vol. 1, No. 2).

1. A Copy of the Report on the Desirable Reforms at the Medico-Chirurgical Academy, Found Among the Papers of the Late N. I. Pirogoff.
   N. A. BATUEFF.
2. A View of the Past, Present and Future of the Obstetrical and Gynecological Sciences..
   V. S. GRUZDEFF.
3. The Prevention and Treatment of the Plague.
   V. P. KASCHKADAMOFF.
4. The Condition of the Insane in St. Petersburg.
   A. L. MENDELSON.
5. Deplorable Misunderstandings in the Question of the Fight Against Tuberculosis.
   P. N. DIATROPTOFF.
6. On M. E. Lion's Paper, "A New Method of Treating Epilepsy. S. A. BELIAKOFF.

3.—Will be abstracted when concluded.

5.—Diatroptoff advances some of the well-known arguments against the extreme view taken by Nozshnikoff and others who, in their opposition to the spreading of consumption-fear, minimize and even deny the etiological relation of the tubercle bacillus to tuberculosis and the infectious nature of the latter. He endorses the measures adopted in Europe to limit the spread of tuberculosis, based as they are on the latest scientific researches. [A. R.]

6.—Beliakoff, the director of the hospital in which Lion conducted his experiments on opocerebrine (see abstract in Philadelphia Medical Journal, January 11, 1902), publishes his statements made regarding Lion's new method of treating epilepsy. He shows how time and again new specifics for the treatment of epilepsy have been brought forward only to disappoint the expectations of their originators. Opocerebrine is an organic preparation from the gray matter of the brain of an animal, and nothing is known of its fate when introduced into the human organism, nor of its physiological or therapeutic effects. In reporting the remarkable results achieved with this substance, Lion, he claims, omited from the reports of the cases facts from their previous history, showing that **temporary amelioration of their condition occurred also prior to the treatment with opocerebrine. Furthermore, none of the patients treated by Lion show any marked changes following the treatment.** The conclusions reached by the author are strongly against the views entertained by Dr. Lion. [A. R.]

Intestinal Perforation with Tuberculous Enteritis.—In the *Tribune Médicale* (October 23, 1901) Charles Laubry reports two interesting cases of tuberculous enteritis with perforation, in patients of 60 and 42 years of age. The former died while under treatment for supposed gastric cancer. Pleurae, lungs, bronchial glands, peritoneum, and mesenteric glands showed typical tubercular lesions, while in the intestines tuberculous ulcers were found, with several perforations. The latter had long-standing diarrhea and died with typical tuberculous peritonitis, which had existed two weeks. Here too pleurae, lungs, bronchial glands, peritoneum, mesenteric glands, and liver showed tuberculosis, while the intestines were markedly ulcerated, and numerous perforations were noted. This was a case of asthenic peritonitis, caused by the perforation of a tuberculous ulcer. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ending March 21, 1902:

SMALLPOX—United States			C.	D.
ALABAMA:	Birmingham.	Feb. 1-28.	12	
CALIFORNIA:	Los Angeles.	Mar. 1-8.	1	
	Sacramento.	Mar. 1-8.	1	
	San Francisco.	Mar. 1-8.	6	
COLORADO:	Denver.	Mar. 1-8.	5	
FLORIDA	Jacksonville.	Mar. 8-15.	9	
ILLINOIS	Bunswick.	Mar. 8-15.	2	
	Chicago.	Mar. 12-15.	1	
INDIANA:	Elkhart.	Mar. 8-15.	1	
	Evansville.	Mar. 8-15.	4	
	Indianapolis.	Mar. 8-15.	13	
	Michigan City.	Mar. 10-17.	1	
	Terre Haute.	Mar. 8-15.	2	
IOWA	Clinton.	Mar. 1-8.	3	
KANSAS:	Wichita.	Mar. 8-15.	2	
KENTUCKY:	Covington.	Mar. 8-15.	2	
	Lexington.	Mar. 8-15.	1	
LOUISIANA.	New Orleans.	Mar. 8-17.	5 cases imported.	
MAINE:	Portland.	Mar. 8-15.	2	2
MARYLAND:	Baltimore.	Mar. 8-15.	1	
MASSACHUSETTS	Boston.	Mar. 8-15.	21	4
	Cambridge.	Mar. 8-15.	5	
	Chicopee.	Mar. 8-15.	1	
	Haverhill.	Mar. 8-15.	1	
	Holyoke.	Feb. 22-Mar. 15	25	
	Malden.	Mar. 8-17.	2	
	Newburyport.	Mar. 1-15.	2	1
	Somerville.	Mar. 8-15.	1	
MICHIGAN:	Detroit.	Mar. 8-15.	6	
	Lansing.	Mar. 8-15.	13	
MINNESOTA:	Minneapolis.	Mar. 1-15.	29	
MONTANA	Butte.	Mar. 8-15.	1	
NEBRASKA.	Omaha.	Mar. 8-17.	4	
	South Omaha.	Mar. 8-15.	80	1
NEW JERSEY:	Camden.	Mar. 8-15.	1	
	Newark.	Mar. 8-15.	6	6
NEW YORK:	Binghamton.	Mar. 8-15.	1	
	New York.	Mar. 8-15.	47	11
	Yonkers.	Mar. 7-14.		1
OHIO:	Chillicothe.	Mar. 8-15.	2	
	Cincinnati.	Mar. 7-14.	25	
	Cleveland.	Mar. 7-14.	3	
PENNSYLVANIA:	Allegheny City.	Mar. 8-15.	4	
	Lebanon.	Mar. 8-15.	2	
	Norristown.	Mar. 8-15.	1	
	Philadelphia.	Mar. 8-15.	32	6
	Pittsburg.	Mar. 8-15.	9	
RHODE ISLAND:	Providence.	Mar. 8-15.	1	
	Warwick.	Mar. 7-14.	2	
TENNESSEE.	Memphis.	Mar. 8-15.	14	
TEXAS:	San Antonio.	Feb. 1-28.	9	
UTAH:	Salt Lake City.	Mar. 8-15.	1	
WASHINGTON.	Tacoma.	Mar. 8-15.	3	1
WISCONSIN.	Green Bay.	Mar. 8-15.	4	
	Milwaukee.	Mar. 8-15.	2	
SMALLPOX—Insular.				
PORTO RICO:	Ponce.	Several cases reported.		
SMALLPOX—Foreign.				
AUSTRIA:	Prague.	Feb.15-Mar.1.	11	
BELGIUM:	Antwerp.	Feb.15-Mar. 1	34	8
BRAZIL.	Pernambuco.	Jan. 18-Mar. 1		65
CANADA	Halifax.	Mar. 8-15.		1
	Quebec.	Mar. 8-15.	10	1
COLOMBIA:	Panama.	Feb. 22-Mar. 1		15
FRANCE:	Paris.	Feb. 22-Mar.1		2
	Rheims.	Jan. 1-31.	1	
	Roubaix.	Feb. 1-28.		1
GREAT BRITAIN.	Liverpool.	Feb. 22-Mar. 1.	6	
	Liverpool.	Mar. 1-8.	7	
	London.	Feb. 22-Mar. 1.	80	189
	Sheffield.	Feb. 22-Mar. 1.	2	
	Leeds.	Feb. 22-Mar. 1.	2	
	Edinburgh.	Feb. 22-Mar. 1.	2	
	Glasgow.	Feb. 15-Mar. 1.	22	10
INDIA:	Bombay.	Feb. 15-22.		3
	Calcutta.	Feb. 8-15.		2
	Karachi.	Feb. 8-15.	2	1
	Rome.	Jan. 26-Feb. 15.		1
ITALY.	Mexico.	Mar. 2-9.	3	1
MEXICO:	Moscow.	Feb. 8-15.	28	12
RUSSIA	Odessa.	Feb. 22-Mar. 1.	2	
	St. Petersburg.	Feb. 8-15.	2	1
URUGUAY.	Montevideo.	Feb. 6.	32	
YELLOW FEVER.				
DUTCH GUIANA.	Paramaribo.	Jan. 1-31.	1	3
MEXICO.	Vera Cruz.	Mar. 1-8.	3	4
CHOLERA.				
INDIA:	Bombay.	Feb. 15-18.		6
	Calcutta.	Feb. 8-15.		51
PLAGUE.				
INDIA:	Bombay.	Feb. 15-18.		283
	Calcutta.	Feb. 8-15.		129
	Karachi.	Feb. 1-15.	80	47
JAPAN:	Nagasaki.	Mar. 16. present.		

The Philadelphia Medical Journal

A Weekly Journal Owned and Published by The Philadelphia Medical Publishing Company and Conducted Exclusively in the Interests of the Medical Profession.

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See Advertising Page 8.

VOL. IX, NO. 14 APRIL 5, 1902 $5.00 PER ANNUM

The Disposal of Sewage.—It is our privilege to publish in this number an excellent paper by Dr. B. H. Buxton of New York on "Bacterial Purification of Sewage." Dr. Buxton discusses the subject with rare thoroughness and clearness, and the problem, of such avowed importance, has received adequate consideration at his hands. The disposal of sewage is one of the great problems of municipal sanitation. The pollution of streams used lower down in their courses as water supplies for towns along their banks, has been the fertile source of repeated epidemics, and preventive medicine seeks the total suppression of such removable causes of disease. Even when such streams are not used for drinking purposes, but are adjacent to centres of population, their pollution, always a source of danger, comes properly within the province of health officials. Dr. Buxton in his able paper describes the various methods which have been employed for the disposal of sewage and states that it was not until 1890, or thereabouts, that it came to be recognized practically that the destruction of excrementitious matter was not a chemical but a biological process, due to the action of bacteria, and since this date the effort has been made to imitate nature to provide for the purification of sewage in a more concentrated way. Dr. Buxton deals at length with a description of the bacterial purification of sewage and he has succeeded admirably in placing before us a clear account of this biological process, the chemical problems involved, and the function of bacteria in accomplishing this purification. His paper has a more than theoretical interest, for the shortcomings of many of the methods in use, as well as their advantages, are outlined. He states that the most successful methods in use are those of Cameron and Scott Moncrieff. The former was introduced at Exeter and the latter at Caterham, England, in 1896. Disposal of sewage is, in the main, a problem for the sanitary engineer, but the physician must be well-informed as to improved methods and be able to lend such co-operation as may be required. Under his eyes are the ravages of disease caused by unpotable water, and it is he who should urge the proper legislation to abate such nuisances; so the problem is clearly a medical one in part. The means in general which have been used to dispose of sewage depend greatly on local conditions, such as the relation of cities to large bodies of water. Certain coast cities are able to dispose of the problem in a comparatively easy manner. This is accomplished by discharging the sewage so that it becomes diffused rapidly through the water where it is very slowly oxidized, and thus does not give rise to serious danger. With inland cities the disposal of sewage is by no means so simple a problem, and to meet the difficulties the methods of broad irrigation, chemical precipitation and intermittent filtration have been variously employed. This latter method, the passing of sewage at intervals through properly prepared beds, is fully set forth in Dr. Buxton's paper. It is important that the process should be conducted carefully and slowly in order that the activity of the bacteria may be preserved; for it is their function to oxidize the organic matter in the sewage. We believe that our readers will profit by familiarizing themselves with the facts of Dr. Buxton's article. A paper of this sort is of practical utility; it covers a field concerning which the general practitioner needs greater information, and it is a contribution to the literature of the highest aim of our art—preventive medicine.

Operations for Cancer of the Breast.—The *Lancet* of March 8th contains an interesting and instructive address on the "Results of Operation in 60 Cases of Malignant Disease of the Breast," by Marmaduke Shield, an abstract of which is to be found in our issue of March 29. What the author has to say about the ultimate results of these operations is of interest to all medical men, but his remarks on the history of the operation and its technique appeal particularly to the American surgeon. Reference is made to the insidious beginning of malignant disease of the breast, and stress is laid upon this point because of the frequency with which the condition, in its early stages, when operation would be most productive of good, is not recognized. American surgeons will hardly be prepared to agree with the writer in

regard to the origin of the modern operation. Shield says that the world owes to England its present radical treatment of cancer of the breast. No one would deny that Moore, in 1867, was the first surgeon to recommend extensive removal of surrounding tissue in operating for this disease. His advice, however, was not followed until many years later, when Mitchell Banks in England and Gross in Philadelphia took up and improved the practice of Moore. The present operation for cancer of the breast differs nearly as much from those of Gross and Banks as did the operations of these men from those of their predecessors. And much of this improvement and change has been due largely to Halsted. Heidenhain demonstrated to the surgeon the frequency of the involvement of the pectoral muscles and it was with this fact in view that Halsted and others devised the modern operation. It would seem to us that the advance made in this department of surgery is due first to Moore, subsequently to Banks and Gross, and finally and not least to Halsted. Many others have contributed to the perfection of the operation and to the good results obtained by it, but to the gentlemen named belongs the greatest credit. It is evident from Mr. Shield's address that it is not his habit to remove the muscular tissue as extensively as is the custom of the American surgeon. No American surgeon can fail, however, to derive instruction from a careful perusal of this valuable contribution to surgical literature.

The Cause and Spread of Dengue.—A contribution on the study of the propagation and pathology of dengue appeared in the *Medical Record*, of February 8, 1902, by Dr. Harris Graham, Professor of Pathology in the American College, Beyrouth, Syria. In studying the epidemic which occurred in the City of Beyrouth, during the early part of July 1901, this investigator makes the assertion that he was able to demonstrate that dengue was spread through the inoculation of infected mosquitoes which had previously bitten individuals suffering from this disease. He further contends that dengue is probably only conveyed from the sick to the well through the contaminated mosquitoes. The genus culex was found responsible for the spread. His experiments were conducted on lines similar to those carried out by the Yellow Fever Commission in Havana, Cuba. One of his experiments is of exceptional interest and to this we wish to direct the attention of our readers. A number of mosquitoes were applied to a patient suffering from dengue, and, after they had bitten the individual, they were placed in a paste-board box. Dr. Graham then traveled to a mountain village having an altitude of 2,500 feet, where there were no cases of dengue, and it was here that the infected mosquitoes were allowed to bite two young men who were apparently in good health. In one instance, four days after the individual had been inoculated, and in the other, six days after, typical attacks of dengue developed. This author also discovered in the blood of individuals suffering from dengue, in every instance, a parasite which exists in the red blood-cell in some stages of its development and at other times it is found in the liquid intercellular portion. This parasite possesses ameboid properties and shifts its position from one part of the corpuscle to another. He contends that this parasite evidently belongs to the class of protozoa. It differs from the parasite of malaria in that its life cycle is longer and in that it forms no pigment in its protoplasm from the beginning to the end of its growth. He was also able to demonstrate that phagocytic leukocytes engulfed degenerated and degenerating forms of the parasite but never those which possessed ameboid movement. He also observed flagellated forms and mentions that flagella were seen among the red corpurcles which possessed a distinct undulatory movement by means of which they progressed, pushing their way among the corpuscles. Flagellated bodies were only found in specimens after the blood had stood for some time. The author remarks that "it may not be absolutely proven that this hematozoon is the cause of dengue, but its constant presence in the red blood corpuscles during the fever, its resemblance to the parasite of the Texas cattle fever, its likeness in manner of growth and mode of propagation (by the mosquito) to the malaria parasite, all point in the same direction and lead us to believe by analogy, if by no other way, that in this parasite we have the cause of dengue." Should subsequent research confirm the views set forth by Dr. Graham, his studies will mark another discovery not less important than those recently made in yellow fever and malaria.

A Moral Code for the Army.—In a general order just issued to the Army, Secretary Root takes high moral ground. He points out the fact that the only way to avoid the effects of intemperance and sexual vice is to avoid those vices. This is a cardinal doctrine, which has long been recognized, and the tone of the Secretary's order, in which this doctrine is promulgated, is wholesome and inspiring. As a practical administrator as well as a practical moralist, however, the Secretary of War is probably not oblivious to the fact that the preaching of this doctrine has never yet abolished vice either in the army or in the world at large, but he has probably

reflected that he is in duty bound to give the army the benefit of it. For this he is to be highly commended.

There is at least one suggestion in Secretary Root's order that is worth very serious consideration. This suggestion is not so much expressed as implied. We refer to the plan of instructing young men in the army about the frightful risks they run when they indulge in sexual vice.

In other words, let the appeal be made to their sense of self-preservation and their fear of physical consequences. The thought and the sight of loathsome diseases—such as gonorrhea and syphilis—are not lost on all young men. We know of plenty of them (especially medical students) who could truthfully bear testimony to the restraining influence which the fear of these diseases inspires in them. Let the surgeons and officers in the United States Army take a little pains to enlighten the ignorance of the soldiers on the action of the gonococcus and of the syphilitic virus. A kindergarten, in which the effects of vice were taught by object-lessons, might not be an impracticable thing in the army as well as out of it. The attempt to restrain all men by mere moral precept has always failed. The United States Army is not likely to be suddenly turned into a moral Utopia. But that its morals could be somewhat purified by a glimpse now and then of the frightful spectre of venereal disease, is possible.

Fish, Leprosy and Potatoes.—We think it somewhat unfortunate that the return of Mr. Jonathan Hutchinson from South Africa has been made the occasion by the newspapers to proclaim his decidedly peculiar views on leprosy. In the first place, these views are not new, for Mr. Hutchinson has been urging them for a long while with a somewhat fanatical insistence. He believes that a fish diet is the cause of leprosy; and of course he has found men eating fish in South Africa, and some cases of leprosy. Therefore the thing is proved. The syllogism in Mr. Hutchinson's mind seems to run somehow this way: Some men have leprosy; they also eat fish; ergo, a fish diet causes leprosy.

The cause of leprosy is now well known, and is the bacillus discovered by Hansen. There is no more reason to see a piscine relationship in this bacillus than in the bacillus of tuberculosis, or of any other disease.

It is interesting in this connection to note that in the life of Pasteur—written by his son-in-law, Vallery-Radot, and just issued—reference is made to the prejudice that so long existed in Europe against potatoes. When these vegetables were taken over from Peru in the fifteenth century they were accused of causing leprosy! The prejudice against them did not abate for three centuries. Now, Mr. Jonathan Hutchinson thinks that potatoes and a vegetable diet would be a cure for leprosy, if only they could drive out fish. Thus opinion gyrates.

The Death-Rate of Montreal.—Consul-General Bittinger has sent to the *Public Health Reports* some of the vital and mortuary statistics of Montreal as gathered from the official report for the year 1900. The most extraordinary item is the death-rate for that city. In 1890 it was 25.46 per 1000 inhabitants. This rate is enormously high when compared with other large cities on this continent. In New York, with its huge congested population, its tenements, and its hot summer climate, the death-rate is only 19.95. In Philadelphia it is 18.26; in Boston 19.06; in Chicago 14.68; in Buffalo 14.19. Even in New Orleans, which is almost a tropical city, it is only 24.94.

The civic authorities of Montreal claim that the high death-rate is caused by the heavy infant mortality. But considering the climatic conditions of the city, a high death-rate among infants should not be expected—certainly not higher than in New York or Philadelphia. The sanitary condition of Montreal is said to be impaired by the existence of a large number of cess pools.

The *Montreal Star*, commenting on the report, says that Montreal lost a larger percentage of its population in 1900 than any other city on the continent, with the single exception of Savannah, Georgia.

In Philadelphia we are accustomed to think of Canada as a region of abounding health, and we cannot fail to be perplexed at this regrettable showing of the Canadian metropolis.

Professorships in Russia.—Europeans are wont to sneer at American medical colleges and American professors, but if we are to believe the statements of Prof. Vasilieff, conditions, at least in Russia, are not so brilliant as they are represented, and there would seem but slight cause for the air of superiority usually assumed by our transatlantic brethren. Prof. Vasilieff, a leading teacher in one of the Russian universities, makes a rather frank exposition in the *St. Petersburgskie Viedomosti* of the status of some of the professors in that country. He points out that the recent practice of appointing professors led to a lowering of the scientific standard, but neither is the method of electing free from evil. The trouble lies in partisanship by the aid of which an unworthy man gains the chair while an able applicant without "pull" is frequently rejected. In a certain institution, the name of which

is not mentioned, the chair of pharmacology is occupied by a pathologist and the chair of clinical medicine by a young and inexperienced man. It has become so that a man with a scientific reputation does not care to apply for a vacant chair for fear of being rejected in favor of an inferior opponent who has the good will of influential members of the faculty or the powers that be. Such a fate was met once by a well-known bacteriologist, a man of universal reputation and a pupil of Pasteur and Metchnikoff. The "professors" who gain their positions through "party pull" make all sorts of efforts to be popular with the students, and it has become so demoralizing that examinations are a mere farce, with the result that students graduate without being able to make an examination of a patient or prescribe a simple remedy. The choice of *privat docents* is attended with the same evil influences. A case is cited in which an utterly ignorant physician gained the position of *privat docent*, although the fact of his shortcomings was known to the faculty. This gentleman sent to one of the laboratories a specimen of feces to be tested for the Widal reaction and, when refused for obvious reasons, submitted the same specimen to another laboratory, and the affair nearly ended in a duel. This incident, however, could not outweigh the influence of two members of the faculty. Another *privat docent*, well-known to Prof. Vasilieff, has not the least conception of the examination of blood, stomach contents, urine, etc., not to mention diagnosis of cardiac lesions. The professor knows still another *privat docent* who discovered enormous cavities in the lungs of a healthy individual and when called in consultation three days later, announced that the cavities had nearly healed.

It is to be remembered that in Russia the medical institutions are almost an exact reproduction of those in Germany, and we are sure that a German professor, were he to possess the proverbial Russian frankness and "open-heartedness," could tell similar tales. Far be it from us to cast reflection upon all the German and Russian medical institutions. Many of them fully deserve the high esteem in which they are held and stand as models worthy of imitation. What we wish to emphasize, however, is this: An institution ruled by partisanship is bound to degenerate, whether located in Germany, Russia, America or any other country; and, what is more, the beneficial effects of high standards are largely undermined by professorial favoritism. The moral is self-evident: We need a high standard, it is true, but we also need to uphold the system of choosing professors that puts the right man in the right place.

Tuberculosis in Colorado.—A quarantine against tuberculosis, if once well started, would extend no one could say how far. A national quarantine might mean next a state quarantine, then a county quarantine, and finally a street and house quarantine. The world, in fact, would soon be quarantine-mad.

Colorado has reason, if any state has, to take some alarm at tuberculosis The State has undoubtedly been partly settled by a tuberculous population, and the immigration continues. Signs have not been wanting that some people in the state are becoming restive, and that efforts might yet be made to put up the bars. We published sometime ago a disclaimer from prominent health officers of Colorado that there is any intention of declaring a quarantine against tuberculosis, and this disclaimer we regard as the most important statement on the question that we have yet seen.

In order, however, that this subject may have full discussion we print elsewhere a paper by a resident of the State, who is evidently a shrewd observer, and who may be accepted as representing one phase of this question. It is evident that the people of Colorado are becoming aroused over this subject of tuberculosis and a discussion of it will do no harm. The suggestion of this contributor that a great outdoor sanatorium be established in that State, is at least novel and alluring, whether it be practicable or not.

Two Important Topics.—We wish to call attention to two valuable articles in the Department of Co-operation and Research. So much has been written upon the subject of uric acid, so many terms have been employed, and so many contradictory or apparently contradictory statements have been made, that we are sure the medical profession will welcome the valuable summary of the literature of this subject that has been prepared by Dr. Croftan.

The question of the legal responsibility of the medical man for mistakes of various kinds is one of perennial interest in regard to false commitments for insanity. The courts have hitherto taken a ground which we believe was unjust to the members of our profession, because it did not make proper allowance for the difficulties in the diagnosis of insanity, and the inevitable personal equation contributing to error. The summary of the recent decisions upon the question prepared by Mr. William H. Lloyd, of the Philadelphia Bar, shows that the trend of legal opinion is toward a more rational view of the subject.

Germany has her own troubles with the quacks. We print below a clipping from one of our contemporaries, giving the figures. Bismarck, it may be recalled, did much to encourage this gentry; and

German mysticism in letters and philosophy may also be responsible for mystical medicine. In the meantime the Kaiser is on the war path for Christian Scientists from America, but it looks as though he might, if he tried, find some domestic foes on whom to test his mettle.

Current Comment.

EXPERT TESTIMONY.

Medical expert testimony in suits at law has fallen into such disfavor that judges, lawyers and physicians alike are casting about for a way to restore it to respectability. Expert testimony should be candid, impartial and scientifically true. In practice the reverse is too often the case.

—*The Minneapolis Times.*

QUACKS IN GERMANY.

According to recent Berlin police reports nowhere in the world have quacks and their nostrums more support than in Germany. While the city population of Germany has increased 58 per cent. and the regular medical men 76 per cent., the quacks have increased 1,537 per cent. Of 123 men who were found to practise medicine in Berlin without a license 30 had been domestics, 45 artisans, and 16 clerks. Only 24 had even a fair education. The women quacks were more numerous than men quacks. Of 130 found practising without a license only one was even fairly well educated. Sixty had been servant girls, 24 dressmakers, 10 charwomen and five nurses. The three men who made the largest incomes had been clerks; of the three most prosperous women two had been washerwomen and one a milliner. Thirty per cent. of the men and 15 per cent. of the women had been in jail.

—*Medical News.*

MEDICAL SCIENCE AND KENTUCKY HOSPITALITY.

The boys at Paducah are going to put their shoulders to the wheel and do all that is in their power to make our visit (The Kentucky State Medical Society) pleasant and profitable. It should not be forgotten that while Paducah is in "the pennyroyal" district, they grow mint down there, and that they send up to Nelson and Bourbon to get the other ingredient that is so essential to the make of that drink which is so delicious and dear to the heart of every Kentuckian. That the inner man will be cared for there can be no doubt, and the social features will be all that the most exacting could expect. It is hoped that the scientific features of the meeting will be equal or better than those of the past.—*The American Practitioner and News.*

THE AUTOMOBILE EVIL.

The many arrests for fast automobile riding and the accidents that happen to persons and property from the motor wagons show the need of regulating the speed of these machines. The New York law, passed by the Legislature which adjourned last week, limits the speed of automobiles to twenty miles an hour in the country and to eight miles an hour in cities. The Massachusetts Legislature will probably pass a law similar in its terms for that State, and when the many Legislatures to be elected this Fall come together next Winter there will undoubtedly be efforts made in most of the States to regulate automobiling. The automobile is a useful and interesting machine in its way and destined to have a great future, but the unchecked enthusiasm of some of its early advocates is endangering its popularity by creating a prejudice against it. It will be better for the automobile and those who admire automobiling if sensible regulations are made governing its running and handling.

—*Philadelphia Press.*

Correspondence.

THE YOUNG PHYSICIAN.

By A. ROBIN, M. D., of Newark, Del.

To the Editor of the **Philadelphia Medical Journal:**

The excellent and suggestive paper on "The Young Physician," by Dr. Amberg, in the **Philadelphia Medical Journal**, March 22, 1902, merits the close attention of all who have the welfare of the medical profession at heart. It seems, however, that in his earnest zeal and sincerity the author has committed himself to a position which is not altogether logical, and his indictment loses in force by being directed against the wrong party. Admitting that the overproduction of medical practitioners is pernicious and cannot but react destructively on the profession as a whole; admitting that there is already too large a number of medical colleges, a number which is ever increasing; admitting that many a medical college is the unripe fruit of the morbid ambitions of aspiring "professors," I still fail to see what the medical colleges, large or small, have to do in the matter of legislative reform. The practice of medicine is, as it should be, controlled by State Medical Examining Boards; official bodies whose function it should be to prevent the overproduction of undesirable physicians. The very existence of a State Medical Examining Board annuls any importance which a medical college may possess as a determining factor in the increase or decrease of *practitioners*. Take, for example, the best medical institution in the country; by charter and common consent this institution is considered to be fully capable of turning out efficent medical practitioners. Yet the State Board of Medical Examiners, under whose jurisdiction the graduates of that institution come, will reject a certain number of the graduates, thus tacitly disqualifying the institution from passing judgment on the fitness of certain graduates to practise medicine. Here, then, we are confronted with an apparent contradiction: It is assumed that only the "best" institutions are capable of turning out the best men, and yet quite a number of the graduates of these "best" institutions are pronounced unfit to practise. Evidently, either the "best" institutions are not the best, or the standard adopted by the State Examining Board differs from that of the institution. At any rate, the fact remains that the fitness of a graduate to practise medicine is determined not by the medical college, but by the State Board. This at once reduces all medical colleges, large or small, to a state of preparatory schools where students are prepared for the State Board examinations. Whether the standard of the Board is high or low is another matter, but, whatever it is, the medical college must conform to it. Such a state of affairs shifts the responsibility for the inefficiency of practitioners and the crowding of the profession from the medical colleges to the State Board. The medical colleges are entirely passive and must stand or fall on their merits in so far as their ability to prepare the students for examination is concerned. Whether the student will prefer one school to another should be left entirely to him and his advisers, it being presumed that, all things being equal, he will prefer the institution which will best arm him for successful competition in his future professional life. With the power to regulate the practice of medicine centralized in our State Boards, we should look to the latter for any reforms in medical education and in the event of their inefficiency place the blame where it belongs. It is fully in the hands of the State Boards to raise the standard of requirements to a degree that would efficiently exclude all but the best fitted morally and mentally to practise medicine. With the raised standard, the smaller medical colleges would either come up to the requirements or fall victims to their

own impotence. Thus the "fittest" and not the "shrewdest" will survive.

A great deal can be and has been said in favor of the smaller medical colleges. In the smaller instituuons the students are more apt to receive individual attention, they come in closer touch with the teacher and are more in a position to acquire the practical knowledge which will best fit them for everyday practice. Some of our best men received their medical education in small medical colleges, a notable example being a distinguished pathologist, who received his medical education in a small and rather obscure medical college, in which the chair of pathology and bacteriology was at the time in the hands of a demonstrator. However, the multiplication of medical colleges, where there is not the least need for their existence, is greatly to be deplored, but not any more than the multiplication of our small universities (so-called). The granting of charters to medical colleges only in name is to be deprecated, but not any more than the granting of university charters to third-rate high-schools. In both instances the fault lies with our lax and utterly absurd educational methods, and our efforts at reform need not be limited to medical schools alone, so long as we are insured through efficient legislation against the invasion of the so-called M. D.s into our profession.

Reviews.

A Handbook of Pathological Anatomy and Histology With an Introductory Section on Postmortem Examinations and the Methods of Preserving and Examining Diseased Tissues, by Francis Delafield, M. D., LL. D., Professor of the Practice of Medicine, College of Physicians and Surgeons, Columbia University, New York, and T. Mitchell Prudden, M. D., LL. D., Professor of Pathology and Director of the Department of Pathology, College of Physicians and Surgeons, Columbia University, New York. Sixth Edition with 17 Full-page Plates and 453 Illustrations in the Text in Black and Colors, New York, William Wood and Company, MDCCCCI. 770 pp. and Index.

The fifth edition of this admirable hand book appeared in 1896 and has since served, in a most satisfactory manner, the requirements of a large mass of American students. In the preface to the present edition Professor Prudden informs the reader that the senior author (Professor Delafield) has retired from active share in the preparation of the present edition. Part I is devoted to technic. As in the previous edition the first chapter of the work deals with the method of making postmortem examinations. Accurate and extremely practical information is given as to the proper method of conducting postmortems. This chapter also contains a résumé of certain medico-legal investigations, including examination in case of suspected poisoning and postmortems on new-born children. Chapter II deals with the lesions found in certain forms of death from violence and includes sudden deaths. Chapter III treats of the preservation of specimens and the technic of histologic examination. The size of the paraffin block for infiltration is placed at ½ cc. Certainly this may be greatly exceeded. The Kaiserling method for preserving specimens is not mentioned, although in the previous edition a modification devised by Jores was commended. This part of the work occupies 60 pp. and is followed by Part II dealing with general pathology to which 276 pp. are devoted.

The chapters devoted to animal and vegetable parasites are concise but satisfactory. Cohnheim's hypothesis concerning the origin of tumors is deemed applicable in certain cases. The fact that Durante had previously enunciated the doctrine accepted by Cohnheim is not mentioned. The statement that strayed or dormant embryonic cells have not been demonstrated would seem to be incorrect if we accept as trustworthy the work of Roux. The classification of tumors is based upon their histology. The author in discussing the pathology of general diseases is cautious and conservative; this is especially evident in the articles on exophthalmic goiter, Addison's disease, and diabetes.

Part III deals with special pathology to which 432 pp. are given. The first chapter, dealing with the blood and blood forming organs, has been revised by Dr. Francis C. Wood; this article in the fifth edition was written by Dr. James Ewing. In addition to diseases of the blood and blood making organs this part contains chapters devoted to the lymph nodes; spleen and thymus; thyroid and adrenals; circulatory system, respiratory system; digestive system; liver; urinary organs; reproductive organs of the female; reproductive organs of the male; bones and joints; voluntary muscle, and nervous system.

The book is not cumbered by prolix bibliographies; references are given to important articles from which most of the literature of the subject can be obtained. There is a wealth of illustration throughout the book that renders it of all similar works best illustrated. Many of the drawings are presumably from Dr. Prudden's pen, as indicated by the initials T. M. P.; but few are photomicrographs. Most of the illustrations are from ink, or stiple drawings and photographs, the reproductions have been executed in an unusually satisfactory manner. Some of the figures and plates are in colors and the colored work, although of the cheaper kind, is extremely satisfactory, it being rather diagrammatic than ideal. Many of the uncolored plates are far superior in the reviewer's estimation, to much of the cheap color work with which so many books are disfigured. The index is satisfactory; the paper is well selected, and the typography excellent,—in other words the mechanical construction of the book is eminently satisfactory.

[W. M. L. C.]

A Manual of Human Anatomy, Part I, Cytology and Embryology. By John M. Swan, M. D., Demonstrator of Osteology and Assistant Demonstrator of Anatomy, University of Pennsylvania, Fellow of the College of Physicians of Philadelphia. Second Edition. Published and for sale by F. W. S. Langmaid, M. D., Philadelphia. $ 75.

That this little book has had a second edition is proof of the fact that it has met a place (or itself). It is a compact line of the elements of cytology and embryology, intended for the use of second year student who is just starting to grapple with these subjects. This résumé is presented in very readable form, and contains the result of the most recent work done in embryology and cytology. The ideas of Peters of Vienna, in regard to the early phase of the development of the placenta, are followed, and the newer and better nomenclature given. It is perhaps to be regretted that a few illustrations have not been introduced, since these pictures, to be carried away in the mind's eye, are often so helpful in the study of an intricate subject. The book is well printed, and in easily portable form.

[A. J. O. Jr.]

The Practical Medicine Series of Year Books, Comprising ten volumes on the year's progress in medicine and surgery, issued monthly under the general editorial charge of Gustavus P. Head, M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume III. The Eye, Ear, Nose and Throat, edited by Casey A. Wood, C. M., M. D., Albert H. An-

drews, M. D., T. Melville Hardie, A. M., M. D. December, 1901. The Year Book Publishers, 40 Dearborn Street, Chicago. Per volume, $1.50. Price of series, $7.50.

The portion of this book devoted to diseases of the eye will prove of considerable assistance to ophthalmologists. The judgment shown in selecting only such materials from the vast amount of ophthalmic literature, as may prove of use for ready reference, could only have been accomplished by such three able men as comprise the editorial staff of this subdivision. The authors have wisely considered ocular bacteriology, and ocular symptoms in general disease. The literature on otology, rhinology and laryngology has also been ably compiled. A number of well executed illustrations accompany the abstracts, and a handy index is appended. Individually this book, as others of the same series, represents considerable ability and conscientious labor, but it is yet impossible to determine the relative merits of these productions until they have stood the test of time. [M. R. D.]

Outlines of Anatomy. A Guide to the Methodical Study of the Human Body in the Dissecting Room. By Edmund W. Holmes, A. B., M. D., Demonstrator of Anatomy, University of Pennsylvania (1892-1901), Surgeon to the Methodist Episcopal Hospital, Consulting Surgeon to the State Asylum for the Insane, Norristown; Consulting Surgeon to the Northery Dispensary, etc., etc. Press of the New Era Printing Company, Lancaster, Pa. 1902.

Dr. Holmes' book was written, in 1897, as a working guide for the dissection of each of the four parts, into which the human body is divided at the University of Pennsylvania, in twenty-eight working days. The purpose of the book is to tell the student what structures he should look for and it does not furnish descriptions of the parts named; the author wisely referring the student to the text-books for this information. The fact that the first edition has been exhausted indicates that the book has acomplished its purpose. [J. M. S.]

Transactions of the Association of American Physicians. Sixteenth Session, Held at Washington, D. C., April 30, and May 1-2, 1901. Philadelphia, 1901.

The volume of the Transactions of the Association of American Physicians that is before us for reviews, is an attractive book of 730 pages. The typography is of that excellent grade for which the printer, who has had so much experience in publishing Society transactions, is noted. The papers that go to make up the volume are among the best produced by American physicians during the year. It is impossible to give each one a separate notice here, suffice it to say that they were all abstracted in Volume VII, pp. 906, 952, 989 and 1034 of this Journal, under the head of Society Proceedings, shortly after the meeting of the Society. The volume contains a valuable general index of the 15 volumes already issued. [J. M. S.]

Fatal Intestinal Hemorrhage in Pneumonia.—Rathery reports a case of pneumonia in a man of 51, who died in the second week of the disease with three consecutive hemorrhages from the bowel. The autopsy showed a pneumonic area taking up two thirds of the right lung and another smaller one in the left lung. The entire colon showed punctiform hemorrhages. Ulcers were also found at the junction of the transverse and descending colons, and in the rectum. These ulcerations Rathery considers pneumococcic in origin, since pneumococci were found in the blood, brain, lungs and intestines. These intestinal hemorrhages in pneumonia are very rare. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, July 25, 1901, No. 26). [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Vaccination Expenses.—The bills of the physicians, both those regularly appointed for vaccination and those appointed upon the auxiliary corps last fall, have been submitted to the Department of Public Safety. The largest number of vaccinations performed by one man during the last nine months was 5922. Many of the physicians have vaccinated over 2000 people during the winter. From this it seems that the $225,000, recently appropriated by Councils for the expenses incurred in fighting smallpox in Philadelphia, will soon be exhausted.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening, April 7, Academy of Surgery; Tuesday evening, April 8, Pediatric Society; Wednesday evening, April 9, County Medical Society; and Thursday evening, April 10, Pathological Society.

Contagious Diseases in Philadelphia.—The cases of smallpox reported this week were but 38, with 3 deaths, a slight increase over last week. The number of cases of diphtheria reported, 49, with 13 deaths, shows a decrease of 20 cases compared with the previous week. Scarlet fever and typhoid fever, on the other hand, have both somewhat increased, there having been 50 cases of scarlet fever, with one death, and 99 cases of typhoid fever, with 20 deaths, reported during the week. The orders which prevented relatives and friends from visiting patients at the hospitals in Philadelphia, which have been in operation for the past three months, are now being generally discontinued.

Medical Society of Germantown.—An appropriation of $25 was made, March 10, by the Germantown Medical Society toward defraying the expenses of Dr. H. M. Righter, who was recently sued for $1000 for having vaccinated a child who afterward died. This amount was appropriated for use in the further defence in the case, provided funds were needed.

An Anniversary.—Dr. Michael O'Hara, for years medical director of St. Agnes' Hospital, celebrated the 50th anniversary of his graduation as a physician on April 3. He has two sons who are practising physicians.

Bequests to Charities.—By the will of the late Mrs. A. P. Biddle, $1000 was left to the Pennsylvania Institution for the Blind, Pennsylvania Training School for Feeble Minded Children, and the Germantown Hospital, each, upon the death of her friend, Mary J. French.

The Philadelphia Obstetrical Society.—At the last meeting, held April 3, an address was delivered, by invitation, by Dr. T. S. Cullen, of Johns Hopkins University. After the meeting a reception was given Dr. Cullen at the University Club.

NEW YORK AND NEW JERSEY.

American Medical Association.—The Committee on Pathologic Exhibit for the American Medical Association is anxious to secure materials for the coming session at Saratoga, June 10th to 13th inclusive. This exhibit was accorded much praise and comment during the sessions at Atlantic City and St. Paul, respectively, where were collected valuable exhibits from all parts of the country. The materials included not only pathologic specimens but the allied fields, bacteriology, hematology, physiology and biology were well represented. It would also be desirable to secure exhibits of new apparatus, charts, etc., used by teachers of pathology and physiology in Medical Colleges. This exhibit has already become a permanent feature of the annual sessions of the American Medical Association and the Committee is desirous of securing its list of exhibits as early as possible and to this end asks those having desirable materials to communicate with any member of the Committee. To contribute to the value of the work, it is suggested that, as far as possible, each contributor select materials illustrative of our classification and by such specialization enhance the usefulness of the display. Those lending their materials may feel assured that good care will be given their exhibits while in the hands of the Committee and due credit will be given in the published reports.

Glanders in New York.—Glanders has recently caused

the death of many horses in this city. In one large stable half the horses were found to have glanders, and were killed. The disease has so far appeared only among draught animals.

The Extermination of the Long Island Mosquito.—The trustees of the village of Lawrence, Long Island, have placed $1000 in the hands of the Board of Health, for the extermination of the mosquito. Water is to be drained from all small ponds and marshes and the cooperation of the adjoining villages will be solicited. It is expected, later, to raise more money, and it is probable that petroleum will be used for destroying the mosquitoes.

Watertown Hospital, New York.—An Easter gift in the form of a check for $5,000 was received at the Watertown Hospital from Frederick S. Flower, of New York, to endow a free bed in the hospital to be known as the Mary Elizabeth Flower bed.

Epidemic on the *Illinois*.—It is rumored that mumps, pneumonia and erysipelas have broken out among the sailors of the U. S. Battleship *Illinois*, now stationed at the Brooklyn Navy Yard. It was reported that 20 men have already been removed to the hospital, where one death occurred. Should these diseases spread, it is most probable that the *Illinois* will not be used as the flagship of Rear Admiral Crowninshield, who is soon to sail for Europe. Official reports state that the only disease upon the *Illinois* is influenza, of which but 17 cases have occurred.

An Aged Physician.—Dr. O. R. Skinner, of Freehold, N. J., has just celebrated his 93rd birthday. He served as surgeon during the Civil War. He is probably the oldest physician in active practice in the United States. He answers promptly every call made for his service, and is kept busy with professional duties.

St. George's Deaconesses Home and Hospital, on East Sixteenth Street, New York City, will be opened April 10. The building, which has just been completed through the generosity of Mr. J. P. Morgan, contains a hospital on the third floor, complete in every particular, with a sun parlor on the floor above. Here a few deserving poor people and several convalescents will be accommodated.

Death of Dr. English.—Dr. Thomas Dunn English died at his home in Newark, N. J., April 1, in his 83rd year. He was born in Philadelphia, June 29, 1819, of an old New Jersey family. After having first studied journalism, he studied medicine, receiving his M. D. from the University of Pennsylvania in 1839. He then studied law, being called to the Philadelphia bar in 1842. At this time, though he practiced both professions, he was known as an author and playwright. He was perhaps best known as the author of "Ben Bolt," which was written in 1843. He went to West Virginia in 1853, where he practiced law and medicine for five years. He moved to Newark in 1857 and a year later went to Hackensack, N. J. He received the degree of LL.D. from William and Mary College, Virginia, in 1876. He returned to Newark in 1878 and has since resided there. He wrote for the *Newark Morning Register*, and was later editor of the *Newark Journal*. He was also a politician, having served as a member of the House of Assembly of New Jersey in 1863 and 1864, and was twice elected Democratic Congressman from the Essex District of New Jersey. Among his works are three or four novels, over 40 plays, and great quantities of poems. His death followed a long illness.

NEW ENGLAND.

Bequests of the Late R. C. Billings.—Among the larger amounts bequeathed by the late Mr. Billings, of Boston, were $100,000 left to Harvard College, the Massachusetts Institute of Technology, and the Boston Museum of Fine Arts: $50,000 to the Massachusetts General Hospital, New England Hospital for Women and Children, Children's Hospital, and Massachusetts Eye and Ear Infirmary; $25,000 to the Perkins Institute and Massachusetts School for the Blind, and to the Home for Aged Men; $10,000 to the Kindergarten for the Blind, the Boston Lying-in Hospital, Morton Hospital of Taunton, Home for Aged Couples, Boston Home for Incurables, Washingtonian Home, Massachusetts Infant Asylum, and several charities.—The late Mrs. S. F. Devlin left $5000 to the Carney Hospital, Working Boys' Home, Home for Destitute Catholic Children, and Free Home for Consumptives, Boston.

The Population of Boston.—Of the people of Boston, only thirty-five per cent. are native born of native parents, while sixty-five per cent. are foreigners.

Mortality in Cambridge, Mass.—The annual report of the Cambridge Board of Health for 1901 showed 1574 deaths. On an estimated population of 94,000, this made a death-rate of 16.72, while in 1900 it was 16.87. During the previous years it ranged from 17 to 19%. There was a marked decrease during the year in scarlet fever and diphtheria. Smallpox and measles, however, increased. Typhoid fever decreased.

Consumption Hospital Needed on Long Island.—Boston's Hospital on Long Island has just completed a new home for nurses. There is, however, great need for a separate hospital for consumptives. To erect the necessary buildings at least $100,000 more is needed. There also seems to be a very urgent need for a centrally located detention hospital for patients with delirium tremens and suspected insanity. The cottages of the Children's Hospital are also very much overcrowded. These facts were reported at the meeting of the Public Institutions' Conference, held recently at the Mayor's office.

WESTERN STATES.

University of California.—On account of the occurrence of a case of smallpox in Berkeley, Cal., a notice has been issued requiring the immediate vaccination of all students and employés at the University. The young man affected, a sophomore in the college department, has but a light attack. Unless students shall have filed a physician's certificate of successful vaccination within the past two years, or of a vaccination within the past two weeks, they will not be permitted to attend lectures.

American Association of Pathologists and Bacteriologists.—The second annual meeting of the American Association of Pathologists and Bacteriologists was held in Cleveland, March 28 and 29 in the amphitheatre of the Western Reserve Medical School. Among those who read papers were: Drs. A. J. Lartigau, F. C. Wood, and W. H. Park, of New York; Harvey Gaylord, of Buffalo; G. B. Magrath, W. R. Brinckerhoff, E. H. Nichols, F. B. Mallory, and W. W. Williams, of Boston; L. Loeb, L. Hektoen, J. and A. P. Ohlmacher, of Chicago; A. A. Bruère and G. R. Charlton, of Montreal; G. N. Stewart and C. A. Hamann, of Cleveland; W. G. McCallum, of Baltimore; A. S. Warthin, of Ann Arbor; and A. O. J. Kelly, J. McFarland, W. M. L. Coplin, A. Stengel, C. Y. White, and Simon Flexner, of Philadelphia. The following officers were elected for the ensuing year: Dr. Ludwig Hektoen, of Chicago, president; Dr. Eugene Hodenpyl, of New York, treasurer, and Dr. Harold C. Ernst, of Boston, secretary.

Tri-State Medical Society, of Iowa, Illinois and Missouri.—The tenth annual meeting of the Tri-State Medical Society of Iowa, Illinois and Missouri was held in Chicago, April 3 and 4, with Dr. J. C. Murphy, of St. Louis, as president.

SOUTHERN STATES.

Medical Association of the State of Alabama.—The annual session of the Alabama State Medical Association will be held at Birmingham, April 15. Among those who are expected to read papers at this meeting are Drs. J. H. Musser, G. B. Massey and Boardman Reed, of Philadelphia; R. T. Morris and W. R. Townsend, of New York; C. T. Wilmer, of Kalamazoo; J. T. Jelks, of Hot Springs, Ark.; and G. S. Petty, of Memphis, Tenn.

The Prevention of the Spread of Consumption.—Dr. Woodward, health officer of the District of Columbia, has recently issued a pamphlet containing notes upon the prevention of the spread of consumption, and the curability of consumption. The pamphlet contains the most modern regulations for the prevention of tuberculosis.

Medical Practitioners' Bill, Maryland.—The Medical Practitioners' Bill, lately introduced by Dr. Dirickson, of Worcester County, has at last passed both Houses and has gone to the Governor for his signature. A number of amendments were added to the bill in the Senate.

The Association of the Medical Officers of the United States Army and Navy of the Confederacy will meet in the City Hall, Dallas, Texas, Tuesday, April 23. The president of this association is Dr. D. D. Saunders, of Memphis, Tenn., Dr.

D. J. Roberts being the secretary. The meeting will last until April 25.

MISCELLANY.

International Sanitary Congress.—The opening session was held at the University of Havana, February 15, with Major W. C. Gorgas, U. S. A., in the chair. The opening address was made by the president of the congress, Dr. Santos-Fernandez, of Havana, upon the "Proximate and Remote Importance of the International Sanitary Congress." Eight such conferences have been held in Europe, and one was held in Washington in 1881. Dr. Eduardo Liceaga then read a paper upon the "Convenience of Substituting Quarantine by More Efficient Sanitary Measures." The meetings of the congress lasted until February 20. Numbers of other interesting papers were read upon sanitation, hygiene, malaria, leprosy, yellow fever and mosquitoes.

Leprosy in the United States.—The Secretary of the Treasury sent to the Senate, March 24, the report of a commission of medical officers of the Marine-Hospital Service appointed to investigate the origin and prevalence of leprosy in the United States. The report shows 278 cases of leprosy in the United States, distributed by States, as follows:

Alabama	1	Missouri	5
California	24	Montana	1
Florida	24	Nevada	1
Georgia	1	New York	7
Illinois	5	North Dakota	16
Iowa	1	Oregon	1
Louisiana	155	Pennsylvania	1
Maryland	1	South Dakota	1
Massachusetts	2	Texas	3
Minnesota	20	Wisconsin	3
Mississippi	5		

Of the total number, 176 are males and 102 females; 145 American born, 120 foreign born and the remainder uncertain. It is stated that 186 of the cases were contracted in the United States, but the opinion is expressed by the Commission that this number is too large, and that some of these cases were brought from abroad. Summarizing, the Commission says that the number of cases is smaller than is generally believed. They also say that leprosy is conveyed from one person to another in the States on the Southern coast; that the majority of the cases in the United States are at large; that at present only 72 of the cases are isolated and provided for by the States or cities in which they are located, and that many of those now at large, if not all, would be willing to be cared for by the public, if proper leprosaria existed for their treatment and comfort. The Commission recommends the establishment of a retreat for lepers, and expresses the opinion that it should be in the arid Southwest or in a similar region farther north, or on an island in the Gulf of Mexico or on the Pacific coast. Of the 155 cases reported from Louisiana, 101 are in Orleans county and 37 in the leper home at Iberville. Of the seven cases in New York, four are in Kings county, and three in New York county. The Commission expresses the opinion that the figures given do not represent the total number of lepers in the country, because they say that the loathsome nature of the disease causes those afflicted to conceal it as long as possible. They also express the opinion that the inhalation of dust where lepers reside is responsible for many of the cases.

Cholera in Manila.—A despatch from Manila, March 30, states that 10 new cases of cholera with 4 deaths had occurred in the last three days. None but natives and Chinamen have so far been attacked. This makes a total of 117 cases with 73 deaths up to April 2.

Yellow Fever.—The State Department has received information from Kingston, Jamaica, that yellow fever has broken out, three British soldiers having been attacked with the disease. The remainder of the garrison has been removed to the mountains, and all possible precautions have been taken to prevent the spread of the disease.—The Argentine Consul in Rio de Janeiro announces that during the last fortnight 80 deaths have occurred from yellow fever. The Argentine Government has enforced strict quarantine precautions for vessels from Rio de Janeiro on this account. The quarantine officers of the different districts of Cuba report the absence of all contagious diseases.

Obituary.—Dr. Uriah Gilman, at Woodstown, N. J., March 24.—Dr. Henry M. Skillman, at Lexington, Ky., March 21, aged 78 years.—Dr. George M. Warner, at Louisville, Ky., March 16, aged 44 years.—Dr. Russell B. Freeman, at Denver, Col., March 12, aged 41 years.—Dr. John R. Timberlake, at Louisville, Ky., March 16.—Dr. Albert R. Leeds, at Germantown, Pa., March 13, aged 58 years.—Dr. Charles G. Massie, at Perkinsville, Va., March 12, aged 65 years.—Dr. David F. Brown, at Dresden, Mo., March 15, aged 56 years.—Dr. Lorenzo S. Keene, at De Land, Fla., March 18.—Dr. George G. Williams, at Jonesville, Mich., March 16, aged 52 years.—Dr. Benjamin F. Sutton, at Middlebury, Vt., March 11, aged 66 years.—Dr. Cornelius E. Satterfield, at Fairmount, W. Va., March 11.—Dr. Leroy Swank, at Williamsport, Ind., March 17.—Dr. John J. Clark, at San Francisco, Cal., March 10, aged 58 years.—Dr. Edward Newton Beale, at Schaghticoke, N. Y., March 16, aged 66 years.—Dr. John W. Hill, at Edgefield, S. C., March 13.—Dr. James Murphy, at Iowa City, Iowa, March 12, aged 37 years.—Dr. Albert A. Becherer, at St. Louis, Mo., March 8, aged 27 years.—Dr. Alfred F. Fletcher, at Eau Claire, Wis., March 14, aged 57 years.—Dr. George H. Lane, at East St. Louis, Mo., March 18, aged 28 years.—Dr. Anson A. Gibbs, at Hemlock, N. Y., March 16, aged 71 years.—Dr. Allen T. Corliss, at Iowa, Logansville, Wis., March 19.—Dr. E. L. Thorp, at Shell Rock, Iowa, March 10.—Dr. George W. Bishop, at Sanford, Fla., March 20.—Dr. Gerald O'Farrell, at Philadelphia, Pa., March 27, aged 70 years.—Dr. Charles R. Burks, at Sherwood, Va, March 26, aged 70 years.—Dr. Orin S. Sargent, at Philadelphia, Pa., March 28.—Dr. Frank L. Portzer, at Greensburg, Pa., March 27.—Dr. Bowen Combs Bowell, at Laporte, Ind., March 29, aged 82 years.—Dr. William Elliott Huger, Jr., at Baltimore, Md., March 29.—Dr. Moses T. Babcock, at Harmondsport, N. Y., March 31, aged 77 years.

GREAT BRITAIN, ETC.

Smallpox at Charterhouse School.—The rumors of smallpox at the Charterhouse School, Godalming, seem not to be fully justified. In spite of the statements that have appeared in the newspapers there has been but one case of smallpox in the school during the winter. The boy had been vaccinated three weeks before the rash first appeared. Vaccination and revaccination have been enforced throughout the school, and it seems most probable that no further cases will develop.

The Cause of Leprosy.—Dr. Jonathan Hutchinson, former President of the Royal Academy of Surgeons, who recently returned to England, after studying the causes of leprosy in South Africa, has arrived at the conclusion that the primary cause of the disease is the use, as food, of badly cured salt fish, which is sent inland from Cape Town and elsewhere on the west and south coasts, and is largely consumed by the farmers and in the industrial centres. While giving this as the chief cause of the diffusion of leprosy, Dr. Hutchinson obtained conclusive evidence that leprosy, in very exceptional circumstances, may be communicated from person to person. He does not believe that it is either infectious or contagious, in the proper sense, but may be communicated by eating food contaminated by leper's hands. Dr. Hutchinson suggests, as preventive measures, legislative control of the fish-curing establishments, the diffusion of information in regard to the danger of communication and the establishment of isolation homes for the lepers during the stage of the disease involving a risk of contracting it.

Cancer Said to be Cured by X-Rays.—In a lecture before the Wallhamston Conservative Club, Dr. F. T. Addyman, of St. George's Hospital, stated that he had recently cured a case of cancer by the action of X-rays. As Dr. Addyman has for some time been experimenting in cancer research, his claims have been treated with great respect. That X-rays have been made the means of alleviating pain in cancer cases to a very large extent is now generally admitted.

The Plague Mortality in India.—A dispatch from La-

hore, March 29, states that Lieut.-Gov. Sir Charles M. Rivaz has publicly declared that the responsibility for the present mortality from the plague in the Punjaub lies upon the supreme Government. This declaration has caused a sensation.

Obituary.—Sir William Guyer Hunter, a graduate of the University of Aberdeen, died suddenly, at Norwood, March 15, in his 74th year. He was professor of medicine in the Grant Medical College, Bombay, and, in 1880, became vice-chancellor of Bombay University.—Col. Robert Coleman Eaton, R. A. M. C., died recently at Spezia, Italy, in his 61st year.—Patrick Thurburn Manson, the eldest son of Dr. Patrick Manson, died accidentally at Christmas Island, where he had gone to report upon beri-beri for the London School of Tropical Medicine. He was a graduate of Guy's Hospital.—Dr. James Tomb died March 13, aged 41, of influenzal pneumonia. He was a graduate of the Royal University of Ireland.—A. A. Wood Johnstone, a graduate of St. George's Hospital, died at Brighton, March 16, aged 62.—Surgeon-General J. R. Theobalds, who served 32 years on the Indian Medical staff, died March 7, aged 80 years.

CONTINENTAL EUROPE.

A New Method for Distinguishing Death from Catalepsy. A means of distinguishing death from catalepsy has been devised by Dr. Icard, of Marseilles, and submitted to the Academy of Sciences. He injects fluorescin, a strong coloring matter that is not poisonous, into the veins. A gram of the fluorescin solution will color 45,000 litres of water. If there is any circulation, the body will turn grass green in two minutes, but the color passes away in a couple of hours without doing any harm.

A New Treatment for Cataract.—A Bordeaux oculist has taken up with remarkable success the treatment of cataract without operations, by the application of baths of salicylate of soda. He has arrested the progress of opacity in the crystalline lens for several years in numerous cases, and is sanguine of success if the treatment is begun at an early stage.

Sanatoria and Dispensaries for the Treatment of Tuberculous Teachers.—The Teachers' Mutual Aid Society of France held a congress at the Sorbonne last year, by permission of the Minister of Public Instruction, to discuss ways and means to found a sanatorium and dispensaries for teachers afflicted with tuberculosis. In order to procure necessary funds for the construction and furnishing of a sanatorium, they decided upon a popular subscription in France, by authority of the minister, and under the auspices of all teachers; also a lottery with a capital of 1,000,000 francs, tickets, 50 centimes each, and prize lots, the highest of which was 125,000. The French chamber is now considering a report favorable to the organization of this national lottery.

The Price of Surgical Operations.—The charges for a surgical operation have just been settled by the Seine Civil Tribunal, Paris. Dr. Albarran sought to recover $1,200 from a Nanterre grocer as a fee for performing laparotomy on the latter's wife. The Court considered the charge exorbitant and reduced the same to $500, stating that it is a medical man's duty to fix his fee in proportion to the patient's means.

Scarlet Fever in Reims.—Scarlet fever has appeared in the barracks at Reims, where 11 soldiers of the 132d infantry regiment are already down with the disease. They have all been removed to the hospital.

A Prince Who is a Physician.—Duke Carl Theodore, of Bavaria, well known as a specialist in diseases of the eye, has lately done his 4000th cataract operation.

A Memorial to Dr. Semmelweis.—About $9,000 has been collected by subscription all over the world, to erect a memorial to Dr. Ignaz Semmelweis, the founder of antiseptic obstetrics. Hungary has contributed more than half of this amount. Germany has given over $1000, Great Britain over $400, Austria over $300, Russia over $200, Sweden and Norway $150, France $125, Switzerland $100, and America a little over $75.

A Pettenkofer Memorial.—With Prof. von Zittel as president, a committee has been formed for the erection of a memorial of the late Prof. Max von Pettenkofer in Munich.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

March 15, 1902.

1. A Report of Cases Illustrating the Aid of the Röntgen Rays in the Diagnosis of Intrathoracic Tumors. J. MAGEE FINNY and EDWARD J. M. WATSON.
2. Posture and Heart Murmurs. W. GORDON.
3. Two Cases of Congenital Disease of the Left Side of the Heart. THEODORE FISHER.
4. On the Treatment of Traumatic Aneurysm by Proximal Ligature; with Six Successful Cases. CECIL BIRT.
5. A Case of Acute Exophthalmic Goiter. A. J. CAMPBELL.
6. The Difficulties of Preventing Enteric Fever in Warfare. CHRISTOPHER CHILDS.
7. Puerperal Insanity. ROBERT JONES.
8. On a Convenient Terminology for the Various Stages of the Malarial Parasite. E. RAY LANKESTER.

1.—The **diagnosis of intrathoracic disease,** especially in cases of suspected intrathoracic tumor, is often one of the mot difficult problems and may be impossible of solution by the ordinary methods of clinical examination. Finny believes that the **X-rays** are a great aid in the solution of these questions. He reports 3 cases of intrathoracic disease in which the X-rays were used for the purpose of diagnosis by Watson. The first patient was a woman, aged 30 years, who had not felt well for 3 or 4 months, and who had lost flesh. About 6 weeks before she was first seen, she complained of pain in the right side, cough and the expectoration of a small quantity of blood. At the same time, she noticed that her right breast was larger than the left and that the right side of her chest appeared swollen. The most important feature of the physical examination was the dilation of the superficial veins over the lower portion of the thorax. In these dilated veins the bloodcurrent had a downward direction. The diagnosis inclined to the existence of an intrathoracic growth involving the intercostal veins and the superior vena cava. The result of an X-ray examination was not satisfactory, because the picture presented a uniform opacity, similar to that which would be produced by a pleural effusion. On looking closely at the picture, however, a deeper shadow could be outlined in its lower portion. An exploratory puncture showed the presence of fluid, of which 72 ounces were removed by siphon drainage, in which there were no diagnostic features. After the tapping, circumscribed dulness was elicited in the lower portion of the right chest, posteriorly, and for a short time the patient's condition improved. Later, it was necessary to tap a second time, after which another X-ray examination clearly demonstrated the presence of a tumor in front and to the right side of the vertebral column. The authors consider this tumor to be a sarcoma, although after the death of the patient no autopsy was held. The second case was in the person of a farmer aged 42 years who was suffering from symptoms that pointed to the existence of an aneurysm of the thoracic aorta. A skiagraph was instrumental in confirming the diagnosis and also in demonstrating the extent of the dilation of the vessel. The third case was in the person of a miller, aged 54 years, who complained of an ill-defined pain in the left side of his chest, which was the only symptom of the existence of an aneurysm of the aorta. X-ray examination confirmed the diagnosis and showed the aneurysm involving the descending portion of the arch of the aorta and the upper portion of the thoracic aorta. [J. M. S.]

2.—Gordon, after a study of the **influence of posture on heart murmurs,** concludes that the recumbent position increases the murmurs of mitral regurgitation, tricuspid regurgitation, aortic stenosis and those produced by anemia in the pulmonary and aortic areas and at the apex. This position decreases the murmur of mitral stenosis and the venous hum of anemia and leaves the murmur of aortic regurgitation unaffected. When a patient is in the recumbent posture, the increase of the depth of the chest and the effect of gravity appear to be responsible for the change observed in the murmur. On this account, when one is describing a murmur which is altered by posture, the posi-

tion of the patient at the time of the observation should be stated. [J. M. S.]

3.—Fisher reports 2 cases of **congenital disease of the left side of the heart.** The first patient was a child, aged 15 months, who died after an illness characterized by anemia, cyanosis, dyspnea and rapid pulse. There had been a loud systolic murmur heard all over the precordium. At the autopsy, the aorta was found to be only half the size of the pulmonary artery and the mitral orifice was extremely stenosed, measuring only 5mm., while the tricuspid orifice measured 2 cm. in diameter. The second patient was a child, aged 4½ months, who died from bronchopneumonia. At the autopsy, the left side of the heart was found to be enlarged and the aortic valve leaflets were found to be thickened and adherent to each other so that the aortic orifice was much narrowed. [J. M. S.]

4.—Birt reports 2 cases of traumatic aneurysm of the axillary artery, one of the brachial, of the popliteal, and one of the radial arteries, which were cured by the application of a ligature to the vessel, proximal to the aneurysmal sac. [F. T. S.]

5.—Campbell reports the case of a young woman, aged 27 years, who had a goiter. About 3 weeks after he first noticed the goiter, the patient had an attack characterized by fever, pain in the left side, constipation and tachycardia. Later, the symptoms increased, the patient became very nervous, and exophthalmus developed. Still later, vomiting began and she had retention of urine and jaundice. A diagnosis of **acute exophthalmic goiter** was made. The patient died, but there was no autopsy. [J. M. S.]

6.—Childs contributes a paper on the **difficulties of preventing enteric fever in warfare.** He refers to the difficulty of detecting first cases of the disease, so that a soldier suffering from diarrhea, which is due to typhoid fever, may not be isolated in time to prevent him from infecting his comrades. He refers to the difficulty of preventing the pollution of the soil around the tents with urine. The regulations and instructions for constructing latrines and for preventing excremental pollution of the camp should be constantly and thoroughly carried out. The soldiers should be prevented from drinking infected water and the water supply for a camp should be as pure as possible under the circumstances. The author refers to the kitchen carts and boiling apparatus used in the Russian and Swiss Armies. [J. M. S.]

7.—Jones concludes his paper on **puerperal insanity,** which began in the last number of the *British Medical Journal.* This form of insanity is considered by all authorities to have the most favorable prognosis. The prognosis of the insanity of early pregnancy is most favorable. That which occurs later in gestation is apt to continue in an exaggerated degree until after confinement and during the puerperal period. It may become chronic. When albuminuria occurs the prognosis is grave. The pathology of the condition is next considered. In the treatment of the insanity that develops during pregnancy, abortion is not necessary, because the symptoms disappear either toward the end of gestation or soon after confinement. The author advises asylum treatment in these cases as well as in those that occur after the puerperium. Thyroid treatment has not been of benefit. [J. M. S.]

8.—Lankester contributes an article on the **terminology for the various stages of the malaria parasite.** The exotospore is the free parasite in the human blood. The amebula is found in the red corpuscles. The enhemospore is found in the red corpuscles and in the blood. The crescent may be male or female and is also found in human blood. The sperm-mother-cell, the egg-cell, the spermatozoon, the zygote and the vermicule are found in the gnat's stomach. Spore cysts, spore-mother-cells in cyst and exotospores in cysts are found in the blood sinus outside the gnat's stomach. Free exotospores are found in the duct of the gnat's salivary gland. [J. M. S.]

LANCET.

March 15, 1902.

1. Lettsomian Lectures on Certain Diseases of the Blood-vessels. A. PEARCE GOULD.
2. Hunterian Lectures on the Anatomy, Physiology, and Pathology of the Imperfectly Descended Testis. Lecture III. W. McADAM ECCLES.
3. Neurological Fragments. J. HUGHLINGS JACKSON.
4. Some Remarks upon "Internal Derangement" of the Kneejoint; Based upon 59 Cases in which Operation was Performed. HERBERT W. ALLINGHAM.
5. A Case of Acute Myasthenia Gravis. C. A. HINGSTON and W. H. B. STODDART.
6. Milk or Whey in Enteric Fever. ARTHUR TREGELLES PRIDHAM.

1.—Gould delivers the second lecture **on certain diseases of the blood vessels** before the Medical Society of London, on March 3, 1902. In this address he discusses **obliterative arteritis.** He mentions that its origin and causes are obscure and that this condition has hardly found its way into our text-books and may be regarded as a very rare affection. However, his personal experience leads him to believe that the condition is not so rare. He has observed nine cases. A brief review of the literature on this subject is given. The first important paper appeared in 1876 and was a contribution of Friedländer. Since that date a number of cases have been recorded and the main features have been discussed by a number of writers. Before proceeding to narrate the histories of a number of cases, he emphasizes some important points. He reminds us that the tunica intima is the essential part of an artery and this inner coat plays an important part in all physiological and pathological processes of the arteries. Through the smoothness of this coat a patent channel for the flow of blood is maintained. Physiological and pathological obliteration of the vessels is brought about by the proliferation of the cells of the intima. The middle coat of the artery is sometimes concerned in a primary calcification change. There are no known primary changes originating in the tunica adventitia. Any roughness or disease of the inner coat, especially when the endothelium is involved, quickly leads to thrombosis, which in the small vessels at once produces obliteration of the lumen with organization and vascularization of the clot. He contends that there are two main agents which are causative of the obliteration of arteries, namely, new growth and thrombus. He writes that the main features of obliterative arteritis are these: "1. The disease originates in the subendothelial layers of the tunica intima of the smaller arteries. In its early stages it is marked by a small cell infiltration which later organizes into a loose and vascular connective tissue. 2. This growth narrows the lumen of the vessel and may entirely obliterate it; more often, however, thrombosis occurs and the organization of the clot completes the permanent occlusion of the artery. 3. The disease beginning in the smaller arteries tends to spread in a centripetal direction and may reach even the largest arteries. The thrombosis it excites also often extends rapidly and far towards the heart, much faster and farther than the changes in the vessel wall, and the clot may thus spread as far as the aorta. 4. The earliest effect of this diseased artery is pain, then follow other evidences of local ischemia and these may pass on to gangrene. These effects vary with the extent of the vascular obstruction and the efficiency of nature's means of compensation. 5. The disease may be very chronic, slowly progressing for years, or it may run a more rapid course. Having reached a certain point, arrest may occur and the symptoms may gradually pass away, as the unaffected vessels become more and more efficient substitutes for those that have been occluded. 6. The disease arrested for a time may recur in the vessels of the same limb or elsewhere, and it may attack more than one vascular area simultaneously. 7. The vascular changes are not always limited to the arteries and endophlebitis may precede or accompany the endarteritis, and the venous obstruction then modifies

the effects produced on the tissues." The author then gives a report of the histories of nine cases. [F. J. K.]

2.—See abstract of *British Medical Journal* of March 29, 1902.

3.—Jackson discusses laryngeal crisis. He mentions that convulsion and loss of consciousness may occur in severe laryngeal crisis. He described the mechanism by which laryngeal crisis is produced. The first stage of the crisis is one of partial or complete spasm of the glottis and is brought about by an impulse from the inferior portion of the larynx which puts the medulla sensory centers controlling that part of the body into activity. Following this the blood becomes rapidly supervenous which still further irritates and stimulates the medullary respiratory center. This may lead to the continuation of the spasm and sometimes convulsions and loss of consciousness occur. [F. J. K.]

4.—Herbert W. Allingham presents a **table of 59 cases in which operation was performed for internal derangement of the knee joint,** and discusses the question generally. It is shown in the first place that there is a great variety of lesions found after a diagnosis of internal derangement and that these conditions are not confined to the semilunar cartilages. Occasionally no abnormality will be found and yet the operation will prove successful in relieving pain. An accurate diagnosis of the condition before opening the knee joint is very difficult. Stress is laid upon the great importance of early treatment in these cases, and it is said that if upon the onset of symptoms the joint is merely put at rest for a period varying from one to three weeks and if this is followed by massage, passive movements, and properly selected exercises, operation can be avoided in a large number of cases. In a certain percentage this treatment will not be successful and then operation must be resorted to. All chronic cases, too, require operation and those in which a loose body can be felt to move to widely different positions in the joint. Allingham prefers, in operating, to make a vertical incision about three inches long, one inch to the inner side of the patella and extending to an inch below the head of the tibia. Exception, of course, to this rule is made in cases of foreign bodies which can be definitely localized. This vertical incision is better than the transverse, as it does not divide the extension of the vasti toward the tibia and because the extension upward of the incision permits of an examination of the large synovial pouch about the patella. The joint should not be washed out with antiseptics and no drainage should be employed. However, when a foreign body has evaded discovery after a careful search, sometimes irrigation of the joint with sterile water will cause the body to float out. It is thought better to remove loose semilunar cartilages than to fix them. The after-treatment consists in putting the joint at rest for one week when passive motion should be begun if the wound is entirely healed, and massage can then be instituted. If in spite of this treatment the joint tends to become stiff it must be moved under an anesthetic. When the semilunar cartilage is involved there is usually a distinct history of injury; a definitely located site of pain on the inner or outer side of the knee joint; no foreign body is palpable; and no creaking in the joint can be elicited. The results generally from the operation have been satisfactory, although occasional stiffness and pain have followed. Recurrence of the trouble after operation is extremely rare. Allingham is careful not to minimize the gravity of the operation which is held to be considerable, and repeats that failure must occasionally follow the operation. [J. H. G.]

5.—A case of **acute myasthenia gravis** is reported by Hingston and Stoddart, which occurred in a man, 71 years of age, a contractor by occupation. Up to the age of 63 he had enjoyed comparatively good health. At about this time he began to suffer from severe neuralgic pains in different parts of the body and limbs. These pains finally centred themselves in the left leg and at times were so severe as to confine him to bed. He was a sufferer from glycosuria, and albuminuria manifested itself twelve months before his death. The final illness, of twelve months duration, seemed to date back to the time when he relaxed his diabetic diet. This illness developed gradually with progressive general weakness. He was unable to read for any length of time on account of slight bilateral ptosis. Difficulty in swallowing showed itself and his diet was restricted to semisolids and, later, only to liquids. Vomiting was a frequent symptom even while partaking of liquids. An examination of the patient showed that he was well nourished and appeared to be in good health except for his ptosis. Weakness was pronounced. He could perform fairly well movements of the limbs or trunk, but these immediately exhausted the patient. There was no muscular wasting or loss of sensation of any part of the body. There was no incoordination or involuntary movement of any kind and tremor was absent. The knee-jerk, which was somewhat exhausted, became more so after repeated stimulations, but it could never be absolutely abolished. Reading seemed to increase the well developed bilaterial ptosis. Ocular palsy was absent, but on lateral deviation of the eyes some nystagmoid jerking developed. The conjunctival and pupillary reflexes were normal. The patient's voice was fairly strong and the facial and mastication muscles appeared normal. Swallowing was difficult and frequent vomiting was a symptom. The heart was normal except for an accentuation of the aortic second sound. Difficulty in swallowing became more pronounced as the disease progressed, and death occurred after an illness of twelve months. A necropsy was not performed. The authors believe that undoubtedly this patient suffered from myasthenia gravis or asthenic bulbar paralysis. [F. J. K.]

6.—Pridham reports a case of enteric fever complicated by intestinal hemorrhage, occurring in a man, 23 years of age, a fish-porter by occupation. The patient was given from three to four pints of whey in every twenty-four hours. With the exception of a small quantity of beef essence and a small amount of brandy, he was fed exclusively on whey. The author thinks that whey possesses distinct advantages over the ordinary milk diet in enteric fever. In the case which he reports, abdominal distention was entirely absent. Delirium was also absent almost throughout the illness. In spite of the intestinal hemorrhage and severe ulceration, serious diarrhea was never present. He is inclined to the view that decomposing milk curds in the intestine produce toxins which aggravate some of the symptoms of enteric fever. [F. J. K.]

MEDICAL RECORD.

March 25, 1902.

1. The Relation of Surgery to Obstetrics. EDWIN B. CRAGIN.
2. The Study of Quarantine in the Light of Modern Progress. ARTHUR H. GLENNAN.
3. A Fatal Case of Gangrenous Appendicitis without one Cardinal Symptom in the Course of the Disease. SAMUEL M. EVANS.
4. Cosmetic Considerations Not the Only Ones in Cases of Strabismus. RICHARD H. DERBY.
5. The Treatment of Internal Hemorrhoids. W. DUFF BULLARD.
6. Is the Mind an Entity. H. H. STONER.

1.—E. B. Cragin considers the **relation of surgery to obstetrics.** He points out that surgery and midwifery for a short time were regarded as one chair during the early period of existence of the College of Physicians and Surgeons. He defends the relation between surgery and obstetrics today as most intimate and states that the

best preparation for obstetric work of the highest type is through surgical training. He discusses 6 features of obstetrical work, (1) **aspesis,** (2) **hemorrhage,** (3) **lacerations,** (4) **obstructed deliveries,** (5) **eclampsia,** (6) **infection.** [T. L. C.]

2.—A. H. Glennan presents a **study of quarantine** in the light of modern progress. He believes that the best results of quarantine are to be obtained from international sanitary conferences which should be based upon informatory principles and not the imposition of too many rules and regulations to which the various countries are not prepared to subscribe. He quotes in full the rules which were formulated and recommended at the recent Pan-American Congress which met in the city of Mexico. [T. L. C.]

3.—Samuel M. Evans presents a **fatal case of gangrenous appendicitis** without one cardinal symptom in the course of the disease. The patient was a girl of 9 years, who had had about a year and a half before, within a period of 5 months, three attacks of illness characterized each time by **prostration, nausea, vomiting, rapid pulse, some temperature, obstinate constipation and slight soreness over the abdomen.** In the last of these attacks the abdomen was thoroughly examined, but there was total absence of symptoms pointing to appendicitis. In the attack which ended fatally intense headache was the only symptom when she was first seen. For two weeks previous to this attack she had suffered from constipation, anorexia, and grew tired easily, there were also occasional severe headaches. The patient died in 6 days. Every 24 hours marked a decided advance in the pulse and the toxemia, the pulse increasing about 20 to 30 beats each day. A bloodcount made on the evening of the 3d day showed that the leukocytes numbered 19,600. The temperature remained practically negative from the fourth day after the beginning of first symptoms until 30 hours before death, when it registered 102°, and it remained high until she died, being 105° at one time. The autopsy, a full report of which is included in the paper, showed a gangrenous appendicitis which was probably an acute attack following chronic appendicitis. There was localized incipient gangrene of the small intestine and acute parenchymatous myocarditis. This case declares that an infection can exist in the appendix which will end fatally not only before peritoneal symptoms occur, but before giving any indications of its source, therefore, asks Evans, under such circumstances as this case presented, is it not justifiable to make an exploratory incision for the purpose of diagnosis and of further interference, if necessary? [T. L. C.]

4.—Richard H. Derby discusses the **importance and the possibility of securing binocular vision in cases of strabismus.** Whatever method of treatment is adopted, the result both cosmetic and visual will generally depend very largely upon the orthoptic treatment. He emphasizes the value of the methods of ocular exercise which practised before operation will add to its success and which carried out after operation materially increase its effect. He mentions that the amblyopia in cases of monolateral squint has been described under at least three different forms. **In the first, the acuity of vision is diminished,** but there is no change in the conductibility of the retinal elements, in the second form, the **power of fixation is impaired. The patient makes tentative movement with the macula,** which seems to be losing its predominance over neighboring portions of the retina. In the third form, **the inner half of the retina has a better vision than the fovea.** In the first form it is common enough to have improvement of the vision after operation, in the second form the improvement is not immediate but comes gradually, in the last form the chances of improvement of vision are small. It is in the second class of these and especially in young children that results can be secured by treatment. The error of refraction must first be corrected under atropine and then the isolated training of the amblyopic eye should be begun and regularly carried out for a half an hour at a time daily. The use of the **stereoscope** as an aid in this direction is recommended. Three illustrative cases are cited. [T. L .C.]

5.—W. D. Bullard discusses the **treatment of internal hemorrhoids.** He believes that the **ligature and the clamp and cautery operations** are the proper procedures to employ and states that the latter possesses an advantage of a more speedy and painless cure and less liability to complications. It is his opinion that the injection and Whitehead methods should be abandoned. [T. L. C.]

MEDICAL NEWS.

March 29, 1902. (Vol. 80, No. 13.)

1. The Present Status of Serumtherapy in Typhoid Fever. JAMES EWING.
2. Surgical Complications of Typhoid Fever. ROBERT ABBE.
3. The Detection of Typhoid Bacilli in the Feces as a Diagnostic test of Typhoid Fever, and a Comparison of this test with the Widal Reaction. HENRY A. HIGLEY.
4. Remarks upon some Experiences with the Widal Reaction. E. LIBMAN.
5. Some Observations on Typhoid Fever. FRANK SHERMAN MEARA.
6. Adrenal Substance in the Intestinal Hemorrhage of Typhoid Fever. WARREN COLEMAN.
7. Pathology of Typhoid Fever. ALEXANDER BATE.

1.—James Ewing emphasizes the importance of recognizing the paracolon or Gärtner group of intestinal bacteria as rather frequent excitants of diseases which may be clinically indistinguishable from typhoid fever. They serve to explain the failures of the Widal reaction which are constantly being reported, and they point out the necessity for testing suspected typhoid serum both in genuine typhosus and in cultures of the paracolon group. In conclusion he states that the bodies of typhoid bacilli contain poisons which do not diffuse rapidly in fluids as does diphtheria toxin and which are incapable of producing the specific lesions of typhoid fever. Not only has no specific typhotoxin been isolated from testtube cultures of bacillus typhosus or from the cadavers of typhoid patients, but many authorities have shown that the procedures which render animals immune to infection by the typhoid bacillus are incapable of protecting them against the infections of the products and macerated bodies of these bacteria. The problem of the serumtherapy of typhoid fever is, therefore, the preparation of a serum which is principally bactericidal and not antitoxic as in diphtheria. It has been generally thought that the agglutinating substance represented the essential principle in preventive serums in typhoid fever, but it has gradually become clear that, while the agglutinines are usually abundant in strongly protective serums, such active serums may exhibit very little agglutinating power. All strongly agglutinating serums are strongly protective, but that highly protective serums may contain little agglutinine. [T. M. T.]

2.—Robert Abbe classifies the surgical complications of typhoid fever as follows: (1) Bone abscesses; (2) destructive deposition of bacillus colonies in the laryngeal cartilage; (3) femoral phlebitis; (4) parotitis; (5) peritonitis from perforating ulcers of the intestine. The last is by far the most important, and statistics show that most recoveries from operation for perforation have come from delaying until shock has passed; twelve hours after is regarded as the most favorable period. If operation can be done under favorable circumstances within twelve or eighteen hours, the recoveries rise to 32% and fall again to 13% for operation after twenty-four hours. [T. M. T.]

3.—H. A. Higley reports a number of cases from which he draws the following conclusions: (1) During the second week of typhoid fever when the technical aids are of the

greatest value to the practitioner, isolation of typhoid bacilli from the feces gives slightly better results than does the Widal test. These two methods used in combination, when the tests are carefully and persistently made, render material aid in the diagnosis of this disease previous to the appearance of distinctive clinical symptoms; (2) by the use of Hiss' isolation method, especially with the substitution of the new plating medium, the detection and isolation of typhoid bacilli are, to one familiar with bacteriological methods, simple, reliable and practical. [T. M. T.]

4.—E. Libman says: (1) That a positive Widal reaction always means that typhoid fever is or has been present; (2) partial reactions are absolutely to be ignored; (3) a negative reaction does not exclude the existence of typhoid fever. It occurs under any of the following conditions: (a) The reaction has already disappeared: (b) the reaction may only appear later; (c) the culture may be at fault; (d) the case is clinically one of typhoid fever and there may never be a positive reaction; (e) the disease is not typhoid fever. A negative reaction may occur if the patient is suffering from an infection by a paracolon bacillus and still, for the practitioner, the case is identical with one of typhoid fever. Again, a positive reaction may occur when the case is clinically not one of typhoid fever, and yet the autopsy, if there be one, may show the presence of the typhoid bacillus in some part of the body, or it may be found *intra vitam* in the urine, feces, rose spots, blood, or some complicating lesion; (4) scientifically, the Widal reaction is of the greatest value in establishing the presence of infection by the typhoid organism in cases such as those last referred to and in assisting in identifying the typhoid bacillus. Practically, it is also of great use, but it is not so valuable as we would wish it to be. Often the diagnosis of typhoid fever is very clear long before we obtain the reaction. In many cases, however, it alone can establish the diagnosis. This is particularly true of the atypical cases in which pneumonic or meningeal symptoms usher in the disease. These cases are more common in children than in adults. Positive reactions have been obtained quite early in many of the atypical cases. [T. M. T.]

6.—W. Coleman treated five cases of **intestinal hemorrhage with adrenal substance.** Four patients recovered, although in two of them the hemorrhage was very severe. The fifth patient died of toxemia and exhaustion several days later and not of hemorrhage. He advises the free use of adrenal substance and gives fifteen grains every two hours during the day and every four hours during the night, gradually diminishing the dose as required. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

March 29, 1902. (Vol. LXXV, No. 13.)

1. The Obesity of Adolescence. HEINRICH STERN.
2. The Relation of Local Disease to Nervous Disorders, especially Neurasthenia. FREDERICK COGGESHALL.
3. The Radical Cure of Hydrocele by Minute (Two-minim) Injections of Carbolic Acid. WILLIAM B. COLEY and PRESTON A. SATTERWHITE.
4. A Prostatectomy Forceps. RAMON GUITERAS.
5. Hippus. RICHARD COLE NEWTON.
6. Diabetes and the Eye. S. BUSBY ALLEN.

1.—H. Stern gives two different forms of obesity: (1) Those cases of obesity abiding after individual development he classifies among the "metabolic," and as "transitory" or "specific" those which subside with the approach of adult life. The origin of the first form occasionally antecedes the period of puberty. The latter form always makes its appearance with the approaching state of puberty, and, as it again vanishes during or at the close of adolescent life, he gives it the term of "specific" obesity of adolescence. The two forms occur in both sexes, although he has found the metabolic variety more frequently among boys, and the specific form among girls. The metabolic variety is the most common and is always due either to excessive ingestion of nutriment, or to insufficient oxidation in the organism, or to both these eventualities together. The specific form among girls explains itself by the fact that the changes occurring at puberty are much more decisive in the female than in the male organism. Superalimentation does not play any part in the production of this type, and must be due to diminished intra-organic oxidation. The reasons why the author ascribes the catabolic disorders to faulty thyroid activity are: (1) Disappearance of the thymus gland and marked development of the thyroids at the peroid of puberty; (2) the more frequent occurrence of thyroid affections in girls than in boys, which fact tends to explain the analogy, greater frequency of transitory obesity of adolescence among the pubescent females; (3) our physiological and clinical experience as regards increase in protoplasm oxidation after administration of thyroid gland or its preparations. Most cases of transitory obesity run an uneventful course. The excess of absolute weight amounts, on an average, to about 25 to 30 per cent. This form seems to deposit fat upon the chest, breasts and extremities more frequently, while in the metabolic variety it principally gathers in and upon the abdomen, in the region of the hips and on the buttocks. The author also mentions that in obese girls the hair of the head is full and attains great length, while it is much less abundant and comparatively short in metabolic obesity. Both forms of juvenile obesity only demand treatment either when the overweight is so excessive as to interfere with the function of certain organs, or in the presence of grave concomitant disorders. Uncomplicated cases of less than 30 per cent. overweight are better not subjected to any continuous treatment. Treatment, if necessary in such cases, should be directed towards maintenance of the individual's present body weight. It should be of such a nature as to prevent protoplasm decline on the one side and further accumulation of fat on the other. [T. M. T.]

2.—F. Coggeshall's plan of treatment in these cases is: (1) To search carefully for the evidence of hereditary tendency to neurathenia or of the appearance of the disease in childhood. This gives a rough indication of the gravity of the tendency and of the likelihood of benefit from removing local causes of extra fatigue; (2) then to search especially in the eye and in the pelvic organs, also in the nose and teeth, and, of course, with great care in the habits and occupations of the patient for sources of removable strain; (3) to remove these local irritations as completely (but in gynecological cases as conservatively) as possible, never waiting until the patient is better before removing what the author thinks is the reason why she is not better; (4) we should never be satisfied with removing the local irritation, but should set about at once building up the nervous system and the mental condition as far as possible. [T. M. T.]

3.—William B. Coley and P. A. Satterwhite report a number of cases treated with **minute injections of carbolic acid.** Their series of cases, though not large, is sufficient, the authors think, to show that practically just as good results may be obtained by using two minims of carbolic acid as from thirty to ninety. This small amount they believe to be absolutely free from all risk, and if a cure of large and long standing hydroceles may be obtained by this simple procedure, they do not believe it justifiable to perform an operation, which would confine the patient to his home or the hospital for a period of ten days, at least not until the simple method has been tried first. Of course, they recognize that different cases of hydrocele differ widely anatomically and pathologically, and just as it would be absurd to advocate the inversion method in a greatly thickened sac with areas of calcification, it would also be absurd to expect a radical cure from two minims of carbolic acid in such a case. The cases that they have treated, however, have not been selected, and they vary from the recent hydrocele in a boy of

fourten, to hydrocele of over forty years' duration in a man of sixty-two, and the results have been almost uniformly good. While they believe that by the injection method described the great majority of cases of hydrocele may be cured, they also believe that there will always be a certain small number of cases in which the open method of resection should be employed. [T. M. T.]

4.—R. Guitéras describes his instrument as follows: It has oval blades with fenestræ in the center; their inner surface is serrated, the outer smooth, and they are about three-quarters of an inch wide and an inch in length. The arms are separated so as to leave room for any part of a lobe to protrude between them, and it will thus be seen that, after a lobe of the prostate is grasped, there will be no unnecessary space taken up by the arms. The enucleating fingers then therefore easily work around the forceps, which holds the lobe without any interference. The handles are the same as those of an ordinary instrument of this class, with the exception that there are eight "patches" in its lock, which facilitates a firm grasp upon different-sized prostates, without crushing or tearing them, and allows of the use of any degree of pressure. [T. M. T.]

6.—S. B. Allen in his article on **diabetes and the eye** mentions among the earlier affections, and one of the most valuable for diagnosis, nuclear ocular palsy—a loss of power of the ocular muscles. When the muscles external to the eyeball are affected, it is called ophthalmoplegia externa; when the muscles inside the eyeball, it is called ophthalmoplegia interna. If the muscles both inside and outside are involved we have a mixed, if one eye is affected a single, if both eyes, a double ophthalmoplegia; while, according to the severity of the affection, we have partial or total ophthalmoplegia. The muscles innervated by the third nerve are most frequently affected. The sixth and fourth nerves come next, causing diplopia, always an alarming symptom. Sometimes the facial and more rarely the levator palpebræ superioris are involved. These paralyses are generally partial, and, if they occur early in the disease, disappear in a few weeks, perhaps to recur later in the disease when they are likely to remain, or at least not wholly to disappear. They may occur when the disease is slight and also when it is severe, and have no constant relation to the various stages. Paralysis or paresis of the accommodation occurring in persons less than 35, and increasing rapidly, should excite suspicion of glycosuria. Failure of vision for near work in diabetes, however, may not always be due to loss of accommodation. Diabetes will cause changes in the shape of the eyeball and changes in the lens that will so alter the refraction of the eye as to produce an acquired hypermetropia, on the one hand, and an acquired myopia on the other; and such changes taking place in a person of forty should put us on guard. This is the most frequent effect of diabetes on the eye. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

March 27, 1902.

1. The Suture of Arteries. J. C. HUBBARD.
2. A Contribution to the Study of Catgut as a Suture and Ligature Material. HUGH CABOT.
3. Neglected Methods for the Sterilization of "Gum-Elastic" Catheters. F. J. COTTON.
4. Two New Methods of Operating for Retrodisplacement of the Uterus. FREDERICK COGGESHALL.
5. The Influence of School Life over Health. FRANK W. WRIGHT.

1.—A critical review of the **suture of arteries** is presented by J. C. Hubbard, together with some experimental investigations concerning transplantation of arteries on animals. [M. R. D.]

2.—Hugh Cabot contributes a study of **catgut as a suture and ligature material.** In order to get the best results from catgut, care must be taken to select the size and preparation best suited for each occasion. The use of too large sizes is one cause of unsatisfactory results. Care in tying and cutting catgut ligatures is essential to safety. As a general rule catgut should be used in sizes as small as will do the work required in any given case. Where great pressure is necessary to occlude the vessels, catgut will not maintain a high degree of tension for a sufficiently long time; as a suture material for the skin catgut has the only claim that it does not have to be removed. Experiments on rabbits cause the author to conclude: (1) That in rabbits chromicized catgut of No. 1 size is retained longer than is desirable in a suture material for surgical use; (2) that plain catgut of No. 1 size is retained a sufficient length of time; that is to say, a minimum of three weeks; (3) that catgut prepared by dry heat is more rapidly absorbed than that prepared by moist methods; (4) that the time required for absorption increases very rapidly with the increase of size, as No. 2 gut took from two to three times as long to absorb as No. 1. [M. R. D.]

2.—Frederick Coggeshall discusses two new methods of operating for **retrodisplacement of the uterus,** referring to Goldspohn's operation, a modification, or as the author considers it, an extension of Alexander's operation, and the operation of Gillean. The advantages of each operation are described. [M. R. D.]

5.—Frank W. Wright, in discussing **the influence of school life over health,** believes that medical inspection of schools, if properly performed, appears to offer more possibility toward lessening sickness among the young, not only at the school, but in the home. The subject should be divided into four classes. First, sanitation of the buildings, which should include the inspection of closets, urinals, heating and ventilating apparatus, lighting and the general cleanliness of the rooms and halls, the water supply and means by which this is served, and possibly supervision of books, pencils, etc., as to neatness and disinfection and destruction if necessary. Second, examination of pupils, which should be daily, for the prevention of contagious diseases and at stated intervals for the detection of vermin and parasitic diseases, and at least once every term to ascertain if all the pupils have been successfully vaccinated. Third, the examination of the eyes and ears of each pupil, that errors in refraction and defects in hearing may be corrected, and treated. Fourth, what may be called outside inspection, that investigation into causes of abscence of children from school, and, if they are found to be ill, the nature of the illness. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

March 29, 1902. (No. 13).

1. The Use of the Gall Bladder to Restore a Prolapsed Liver. A. F. JONAS.
2. End-to-End Approximation of the Broad Ligaments and Other Points of Technique in Abdominal Hystero-Myomectomy. E. C. DUDLEY.
3. Anemias Secondary to Gastro-Intestinal Disease, with Report of Two Cases. G. W. McCASKEY.
4. The Anatomical Factor in the Production of Baldness. GEORGE ELLIOTT.
5. Ocular Lesions Associated with Constitutional Diathesis. H. ISAAC JONES.
6. The Prostate. JOHN B. MURPHY.
7. Case of Typhoid Fever Complicated by a Thrombophlebitis of the Long Saphenous Vein, Etc. GEORGE C. ARMSTRONG.

1.—A. F. Jonas describes two cases in which he operated for **gallstones** and found the **liver displaced** downwards and inwards to a considerable extent. After relieving the condition for which he operated he replaced the liver without difficulty and fastened the gallbladder to the upper angle of the wound, thus holding the liver firmly in position. Both patients were examined a considerable length of time after the operation and no reproduction of the liver displacement was discovered. In the second case there was associated with the descent of the liver, gastroptosis and enteroptosis After this operation the abdominal walls should be firmly supported for a considerable period by an abdominal band,

otherwise the gall bladder attachments would become elongated. After discussing the question of liver prolapse Jonas draws the following conclusions: (1) The cause of hepatoptosis consists in a modification of one or more of its normal supports, or in an increase in the size and weight of the liver. (2) It is impossible for the liver to descend without producing a descent of the hollow abdominal viscera. (3) The utilization of the gall bladder as a suspensory ligament, to maintain and hold in its normal position a prolapsed liver, together with certain other abdominal organs, seems practical. [J. H. G.]

2.—Dudley remarks that **abdominal hysteromyomectomy** may be *supravaginal*, in which the tumor, corpus uteri and supravaginal portion of the cervix are removed, or *complete*, in which the tumor and entire uterus are removed. In performing supravaginal hysteromyomectomy, Dudley closes the uterine stump in the anteroposterior direction and the broad ligaments in the same direction by end-to-end approximation. The steps of his operation are abdominal incision, delivery of the tumor through the abdominal wound, ligation of the ovarian and uterine arteries and removal of the tumor together with the corpus and supravaginal portion, toilet of the peritoneum, and closure of the abdominal wound. He claims as the advantages of end-to-end approximation of the broad ligament the following: The broad ligaments when approximated by this method take the place, in an anatomical sense, of the excised uterus, and form a pouch, posteriorly, that corresponds to the cul-de-sac of Douglas and, anteriorly, a depression that answers for the uterovesical pouch. The broad ligaments thus brought together give support to the rectum, vagina, bladder and other parts of the pelvic floor, and in so doing prevent the descent of these parts. Being interposed between the bladder and rectum they prevent the intimate union of these two viscera, thereby rendering infection less likely. He claims also that the operation is more quickly and easily performed by this method than by side-to-side union of these ligaments.

[W. A. N. D.]

3.—**Two Cases of anemia due to intestinal disease** are reported by McCaskey. Before considering the cases, he discusses anemia due to gastro-intestinal disease. McCaskey believes that intestinal toxemia, in a large proportion of the cases, is capable of producing a leukocytosis, and he further holds that the hemolytic action upon the erythrocytes is brought about in most of the conditions accompanied by a leukocytosis. The first case was one of secondary anemia due to disease of the digestive tract. The anemia was pronounced. There were 1,500,000 erythrocytes per cubic millimeter, 43,000 leukocytes per cubic millimeter and 30 per cent. of hemoglobin. Under treatment the patient improved and the blood assumed the normal state. The second case occurred in a man. 31 years of age, who had complained of stomach and bowel trouble for five years. Anemia in this case was also decided. The red cells numbered 1,700,000 per cubic millimeter and the hemoglobin percentage was twenty-five. The patient improved under treatment and the blood regained its normal state. [F. J. K.]

4.—Elliott discusses **the anatomical factor in the production of baldness.** He thinks that interference with the return flow of blood and the lymph in the lymphatic channels due to constriction produced by the hat is the important factor in the production of baldness. He contends that the construction of the hat interferes very slightly with the circulation in the arterial trunks of the scalp. He is not disposed to attach great importance to dandruff as the prime cause of baldness and mentions that women suffer from this affection quite as much as men do. The fact that women give more attention to hair dressing, combing it night and morning, is the reason why few women become bald even in advanced life. He recommends massage-exercise for the prevention of baldness, which he thinks should be begun in early life. [F. J. K.]

5.—Jones discusses **ocular lesions associated with constitutional diathesis.** The author considers the effects of various diseases upon the eyes and concludes "that, in all ocular troubles, remove the cause, whatever it may be, syphilis, rheumatism or other debilitating and lowering dyscrasia. We must remember that it is not only our province to gain knowledge wholly from a single organ and direct treatment to the same, but we must study the general condition of our patient and see if we cannot find a cause for the local change." [F. J. K.]

6.—John B. Murphy, after discussing **hypertrophy of the prostate gland** and the various **operations for the relief** of this condition at considerable length, reaches the following conclusions: (1) From the clinical reports and experience, it seems evident that in extreme cases prostatotomy is the operation of election. (2) It appears evident that in the hands of safe, far-seeing, informed practitioners, few cases will now be allowed to progress to this extreme condition before radical means are resorted to for permanent relief. The practice of to-day should be timely practice. (3) Continued use of the catheter is a menace to life, not to mention its discomfort, no matter how favorable the conditions for its performance. The patients all, sooner or later, suffer from cystitis and its sequelæ. (4) Prostatectomy gives the best permanent result, and is fraught with very little more danger than prostatotomy. (5) Suprapubic prostatectomy should be limited to exceptional cases of enormous intravesical enlargements of the prostate. It appears to us to endanger the sphincteric control more than the perineal operation. It is more sanguinary and the work is more difficult and distant from the operator. (6) The perineal is the most direct and least bloody route. It admits of a very large opening, and permits the prostate to be drawn quite into the open before it is attacked. It gives the greatest security against injury to the bladder wall and least liability to disturbance of the internal sphincter. It endangers the rectum least and affords the best drainage. (7) It can be best performed through a Y-shaped incision, with a Sims speculum for a posterior retractor. The prostate is drawn out easily with sharp hook retractors, and best separated from the bladder from behind forward. The operation should never be performed in the dark, *i. e.*, through a small incision. (8) It should always be intracapsular enucleation en masse, allowing the anterior isthmus to remain. The hemostasis may be secured with forceps or a packing of subiodide of bismuth (not iodoform) gauze. The permanent catheter should not be introduced until the perineal drain is removed. (9) The patient should be kept in a semisitting position for seventy-two hours after the operation, and should be out of bed by the fifth day. He should drink large quantities of water from the onset. (10) Anesthetic is *sub judice*. Phosphate of sodium should be administered to keep the urine acid: and urotropine as an antiseptic. The personal equation must never be lost sight of in operating these cases, and attention to every small detail of the patient's general condition is necessary for the best results. [J. H. G.]

7.—Armstrong reports **a case of typhoid fever accompanied by a thrombo-phlebitis of the long saphenous vein, a severe hemorrhage from the bowel, infection of the clot, with recovery,** which occurred in a man, 20 years of age. The patient came under the author's observation on August 21, 1901, at which time his temperature was 102.5° F. and the pulse rate 72. Most of the symptoms which occur in typical cases of enteric fever were present. During the early course of the disease, the temperature never rose above 103°F. Convalescence was apparently established at the end of the fourth week. On September 17, thrombophlebitis of the long saphenous vein developed. At this time the temperature rose to 105.2° F. Four days after the onset of the phlebitis the patient had a severe hemorrhage from the bowel. Recovery was slow but uninterrupted, and the author points out "that the case is interesting from the facts that an apparently moderate attack of typhoid fever is no criterion from which to deduce a prognosis; this case demonstrated beyond a reasonable doubt the value of the salt solution that was used to correct the acute anemia." [F. J. K.]

AMERICAN MEDICINE.

March 29, 1902.

1. Sand Filtration in Relation to Diesase. JAMES M. ANDERS.
2. Observations on Bacillus Coli Communis from Certain Species of Domesticated Animals. VERANUS A. MOORE and T. R. WRIGHT.
3. The Treatment of Suppuration in the Uterine Appendages. CHARLES P. NOBLE.
4. Report on a Parasitic Disease in Horses, Mules and Caribao in the Philippine Islands. J. J. CURRY.

5. Movable Kidney with Possible Explanation of Failure in Some Cases to Relieve Symptoms by Nephrorrhaphy. GEORGE H. MALLETT.
6. A Criticism of a Recent Discussion upon the Value of Certain Cases of Blood Examination. ROBERT N. WILLSON.
7. Facts About Smallpox and Vaccination. Issued by the Council of the British Medical Association.

1.—J. M. Anders presents a paper on **sand filtration in relation to diseases.** He holds that the method of purifying drinking water for municipalities by slow sand filtration is the best and most practicable. He discusses the means of purification of the present water supply of Philadelphia under 2 heads: (a) the affections that are produced by habitual and temporary use of polluted water, and (b) the efficiency of sand fiftration as a practical means of minimizing the prevalence of the diseases produced by an impure water supply. [T. L. C.]

2.—V. A. Moore and F. R. Wright contribute a paper on **observations of bacillus coli communis from certain species of domesticated animals.** They have made bacteriological examinations from 44 animals divided among 6 species, including horses, cattle, sheep, pigs, dogs and chickens. The characteristics of the organism in the various species are described. The authors state that a study of the action of the colon bacilli on the sugars and milk shows that those existing in the intestines of these different species of animals fall very naturally into two groups; **those that ferment the 3 sugars with the formation of gas, and those that ferment dextrose and lactose only.** These correspond with the two varieties described by Smith. It is important to note that the quantity of gas produced and the relative quantities of H and CO_2 varied somewhat in the different cultures. It is difficult, however, to find variations sufficient, either in extent or constancy, to warrant a formation of new varieties of groups. [T. L. C.]

3.—C. P. Noble discusses the treatment of **suppuration of the uterine appendages.** His paper deals with 200 cases, 146 of which were treated by abdominal section and 54 by incision and drainage, in almost all cases the avenue of entrance was through the vagina. Elaborate tables of the cases accompany the article. The methods of dealing with suppuration of the uterine appendages have been greatly improved within the last 14 years, the mortality has been reduced from more than 16% in the first half of this period to less than 5% in the second half. This reduction in the mortality has been obtained by: 1. Abandoning abdominal section in the treatment of pyosalpinx and abscess of the ovary when complicated by intraperitoneal abscess, and by substituting direct incision and drainage in this group of cases, and also for recent cases of pelvic suppuration of puerperal origin. 2. By substituting hysterectomy for oöphorosalpingectomy for the removal of bilateral suppuration in the uterine appendages. Direct incision and drainage finds its best indication in: (1) Puerperal phlegmon; (2) puerperal ovarian abscess, intraperitoneal abscess and pyosalpinx; (3) in complicated cases of pelvic suppuration of whatever origin, in which the pus is not contained within the ovary and tube. [T. L. C.]

4.—Capt. J. J. Curry reports a **parasitic disease in horses, mules and caribao** in the Philippine Islands. Investigation of a disease occurring in the caribao has shown that the parasite found in these animals is identical with that reported by Smith as occurring in horses and mules and which appears to be the **"surra"** parasite. A biting fly, not yet identified, seems to carry the infection in all cases. "Surra" is well known in India and Burmah and is closely related to the "nagana" or "tsetse" fly disease prevalent in Africa. Curry states it is probable that the cattle epidemic which he describes is "surra" and not rinderpest. This latter disease has existed, however, for several years in certain provinces in the Philippines. Treatment has been unavailing. [T. L. C.]

5.—G. H. Mallett presents a paper on **movable kidney; with possible explanation of failure in some cases to relieve symptoms of nephrorrhaphy.** He reports 4 cases and states that in most instances of movable kidney, when an operation is indicated and the symptoms persist after operation, the kidney has been fixed in a malposition. He believes that in many cases of fixation the kidney is attached in a position of external rotation on its vertical axis, which naturally rotates the internal concave border and the hilum more outward than normal, which facilitates the formation of a kink in the ureter and obstruction to the circulation besides offering a better opportunity for downward pressure by the liver. [T. L. C.]

6.—R. N. Willson presents a criticism of a recent discussion upon the **value of certain cases of blood examination** which is a further reply to Deaver's recent articles on this subject and those of Baldy, the last of which appeared in this Journal, March 15, 1902. [T. L. C.]

THE JOURNAL OF NERVOUS AND MENTAL DISEASES.

January, 1902. (Vol. 29).

1. Contribution to the Study of Spinal Fractures with special reference to the Question of Operative Interference. G. L. WALTON.
2. Report of a Case of Epilepsy Presenting as Symptoms Night Terrors, Impellent Ideas, Complicated Anatomatisms, with Subsequent Development of Convulsive Motor Seizures and Psychical Aberration. W. K. WALKER.
3. A Case of Myelitis Exhibiting the Results of Coordination Exercises. JOHN K. MITCHELL.

1.—In G. L. Walton's article, the study of spinal fracture with special reference to the question of operative interference, the following conclusions are given: (1) There are no symptoms which establish (otherwise than through their persistence)irremediable crush of the cord; (2) while total relaxed paralysis, anesthesia of abrupt demarcation, total loss of reflexes, retention, priapism, and tympanites, if persistent, point to complete and incurable transverse lesion, the onset of such symptoms does not preclude a certain degree at least of restoration of function; (3) the prognosis without operation is grave; (4) while the results of operation are not brilliant, they are sufficiently encouraging to warrant us in making the practice more general; (5) in most cases it will be wise to operate within a few days of the injury, but a delay of some hours is advisable, partly on account of shock and partly to eliminate the diagnosis of simple distortion; (6) there is no infallible guide to the extent of the lesion. The operation at the worst does not materially endanger life nor affect unfavorably the course of the case, and may at least reveal the lesion and lessen the pain ;it may sometimes save a patient from death or from helpless invalidism of most distressing character. Instead of selecting the occasional case for operation, rather should be selected the occasional case in which it is contra-indicated (the patient with great displacement of vertebrae, the patient with high and rising temperature, the patient plainly moribund, the patient still under profound shock); (7) the dura should be opened freely; it need not be sutured; drainage is not necessary. [T. M. T.]

2.—W. K. Walker reports a case of the above in a patient of psychopathic heredity, presenting in early childhood the phenomena of night terrors and somnambulism, defective inhibition, precocious alcoholism, impellent desires and obsessions, complicated automatisms with subsequent development of convulsive motor seizures, and the psychical aberration so characteristic of this disease. The special features of the attacks were that they were paroxysmal and periodic in character with sudden onset and automatisms showing activity of the higher nerve centers attended with absence of consciousness, memory and spontaneous will, followed by sequelae of epileptic occurrences such as confusion, suspicions, violent temper, and tendency to depression in the intervals, controlled or markedly modified by the administration of bromides. Amongst the psychic symptoms there were (1) the earliest manifestation in the form of simple irresistible impulse unaccompanied by emotional states; (2) irresistible impulses to theft, to suicide and to homicide, the last two being the outcome of emotional states; (3) there were frequently manifested anxious states, having their origin in

constant brooding over his condition; (4) suspicions and delusions of persecution developed in like manner; (5) irregular and imperfectly coordinated movements carried out during somnambulistic states; these, with the subsequent development of true convulsive motor seizures, complete the cycle of epileptic occurrences which have developed in the reverse order of that commonly observed.

[T. M. T.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

December 12, 1901.

1. The Immunizing Substances in the Blood. P. EHRLICH.
2. Concerning the Immunizing Effect of Cholera Vibrios when Combined with Cholera Amboceptors. R. PFEIFFER.
3. Investigations concerning the Usefulness of the Bacillus of Danysz in the Destruction of Rats. R. ABEL.
4. An Analysis of Disturbances of Movement. (Conclusion). A. BICKEL.
5. A Contribution concerning Coagulum-like Bodies in the Urine. A. ROTHSCHILD.
6. Concerning the Parasitic Etiology of Carcinoma: A Reply to the Paper of Professor Ribbert. ALEXANDER-KATZ.

A Reply to the Same by PROFESSOR RIBBERT.

1.—To be continued.

2.—To be concluded.

3.—Abel has made both laboratory and practical investigations of the effect of the bacillus of Danysz, and reaches the conclusion that, while the results are uncertain and not to be relied upon, and **while they do not seem especially encouraging, it is possible that the bacillus may be made useful for destroying rats;** but that it is first necessary to determine the circumstances under which it acts most successfully. [D. L. E.]

4.—Bickel discusses the results of removal of the cerebellum. The main point is that the movements remain coordinated and have proper succession, but that they are, at the same time, ataxic; that is, according to his terminology, they are not properly regulated. The animal sucessfully carries out the individual purposeful movements in the different extremities; it, however, finds it impossible to rise from the ground or to run. The author believes that the **cerebellum is one of the essential elements in maintaining equilibrium, but that is has no important connection with locomotion.** He describes the movements of animals after the removal of that organ. Dogs, for instance, swim successfully under such circumstances, unless they lose their balance in the water, when they at once tend to drown. They can also walk, if the equilibrium is artificially maintained; but the moment that it is necessary for them to maintain their balance themselves they tend to fall.

[D. L. E.]

5.—Rothschild describes the case of a man of fifty-nine, who was seen because of dysuria and the passage of blood in the urine. The latter contained a little albumin and red bloodcorpuscles; also a **large worm-like body,** with a smooth, glistening surface, having a diameter of about ½ cm. and a length of about 5 cm. Its shape was such as to lead to the belief that it had come from the ureter. It was impossible to examine the bladder and ureters, and the man disappeared, for a time, from observation. The substance passed was suspected of being fibrin, but did not give the reaction of the latter, either by staining or by direct chemical examination. Rothschild then discusses the few other cases of this kind reported in the literature. Similar bodies have been found in amyloid degeneration of the kidneys and in pyelitis. In some instances the urine was not bloody; but, as a rule, the passage of these bodies was accompanied with blood. In the case here reported it was suspected that the cause of the condition was a neoplasm, but the examination of the substance passed showed it to be of entirely homogeneous character and to contain no cells, either tumor-like or otherwise. Subsequently, however, the patient again came under observation, with the evidences of **a tumor of the kidney,** which was operated upon and the left kidney removed. The growth had involved about two-thirds of the organ; it was situated at its upper pole, and consisted, in large part, of structureless, yellow masses, which looked more or less like fibrin clots. In other places, the tumor was grayish-red and firm. The growth projected into the pelvis, and some portions of it lay free in the pelvis. There was found in the ureter a mass similar to that previously passed. The microscopic examination of the growth showed it to be a giant-cell sarcoma; and similar examination showed that the fibrin-like substance of the tumor had the same appearance as that passed. It had also the same chemical characteristics. It was, therefore, believed that **the body previously found in the urine was directly derived from the tumor.** A note states that the fibrin-like substance was certainly not mucin; what it was, is not indicated. [D. L. E.]

NEUROLOGISCHES CENTRALBLATT.

October 16, 1901.

1. Reflexes in the Face and Head. W. VON BECHTEREW.
2. The Supraorbital Reflex. C. HUDOVERNIG.
3. Spinal Motor Localization and the Theory of Metameres. C. PHARON and M. GOLDSTEIN.
4. The Position of the Motor Cranial Nerves in the Crus Cerebri. G. BIKELES.

1.—von Bechterew states that on the 22d of February, 1901, in the course of a description of a number of reflexes he mentioned the **eye-reflex:** a contraction of the orbicularis oculi upon tapping the frontal region of the skull. He believes that this reflex is the same as that discovered and described by McCarthy, the difference being that McCarthy claims that the reflex is due to striking upon the trunk of the supraorbital nerve. He calls attention to the cheek reflex: slight twitching of the mouth upon friction of the [illegible] also to the mandibular reflex, which is elicited by striking upon the occipitofrontalis, and not by axilla with the mouth half open, and manifested by a dropping of the jaw. This differs from jaw clonus. Also the nasal reflex; a slight contraction of the nostril, and of the cheek on the same side when the nasal mucous membrane is irritated. [J. S.]

2.—Hudovernig calls attention to **McCarthy's reflex,** and states that he discovered it more than a year ago. He believes after testing more than 1000 persons, that it is elicited by striking upon the occipitofrontalis, and not by striking upon the nerve. He doubts whether it is really a reflex, because in one case of trigeminal neuralgia, in which the Gasserian ganglion was extirpated, the reflex persisted upon both sides. [J. S.]

3.—Parhon and Goldstein after discussing the theory **of spinal metameres,** that is to say, the segmental arrangement of the cells in the cord, have undertaken a study of the anterior cornua in order to determine the localization of cells governing certain muscles. They give a careful description of the anatomical arrangement of the cells, and describe the change following the amputation of various extremities. The paper is still unfinished. [J. S.]

4.—Bikeles reports the case of a man who had during life the spmptoms of motor aphasia. When he died there was an area of softening in the inferior frontal convolution involving the lower third of the anterior central convolution. A small area of softening was also found in the inferior parietal convolution. Sections through the cerebral crus showed an area of degeneration in the second median fifth, that is to say, lying to the median side of the area usually believed to be occupied by the pyramidal tract. No areas of degeneration could be found in any portion of the spinal cord. He believes that this area was due to degeneration of the central neurons of the motor cranial nerves, and that it confirms the old doctrine, that the upper neurons of those nerves are placed to the median side of the true pyramidal tract in the crus cerebri. [J. S.]

Special Article.

COLORADO AND THE CONSUMPTIVES.

By A RESIDENT OF THAT STATE.

Now that science has demonstrated the fact that tuberculosis is a contagious disease, the people of Colorado have become thoroughly alarmed at the dangers that surround them. The fact that original cases of consumption are occurring in the state, and that their number is on the increase only increases the general feeling of anxiety upon the subject. The Denver Bureau of Health shows that the number of cases contracted in Colorado increased from 49 cases in 1893 to 99 cases in 1898. It used to be the belief that a person born in Colorado of healthy parents was almost absolutely immune from the ravages of the disease. And it is the belief now that these cases do not occur from any inherent climatic or sanitary condition, but from contagion alone. Evidence is not lacking to prove this hypothesis. The washing from a certain infected house was for a series of years sent out to some colored women, who finally, with hardly an exception, developed tuberculosis.

If the disease is contagious, and of this there can now be no shadow of doubt, the people of Colorado do not lack opportunity to contract it, for they are absolutely surrounded by it. For this condition they themselves are not blameless, for in their enthusiasm they have advertised the advantages of the Colorado climate, far and wide. Real estate boomers, of whom Colorado has had as many to the square acre as any state in the union, have heralded its curative qualities even beyond the seas, and the English patient is found at nearly all of the health resorts, as well as rusticating upon the ranch or living a solitary outdoor life among the Rocky Mountains. They come from all conditions of life; from the farm laborer to the millionaire, and have as a matter of fact brought millions of dollars to the state. Thousands, finding themselves cured or partly so, and knowing that a return to their former homes would be sure death, have brought their all here, and settled down for life. They are found in all the walks of life, on the farm, in the mines, in commerce, trades and professions. Some recover apparently sound and robust health, while others carry constantly with them the dull eye, the hectic cheek, the harrassing cough, but find life bearable, eking out years and years of fairly comfortable existence. Their strength under their changed conditions is sufficient to enable them to pursue their regular vocations and thereby make a livelihood, if not accumulate fortunes. In this respect, however, too many flock to the towns, too firmly wedded to urban life to tear themselves away from it to the more wholesome and healthful walks of rural life. Yet, in spite of the enervating effects of indoor life, many improve in health and follow their bent for years; but it is doubtless true that thousands deprive themselves of the real benefits of the change of climate by shutting themselves up in stores, offices and shops instead of seeking outdoor occupations and as a consequence are borne to untimely graves.

And it is interesting, and in many respects pathetic, to see the struggles these people make for life; and to observe the many acts of heroism performed by them, or in their behalf, the sacrifice made and the hardships suffered. Friends are parted, homes broken up, the hopes of a lifetime abandoned, that some loved one may be saved from the ravages of dread disease. Fathers abandon their chosen occupations, dispose of the hard-earned accumulations of a lifetime at a sacrifice, and move to a new and a far country that a wife, a son or a daughter may be saved from suffering, if not from death; a country that seems to them cold and uninviting by reason of its vast, treeless plains and enormous mountain ranges. Some arrive upon the scene with barely enough to pay their travelling expenses, and find themselves strangers in a strange land. Then employment must be found in a market already over-supplied, and the effects of the change upon the sick one watched with anxious eye. Happy the day, however, that sees the languid eye brighten, and the feeble step quicken, for then all the pain and sacrifice is repaid a hundred fold. But how doubly sad when it becomes evident that the change was too long delayed, or perhaps bootless in the beginning, for then the slow decline and the sure approach of death make the heart-ache and the pangs of home-sickness all the keener. Then at last the burial in a stranger's land or that mournful procession to the old home in the east, and the tearful sympathy of old friends.

And here are women sewing, canvassing for books, or for some article of household utility from door to door or turning in a hundred ways to earn a livelihood for their invalid husbands and children. And here are husbands nursing sick wives, doing the housework perhaps for their families, and earning a living into the bargain. What tireless labor and patience it takes, night and day, and how many shifts it requires to keep death and the wolf from the door! Just in the next block to me lives a little family. The mother is a consumptive. Her pretty sister is housekeeper. The husband must needs make a living, so recently he bought out a small retail oil business, and peddles illuminating oils from door to door. On pleasant days the mother, well wrapped from the cold, takes her seat in the little oil wagon, and goes the rounds with the father, so that she may have the benefit of the bright sunshine and crisp air.

Then there are thousands who are supported in their invalidism by friends and relatives in the East. Others are partly supported and make up the balance by performing some kind of light labor here. They are willing to work for low wages, if they may only be permitted to earn enough to fill in the gap in their small income. And here is a cause of much complaint from the able-bodied worker. He says that invalid labor has glutted the market and depressed the price of wages. This is true; consumptives from every known trade and profession come to Colorado for their health, and some from necessity, and others from choice, offer their ser-

vices to employers at almost any price the latter see fit to offer them.

Yet it would seem hard to deny these sufferers the benefit to be derived from a life in Colorado. Still we hear the question of an absolute quarantine or compulsory isolation for consumptives gravely discussed. The Colorado State Board of Health advocates neither of these expedients, but claims that by the employment of proper precautions upon the part of those infected and those not infected, contagion may be prevented. The board has just issued an extended set of rules and regulations for the guidance of those who may have the disease to deal with. But the board is composed of physicians, who would naturally have business if not humane reasons for their action, for the consumptive patients of Colorado are a perfect harvest for the doctors. But it is probably true, nevertheless, that the people of the state have a grave problem before them; a problem which heretofore they have given but little thought to, and one that grows daily more serious in consequence of the increased influx of consumptives. These patients are seen everywhere, in city, in town, on the ranch and in the mountains. They are constantly in evidence at the hotels, boarding-houses, at the watering places and summer resorts. They board in the private families in town and country, and have been received as a matter of course. They are in parlors and reading-rooms and dining-rooms. They bathe in the summer's sun and in winter wrapped in comforts sit on the verandas taking the sun and air. They are seen walking, driving and wheeling. Their coughing disturbs your sleep at night, and in the morning they bring both their disease and its hoped-for remedy to the breakfast table. The people have endured these things with remarkable complacency for years, partly out of pity and partly out of self-interest. But now that it is becoming a patent fact that the disease is communicable to the healthy person by contagion, many will begin to ask themselves if the course hitherto pursued was the most wise. This awakening is already becoming manifest. Not only are some boarding-house keepers drawing the line, but precautious in the way of preventing contagion are being taken. The other day a young lady from the East died of consumption at a family residence on my own street. No sooner was the burial over than the apartments that the deceased had occupied were attacked with disinfectants and then the painters and paper-hangers came and made a complete renovation of the rooms. Any one seeing the operation, and not knowing all the circumstances, would suppose the apartments had harbored a smallpox patient.

Probably the climate of Colorado is the most efficacious in the cure of consumption of any in the world. The altitude of the state varies from 4000 to 15,000 feet above sea level. The air is pure and highly rarefied. There are no fogs or mists to speak of, and long depressing storms are the exception rather than the rule. There are no raw east winds such as aggravate pulmonary troubles in the East. The land is well drained. The winds are usually mild but bracing. The rain-fall is slight and the sunshine superabundant. Observations taken at the State Agricultural College at Fort Collins, extending over a period of ten years, showed the average annual rainfall to have been 13.58 inches, while in New York city, for the same period, it was 40.69 inches. The annual average of stormy days was fifty-four, while in New York it was 135, and in Cleveland, Ohio 143. The annual percentage of sunshine was 64.9 and in Geneva, N. Y., 36.7. In view of these facts it would be hard to deny humanity the boon to be conferred upon the sick by a residence here. But of course when the people of the state are told by men of science that consumption is as contagious as smallpox, they can no longer look with indifference upon the large influx of consumptives now coming to the state, and the indiscriminate manner in which they mingle with society. They also have a solemn warning before them in the large increase of cases of consumption originating in the state. So that it is not to be wondered at that certain radical measures for the prevention of the spread of the disease should be under discussion. Exclusion would seem drastic and inhumane; isolation would be bad enough, for consumptives dread each others company more than theirs is dreaded by the well. But the State has an enormous area, something like 103,000 square miles, and it would seem that a part of it might be reserved as a great sanatorium, and it would also seem reasonable that some of the multi-millionaires who are lavishing their wealth upon libraries, and already prosperous institutions of learning, might take up this question and establish in Colorado some great resort for the amelioration of the condition of the thousands who suffer with this dread disease. It would not only be conferring an inestimable boon upon the sick, but would be a benefit to society generally.

Spontaneous Rupture Through the Umbilicus in a Case of Ascites.—Pierre Merklen and Gougelet report the spontaneous rupture of ascitic fluid through the umbilicus in a woman of 68, who had had ascites for over two years. She had gout, psoriasis, dyspepsia, arteriosclerosis, intermittent glycosuria, cirrhosis of the liver, and perihepatitis. Her liver was large and she had frequent attacks of asystole. The abdomen had already been punctured 25 times, 14 to 16 liters being withdrawn in each puncture. As the ascites increased, an old umbilical hernia became manifest. An ulcer appeared upon this, and here the rupture occurred, 17 days after the last puncture. The liquid escaped for almost two hours before the abdomen was empty. The patient died a week later. Rupture of the ascites through the umbilicus is an unfavorable sign. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, July 25, 1901, No. 26). [M. O.]

Double Perforation of the Bladder.—George Gross reports a rare case of double perforation of the bladder in a man of 24, who, falling from a height of 10 feet, was impaled upon a fence. The pale of the fence was at once removed from the perineal wound. The anal sphincter was torn. Catheterization brought away 150 gm. of pure blood. Laparotomy was performed and a wound found in the lower posterior part of the bladder. This was sutured and drainage left in. The patient died the next day. The autopsy showed a second, higher perforation of the bladder, and tiny bits of skin, shirt, and trousers were found above this. The pale carrying them had passed totally through the bladder, causing wounds of entrance and of exit. Only the lower wound had been found at the operation. These cases are rare. (*Revue Médicale de l'Est*, August 15, 1901, No. 16). [M. O.]

Original Articles.

THE RELATION OF THE TUBERCLE BACILLUS TO PSEUDOLEUKEMIA (STERNBERG'S DISEASE).*

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The etiology of Hodgkin's disease, or malignant lymphoma, is one of the most elusive problems in medicine; in fact, there are now included under this term a number of conditions most of which are struggling, with slight success, for recognition as disease entities. That certain of the cases are due to a peculiar form of tuberculosis of the lymphatic apparatus has been recognized for a considerable length of time, chiefly as a result of the brilliant article of Sternberg; but such cases have been considered rather as pathological curiosities than as clinically recognizable. The majority of cases have been diagnosed pseudoleukemia, and only the autopsy has revealed the true condition. Indeed, it has required an histological examination, and even careful inoculation experiments (Brentano and Tangl. Sabrazés) before the etiology was clear. In some cases (Kosler, Freudweiler) tuberculosis of some of the other organs has been recognized as a complication, but has not been supposed to be the cause of the pseudoleukemic manifestations.

I have, in a comparatively brief period, had the opportunity of observing four cases of lymphatic tuberculosis that resembled pseudoleukemia, on all of which autopsies were obtained confirming the diagnosis, and all presenting certain common clinical features.

CASE 1.—M. S., white, male, single, an Austrian by birth, and a laundrer by occupation, was admitted to the wards of Dr. William E. Hughes, at the Philadelphia Hospital, April 4, 1901. As he spoke only Polish, a history was obtained with great difficulty. Through an interpreter it was learned that his father and one sister had died of some unknown cause. His mother had died of pneumonia, after having been sick for 7 days; another sister had died at the age of 4. His present sickness commenced 4 months before admission, the first symptoms being a severe cough with expectoration, followed by progressive weakness and loss of weight. A month later he suffered from pain in the back and abdomen, that at times was sharp. He was constantly thirsty, but drinking water increased the pain. He had also had chills. For 3 months he had been on an absolute milk diet. He stated that he had not noticed any enlargement of the abdomen, nor any change in the character of the urine. When admitted it was noted that he was a fairly well developed man. The tongue was moist and slightly coated in the centre. The pulse was regular, rapid, full, and of good force. The peripheral arteries were slightly sclerosed; the pupils reacted normally; the muscles of the eyes showed no alterations, and the mucous membranes were pale. The thorax was slightly flattened; the abdomen bulged slightly in the upper part, especially on the right side. The left lung was normal. The right lung anteriorly showed dulness at the apex gradually diminishing toward the base to a normal note. The respiratory sounds were harsh, especially at the apex. Posteriorly there was also dulness at the apex, diminishing toward the base; some crepitation heard everywhere, and moist, almost bubbling rales at the apex. The heart was normal. The liver could be distinctly palpated, extending a hand's breadth below the costal margin. Its surface was smooth. Pressure caused pain. The extremities were negative.

April 5 the following notes were made: There is profuse expectoration streaked with blood; the eyes are sunken; the skin is an olive color. The right side of the thorax moves less than the left during respiration. Tactile fremitus and vocal resonance are greatly increased at the right apex, and there are numerous crackling rales, The liver extends from the 5th rib to 2 inches below the costal margin, and is quite tender. The spleen is greatly enlarged and extends 6 inches below the costal margin. The sputum was examined and diplococci and staphylococci were found, but no tubercle bacilli. The urine was red, the specific gravity was 1026, a considerable amount of albumin was present, and there were numerous red bloodcells in the sediment. The blood showed: Hemoglobin, 47%; red bloodcells, 4,010,000; white bloodcells, 6000. The differential count gave polymorphonuclears, 74%; eosinophiles, 3%.

April 6. Blood examination gave: Hemoglobin, 50%; red bloodcells, 3,050,000; white bloodcells, 7,200; polymorphonuclear 63%; transitional, 15%; mononuclear 17%; eosinophile, 5%.

April 7. The urine contained albumin in considerable quantity, and blood casts. Specific gravity, 1022.

April 10. Patient is stronger and out of bed; he is greatly emaciated and his expression is dull; he complains of pain in the apices of both lungs. The sputum is copious and rusty, but does not contain tubercle bacilli.

April 11. Patient complains of great weakness.

April 12. A very few tubercle bacilli were found in the sputum for the first time. Patient is weaker than yesterday and complains of great tenderness in the region of the liver.

April 27. The liver and spleen are increasing in size; there is movable dulness in the flanks and fluctuation in the abdomen. The sputum contains numerous tubercle bacilli.

April 29. The ascites has increased enormously and it is impossible to palpate the liver and spleen. There is no dyspnea, but the respirations are very slow (12 to 16). Edema of the lungs developed rapidly and the patient died at 8.30 P. M.

During the stay of the patient in the hospital I had the oportunity, through the kindness of Dr. William E. Hughes, to demonstrate him repeatedly to my ward classes. The diagnosis that at first seemed most likely was pseudoleukemia. Afterwards, when the nature of the process in the lungs was recognized, it was changed to pulmonary tuberculosis with amyloid disease, although, later, I regarded the case as pseudoleukemia associated with the lung condition. I was not at this time thoroughly familiar with Sternberg's article.

The autopsy was performed April 30, 1901, at 12.30 P. M., by Dr. F. J. Kalteyer. The pathological diagnosis was as follows: Tuberculosis of the lungs; chronic pleurisy with adhesions; cirrhosis of the liver; congestion of the spleen and kidneys; tuberculosis of the intestines, and ascites. I quote the following from the notes:

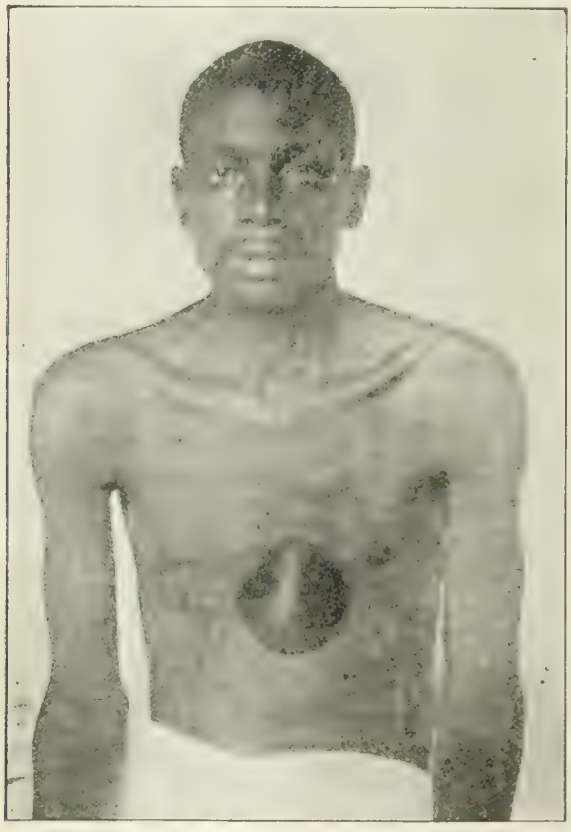
The peritoneal cavity contained 2500 cc. of straw colored fluid, specific gravity 1015. The lower margin of the liver extended 3 cm. below the costal margin; the heart was normal. The left lung was studded with miliary tubercles from the apex to the base. The right lung was densely studded with tubercles, varying in size, the larger ones 3 to 4 mm. in diameter and usually caseous in the centre, The spleen was greatly enlarged, measuring 18x13.5x3.5 cm. It weighed 680 gm. The capsule was thickened and the tissues congested. The kidneys were large, dark, and friable, but showed no gross lesions. The liver was enlarged, measuring 26x21x6.5 cm., and weighing 1990 gm. It was granular, firm, and contained numerous yellow tubercles surrounded by yellowish red liver substance. The small and large intestines contained a number of tubercular ulcers of various sizes. The tissues were unfortunately lost, and microscopical studies could not be made. The condition of the lymph glands was not noted.

CASE 2.—G. G., a negro, 28, a driver by occupation, was admitted to Dr. Musser's wards at the University Hospital

*The tuberculous form of pseudoleukemia deserves to be called Sternberg's disease, because Sternberg was the first to regard it as more than a pathological curiosity, and to attempt to establish its importance by systematic studies.

on the 24th of May, 1901. He had always worked hard, and his appetite had been good. He indulged moderately in alcohol, and used tobacco to excess. His mother had died at the age of 80; his father is living and well at the age of 70. One sister died at the age of 18 from a "bad cold." One sister and three brothers are living and well as far as he knew. There was no history of tuberculosis, and only an indefinite history of tumor in an aunt. Up to the time of the beginning of his sickness he had always been well and exceptionally strong. About five years ago he had had an attack of pain in the right hip. He had never had any venereal disease, nor any of the ordinary diseases of childhood. Two years ago, while lifting a barrel of oysters, he had felt a sensation of something giving way in the sternum, and 2 days later a tumor appeared near the xiphoid which grew rapidly for a month and then remained stationary in size. It had never been painful, and had never given him any trouble, whatever. A few days later he noticed that the right side of the abdomen was full, and he felt a mass there, which he supposed was a tumor. This also had never been painful, nor given him any discomfort. About a month before admission he noticed some swelling of the feet, and more pain in the back and hip. He had also cough with expectoration, and the day before admission profuse nose-bleeding. On two occasions he had had night sweats and had felt feverish for several days. His physical condition was as follows.

The arteries pulsated vigorously. The superficial lymph glands were not enlarged. A hemispherical tumor covered



the lower part of the sternum, extending from the level of the 4th interspace to below the xiphoid cartilage, and from 2 inches to the left, to 1.5 inches to the right of the sternum. It fluctuated, but did not pulsate, and was not affected by respiration or by coughing. It could not be reduced by pressure. It was neither painful nor tender. It was surrounded by a zone of absolute dulness about ½ an inch broad. The upper portion of the thorax was fuller on the right than on the left side, and moved more during respiration. The percussion note was slightly impaired at the right apex. Tactile fremitus and vocal resonance were increased at this place, and there was slight pectoriloquy. Inspiration was slightly harsh and interrupted synchronously with the heart beat; expiration was harsh and as long as inspiration. The left lung was normal. Posteriorly the respiratory sounds were vesicular, more distinct on the left than on the right side. There was a distinct cardiac impulse over the precordium. The apex beat was in the 5th interspace, inside the nipple line, powerful and diffuse. The area of cardiac dulness commenced at the 5th rib in the nipple line, and merged into the dulness of the tumor. There was a systolic murmur heard best at the pulmonic cartilage, and reduplication and accentuation of the second sound at this point. The other sounds were clear. The absolute liver dulness commenced at the 6th interspace. The lower border of the liver extended from the anterior superior spine of the ilium to the junction of the ribs and the left anterior axillary line. It was firm, the surface smooth and not tender. It moved with respiration. The spleen was not distinctly palpable, but percussion indicated that it was enlarged. There was slight general anasarca and edema of the legs extending to the knees. The knee jerks could not be elicited, but otherwise the nervous system was negative.

The subsequent course of the case was quite uniform. The temperature was very irregular; there was nose-bleed almost daily, and this was usually severe and difficult to control. Emaciation progressed steadily, but very slowly. The liver gradually decreased in size; on the 5th of June it was one inch below the umbilicus, and on the 20th it was barely below. The spleen remained enlarged by auscultatory percussion, and the lower edge was distinctly palpable. By the 1st of July the edema of the legs had become quite severe; on the 14th there was a distinct accumulation of fluid in the peritoneal cavity, and on the 16th pronounced general anasarca. This persisted until death. The stomach was not enlarged. On the 19th of July he became slightly delirious and had a convulsion beginning in the hands and arms. After this he remained unconscious for some time. The muscles were spastic, but there was no paralysis. The pupils were equal and contracted. On the 20th he was partially conscious, and able to take nourishment, although still very restless. On the 21st there was a slight tremor of the hands and some doubtful paresis of the left side of the face. When spoken to he answered only in monosyllables. Toward midnight he lapsed into complete unconsciousness, the pulse grew weaker, and he died at 2 A. M. on the 22nd of July.

Throughout the case the urine was examined, at first almost daily and afterward at frequent intervals. On the 25th of June the specific gravity was 1020; albumin, sugar and indican were absent; the diazo reaction was negative; the sediment contained a few leukocytes, but no casts. Subsequently there was occasionally a faint trace of albumin, constant toward the end; granular casts at rare intervals, and faint traces of bile twice. On the 28th the urea was found to be 228 grains in 24 hours (0.9%). On the 24th of May the blood count was as follows: Hemoglobin 50%; red bloodcells 2,300,000; white bloodcells 4080. The leukocytes were counted at frequent intervals, and ranged between 3060 and 4380, with the exception of June 23rd, when they reached 11,400 for some unexplained reason. The hemoglobin decreased at first slowly; on the 20th the blood count was 45%, and 3,500,000. Later the anemia was more severe, and on the 8th of July the count was 20%, and 2,800,000. The differential count on the 28th of June was: Polymorphonuclear cells 81%; eosinophile cells absent; large mononuclear cells 9%; small mononuclear cells 10%. On the 25th of June careful search failed to show the plasmodium of malaria. On the 26th of May the Widal reaction was reported positive, and, on the 3rd of June, negative. On the 29th of May the Justi test for syphilis was negative. As it is of little value in the tertiary stage, this was not considered significant. The sputum contained staphylococci and streptococci, but never any tubercle bacilli. The stomach contents showed diminished acidity (18%); lactic acid was not present. On June 1st the cyst was aspirated and a thick yellow fluid withdrawn, containing some cheesy masses. It also contained numerous compound granule cells, but no bacteria. The chemical examination gave: Reaction, alkaline; specific gravity 1030; albumin 7%; albumoses present; evidently an inflamma-

tory exudate. Tubercle bacilli in particular were not found. Cultures on various media remained sterile. Two guinea-pigs were subcutaneously injected, one of them dying ten weeks later of generalized tuberculosis, the other remaining healthy. On the 20th of June 5 mg. of tuberculin were injected, and the temperature was lower than usual during the following 24 hours. On the 29th Professor Edward Martin incised the cyst, and found it to consist of a cavity filled with cheesy masses, surrounded by a dense fibrous wall. It communicated by a narrow opening with a substernal sinus that was apparently closed. Smears, cultures and inoculations with this fluid, made by Dr. Kneass, were all negative.

The diagnosis of this case presented many difficulties. It presented the syndrome of progressive anemia, enlargement of the spleen and liver, and fever of an extremely irregular type. After typhoid fever and malaria have been excluded, and the negative Justi test and failure to react to antispecific treatment had rendered a diagnosis of syphilis improbable, it appeared that the case must be either one of pseudoleukemia with irregular temperature, or a case of lymphatic tuberculosis, that is, Sternberg's disease. The latter supposition was slightly strengthened by the presence of a symptom of mediastinal tumor described by Smith, which consists of the development of a harsh murmur over the base of the heart, when the patient arches his back. This murmur, distinct from the hemic murmur, constantly heard, was easily elicited. In view of the frequency with which cases of pseudoleukemia prove to be tuberculous, and particularly on account of the irregular temperature, and the extrathoracic abscess (a symptom of lymphatic tuberculosis first described by Askanazy) a positive diagnosis of lymphatic tuberculosis was finally made, before Professor Martin's operation. The autopsy was obtained with great difficulty, and not until 44 hours after death. It was made by Dr. Hendrickson, to whose kindness I am indebted for the following notes:



Intense edema throughout the body. Post-mortem decomposition well advanced. The abdominal cavity contained 800 cc. of blood-stained fluid. The liver extended 10 cm. below costal border, in the median line. The pericardial cavity was obliterated by firm adhesions. The weight of the heart was 420 gm. The walls were moderately hypertrophied, but post-mortem degeneration was so far advanced that it was impossible to determine anything further. The glands about the base of the heart were enlarged and caseous. The pleural cavities were obliterated by firm adhesions. The lungs contained numerous recent white miliary tubercles. The bronchial glands were enlarged and pigmented but not caseous. The spleen was enlarged; it weighed 270 gm. and had undergone considerable post-mortem change, but numerous yellow conglomerate tubercles could be distinguished. The kidneys contained no tubercles. Both lateral lobes of the prostate contained caseous areas, the right side being greater. The liver weighed 2720 gm.; the surface was smooth; the lobules well defined, suggesting cirrhosis, and a few bile-stained conglomerate tubercles were scattered throughout its substance. The gastrohepatic and retroperitoneal lymph-glands were greatly enlarged and caseous, but not all to the same extent. The aorta was the seat of slight sclerosis. The brain, stomach, intestines and pancreas were normal.

In view of these findings Dr. Hendrickson made the following diagnosis: General tuberculous adenitis; chronic tuberculosis of the prostate (probably the initial lesion); subacute disseminated tuberculosis of the liver and spleen; acute disseminated tuberculosis of the lungs; chronic obliterative pleuritis and pericarditis; chronic subcutaneous tubercular abscess. He has also informed me that the histological examination of the tissues has confirmed in all respects the macroscopic diagnosis, although he was unsuccessful in staining the tissues for tubercle bacilli.

CASE 3.—J. B., male, negro, 36, laborer, was admitted to my service at the Philadelphia Hospital, July 30th, 1901. He was desperately sick and very unintelligent. He stated that his father and mother had died of asthma, and that three brothers had died in infancy of unknown causes. He had had most of the diseases of childhood and gonorrhea. Otherwise his health had been good. His present sickness commenced at Christmas, 1900, when he was thrown from a wagon and fractured two ribs. From this time he had had pain in the chest and abdomen. During the month of June he commenced to cough and to expectorate a mucopurulent material that was never mixed with blood. He suffered from diarrhea for several weeks. He had lost considerable weight, had grown very weak, his appetite was poor and his digestion disturbed. For a week he had had only whisper speech. When admitted it was noticed that he was greatly emaciated, his expression was anxious, the pulse was rapid, weak, compressible, and regular. The tongue was slightly coated; the pupils reacted normally; there was complete aphonia; no pareses; the thorax was well formed, and expanded equally on both sides. The percussion note was impaired over the right apex, and over the left base posteriorly. Tactile fremitus and vocal resonance were slightly increased at the right apex. Fine crepitant rales were heard in both lungs anteriorly and posteriorly. The outline of cardiac dulness extended from the 4th rib downward, and from the left border of the sternum to the left parasternal line. The apex beat was weak and circumscribed, and situated in the 5th interspace inside the nipple line. The sounds were clear but very faint and distant. Liver dulness extended from the 6th rib to a line 3 inches below the costal border, and to the left as far as the nipple line. The surface of the liver was smooth and pressure upon it produced pain. The spleen was distinctly palpable as a large rounded mass in the left hypochondrium.

July 31. The urine continued albumin and granular and hyaline casts. The specific gravity was 1025. The sputum contained numerous tubercle bacilli.

August 2. The blood examination gave: Hemoglobin 60%; red bloodcells 4,190,000; white bloodcells 13,900. A differential count was not made.

August 8. The patient grew gradually weaker and died at 8 A. M.

In view of the physical signs a diagnosis was made of miliary tuberculosis of the lungs, tuberculosis of the liver and spleen; general tuberculous involvement of the lymphatic system, and myocarditis. It was strongly suspected that the lymphatic involvement was primary on account of the marked enlargement of the liver and spleen. The autopsy was performed by Professor Joseph McFarland, who has kindly permitted me to use his notes.

Autopsy performed 8 hours after death. The pathological diagnosis was: General tuberculosis, most pronounced in the lymphatic apparatus and spleen; miliary tuberculosis of all the organs; tuberculous ulcers of the stomach and intestines. Acute hemorrhagic myocarditis. The pleural and pericardial cavities were obliterated by adhesions, and everywhere studded with yellow tubercles. Firm tumors the size of lima beans were found on the inner surfaces of the pleura. The base of the heart was surrounded by a large mass of tuberculous lymphatic glands. At the root of the aorta there was a single gland about the size of a hen's egg, firm in consistency and resembling a fibroma upon section. It was encapsulated, and after section the cut surfaces became convex. The smaller glands were filled with yellow tubercles. Both lungs were filled with gray tubercles. The heart weighed 620 gm. The epicardium was greatly thickened and gelatinous. The muscle

was soft, yellowish in color, and everywhere studded with petechial hemorrhages. The spleen was enlarged, measuring 16x11x7 cm., and weighing 590 gm. It was firmly attached to all the surrounding surfaces by adhesions that included several cheesy lymphatic glands, and a number of dark colored hemolymph glands. The substance was dark red in color, firm and thickly studded with gray tuberculous areas varying in size from a shot to a pigeon's egg. These were firm in consistency. The kidneys showed some parenchymatous degeneration and a few tubercles. The bladder and prostate were normal. The peritoneum was everywhere studded with miliary tubercles. The mesenteric glands were enlarged and tuberculous. About the celiac axis they were as large as pigeon's eggs, and for the most part dense and hard. The liver was firmly attached to the diaphragm; it was enlarged, weighing 1690 gm. The section was nutmeg and showed everywhere numerous miliary tubercles and a few bile cysts containing inspissated bile. The gall bladder was thickened and small as a result of a chronic pericholecystitis. The pancreas was normal. The stomach showed numerous hemorrhagic erosions and a large ulcer near the pylorus. A few tuberculous ulcers were found in the intestines. There was slight tuberculous erosion of the 7th rib on the left side, and of the bodies of several vertebræ. The larynx was tuberculous. I am indebted to Professor McFarland for the following note:

Concerning the specimens taken from the body of J. B., who came to section on August 8th, I beg to report that the disease of the organs and lymphatic apparatus was tuberculosis. The large fibrous lymph-nodes of the mediastinum, when examined miscroscopically, showed a chronic fibrosis with scattered foci of cellular infiltration and coagulation necrosis. There were no typical tubercles present. The lymphatic tissue itself had disappeared. Except for the associated conditions it would have been very difficult to recognize the true nature of the lesion. The lungs contained scattered miliary tubercles with cheesy centres and giant-cells. There were similar tubercles in the liver. The heart muscle showed marked fatty degeneration with interstitial hemorrhages, the microscope fully confirming the naked-eye-appearance of the heart-muscle.

CASE 4.—J. K., white, 49, stevedore, was admitted to the Philadelphia Hospital on the 29th of July, 1901, complaining of pain in the stomach, fever, and loss of appetite. His family history was too indefinite to be of value. His own previous medical history was also very unsatisfactory. He admitted gonorrheal infection 30 years ago; had been a moderate drinker, and 3 years ago he had fractured his collar bone. The ends of the bone had been wired together, but union had not occurred, and the sternal end of the outer fragment had penetrated the skin. His present disease began, according to his own account, about 6 months before admission with an attack of jaundice. He was admitted to St. Mary's Hospital and treated for some time and apparently recovered. After leaving the hospital, however, he had chills and fever, and from time to time severe hemorrhages from the nose and mouth. He rapidly grew weaker, his appetite was impaired, and he lost 42 pounds in weight. When admitted to Dr. Stengel's wards at the Philadelphia Hospital, his physical condition was as follows: A poorly nourished, well formed man, with a subicteroid tint of the skin; the pupils were normal; the tongue a good color, coated and slightly fissured. There was a large scar below the right clavicle at the sternal end, and at its upper end a small necrotic mass of bone penetrated the skin. In the end of this bone several wire sutures could be seen. The skin around it was slightly discolored. There was a slight pulsation of the veins at the base of the neck; the cervical glands were not enlarged; the pulse was of moderate force, quick and receding; the vessels were soft; there was a distinct capillary pulse. The thorax was well formed; the expiratory movement was greater on the right side; respiration was vesicular; expiration was prolonged. On the left side inspiration was slightly diminished in intensity, and there was friction in the left axillary region. The apex was in the 6th interspace, 1 inch outside the nipple line. The deep area of cardiac dulness extended from the right parasternal line to the left anterior axillary region horizontally, and from the 3rd rib above. At the apex the 1st sound was loud and sharp; the second sound was of moderate intensity. At the base both sounds were clear. The aortic second was louder than the pulmonic second. The liver extended from the 6th rib to a line 1 inch above the umbilicus; the left lobe could be felt extending as far as the left nipple line; the surface was smooth and the liver slightly tender. The spleen was not palpable, but appeared enlarged to auscultatory percussion. In the right lumbar region a smooth regular mass could be felt which seemed to be the right kidney. There was considerable gurgling in the abdomen upon deep palpation. The chest and abdomen showed some whitish areas. On the 1st of August a blood count was made and showed 4,530,000 red bloodcells, and 11,300 white bloodcells. On the 12th of August the physical signs were as follows: On the right side inspiration was harsh, expiration was harsh and prolonged. On the left side inspiration was accompanied by a creaking friction; expiration was soft and prolonged. The cardiac dulness extended horizontally from the midsternal to the left nipple line, and from the 3rd rib downward. The apex was in the 5th interspace 1 inch to the left of the nipple line. The heart sounds were clear; the pulmonic second was slightly accentuated. The liver extended from the 6th rib downward to the left of the umbilicus; it moved slightly with respiration and was still distinctly tender. The spleen was not palpable but was enlarged to auscultatory percussion. The abdomen was not distended.

Throughout the course of the case the patient had an extremely irregular temperature, but as a result of rest and feeding he improved slightly in his general condition. On the 21st he requested and was given his discharge.

In view of the irregular temperature, the enlargement and tenderness of the liver, the rapid loss of weight, the history of hemorrhage, and the fact that nutrition must have been impaired as much as 3 years ago, all indicating a slowly progressive and very chronic condition, a diagnosis was made of lymphatic tuberculosis, although I felt at the time that there was a possibility that it was not correct. On September 15th the patient was readmitted to the hospital to the service of Dr. Riesman, suffering from cough and expectoration. The latter was examined and tubercle bacilli readily found.

On the 23rd of September the patient stated that about the middle of the month he had had a severe hemorrhage from the nose which had been repeated several times since. His present condition was as follows: He was poorly nourished; there was marked pigmentation of the chest and back, with irregular areas of leukoderma. The right lung showed slight impairment of resonance at the apex; respiration was harsh and vesicular; expiration was prolonged. In the left lung the respiration was slightly impaired at the apex during inspiration. The heart was enlarged; the apex was in the 6th interspace 1 inch outside the nipple line, feeble and diffuse. Dulness commenced above at the 4th rib and extended laterally from the left border of the sternum to 1 inch to left of the nipple line. The heart sounds were clear; the pulmonic and aortic second sounds were clear. The liver dulness commenced at the 6th rib and there was slight respiratory movement. The lower border could be palpated at the level of the umbilicus, and the lower lobe as far as the left nipple line. There was considerable tenderness over the liver. The spleen could be palpated during deep inspiration. By auscultatory percussion it appeared to be considerably enlarged. The axillary and inguinal lymph glands were palpable but small. The cervical lymph glands could not be felt. The pulse was medium full, normal volume; the arteries soft. Knee jerks were normal, and there was no disturbance of sensation. The patient had cough and expectoration and tubercle bacilli were readily found in the sputum.

The patient continued to grow worse. The physical examination showed very little change excepting that the skin grew noticeably darker over the whole body. On the 9th of November the presence of a considerable quantity of fluid in the abdominal cavity was recognized. The liver and spleen were both palpable and the patient was very weak. On the 17th of November he died. The only examination of the urine made during his last stay at the hospital showed a specific gravity of 1010, no albumin and no sugar. The autopsy was made by Dr. Buckley on the day of death. The pathological diagnosis was miliary tuberculosis of both lungs, pleurisy with an effusion on the

left side, tuberculous ulcers of the intestines, cirrhosis and fatty infiltration of the liver, parenchymatous nephritis and a tape-worm. The weight of the spleen was 250 gm. and of the liver 1570 gm. There was fluid in the left pleural cavity; the spleen contained numerous tubercles; the glands of the mesentery and mediastinum were only slightly enlarged. Otherwise nothing of importance was found.

Dr. M. P. Ravenel very kindly consented to make cultures from the glands which at the time of autopsy were not as greatly enlarged as I had expected to find them. No tubercle bacilli were found upon staining, but guinea-pigs inoculated with the glandular substance died with generalized tuberculosis, and Dr. Ravenel states that there is some reason to believe that this bacillus is more virulent than the variety ordinarily obtained from human beings. The cultures have not yet been completed.

These four cases have so many clinical and pathological features in common that they may properly be considered as belonging to the same group. In all there was moderate anemia, progressive cachexia terminating in death, and enlargement of the liver and spleen. In the case longest under observation (II) the temperature was unusually irregular. In the other three cases it was not taken continuously, but was quite irregular for periods of several days. In two cases (I and II) there was almost constant edema, and in three (I, II and IV) a terminal ascites. In three cases (I, III and IV) the liver was exquisitely tender, and in the other it had been enlarged for two years and was almost painless. In three cases (I, III and IV) tubercle bacilli were found in the sputum before death, and in the other a lesion, probably, but not certainly, tubercular, existed. The post-mortem findings in three cases were very similar. There was enlargement of the deep lymphatic glands, miliary tuberculosis of the lungs, subacute tuberculosis of the liver and spleen, and in one case tuberculous erosions of the bones. The subcutaneous densely encapsulated sterile abscess in case II was similar to the fluctuating tumors situated close to the spinal column observed by Askanazy in a woman of 37, who was suffering from anemia. These contained a sterile, partly cheesy material that could only be drawn through an incision, and communicated with the thoracic cavity by a narrow sinus. Case III had a huge fibrous encapsulated tumor at the base of the heart that resembled very closely the tumor described by Claessen, occurring in a boy of 19, who had chronic passive congestion of all the organs, enlargement of the liver and spleen, and symptoms of chronic obliterative pericarditis. This tumor resembled a fibroma and showed no areas of necrosis, but tubercle bacilli were found in its substance. The bronchial glands were caseous and miliary tubercles were found in the pleuræ and pericardium, but the lungs and other organs were free. Testi, Bradbury, Witthower, Scott and others have also reported tumors of the mediastinum. Testi's and Bradbury's cases had enlargement of the cervical glands; Witthower's, diagnosed sarcoma, had the Pel-Ebstein type of recurrent fever, and Scott's case was undoubtedly tuberculous.

In case IV the findings were rather atypical inasmuch as the deep lymph glands were not greatly enlarged. There was, however, a subacute tuberculosis of the spleen and miliary tuberculosis of the lungs and, in addition, tuberculous ulceration of the intestines. Fortunately, the inoculation experiments by Dr. Ravenel prove conclusively the tuberculous nature of the process in the lymph glands.

Summaries of the Four Cases.

1. The disease commenced with cough and expectoration followed by weakness and loss of weight; then pain in the back, chills and thirst. Four months later the liver and spleen were found to be enlarged; there were signs of catarrhal disease of the right apex, and a slight anemia. The urine contained albumin and blood casts. In the course of a few weeks tubercle bacilli were found in the sputum, ascites developed and the patient died of pulmonary edema. At the necropsy there was found miliary tuberculosis of the lungs and liver, and tuberculous ulcers in the intestines.

2. A man, 28 years of age, as a result of a severe strain developed a fluctuating tumor over the sternum. Shortly after this he noticed enlargement of the liver. Two years later he had pain in the back, cough and expectoration, profuse epistaxis and fever. When admitted, an abscess containing sterile pus covered the lower parts of the sternum. The liver and spleen were enlarged; the resonance of the right apex was slightly impaired; a hemic murmur was heard at the base of the heart; the temperature was irregular; the blood showed moderate anemia, and the urine contained a slight amount of albumin. He finally developed general edema and ascites, had a slight apoplectiform attack and died. At the necropsy there were found an adherent pericardium, caseous mediastinal and abdominal lymph glands, recent miliary tuberculosis of the lungs, conglomerate tubercles of the spleen and liver, and old tuberculosis of the prostate.

3. Six months after an injury to the chest the patient developed cough and expectoration. He had diarrhea, was emaciated and slept poorly. When admitted he had aphonia, impaired resonance at the right apex, a feeble heart beat, enlargement of the liver and spleen, albuminuria and moderate anemia. The sputum contained tubercle bacilli. At the necropsy there was found general tuberculosis, most pronounced in the lymph glands and spleen, miliary tuberculosis of all the organs, tuberculous ulcers of all the organs, obliterative pericarditis and pleuritis, and hemorrhagic myocarditis.

4. Man of 46, fractured his clavicle and, in spite of wiring, union did not occur. Two years and a half later he had an attack of jaundice, then chills and fever, and hemorrhages from the mouth and nose. The liver became enlarged and tender; the spleen was moderatly enlarged, and there was moderate anemia without leukocytosis. The temperature was irregular. From time to time he had a hemorrhage from the nose. The liver increased in size, the superficial lymph glands were palpable but small; he developed the typical signs of pulmonary tuberculosis and tubercle bacilli were found in the sputum. Finally there was a severe ascites and death. At the autopsy the abdominal and thoracic lymph glands were found moderately enlarged; there was subacute miliary tuberculosis of the spleen, and fatty degeneration but no tuber-

culosis of the liver. There was miliary tuberculosis of the lungs and tuberculous ulcers in the intestines. Dr. Ravenel made cultures from the lymph glands and obtained an actively virulent tubercle bacillus.

It may be said to be the prevailing opinion among pathologists of the present day that there are three forms of disease of the lymph glands that may give rise to the syndrome characteristic of pseudo-leukemia. These are lymphosarcomatosis, tuberculosis, and a peculiar infectious process whose cause has not yet been discovered, but which by some (Reed) is regarded as the only true form of Hodgkin's disease. The relation of the tubercle bacillus to Hodgkin's disease has been a subject of interest for many years. Billroth long ago suggested that the hard fibrous form of polyadenitis was really a tuberculous infection of the lymph glands. In 1875 Winiwarter wrote that "some have endeavored to find in syphilis and tuberculosis an etiological factor for malignant lymphoma; at present there is nothing to prove this;" and in 1891 Dreschfeld called attention to the analogy of some of the changes in the lymph glands with those of chronic tuberculosis. Of late years a considerable amount of proof has been furnished, although the opinions of the authorities are much at variance. With the possible exception of Sternberg I have been able to find no authority who declares himself unqualifiedly in favor of the theory that pseudoleukemia is always produced by infection of the lymphatic apparatus with tubercle bacilli. But even Sternberg is not dogmatic, although he regards this view with considerable favor. That the glands in many instances contain tubercle bacilli is no longer a matter of question, and that these bacilli are capable of infecting susceptible animals has been conclusively proven. Moreover, it has been shown that in many cases with the characteristic histological picture of lymphoma tuberculosis exists, and the tubercle bacilli may be numerous and virulent. It does not necessarily follow that they are the cause of the pseudoleukemia, because, as many authors have suggested, they may exist either as a secondary or as an associated infection. That is to say, there is no reason why lymph glands, the seat of tuberculosis, might not take on the changes and produce the symptoms of pseudoleukemia, or that lymph glands characterized by the morbid alterations of pseudoleukemia and associated with symptoms of that disease, might not become infected with tubercle bacilli. The latter view is held by Liebmann, Dietrich, Schmalz, Koster, Fischer and others. Some of these authorities also believe that tuberculous infection of the lymph glands may, under certain circumstances, produce morbid changes somewhat similar to those of pseudoleukemia, and that the symptoms of the diseases may be indistinguishable. Stengel, Frolich, Liebmann, Dietrich, Finzi, Combemaole and others, who have written within the last decade, admit the tuberculous nature of some cases of pseudoleukemia. However, they insist that it can also be produced by other hitherto undiscovered causes. Weiss and Reed, I believe, are the only authors who assert that although lymph glands may be infected with the tubercle bacilli and may give rise to the symptoms of pseudoleukemia, nevertheless all such cases should be considered as merely instances of lymphatic tuberculosis, not belonging to the pseudoleukemic group. In fact, they believe that they differ essentially from this group in their morbid anatomy and in their etiology. Pinkus, one of the most recent writers on the subject, after a brief summary of the facts at hand, states, very fairly I think, that "the question whether tuberculosis is invariably present in those glands which show changes of pseudoleukemia, can only be decided by a considerable increase of the available material. The fact that the more carefully the investigations are conducted with all the aids of modern knowledge, the more frequently has the tuberculous nature of the process been proven, argues strongly for the influence of tuberculosis in these cases."

When we sift the mass of clinical and pathological material that has been accumulated in the literature, we find that the greater proportion of it furnishes merely presumptive and not decisive evidence. In the majority of cases that have been reported no effort has been made to find tubercle bacilli unless certain characteristic lesions were present. On the other hand, in many instances what were apparently miliary tubercles have been regarded as the metastases of lymphosarcoma and described as such without the exclusion of tuberculosis by histological examinations, cultures or inoculations. It must be stated, however, that a considerable number of these cases were observed before the discovery of the tubercle bacillus, and therefore before it was possible to identify the nature of the lesions. Among these are the cases reported by Winiwarter, Langhans, Kuhnhern, Desmos, Barié, Arkmann, Wendt, Rosenstein, Perret, Morrison, Pantoppidan and Schmidt, and many of the cases collected by Croco. In other cases, although the prevailing views of the nature of the process, and the belief that the cause was unknown, led to the neglect of careful investigations, the reasons to suspect the existence of tuberculosis was very strong. For example, there has been cheesy degeneration in the glands, as in the cases of Brauneck and Winiwarter; amyloid disease of the organs, as in the cases of Buchanan and Pantoppidan; necrosis and softening of the glands, as in the cases of Winiwarter, Mosler, and Brigidi and Piccoli. Other cases have been recorded in which the clinical course resembled in many respects that which we believe is typical of lymphatic tuberculosis, but in which the autopsy is either lacking or so inadequately reported that it is impossible to draw any conclusions from it. Among these are the cases of Mosler, Liebmann, Türk, Sippi and Russel.

In addition to these cases there are now a number of references in the literature to a peculiar form of disease, first described by Pel and Ebstein, and given by the latter the name of "recurrent fever" (Rückfall-Fieber). A number of cases have been reported by Pel, Ebstein, Murchison, Renvers, Hanser, Vickers, Klein, Fiedler, Hammer, Seebohm, Van der Scheer, Hampel, Gowers, Puritz, Barbrock, He-

noch, Mosler, Fischer, Kast, Kosler, Witthower, Askanazy, Sternberg and Musser. Of these, certain cases, particularly those of Puritz, Henoch, Kosler, Sternberg and Askanazy, were certainly due to tuberculous infection. In other cases, those of Renvers, Völckers, Hammer, Seebohn, Puritz, Henoch and Witthower, were apparently due to sarcoma, although in none of these cases was the tubercle bacillus certainly excluded. Fischer and Klein obtained cultures of the staphylococcus from the glands, and Hampeln's case was apparently one of carcinoma of the stomach. Sternberg is strongly of the opinion that all these cases are tuberculous.

The cases that have been sufficiently well studied so that they furnish direct evidence upon this question are few in number. They include those in which tuberculosis of the lymph glands and possibly of other organs existed and was positively demonstrated by inoculations, or by staining the tubercle bacilli. Second, those in which careful histological and bacteriological examinations excluded the existence of the tubercle bacillus. Among the earliest cases of the first group was that of Delafield. His patient, a woman of 23 years, had enlargement of the cervical lymph glands, an irregular and often high fever, progressive emaciation and death. At the necropsy there was found calcification of the mesenteric glands, evidently a chronic process, and miliary tuberculosis of the lungs. The next case, reported by Waetzold, was of the utmost importance, because it was the first in which tubercle bacilli were demonstrated in glands which failed to show the characteristic histological changes, and therefore called attention to a form of tuberculous infection hitherto unrecognized. A woman of 30 years had had glandular swellings in childhood; these reappeared 3½ years before death and were extirpated. Immediately afterward the patient developed anorexia, diarrhea, cough, and progressive weakness. One and one-half years before death the glands were again extirpated and histologically appeared to be pure lymphomata. After this the emaciation became extreme; there was complete insomnia; the cough was worse and not controlled by drugs, although there were no signs of pulmonary disease. The temperature showed irregluar elevations and there were chills and epileptoid attacks that apparently improved upon quinine. Dry pleurisy, ascites, and albuminuria developed and the inferior maxillary glands underwent softening just before death. The necropsy revealed enlargement of the spleen; the retroperitoneal and mesenteric glands were enlarged; there were amyloid kidneys, a normal liver and miliary tuberculosis of the lungs. The mediastinal and bronchial lymph glands were also enlarged and contained hyaline areas in which were numerous tubercle bacilli.

(To be Concluded.)

BACTERIAL PURIFICATION OF SEWAGE.

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In this country of enormous lakes and rivers, and comparatively great distances between the larger towns, the necessity for purification of sewage before its final discharge into the water courses has so far hardly been felt. It is only a matter of time, however, before something must be done, and the rising generation should begin to gain some knowledge of the question, since it will surely become a burning one before their race is run.

Experiments have been carried on during the last 14 years at Lawrence, Mass., under the auspices of the State Board of Health, but England from force of necessity has been the birth place of most inventions for solving the problem. So long as 40 or 50 years ago the pollution of rivers had reached such a point that it was clear this state of things could not be allowed to continue, and in 1876 the Rivers Pollution Act was passed, under which all towns were enjoined from running crude sewage into the water courses. In consequence of this act a host of purification schemes arose, all of them more or less inefficient.

In the first place sewage farms were started, but were found impracticable in most instances, owing to the impossibility of obtaining sufficient suitable land at reasonable rates. Numerous chemical purification methods were also tried, and ultimately lime, or lime mixed with ferrous or aluminum sulphate, was found to be the best precipitant; the insoluble matters being practically all carried down to form a sludge, whilst the effluent was clear and free from odor. This, however, by no means solved the difficulty, for the sludge proved costly to handle and practically valueless for manure, whilst the effluent was just as prone to putrefaction as the original sewage, since the organic substances in solution had not been broken down in the least.

By degrees, however, it came to be recognized that the destruction of excrementitious and other dead organic matter as carried out in soil and water by nature is not a chemical but a purely biological process due to the action of bacteria, and about 1890 these ideas began to take a practical shape; suggestions being made to imitate nature and so improve on her methods that the purification of sewage could be carried on "under control" in a more concentrated way than provided by her.

It may be said here in a general way that this is effected by running the sewage through tanks and coke beds in which the bacteria grow and multiply, attacking the organic matter in the sewage and breaking it down into simpler nonputrescible compounds. It is not necessary to seed the tanks and beds with special bacteria, since there are countless numbers of the right kind always existing in the sewage, affording a constant fresh supply.

Before describing the various biological filtration processes in use at the present day, some prelimi-

nary remarks are necessary in order to gain a clear idea of the subject.

Sewage consists of water containing about one-tenth per cent. of mineral and one-tenth per cent. of organic matter. The mineral matter may be ignored, since it is not liable to putrefaction. Of the organic matter about one-half is insoluble, being held in suspension, and one-half is in solution, but the strength of course varies within wide limits. On account of the presence of organic matter sewage is a favorable nutrient medium for bacteria, many of which, in the process of development, evolve offensive odors. The object then is to induce the bacteria so to change the sewage as quickly as possible in an inoffensive way, that by the time it is finally discharged into the water courses, it no longer affords a favorable medium for their growth.

All bacteria require oxygen for their development. Some can only make use of free oxygen and oxidize, so are called obligate ærobics, whilst to others free oxygen acts as an antiseptic, such bacteria being only able to make use of oxygen stored up in organic matter which they deoxidize in the process. These are the obligate anærobics. The vast majority of bacteria, however, are facultative anærobics, i. e., they can make use of free oxygen or, in its absence, utilize stored oxygen, either in organic or inorganic combination, and act as oxidizers or deoxidizers, according to the nature of their environment. We may call these facultative anærobics or facultatives.

Bacteria are only able effectively to break down insoluble organic matter in such a way as to make it soluble when they are acting anærobically. Oxidation will change it, though slowly, in such a way that it will be less liable to putrefaction, but a great part of it will still be insoluble and soon clog the filters.

Sewage, therefore, must be subjected to anærobic action at an early period of its purification in order to liquefy the insoluble matter and prepare it for oxidation.

Generally speaking, it may be said that bacteria acting anærobically evolve offensive volatile products—sulphur compounds and methylamines—whilst in ærobic conditions of growth their volatile and gaseous products are inoffensive because more completely broken down. The former may be called putrefaction and the latter decomposition.

The object then will be to subject the sewage to as little anærobic action as possible; only sufficient, in fact, to liquefy the solids, and then pass it on to be oxidized by ærobic action.

In tracing the processes by which sewage is purified it will be best to commence with the solids, since the organic matter already in solution is simply in stages which will be reached by the former during purification. There are two kinds of solids, the carbohydrates, such as starch and cellulose, and nitrogenous proteids. The final products of purification are gases, which, of course, escape, water, and inorganic nitrates, which remain in solution; the latter being of great importance since it is in the form of nitrates that nitrogen is utilized by higher chlorophylous plant life. Since the carbohydrates contain no nitrogen, it will be sufficient to say of them that they are liquefied (hydrolysed) by the anærobics, and the soluble products, either anærobically or ærobically, further broken down until they are entirely reduced to gases and water.

The disposition of the proteids needs closer attention. The first action is essentially hydrolytic—simplification with addition of water—the obligate anærobics secreting soluble ferments or enzymes, which digest the insoluble proteids, in the same way as animals digest them by means of enzymes secreted by the mucous membrane of the intestinal tract, changing them to soluble peptones.

The peptones are then attacked by bacteria which break them down into gases and various soluble amido compounds; this being done either by oxidation or deoxidation, the products varying in nature according to the action to which they have been subjected. In deoxidation, for instance, the principal gas generated is CH_4, and in oxidation CO_2; the amido compounds probably differing to some extent. The term amido compounds is here used for the sake of brevity, in a much wider sense than is strictly speaking correct, being intended to cover any nitrogen containing compounds simpler than peptones, but more complex than inorganic ammonium salts.

The next step is one principally of oxidation, though it may also take place anærobically by deoxidation, the amido compounds being changed to CO_2 and NH_3; these combining together to form inorganic ammonium carbonate which remains in solution. Gases are also evolved during this process, but these need not be taken into consideration.

A highly specialized strictly ærobic group of organisms, the nitrosifiers, now come into play, by which the ammonium carbonate is oxidized to nitrous acid; the latter combining with any potassium, sodium, or calcium bases present and forming nitrites.

The nitrites are then still further oxidized to nitrates by means of the nitrifiers, another group quite distinct from the nitrosifiers. In speaking, however, of nitrification, this is taken to cover the action both of the nitrosifiers and the nitrifiers.

The bacteria of nitrification cannot develop in the presence of much fermentable organic matter, so do not grow on the ordinary gelatine or agar plates of the bacteriologist. Winogradsky succeeded in isolating them on plates containing a gelatinous silicate as the solid medium, and his assistant, Omeliansky, has more recently used gypsum for this purpose; the nutrient media in each instance being ammonium salts for the nitrosifiers and nitrites for the nitrifiers, with solution of which the solid materials are moistened.

The process may be tabulated as follows:

	Changed to	By	Action
Insoluble proteids.	Soluble Peptones	Enzymes secreted by anaerobics	Hydrolysis
Soluble peptones	Unstable amido compounds	Anaerobics or facultatives	Deoxidation or oxidation
Amido compounds	Ammonium salts	Facultatives	Oxidation or deoxidation
Ammonium salts	Nitrites	Nitrosifiers	Oxidation
Nitrites	Nitrates	Nitrifiers	Oxidation

Besides the above mentioned products there is a small amount of an irreducible insoluble organic substance formed, called humus, but not sufficient to clog the filters to an appreciable extent. The presence of a little humus is advantageous since the nitrifying bacteria seem to be able to make use of this nonfermentable matter in their metabolism.

A few remarks by way of explanation may here be inserted.

1. In speaking of hydrolysis—simplification with addition of water—it must be understood that this action is not confined to liquefaction of solids. Many of the soluble compounds are rendered more simple in construction by hydrolysis; the conversion of urea into the more stable ammonium carbonate by the micrococcus ureæ may be given as an example.

2. *Apparent Oxidation.*—Even under anærobic conditions there may be apparent oxidation, i. e., the resulting simpler compounds may contain relatively more oxygen than the original. But this is not in reality an oxidation, but only a loss of C, H or N, which are evolved as gases.

3. *Loss of Nitrogen.*—In the breaking down of nitrogenous compounds by bacteria there is always a loss of nitrogen evolved as N or as NH_3 if there is not enough acid present for the latter to combine with as ammonium salts. Free N is evolved by the action of the anærobics, being released from its organic combinations as such, but many of the facultatives in the absence of free oxygen can attack the nitrates and nitrites already formed and utilize their O; thus reducing them to NH_3 or free N. Such a process is called denitrification, and occurs very freely in sewage beds where there is no attempt to keep the facultatives and nitrifiers separate. As will be seen, the continuous filtration systems are the only ones in which a complete separation is approached, and with these there is comparatively little loss of nitrogen. In manure heaps there is considerable loss on account of this denitrification, detracting to a great extent from the value of the manure as a fertilizer, whilst in natural processes in the soil it also occurs, resulting in loss of nitrogen.

4. *Chemical Tests.*—In testing sewage and the purified effluent chemically one estimates:

(a) The nitrogen existing as ammonia in inorganic combination.

(b) The nitrogen existing as ammonia in organic combination—albuminoid ammonia.

(c) The nitrites and nitrates.

(d) The oxygen absorbed. By O absorbed is meant the amount of it extracted from an acidified solution of potassium permanganate acting at room temperature for four hours. This varies much according to the nature of the organic compounds; the carbohydrates acting most energetically. The test may therefore be taken as roughly indicating the amount of carbohydrates, although it is of value more as a comparative than an absolute test, since the more unstable amido and other compounds and even inorganic sulphides, products of deoxidation, are also quite active.

The usual standard for a purified effluent in England is a maximum of 1 per 100,000 for the albuminoid ammonia, and 1 per 100,000 for the O absorbed.

5. The incubator test is of comparatively recent origin, having been in use only 4 or 5 years, but for practical purposes is the most important of all, since it aims to determine whether the final effluents are prone to putrefaction or not. A sample of the effluent is submitted to the O absorbed test for 3 minutes and the amount noted. A quart bottle is then filled with another, but similar, sample of the effluent and kept well stoppered at 80° F. in an incubator. After 6 or 7 days it is tested for three minutes; the odor and appearance being also noted. If there is an increase in O absorbed, this is looked upon as evidence of putrefaction, since it means that there is an increase of the more unstable organic compounds and inorganic sulphides in consequence of deoxidation, whilst no change or a decrease in the amount of O absorbed indicates that the organic matter has been broken down to such an extent that there is no longer sufficient pabulum present to permit of increase of bacteria under anærobic conditions. The anærobics always require a good, strong diet, and so do the facultatives in the absence of O, although when there is plenty of this they can get along with very little nourishment.

6. Bacteriological tests are also valuable. Crude sewage contains one to ten millions or more bacteria per cubic centimeter, as shown by the usual methods of plating out, and this number may be reduced to a few thousands or even hundreds in a good final effluent. The obligate anærobics and nitrifying organisms will not grow on ordinary plates, so this refers only to the facultatives which are to some extent oxidized out of existence during purification processes.

It may, however, be at once remarked that, although it is quite possible to produce an effluent which would pass as a good drinking water according to bacteriological standards, yet the expense of this on a large scale is prohibitive. In practice the number of bacteria is not very materially reduced. Houston, in experiments with London sewage, found that the bacillus coli communis slips through the filters in large numbers, and from this it may be inferred that the typhoid bacillus would do so, too,

if it happened to be present in the sewage at any time. It may be laid down, therefore, as a general, though at present ideal, rule that the water from no river into which even purified sewage is run should be used for drinking purposes without previous efficient filtration.

In determining the progress of purification bacteriologically, it is probable that results are usually considerably underestimated. In the suspended matter of the crude sewage the bacteria hang together in colonies or zoöglea, and Mr. Dibdin informed me last summer that, if the sewage be thoroughly beaten up first, the plate cultivations will show a hundred times more colonies than usual, so that instead of one to ten millions the numbers will be more like a hundred to a thousand millions per cc. In the final effluents the suspended solids are practically removed so that the individual bacteria are more easily separated and the recorded results probably fairly accurately represent the true state of affairs.

Sewage, as it enters the main sewers, is called "fresh," and contains solid organic matters in lumps, soluble organic substances, ammonium salts, nitrites, nitrates and dissolved O. During the next 6 or 8 hours, which may be taken as a fair average time for it to reach the outfall, it undergoes some changes. The lumps are broken up, mechanically and perhaps also to some extent by bacterial action, into finer particles, and the bacteria present begin to multiply. The action is mainly by the facultatives, the dissolved O being first used up, after which nitrates and nitrites are reduced by coli communis and other "denitrifiers" which have this reducing power. The sewage is now "stale," containing comparatively finely divided particles and showing an increase of inorganic ammonia formed by action on the soluble nitrogenous matter, whilst the nitrites, nitrates and dissolved O have disappeared. It is now all ready for true anærobic action, and after this has proceeded to some extent it is called "septic" sewage.

The preliminary anærobic action was not understood at first, the supposition being that the purifying from start to finish was an oxidation process. Under this impression Col. Waring, 1894, introduced his sand filters with forced æration at Newport and other places in the United States. The purification of the sewage was effective, but the solids had no chance to get liquefied, so the filters quickly became clogged and had to be cleaned at great expense. In experiments on these lines at Lawrence it was found that the more complete the æration, the worse was the clogging.

Dibdin, about the same time, introduced his bacteria or contact beds in London; tanks, 3 or 4 feet deep, filled with lumps of coke or burnt clay, into which the sewage was slowly poured, allowed to remain "in contact" with the coke surfaces for a while, and then slowly drained off; the idea being that by this means the filters would be thoroughly ærated without the necessity for forcing air through them. The contact beds were much more successful than Waring's, the sole reason, though this was

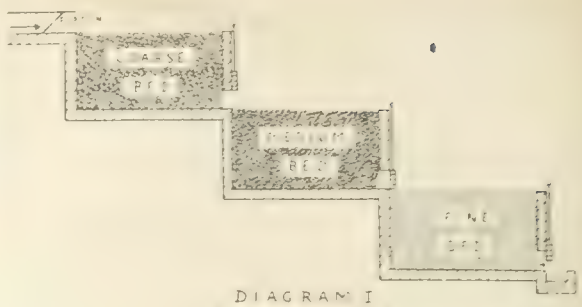


DIAGRAM I
TRIPLE CONTACT

not appreciated at that time, being that the aeration was less complete, so that some anærobic hydrolytic action was possible.

As soon as the double anærobic and aerobic action came to be recognized, attempts were made to keep each set of bacteria altogether separate so that the anærobics might do their work without interference by those which work best aerobically and vice versa.

The most successful methods are those of Cameron and Scott Moncrieff, 1896, the former introduced at Exeter and the latter at Caterham in England.

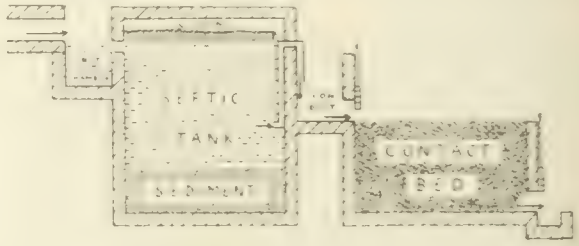


DIAGRAM II
SEPTIC TANK AND PERCOLATING CONTACT BED

Cameron (Diagram 2) allows the sewage to pass slowly and continuously through a closed wooden box—the septic tank—the effluent from which passes to a coke contact bed to be oxidized, the bed being alternately filled and drained. By means of this intermittent filtration aeration is accomplished since air is drawn down through the coke in draining as with the Dibdin beds.

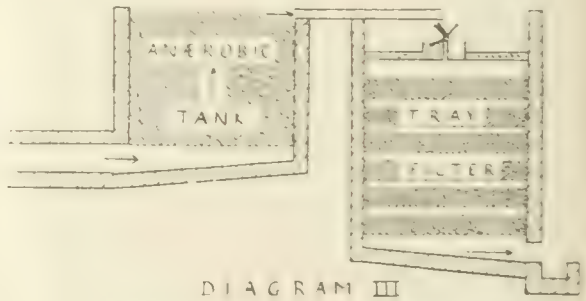


DIAGRAM III
SCOTT-MONCRIEFF SYSTEM

Scott Moncrieff (Diagram 3) constructs a tank containing broken flints or other coarse material resting on a false bottom, and allows sewage to flow in continuously from below, the action being altogether anærobic except to a limited extent at the surface. From the anærobic tank the sewage is

passed on to filter through coke contained in a series of trays where the oxidizing action takes place; the flow being continuous and the fluid aerated in dropping from one tray to the next. By this and other somewhat similar methods of continuous filtration there is a better chance than in the contact bed for the facultatives and nitrifiers to get in their best work. The facultatives multiply mostly in the upper layers of the filter, reducing the soluble organic matter to ammonia. Below these comes a zone occupied chiefly by the nitrosifiers, and in the lower layers the nitrifiers predominate. The result is a purer, more highly nitrated effluent than is possible with the contact beds where there is no chance for the facultatives and nitrifiers to work independently of each other, but the general consensus of opinion is that the contact beds afford an effluent which is good enough for all practical purposes, and are cheaper to work on a large scale than any method of continuous filtration.

The processes may be tabulated:

	Method	Flow	Action
1) Waring	Forced aeration through sand	Continuous	Entirely aerobic
2) Dibdin	Coke beds Natural aeration by filling and draining	Intermittent	Anaerobic and aerobic alternatly in same beds
3) Cameron	a) Septic Tank b) Coke beds	Continuous Intermittent	Strictly anaerobic Chiefly aerobic
4) Scott Moncrieff	a) Anaerobic Tank b) Coke tray filters	Continuous Continuous	Strictly anaerobic Strictly aerobic

It may be here remarked that it has been found impossible in practice to treat raw sewage by either of the first two processes. Under the forced aeration system it is necessary previously to remove the suspended solids as far as possible by chemical precipitation, or the filters will clog almost immediately.

Dibdin at first used a sewage which had been chemically treated, and found he could effect fair purification at the rate of a million gallons per day per acre. Later he simply removed the grosser particles by screening, but the solids still remaining in suspension reduced the efficiency of the beds by about one-third, so that not more than six or seven hundred thousand gallons per day per acre could be handled.

This production of sludge or, at the best, large amount of putrescible organic solid matter is naturally a serious disadvantage, but is overcome to a great extent by the methods of Cameron and Scott Moncrieff, where, on account of the more perfect hydrolysing action, the raw sewage can be used without any preliminary chemical treatment or screening. Not only are solid matters disposed of in the anærobic tanks, but in the effluent the soluble organic matter is in a more advanced condition than in the original sewage, so that a septic tank effluent is more readily purified in the coke beds than one from precipitated or screened sewage.

It has hitherto been said in a general way that anærobic action is necessary for the satisfactory liquefaction of solid organic matter, but a distinction must be drawn in this respect between that of animal and of vegetable origin. The former can be liquefied and disposed of by bacteria acting aerobically, though not so quickly as by anærobic action, but the latter is much more refractory. The solid vegetable matter, in domestic sewage at any rate, consists chiefly of paper and, to a lesser degree, of corks, rags, etc., whilst where there is much wooden pavement, and the combined system of drainage, as in London and many other English towns, there is in addition a large amount of woody fibre. The principal ingredient of all these is cellulose, and it is the cellulose which is refractory, requiring a considerable time for liquefaction even under the most favorable anærobic conditions. It now becomes evident why it is so necessary to screen the grosser particles, consisting chiefly of paper, corks, etc., before running the sewage into the Dibdin beds; why, even when this is done it is found in practice that the surface must be often raked over to break up the fibrous deposit which forms there, and why there is progressive loss of capacity, for there is no anærobic action possible on the surface of these beds, so that the cellulose caught there remains practically unchanged almost indefinitely.

A septic tank, however, overcomes the difficulty. There is always a deposit at the bottom, and a thick scum several inches thick on the surface. The scum prevents absorption of oxygen by the liquid, so that the action immediately underneath it is strictly anærobic. Paper, corks, and other solids, no matter how large, all go into the septic tank, where they either fall to the bottom, or rise to the top and adhere to the scum, remaining for days, weeks or months, until finally liquefied. The effluent is drawn from half-way down the tank (see diagram), so that no solids can escape with it, or at any rate only particles so small that even under subsequent slow working aerobic conditions they can be disposed of. When a septic tank is first started there is gradual formation of a deposit below and a scum above, and for a time these are constantly increasing in thickness, causing some loss of capacity of the tank. In 3 or 4 weeks, however, as the bacteria multiply, an equilibrium is established, liquefaction balancing addition of solids, and after this is reached any additional loss of capacity is due to deposit, partly of mineral matter, which, of course, bacteria are powerless to remove, and partly of the already mentioned stable humus. The life of a septic tank may be put at two years, at the end of which time it must be cleaned out and started afresh. A Scott Moncrieff anærobic tank is filled with broken flints or other coarse material resting on a false bottom, whilst a Cameron septic tank has nothing of the kind in it. The reason for this difference now becomes obvious. In the upward filtration of the former, a de-

posit is formed in the lower chamber beneath the false bottom, and the deposited material is gradually cleared off as in the septic tank, but the lighter particles rise and rest against the under surface of the false bottom, where they are acted upon by the anærobics, and as soon as they get small enough, will pass through the meshes of the false bottom. Such meshes, however, to avoid clogging, must of necessity be somewhat coarse, so will allow comparatively large particles to pass. These must, therefore, be arrested in their upward course and the anærobics given a chance to work on them further before they are passed on to the beds. In the septic tank the lighter particles adhere to the scum which plays the part of the broken flints, so that these can be dispensed with. It has, however, been suggested that coarse material placed in the septic tank might accelerate bacterial action, as affording more surface for the bacteria to cling to, but any advantage gained in this way does not compensate for the loss of capacity, and the suggestion has not been carried out in practice. A priori then one would expect the septic tank to be more practical than the upward filtration, and that this is so seems to be proved by the more general adoption of the former; Scott Moncrieff tanks having been only exceptionally installed in England, whilst septic tanks are to be found all over the country.

The Dibdin system is now in use in many places in England, but it is found that a single contact bed is not sufficient to provide an effluent which will stand the incubator test. Double contact beds, therefore, have to be provided, and at Hampton on Thames even triple contact beds (Diagram 1) are in use. Here, however, a specially good effluent is required, since one of the London Water Companies has its intake just below Hampton.

The method of working the contact beds, whether used with or without previous anærobic treatment, may be briefly described. The bed is filled slowly during one hour, the sewage allowed to remain "in contact" for 2 hours, then slowly drained off for one hour, and the bed allowed to "rest empty" for four hours, a cycle of 8 hours, after which it is again filled.

When a bed is first started the purification is slight, but the bacteria soon multiply enormously, clinging in colonies to the surfaces of the coke, and in 2 or 3 weeks the bed becomes ripe, after which it maintains its efficiency indefinitely if properly handled.

The effluent, however, is frequently submitted to the incubator test, and if at any time it shows signs of deterioration, the bed is given a rest for a week or two. In resting, the prolonged contact with the air weakens the anærobics, whilst the more strictly ærobic bacteria, which give the finishing touches to the purification, are strengthened, so that on resuming work the effluent improves again.

LIGHT AND RADIANCE IN THE TREATMENT OF DISEASE.

By GEORGE G. HOPKINS, A. M., M. D.
of Brooklyn, N. Y.

ARTICLE III

THE TREATMENT OF CARCINOMATOUS GROWTHS BY ROENTGEN RAYS.

The interesting meeting that gathered at the New York Academy of Medicine, on the 6th of March, when the large meeting hall was well filled, is evidence of the general interest in the use of the Röntgen Ray in the treatment of malignant disease.

The paper of the evening was by Dr. Williams, of Boston, and was a concertive epitome of his experience in this line of treatment. I was one of the Fellows who were asked to discuss the paper.

No one present could have failed to be convinced of the power of this ray over diseased cell growth.

The article which I published in the journal of Jan'y. 6, 1900, on white gangrene was the means of leading me to experiment with X-Ray in carcinomatous and other malignant and benign growths. These experiments have developed, in 3½ years, into a certainty that the larger proportion of these growths can be absolutely controlled by the use of this fluorescence.

There is a wide difference of opinion as to the length of each seance and the proximity of the tube to the diseased surface. The large majority of those reporting favor, as I do most decidedly, the soft tube for this kind of work. The majority of operators use the static machine as their source of electrical energy for the tube, but many of these practitioners state that the source of energy is not material to the cure. I have used both sources of electrical energy, the coil and the static machine. My success with the coil was far from being satisfactory, and I have discarded it entirely for the static machine.

The use of this therapeutic agent in the treatment of inoperable cancer is simply wonderful. With proper care and judgment we have a safe and certain cure for a very large class of malignant diseases, that heretofore have been considered incurable. Like every other good thing it is bound to be abused, and in untrained hands has already been productive of harm to some of those whom it has sought to cure.

I have recently had two cases come to me in which carelessness in protecting the healthy parts had caused extensive injury. In one case it was overzealous treatment, but in the other it was inexcusable recklessness in not protecting parts that could have been preserved from injury with very little trouble. My turn may come to have "burns," but it will not be for want of every possible precaution that I can take to prevent such a catastrophy. I have not had a case in my own hands in more than three years of work with these growths. Every day strengthens my faith in this therapeutic measure.

Last year I refused to treat uterine cancer in any of its forms. This season I have been treating inoperable cases, with a considerable degree of success.

In the hemorrhagic forms of carcinoma of the

uterine neck and vaginal walls my success has been gratifying. But in these cases I make use of the Finsen light as well as the Röntgen Ray. I find that the actinic rays of light derived from the Finsen tube will control the hemorrhagic condition much more promptly than any thing I have ever used.

I have a case that came to me on a stretcher, nine weeks ago to-day, the least movement causing profuse bleeding from the cervix. This patient I subjected to the Finsen ray for one hour and the Röntgen ray for 10 minutes daily.

For the past four weeks there has been no hemorrhage, and she has walked in the street and rides from two to three hours daily.

The tubes that are apparently in every way alike will have totally different therapeutic effect.

It goes without saying, that the nearer the tube is placed to the patient the more intense the action on the tissue exposed to it.

Some patients will tolerate a 15 minute exposure at 25 inches distance; but 5 minutes at 15 inches distance will cause a redness of the skin in another.

The use of the Ray in visceral cancer is growing in favor daily.

My preference in such cases is for a hard tube, as that has to its credit more injuries to the deep tissues, and therefore penetrates more deeply.

In my researches for the article for white gangrene, I found by statistics, that with hard tubes the trophic disturbances began in the deeper tissues without there being any damage to the superficial parts.

This being the case when it is desired to treat malignant disease of the internal parts, we should select a hard tube for the purpose and bring it as close to the surface of the body as we can, consistent with safety.

Many operators interpose between the tube and the patient an aluminum screen with the object of preventing a burn. This suggestion was made by Mr. Tesler. As the X-Ray passes through aluminum more readily than through glass, it seems hardly creditable that it can be of any service in preventing injury to the tissues. To my mind it is dangerous to use it, as it leads to a sense of false security and therefore to recklessness in the use of this powerful therapeutic emanation. It is a noticeable fact that those who advocate this expedient have had the most intimate experience with the distructive effects of the X-Ray, notwithstanding the use of this false protector.

Carcinoma of the female breast has received the largest amount of attention from radiotherapeutists, and the use of the Röntgen Ray is now a well established method of cure for this intractable manifestation of cancerous disease.

One of the most satisfactory fields for work in this line is in recurrent carcinoma after amputation of the breast. This form of disease has given me my most satisfactory results, as I have treated a very large number of such cases.

Where ulceration has not occured in these breast cases, nearly every case that comes to us will yield to treatment without the distruction of the superimposed skin. Where the skin has been destroyed over the region of disease, the ulceration will heal very promptly. I have had it do so even in women advanced in pregnancy.

Carcinoma of the stomach has been brought within the curative influence of Röntgen fluorescence. But these are the cases that require the greatest amount of care and judgment on the part of the operator. The happy medium is so very difficult to determine that it is better to err on the side of short exposures, as too long seances may do serious damage to the patient.

The various forms of malignant disease that affect the face are amenable to this form of treatment. In my experience malignant disease occurring in this part of the body is more odoriferous than in almost any part of the human system. It is remarkable with what rapidity the odor disappears while under daily exposures to the X-Ray. Large surfaces in cases involving the greater portion of the cheek of one side, heal very satisfactorily, but not as rapidly as in some other portions of the body.

In cancer involving the tongue where speech has been lost and swallowing is so difficult that the patient is nourished by rectal enamata, the X-Ray has worked marvelously.

I have one case in which amputation of the tongue was decided upon, as the growth was closing both trachea and esophagus, that has yielded to the combined use of the X-Ray and Finsen Light.

This patient was receiving all his nourishment per rectum, yet in three weeks time, with five treatments a week, was able to eat solids, and had regained phonation which had been lost.

A CASE OF BUBONIC PLAGUE—RECOVERY.

By THOMAS W. JACKSON, M. D.,

Captain and Assistant Surgeon, U. S. Vols., Naic, Luzon, P. I.

During the night of September 12, 1901, a native scout appeared at the Military Hospital at Naic, Cavite Province, Luzon, complaining of severe cramp-like pains in the calves of both legs. An application of chloroform liniment was made by the hospital steward and the native returned to his quarters, appearing at sick call the following morning, however, with a temperature of 103° F. Examination revealed a well-developed left femoral bubo of the size of a small lime, and as no venereal lesions were found he was immediately isolated.

Owing to his ignorance of English and Spanish it was difficult to elicit a complete history, but by means of an interpreter the following facts were gathered:

The patient, Julian Gonzalez, a Tagal, aged 20 years, was a native scout quartered with Co. I, Fourth U. S. Infantry, and had returned with six other native scouts, in good health, September 9th, from the town of Magallanes, nearby.

He denied having chills, fever, symptoms of malarial or venereal disease or any recent illness. Five years ago he had smallpox. One sister died suddenly three months ago in a small barrio about five miles away. Cause of death unknown. Patient stated that her death was caused "by the wind blowing upon her."

In the absence of a microscope, malarial fever

could not be excluded and quinine administration, by mouth and needle, was begun and continued until the diagnosis was established, as shown upon attached chart.

The bowels and kidneys performed their functions normally. ,

The bubo increased in size during the first twenty-four hours attaining the size of a guava. The skin was quite tense and the bubo was moderately tender. At the end of twenty-four hours it began to diminish in size and consistence, but showed no signs of suppuration. At the end of four days it had almost entirely disappeared. A few inguinal glands and one cervical gland of the same side became slightly swollen, but there was no other manifestation of glandular involvement. Upon the fifth day the temperature dropped to 99° F., but upon the afternoon of the same day the temperature was 103° F. Upon the morning of the sixth day the temperature was slightly subnormal (vide chart).

Every precaution was taken to prevent the spread of the disease. The building in which the case occurred was thoroughly disinfected and the patient was isolated in a tent in the middle of a large field and attended by another native scout. I visited the patient three times daily.

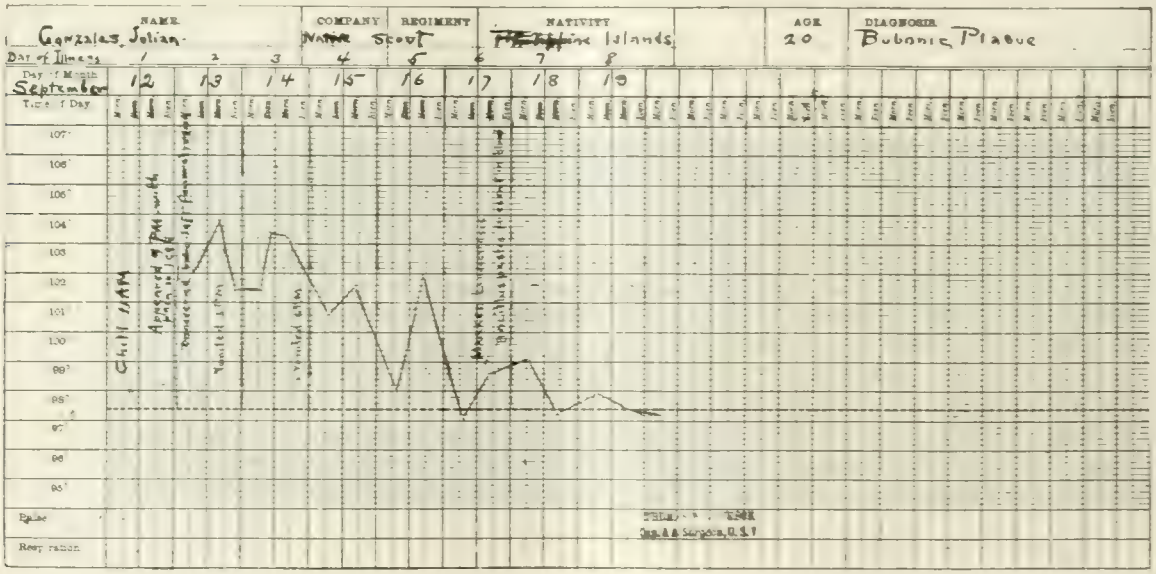
In the absence of a microscopical diagnosis I inclined to the view that the case was one of sporadic plague for the following reasons:

1. The onset and progress of the case suggested an acute infectious disease.

2. The appearance of a femoral bubo without venereal or other nearby skin lesion, coincident with acute febrile symptoms is most unusual in cases of malarial disease. In a recent experience of over two thousand cases of malarial disease I have not observed such a combination of symptoms.

3. The recent occurrence in this town of five cases of bubonic plague readily accounted for the origin of the case, the buildings in which the original cases occurred still remaining, the medical officers being without authority to destroy such buildings under the existing civil government.

4. The temperature curve might be variously interpreted but was not inconsistent with plague.



Symptoms.

Chill, initial.
Fever.
Vomiting (twice).
Bowel and kidney functions normal.
Skin very dry and hot, seldom moist.
Teeth and lips accumulate sordes.
Conjunctival injection marked.
Mental excitement.
Sclerae injected.
Tremor marked.
Pupils normal.

Treatment

Quin. Hydrochlor. ..
Hypo
inject.
Sept 14 Strych Sulph ..
and 15.
Morph. . . . . ..
Quinin.
Phenacetin aa ....
Every 3 hrs. until diagnosis was established.

Strychnin. .002 p. r. n.
Ext Ferri Co. U. S. A. p. r. n.
Diet liquid and light.
Rest in Bed.

Blood Examination.

1-12 oil immersion lens)
No malarial parasites
No malarial pigment
Marked leukocytosis
Plague bacilli present in several specimens from ear
Stained Loeffler Alkaline Methylene Blue.

The prominent symptoms, with treatment, are noted upon the clinical chart.

At my request the Manila Board of Health sent Dr. J. F. Halsell with a microscope, and blood examinations of the suspected case were made, September 17th. No pigment nor malarial parasites were found, but a marked leukocytosis was present and plague bacilli were found in several specimens, making positive the diagnosis of bubonic plague. The blood specimens were taken from the patient's ear and stained with alkaline methylene blue (Löffler) and the examination made with 1-12 objective (oil immersion). No effort was made to treat the patient with serum. His convalescence was uneventful and he was discharged from quarantine October 2, 1901.

The total number of known cases of bubonic

plague which have occurred in Naic, Cavite, Luzon, during 1901, are tabulated below.

Nationality	Americans	Filipinos	Chinese	Combined
Total Number Cases	1	3	2	6
Fatal Cases	1	2	0	3
Per Cent. Mortality	100	66⅔	0	50
Cases with Suppurative buboes	0	2	2	4
Cases without Suppurative buboes	1	1	0	2

A CASE OF THROMBOSIS OF THE LEFT INTERNAL JUGULAR, SUBCLAVIAN, AXILLARY, BASILIC AND MEDIAN BASILIC VEINS, OF UNEXPLAINED ORIGIN,

By CHARLES J. ALDRICH, M. D.,

of Cleveland, Ohio.

Lecturer on Clinical Neurology and Anatomy of the Nervous System, Cleveland College of Physicians and Surgeons; Neurologist to the Cleveland General Hospital and Dispensary; Neurologist to the City Hospital.

Mrs. L., sixty-seven years of age, widow, three grown children, German born, has been under my care at intervals for the last nine years, but at no time previous to her present sickness has she been seriously ill. She has suffered from epidemic influenza on three occasions, the last in the month of February, 1901. She has some hypertrophy of the left heart which I believe to be a senile change. Her circulation has always been good, pulse full, strong and regular.

I was called to see her on the 15th of May last and elicited the following history: Since her illness in February she had so far recovered that she said she was in better flesh and better condition than she had been for some time. She had been working in her garden several days previous to my visit and felt unusually good. The night preceding my visit, while at the evening meal, she began to suffer abdominal pain; she retired early, but was awakened later by increase in the severity of the pain. Her daughter arose and applied hot fomentations to the abdomen, gave her an enema and half-ounce of caster oil. Her bowels had not operated in the twenty-four hours preceding. The oil nauseated her and she vomited; neither did the enema secure movement.

I found her in bed, suffering a considerable amount of abdominal pain, temperature 99°, pulse 90, full, strong, regular and compressible. Examination of the abdomen revealed a large mass extending from the right iliac fossa up to the liver, occupying the region of the cecum and ascending colon. It did not ascend and descend with the movement of the diaphragm. Four or five years ago she had some obstruction of the bowels and a mass in the abdomen, but my memory is not clear as to its location or characteristics; cathartics, however, relieved her. The mass did not pit on pressure and notwithstanding some other symptoms to the contrary it was thought that we had to deal with an impacted bowel and accordingly instituted measures for its emptying. They included oil enema, a solution of Epsom salts delivered through the colon tube, and by the mouth we gave forty grains of magnesium sulphate in peppermint water and syrup every hour. Occasional quarter-grain doses of codeine controlled the pain. Three days passed before any fecal matter was evacuated.

On the fifth day of her illness she was seen in consultation with Dr. F. E. Bunts. After careful examination he was unable to be certain as to the nature of the mass, and although exclusion of malignancy was not possible, nor was fecal impaction or a distended gall bladder outside of our consideration, it was agreed that a continuance of the evacuation treatment was wise while we awaited the accumulation of data on which to make a positive diagnosis.

Repeated examination and a puzzled countenance begat worry and additional council was asked for by her daughters.

On May 23d she was seen in consultation with Dr. Dudley P. Allen. At this time, as I had noticed for a few days preceding, there had been marked change in the size of the abdominal tumor, it was softer, smaller, less tender and was seen to move with the respiratory movements. Dr. Allen did not feel warranted in making a positive diagnosis.

Three or four days previous to Dr. Allen's visit a swelling at the root of the neck on the left side was noticed. This swelling filled the supraclavicular space. Pain was complained of about the inferior attachments of the left sternocleidomastoid muscle. In the mass a hard ridge could be felt occupying the position of the internal jugular vein and extending above the middle of the neck. There was much tenderness over this area and she complained of pain radiating from this tender region to the back and top of the head; there was not, however, any flushing of that side of the face more than the other side, although the whole face had been more or less flushed during her illness. On careful inspection it could be seen that the skin over both the supra- and infraclavicular areas appeared bluish in color, and the superficial veins were enlarged. After some of the puffy swelling had disappeared it was possible to determine that she was suffering from thrombosis of the left internal jugular vein. Preceding and since the visit of Dr. Allen she had had considerable pain in the neighborhood of the sternum and it was thought possible that she might have an extension of the thrombosis into the innominate. Dr. Allen did not feel disposed to make a positive diagnosis of thrombosis of these large veins, but advised that she be kept very quiet and the case watched.

The day following Dr. Allen's visit she began to complain of pain in the axilla. Examination was made and a hard cord found occupying the position of the left axillary vein. The swelling and tenderness had very much diminished in the neighborhood of the jugular. During the next 48 hours the pain began to descend the arm and examination demonstrated that the thrombus was slowly creeping downward to the elbow which it reached on the 29th of May. She was again seen by Dr. Allen in consultation on May 27th, at which time the thrombosis could be located from the middle portion of the neck downward until it disappeared behind the clavicle, again emerging in the axilla and continuing to the juntion of the middle with the lower thirds of the arm. The arm was slightly swollen, tender and painful, and the superficial veins on the left half of the chest were dilated and full. The veins of the forearm and hand were not more than those on the opposite side, neither were the fingers, hand nor forearm swollen, nor was there any difference in the color of the finger nails. The temperature had at no time been more than 100° F., and almost all of the time about 99°. The pulse was full, strong and regular, ranging about eighty.

On the 29th, Dr. C. A. Hamann visited the case with me and confirmed the opinion that a thrombus existed in the jugular vein, extending down the neck to disappear behind the clavicle probably filling the subclavian, certainly filling to distension the axillary and basilic veins. He called attention to our ability to feel the valves in the axillary vein, thus demonstrating without doubt a thrombosis of that vessel.

The thrombotic process extended through about one-half of the median basilic and down the basilic to the entrance of the ulnar veins. No symptoms developed other than mentioned.

July 8th, the abdominal mass has lost its tenderness, is less than one-fourth its former size and she has been up and about for the last four weeks. Her bowels are now free and she is apparently as well as ever, excepting the

natural weakness incident to her age and recent illness. The thrombus has become hard, is shrinking in diameter and without doubt the internal jugular and the brachial veins are obliterating. We have no means of knowing with certainty the condition of the subclavian but are warranted in believing that it is still occluded and undergoing obliteration.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ending March 29, 1902:

SMALLPOX—United States.

			Cases	Deaths
CALIFORNIA:	Los Angeles	Mar. 8-15.	6	
	Sacramento.	Mar. 8-15.	1	
	San Francisco.	Mar. 8-15.	13	
COLORADO:	Denver.	Mar. 8-15.	8	
ILLINOIS:	Bloomington.	Mar. 15-22.	2	
	Joliet.	Mar. 1-15.	8	
INDIANA.	Evansville.	Mar. 15-22.	5	
	Indianapolis.	Mar. 15-22.	14	
IOWA:	Clinton.	Mar. 15-22.	1	
KANSAS:	Wichita.	Mar. 15-22.	5	
KENTUCKY:	Covington.	Mar. 15-22.	8	
MAINE:	Portland.	Mar. 15-22.	4	
MASSACHUSETTS:	Boston.	Mar. 15-22.	19	2
	Cambridge.	Mar. 15-22.	3	1
	Fitchburg.	Mar. 15-22.	3	
	Lawrence.	Mar. 15-22.	4	
	Malden.	Mar. 15-22.	2	
	Somerville.	Mar. 15-22.	2	
MICHIGAN:	Detroit.	Mar. 15-22.	13	
	Grand Rapids.	Mar. 8-15.	4	
NEBRASKA:	Lincoln.	Mar. 15-22.	19	
NEW JERSEY:	Omaha.	Mar. 15-22.	20	
	Elizabeth.	Dec. 28-Feb. 15	12	1
	Hudson County.	Mar. 8-15.	1	
	Jersey City.	Mar. 9-16.	48	
	Newark.	Mar. 9-23.	78	1
	Paterson.	Mar. 15-22.	25	
NEW YORK:	Binghamton.	Mar. 15-22.	1	
	New York.	Mar. 15-22.	66	13
	Yonkers.	Mar. 14-21.	2	
OHIO:	Cincinnati.	Mar. 14-21.	25	
PENNSYLVANIA:	Allegheny City.	Mar. 15-22.	1	
	Philadelphia.	Mar. 15-22.	26	3
	Pittsburg.	Mar. 15-22.	4	
	Providence.	Mar. 15-22.	5	
RHODE ISLAND:	Greenville.	Mar. 8-15.	7	
SOUTH CAROLINA	Sioux Falls.	Mar. 15-22.	4	
SOUTH DAKOTA:	Memphis.	Mar. 15-22.	13	
TENNESSEE:	Tacoma.	Mar. 8-15.	10	
WASHINGTON:	Wheeling.	Mar. 15-22.	2	
WEST VIRGINIA.	Green Bay.	Mar. 15-22.	23	1
WISCONSIN:	Milwaukee.	Mar. 15-22.	3	

SMALLPOX—Foreign.

BELGIUM:	Antwerp.	Mar. 1-8.	18	3
CANADA:	Halifax.	Mar. 15-22.	9	
	Hamilton.	Mar. 15-22.	1	
	Quebec.	Mar. 15-22.	2	
	Winnipeg.	Mar. 1-15.	9	
CHINA:	Hongkong.	Feb. 1-8.	1	
COLOMBIA:	Cartagena.	Mar. 3-9.		1
	Panama.	Mar. 10-18.	50	
FRANCE:	Paris.	Mar. 1-8.		3
GREAT BRITAIN:	Leeds.	Mar. 8-15.	2	
	London.	Mar. 1-8.	355	80
	North Shields.	Feb. 22-Mar. 8.	16	2
	Swansea.	Feb. 22-Mar. 1.	1	
	Tottenham.	Feb. 22-Mar. 1.	1	
	West Ham.	Feb. 22-Mar. 1.	7	
	Dundee.	Mar. 1-8.	1	
	Glasgow.	Mar. 7-14.	95	2
	Leith.	Mar. 1-8.	1	
INDIA:	Bombay.	Feb. 18-25.	8	
	Calcutta.	Feb. 15-22.	8	
	Karachi.	Feb. 2-9.	2	3
	Karachi.	Feb. 16-23.	12	2
	Madras.	Feb. 8-14.		5
ITALY:	Naples.	Feb. 22-Mar. 1.	9	1
	Palermo.	Feb. 22-Mar. 8.	27	5
	Rome.	Jan. 18-25.		1
RUSSIA:	Odessa.	Mar. 1-8.	2	1
	St. Petersburg.	Feb. 22-Mar. 1.	11	8
	Warsaw.	Feb. 15-22.		2
SPAIN:	Barcelona.	Mar. 8-15.		5
STRAITS SETTLEMENTS:	Singapore.	Jan. 18-25.		2
URUGUAY.	Montevideo.	Jan. 26-Feb. 8.	152	14

SMALLPOX—Insular.

PORTO RICO.	San Juan.	Feb. 22-Mar. 1.	14	

YELLOW FEVER.

MEXICO:	Vera Cruz.	Mar. 8-15.	4	2

CHOLERA—Insular.

PHILIPPINES:	Manila.	Mar. 2[illegible].	[illegible]	

CHOLERA—Foreign.

CHINA:	Canton.	Mar. 1-7.		2
	Chefoo.	[illegible]		
INDIA:	Bombay.	Feb. 18-25.		5
	Calcutta.	Feb. 15-22.		84
	Madras.	Feb. 8-14.		10
STRAITS SETTLEMENTS.	Singapore.	Jan. 18-25.		21

PLAGUE.

AUSTRALIA:	New Castle.	Mar. 2[illegible].		
INDIA:	Bombay.	[illegible]		704
	Calcutta.	Feb. 15-22.		176
	Karachi.	Feb. 2[illegible]	72	45
	Karachi.	Feb. 16-23.	72	48

The Etiology of Tabes From 1000 Observations.—Fournier, in the *Bulletin Médicale*, December 4, 1901, says that the history of tabes has passed through three periods, a stage of incredulity, about 1875, when he first stated his belief in the syphilitic origin of the majority of the cases of locomotor ataxia; a stage of investigation, when numerous observations were made; and finally the present time, when tabes is universally believed to be the product of syphilis. Fournier has seen 1000 cases in the past 26 years, and, with the aid of his students and friends, he has collected their case-histories. Of the 1000, only 75 give no syphilitic antecedents, the rest giving a certain syphilitic history. Thus only 7½% were without a syphilitic history. In eight patients the tabes was the sure result of hereditary syphilis, as probably also occurred in other cases. Locomotor ataxia seems most frequently to follow mild cases of syphilis. It supervenes in persons under a high nervous strain, and in those of marked nervous heredity. Yet tabes is generally seen in men, only six per cent. occurring in women. Tabes is also most frequent in those cases of syphilis which are not well treated with antisyphilitic treatment at the beginning of the illness. The fact that tabes is a late result of syphilis aggravates the prognosis of syphilis. Tabes occurs so often in syphilis that, of all the accidents found, only cutaneous syphilides and cerebral syphilis exceed it in frequency. And tabes is so refractory to treatment that the ordinary specific treatment is powerless. When tabes supervenes, syphilis is incurable. Therefore the prophylaxis of syphilis, as it is now understood, becomes even more important than it formerly was. [M. O.]

The Epidemic of Cerebrospinal Fever at Arras, France.—P. Beaujeu describes last year's epidemic of cerebrospinal meningitis among the infantry soldiers in garrison at Arras. (*Archives de Médecine de Pharmacie Militaires*, October, 1901). 23 soldiers were affected, with 10 deaths in two months. Six weeks later three more cases appeared, eventually recovering. These cases were discovered during an epidemic of influenza. The majority were in young men, who lived in particularly cold quarters. Another regiment, also in garrison in Arras, suffered severely from influenza, but escaped the meningitis epidemic. This regiment was disbanded for two weeks, the soldiers being sent to their homes, where two fatal cases of meningitis developed. The cases of meningitis followed in crops, with renewed cold weather, continuing long after the influenza had disappeared. Some cases were abortive in type, others were acute and severe, while others were slow with or without a relapse. The autopsies confirmed the diagnosis. No officers or citizens of Arras were affected. The cases were isolated. The treatment consisted of counterirritation to the spine, ice to the head, hot baths, normal salt solution injections and stimulants. [M. O.]

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Cholera.—The reports from the Philippine Islands that cholera is prevailing in Manila, and that United States troops are to be hurried home on account of the disease, are rather disquieting. Up to April 2 there had occurred 117 cases of cholera, with 73 deaths. As usual, the health authorities were having difficulty in finding all the cases, and were even being opposed by the priests, who assured the people that the precautions were only intended to annoy them. Major Maus, the Health Officer, had made many autopsies and found the disease to be a malignant type of Asiatic cholera.

Cholera has been raising its head elsewhere in the world. It is prevailing in India. The *Public Health Reports* state that in Calcutta up to a recent date more than 400 deaths had occurred. It is also in Java and in Singapore. It seems to have reached China, for a telegram from Hong Kong states that Manila had quarantined against that city. But, worst of all, the disease has followed the pilgrimage to Mecca. Sixty deaths were reported in March at Medina among the Moslem pilgrims, and (most alarming of all) the report now comes that hundreds of deaths have recently occurred at Mecca and at Jedda. There is a peculiar ominous significance in the appearance of cholera at Mecca. The historic associations of the scourge with that Moslem shrine are well known. One of the great highways for cholera from India into Europe has been along the track beaten by the pious Mohammedans. In 1831, according to Stillé, the disease killed nearly one-half the pilgrims at Mecca, and thence speedily spread with returning pilgrims to Alexandria and Constantinople, and thence throughout Europe as far north as St. Petersburg, Sweden, and Edinburgh.

But cholera has other routes than those of the pilgrims. Two others especially are noteworthy—by war and by commerce. Armies and merchant fleets have always been among its favored means of transit. It is this aspect of the question that now presents itself directly to us in America. We have an army at present in a cholera-infected country, and this army is about to return home. Surely, according to the analogies so profusely shown by history, we could not have a better means of importing cholera to our shores than by our Philippine army. The first importation of cholera to American soil was by some immigrant ships that landed at Quebec in 1832. The transports that convey our troops from the Philippines might repeat this object lesson.

But we do not aspire in these columns to assume the rôle of an alarmist. We have great confidence in modern sanitary science, and in the way it is practised by the United States government authorities. Even though, in the present case, the disease would come by way of California, where the state and city authorities deem it a patriotic duty to deny the existence of epidemic disease; even in spite of this fact, we believe that cholera would not easily escape the vigilance of our national sanitary watchkeepers.

The Relation of the Tubercle Bacillus to Pseudoleukemia.—The paper by Dr. Joseph Sailer which is concluded in this number, may be justly regarded as a most important contribution to our knowledge of the nature of pseudoleukemia. Dr. Sailer reports a series of four cases of lymphatic tuberculosis which resembled pseudoleukemia, and he has presented a searching and critical review of the literature bearing upon this condition in an effort to determine its essential nature. The association of tuberculosis with pseudoleukemia was recognized frequently previous to Sternberg's valuable paper on this subject, which appeared in 1898, but it was he who first pointed out that in a large proportion of cases supposed to be pseudoleukemia the tubercle bacillus is found either as a causative or associated factor. Sailer presents a critical study of Sternberg's cases, as well as of a large number of others from the literature which bear upon the association of tuberculosis and pseudoleukemia. In this category are included those cases of recurrent fever (Ebstein-Pel's disease) which Sternberg regards as tuberculosis. The evidence which Sailer has been able to collect, and his search has been a most thorough one, is largely in favor of the tuberculous nature of the majority of, if not all, cases of pseudoleukemia. He tells us that it was his inten-

tion when he began to prepare this paper to find some common clinical features in these cases that would render possible during life the differentiation of lymphatic tuberculosis from true pseudoleukemia, if such actually exist. He now has great doubt that such clinical differentiation is possible. Especially interesting is that portion of Dr. Sailer's paper dealing with the question why tuberculosis of the lymph glands sometimes produces such extraordinary symptoms. He mentions Askanazy's suggestion that the lesions in one of his cases resembled pearl disease in cattle. It was in 1898 that Theobald Smith proved that there was more than one variety of tubercle bacillus and, as is well known, these views have been completely confirmed. Sailer also mentions the work of Lartigau and of Ravenel, who have demonstrated that a considerable variation exists between specimens of tubercle bacilli from different lesions in human beings. Sailer regards it as possible, therefore, that in the pseudoleukemic forms of tuberculosis we may have to deal with a variety of the organism which differs somewhat from the one ordinarily infecting human beings. This appears extremely plausible, but, as Sailer states, is far from being proven. Such an hypothesis would require much study in order to establish certain constant peculiarities in the cultural and pathogenic character of the tubercle bacillus obtained from a sufficiently large number of cases.

Danger in Cigars.—It may perhaps not be generally known that in the manufacture of cigars the workmen commonly moisten the tips of the cigars with their lips, instead of using water or some other fluid which they might readily obtain. The workman claims that this process saves time, and as he is paid by the piece, the saving of time is a material object to him.

To physicians this is a matter of considerable importance, as the statement of the following case will readily show. A week or so ago a Cuban cigar maker presented himself in the clinic at the Jefferson Medical College Hospital to Professor Orville Horwitz. Upon investigation it was found that the man was affected with secondary syphilis; that the mucous membrane of the tongue and throat was literally covered with mucous patches. Upon close questioning Professor Horwitz elicited the fact that he wrapped his cigars in the manner mentioned above. He was informed that unless he ceased moistening the cigar tips with his lips Dr. Horwitz would inform his employer. The man subsequently promised that he would cease this method until the condition had been entirely relieved.

It appears to us that one of two methods should be insisted upon. Either that smokers protect themselves by using a mouth-piece when smoking, or that such laws be enacted as would compel workmen to use another method than moistening the tips of the cigars with their lips. Modern hygiene certainly demands that another method should be insisted upon. It is scarcely worth while to raise the point as to whether smoking should be given up entirely.

The Medico-Legal Aspect of the St. Louis Tetanus Cases.—What may be the final act in the St. Louis tetanus tragedy came to a rather sudden and unexpected ending in court. The parents of one of the children who were killed by the administration of poisonous antitoxin, brought suit for damages against the city of St. Louis, the Board of Health, and others. The city and Board of Health were specifically charged with responsibility for preparing and issuing the impure serum.

The attorney for the city contended in a demurrer that the city of St. Louis was acting in a charitable capacity, and moreover was acting for the State, and that an action cannot be sustained against the State, for the State is sovereign. The judge sustained both these contentions. In his opinion (which is given in abstract in the *New York Medical Journal*), he says that no similar case is to be found in the statutes. The Board of Health is a charitable institution; for it is not the duty of the municipality to protect the public healh. Moreover, the board was exercising a part of the sovereign power of the State, and therefore it acted for the State. But the sovereign State, according to a well-recognized principle of law, cannot be sued for the negligence of its officers.

This is evidently good law, and sounds reasonable. It will certainly meet the approval of boards of health; and may give some of them a sense of security when they do not happen to do their duty. But whatever traditionary law may say to the contrary, there are some people who will continue to believe that it *is* part of the duty of the State and the municipality to protect the public health.

Chromodiagnosis of the Cerebrospinal Fluid.—The cerebrospinal fluid continues to promise extensive diagnostic resources, not only from a bacteriological point of view, but from its color. This subject has been extensively investigated by Fürbringer since 1895, and has recently again been taken up by Sicard (*La Presse Medicale*, January 25, 1902). And yet, while one would naturally suppose that blood-tinged cerebrospinal fluid would be diagnostic, if persistent, of hemorrhage somewhere along the cerebrospinal axis, it has been shown that many fallacies may result from such an acceptation. A pure bloody contamination of the fluid is not only not

characteristic, but unreliable, as a puncture of a vein may have occurred during the introduction of the aspirating needle. A yellowish color would, if anything, be more significant of cerebrospinal hemorrhage, on account of the alteration that might have taken place in the blood. On the other hand, the absence of blood in the aspirated cerebrospinal fluid does not necessarily signify that there has been no hemorrhage, as the latter may occur in an extradural position, and may not become manifest on account of impermeability of the dura itself. Until we find some means for determining the presence or absence of dural permeability, we cannot hope definitely to ascertain whether the hemorrhage occurring along the cerebrospinal axis is extradural or subdural. Some advance in this subject has been made by Sicard, although only in two cases. In two instances of hemorrhage into the ventricles of the brain he was able to recover potassium iodide in the cerebrospinal fluid, which is of decided significance, as it has been practically determined that the dura is not permeable for this drug. Only once could the presence of hemoglobin be demonstrated by spectrum analysis of the spinal fluid, but no red blood-cells could be observed microscopically. It is believed that the yellow discoloration of the fluid in acute cases of cerebrospinal meningitis is probably due to small dissemniated pial hemorrhages. The yellowish-green discoloration of the spinal fluid seen in chronic jaundice is not attributable to an entrance of bile into the spinal canal, but to a peculiar, easily diffusible biliary pigment, which has been found easily to pass the pia. The subject undoubtedly offers a fruitful field for diagnosis, and there is no reason why inspection in this instance should not receive further valuable assistance from chemical and pathological investigation, with especial reference to some means for determining dural permeability *intra vitam*.

The Case of Professor Loeb.—The *American Inventor* says that the case of Professor Loeb is a tempest in a tea-pot. This irreverent remark is called forth by the statement that the Chicago professor is miffed at the misrepresentations of his "new biology" in the American newspapers. We do not wish to contribute further to this irreverence when we say that the newspapers are hardly to be blamed for misrepresenting Professor Loeb's ideas, for some of his ideas lend themselves very readily to misconception and misrepresentation. This is the fault as much of the ideas as of the newspapers. We trust, however, for Professor Loeb's own sake, that it is not true that he has threatened to go back to Germany in order to escape the American public. We are convinced that the interest of the American public in the progress of science is genuine, wholesome and intelligent; and that any new ideas that cannot stand this scrutiny must have weak points in them somewhere. When we recall the work of the great masters in science—like Darwin, Huxley, Pasteur and Virchow—and how as a rule they were not only willing but anxious to instruct the public, we feel rather sorry for Professor Jacques Loeb.

The Mayor of San Francisco.—This executive has put himself in line with the State officers on the subject of plague, and has resolved to have nothing to do with the "bubonic Board of Health." Therefore he has discharged the members of it. The discharged members have sued out an injunction against the Mayor, with what result remains to be seen. It will be recalled that the City Board of Health has always taken the correct stand on the plague question, and this body was the only guarantee the country had that there were some officials in San Francisco who stood between us all and the pest. The latest reports are to the effect that the disease is no longer confined to the city of San Francisco. The gravity of the situation is thus much increased. The spectacle in California has been from the very beginning a disgrace as well as a menace to the whole country.

The fact that reports of fatal cases leak out now and then at comparatively long intervals, is strongly suggestive of the suspicion that the disease is constantly present and running a hidden course. This is not improbable among the Chinese, who conceal their sick and even, it is said, bury their dead in their cellars.

Coelioscopy.—Surgeons are a restless and enterprising lot of mortals. It has been supposed for some years that the peritoneal cavity was sufficiently accessible to their attacks, but it appears that they are still unsatisfied. Kelling (*Münchener medicinische Wochenschrift*, Vol. 49, No. 1) has devised a method of examining this cavity which he calls coelioscopy. Hitherto dogs have been his only victims, but he confidently expects to apply this new method to human beings. It consists essentially in filling the peritoneal cavity with sterile filtered air through a hollow needle, then plunging a trocar through the distended abdominal wall and passing through the trocar a cystoscope. Through this cystoscope the adjacent peritoneal surface may be inspected. That this method would be very much safer than an exploratory laparotomy is doubtful, but it will probably be easier to persuade patients to submit to it, particularly as general anesthesia does not appear to be required.

The Death-Rate of Large European Cities.—According to special reports received by the United

States Department of State the death-rate for the great capitals of Europe for the last five years of the nineteenth century was as follows:

London, 1896, 18.6 per 1000; 1897, 18.2; 1898, 18.7; 1899, 19.8; 1900, 18.8.

Berlin, 1896, 19.0; 1897, 18.6; 1898, 17.7; 1899, 19.7; 1900, 18.7.

Paris, 1896, 19.1; 1897, 18.4; 1898, 19.1; 1899, 19.2; 1900, 19.4.

Vienna, 1896, 22.36; 1897, 21.30; 1898, 20.35; 1899, 20.63; 1900, 20.42.

Moscow, (approximately) 1896, 29.22; 1897, 28.37; 1898, 29.62; 1899, 28.02; 1900, 30.94.

Our large American cities compare favorably with these figures. In New York the death-rate is 19.95; in Philadelphia, 18.26; in Boston, 19.06; in Chicago, 14.68. As we pointed out last week, Montreal, although not in the same class with these very large cities, has almost the highest civic death-rate in America, it being 25.46 per 1000. It is somewhat remarkable how nearly alike many of the large cities are in this respect. The very high rate in Moscow probably indicated a defective sanitation, and the low rate of Chicago may indicate a large floating adult population.

A Growing Abuse.—The medical profession owes it to itself and to the public, to take action against the custom on the part of some members of the profession of receiving commissions from instrument-makers, druggists and others to whom they may have occasion to refer patients. A truss manufacturer believes, as he states in a recent circular letter, that he has avoided further misunderstanding by offering to physicians a professional discount (so-called) of 25 per cent., which is to be forwarded to the physician referring the patient each month following the full payment of account. For the sake of those members of the profession who still have some sense of decorum in such matters, the amount may be deducted instead from the patient's bill. No criticism, we suppose, attaches to the instrument maker. He is in business, and as it is now an accepted tradition in the commercial world that anything to attract customers, not distinctly illegal, is allowable, he is quite within the ethics of his trade. The lamentable feature is that his circular reveals a benumbed ethical sense on the part of members of the medical profession that is derogatory to that body, and the fact that we know that such venal offenses have existed in the past is no consolation when we consider that this circular indicates that such conditions are wide-spread in the present.

According to latest reports, Congress is to be asked to appropriate $25.000 for the physicians and surgeons who attended President McKinley. By the time this sum is divided for the benefit of the numerous attendants who have a claim upon it, it will hardly be large enough to go round. The retrospective value of a doctor's services grows rapidly less. We trust Congress will act before there is time for these services in this case to be forgotten entirely.

Embalming fluids are often a great nuisance to the pathologist, but in medico-legal cases they may be a downright obstruction to the cause of justice. In Mrs. Haines' case the theory of poisoning had to be thrown aside entirely, because of the doubt raised about the ingredients of an embalming fluid. To the lay observer this would seem to leave the question unsettled, although in justice to Mrs. Haines it must be said that there was no evidence whatever that she had either possessed or administered arsenic. We expect to discuss the case more at length in another number.

Current Comment.

QUACKS AND ARISTOCRATS.

The German Society for Protection of Physicians, which has lately taken up quackery among the aristocrats and plutocrats, is in error in assuming this to be the product of nineteenth century degeneracy. The quack, as Carlyle remarks anent Cagliostro, comes in for his share in all ages. Every financial revolution places the mystic tendencies of primitive man in the foreground, since the moneyed Philistine is perculiarly predisposed to the occult notions of primitive man.

—*The Medical News.*

POLITICS AND PUBLIC HEALTH IN SAN FRANCISCO.

The new mayor of San Francisco has given evidence of what sort of man he is by the removal of the four remaining members of the old city board of health. The reasons for this as given by him are much the same as those influencing Governor Gage in his remodeling of the state board of health and his crusade against Dr. Kinyoun and his associates. Mayor Schmitz says that he has for three months "carefully examined and investigated all accessible reports and records" and has personally inquired into numerous specific cases declared by the board to have been bubonic plague and is unalterably convinced that "bubonic plague has not existed and does not exist in San Francisco." The medical profession of the country and of the world, only excepting a few commercially-influenced physicians in San Francisco and California, is convinced that bubonic plague has existed in that city and state and is very far from being satisfied that it does not still exist there to some extent and that it is not liable to break out into an epidemic at any time.

—*Journal of the American Medical Association.*

MEDALS OF HONOR IN THE UNITED STATES ARMY.

A board of officers of high rank, presided over by Major-General McArthur, has recently been engaged in investigating deeds of valor performed by officers and men

of the United States army during the war with Spain, the Philippine campaign, and the expedition against Pekin. They have decided that only ten officers should be awarded a medal of honor, which is the highest distinction in the power of the States to bestow, and corresponds to our own Victoria Cross. At the head of the list of officers stands the name of First Lieutenant George W. Mathews, assistant-surgeon United States Army, to whom the medal is awarded for "most distinguished gallantry in action near Porac, Luzon, P.I., October 29th., 1899, in attending wounded under a severe fire of the enemy, and seizing a carbine and beating off an attack upon wounded officers and men under his charge." Besides Assistant-Surgeon Mathews four other medical officers of the army, now living, have gained medals of honor. These officers are Colonel B. J. D. Irwin, who received the medal for "distinguished gallantry in action against hostile Apache Indians," while voluntarily in command of a body of troops; Lieutenant-Colonel H. R. Tilton, for "distinguished gallantry in action against Indians....where he fearlessly exposed his life and displayed great gallantry in rescuing and protecting the wounded"; Major J. K. Corson, for "most distinguished gallantry in action near Bristol Station, Va."; Captain (now Brigadier-General and Governor of Cuba) Leonard Wood, for "distinguished conduct in the campaign against hostile Apache Indians during the summer of 1886." The toal number of living officers to whom medals of honor have been awarded is 110.

The British Medical Journal.

A DISGUSTED INVESTIGATOR.

If the daily papers are to be trusted, Prof. Jacques Loeb, of Chicago University, whose discoveries and theories in biology have come prominently before the public of late, resents the quality and quantity of the notice that has been bestowed by the press on his work, and has expressed his intention of going back to Germany, the land of his birth, where he can work in quiet. Possibly Dr. Loeb's friends of the daily press have misrepresented him in this respect no less than in the matters about which he is said to complain. *The American Inventor*, however, takes the report seriously and devotes an editorial to it, pointing out that annoying as sensational misrepresentation in the press must be to a conscientious investigator, it is something that can not be controlled in a free country, and at any rate it is a sign that there is a certain kind of public interest in scientific discovery. By proper guidance, this may develop into that form of interest that will raise American research from the low level that recent writers tell us it now occupies.

—*The Literary Digest.*

Reviews.

Toxicology. The Nature, Effects and Detection of Poisons, with the Diagnosis and Treatment. By Cassius M. Riley, M. D. Small 8vo. 121 pages and index. Lewis S. Matthews and Co., St. Louis, Mo.

Dr. Riley has collected a large amount of trustworthy information and expressed it in clear and correct language; the printer and publisher have requited the author's labors by producing a badly-printed book in a hideous green cloth and with fly-leaves decorated with a wall-paper pattern. We object also to the shape of the book. There is no need for such wide margins; by cutting down these the work would have been brought within a size convenient for the pocket, and it is as a student's pocket-book that it is especially adapted.

As noted above the text is excellent. The author's aim to eliminate unimportant matter has been attained. He frankly informs us that he found the task harder than he anticipated. He has brought the book up to date, as is shown by paragraphs on formaldehyde and other food preservatives, methyl alcohol and various synthetic drugs. There is no table of contents and no suggestion of a classification of poisons, but the usual arrangement into inorganic and organic poisons is followed.

We are pleased to note the care taken with the chemical nomenclature. The new spelling is used in full. [H. L.]

Photographic Atlas of the Diseases of the Skin. By George Henry Fox, A. M., M. D. Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York, etc. Parts IV, V, VI, VII, VIII and IX. Philadelphia. J. B. Lippincott Company, 1901.

The several parts of Dr. Fox's Atlas before us show that, upon the whole, the general excellence of the plates commended in the review of the first three is well maintained. Part IV. contains illustrations of rosacea, alopecia areata, psoriasis nummularis, pityriasis circinata, and pemphigus, and with the exception of that of pityriasis circinata are good selections and satisfactory portrayals. In Part V are shown sycosis, scrofuloderma, papulo-squamous syphiloderm, papular eszema and morphœa, of which those of sycosis, scrofuloderma and morphœa are of more than average excellence. Of the five plates in Part VI those of tinea versicolor, gyrate psoriasis, and fibroma show the conditions well; that of pityriasis diffusa, a name which could probably not be found in other dermatological works, represents a rather anomalous, scaly eruption suggestive apparently of eczema seborrhoicum, but about which there would be differences of opinions among dermatologists themselves, and therefore of little value to general practitioners. The plate of eczema seborrhoicum which Dr. Fox prefers to call "pityriasis seborrhoica" is a fairly good representative of this rather common malady, although much more extensive than the average run of cases. In Part VII the author gives an excellent portrayal of a class of impetigo contagiosa cases met with, illustrating the moderate development of the eruption. Purpura is also well shown and those of eczema of the legs (two illustrations) are sufficiently satisfactory. That of pustular syphiloderm is not up to the others in delineation, the coloring giving some of the lesions a scaly aspect rather than a pustular or crusted appearance. Of the pictures in Part VIII those of tinea versicolor, hypertrophic lichen planus, and tuberculosis verrucosa (three illustrations) are especially to be commended; that of psoriasis of the circinate and diffused types is also good, and shows the condition as frequently observed when patients come under observation with the scales previously removed by a bath or in consequence of work and free sweating. The plate of chloasma, showing the side of the face and neck region, in which the discoloration is less frequently seen than the forehead, is not for this reason as good a selection as the others. Part IX contains good illustrations of lupus and keloid, and fair pictures of herpes facialis and ichthyosis. For the eye of the general practitioner the plate of the tubercular syphiloderma of a more pronounced type than presented would have been of greater advantage.

The accompanying text is in Dr. Fox's well known terse style, and presents treatment in a condensed but clearly understandable manner. Taking the Parts which have already appeared, containing in all nearly sixty colored illustrations, the publication can be said to be an extremely valuable one, for while an occasional plate, probably unavoidably, slips in that is not fully up to the others in coloring or selection, yet this has occurred in but few instances. With an elementary clinical foundation a student or physician can gain much added practical knowledge from such atlas representations as Dr. Fox is furnishing, and particularly when inspection goes hand in hand with a careful study of the essential facts of symptomatology and diagnosis to be found in any good text-book on diseases of the skin. [H. W. S.]

American News and Notes.

PHILADELPHIA, PENNSYLVANIA, ETC.

Pennsylvania Hospital for the Insane.—The memorial baths in the women's department in the Pennsylvania Hospital for the Insane were opened April 1. The pool, 45 by 10 feet, is of white brick with marble steps. Near the pool is a heated compartment for Turkish baths.

Society Meetings Next Week.—The following sections of the College of Physicians, Philadelphia, will hold meetings next week, at 8.15 P. M.: Monday evening, April 14, Section on Medicine; Tuesday evening, April 15, Section on Ophthalmology; Wednesday evening, April 16, Section on Otology; Thursday evening, April 17, Section on Gynecology.

Pennsylvania Medical Examining Board.—The State Medical Examining Board met at Harrisburg, April 1. Dr. Henry Beates, Jr., of Philadelphia, was elected president, Dr. H. S. McConnell, of New Brighton, secretary. The next examinations will be held June 25 to 28.

County Medical Society, Lancaster.—The new president of the Lancaster City and County Medical Society, who was elected recently, is Dr. J. W. Kinard.

Contagious Diseases.—For the week ending April 5, but 26 cases of smallpox, with 6 deaths, were reported, a marked decrease compared to the previous week. There was also a slight decrease in the number of scarlet fever cases, 47, with 2 deaths, having been reported. Typhoid fever and diphtheria, however, both show an increase, the former a marked increase, as 119 cases with 15 deaths were reported. There occurred 54 cases of diphtheria and 16 deaths.

College of Physicians, Philadelphia.—At the last meeting of the College of Physicians, April 2, Dr. William Osler, of Johns Hopkins University, read a memoir upon the late Alfred Stillé.

Samaritan Hospital.—A fire of unknown origin occurred in the Samaritan Hospital, April 7. The fire was fortunately confined to the doctors' room. The nurses behaved most admirably, urging the patients to remain quiet, and assuring them of safety. The two resident physicians lost all their belongings. The damage to the building was about $500. No one was hurt.

Dr. Keen Honored.—Dr. William Williams Keen, professor of surgery, Jefferson Medical College, at present in Berlin, has been elected an honorary member of the 31st Congress of the German Surgical Association, held in Berlin last week.

Charitable Bequests.—Among the institutions which will benefit by the will of the late C. G. Sower, are the Philadelphia Home for Incurables, Home for Colored Orphans, Children's Hospital, German Hospital, Home for Dumb Children, Pennsylvania Home for Blind Women, and many other charities.

NEW YORK.

An Opening for Internes in the New York State Hospitals.—Students about to graduate who are unable to secure positions in general hospitals, or young physicians whose terms are about to expire in general hospitals and who wish to enlarge their experience, are now offered an opportunity to enter the New York State Hospitals as "internes" or clinical assistants. Appointments, providing lodging and board, are made for a year. 28 positions will be open in the 14 State Hospitals, situated in Utica, Buffalo, Gowanda, Binghamton, Kings Park, L. I., Flatbush, Brooklyn, Central Islip, L. I., Ward's Island, N. Y. City, (two hospitals), Rochester, Ogdensburg, Poughkeepsie, Willard and Middletown. The hospitals at Gowanda and Middletown are homeopathic. Though these are hospitals for the insane, they are so large that opportunities for experience in general medicine are abundant. Each hospital is well equipped with clinico-pathological laboratory and apparatus, operating rooms, trained nurses, hydrotherapeutic and electrical devices and good medical libraries. The field for study in general medicine is excellent, and surgical operations of all kinds are frequently performed, either by resident or consulting surgeons. It is thought that many students who wish hospital experience and are unable to obtain it, because of the relatively few places available in general hospitals, may be glad to learn that positions of this kind have been thrown open to them. It is believed that young physicians wishing hospital experience will profit by a year's residence in one of these hospitals, and such as desire to continue in special work would be eligible for appointments subsequently to salaried positions in the same service. No examinations will be necessary, but application should be made in person, with good references, directly to the medical superintendent of any of the above named hospitals or to Dr. Frederick Peterson, President of the Commission in Lunacy, 4 West 50th St., New York City.

No Smallpox at Saranac.—There is a report that over 150 patients of smallpox had appeared at Saranac Lake, N. Y. This, however, has been denied, the latest reports stating that not a single case of smallpox, or of the so-called Cuban itch, has occurred at Saranac Lake. All reports to the contrary are untrue.

Death of Dr. Bloodgood.—Dr. Delavan Bloodgood, medical director, U. S. N., died of heart disease at his home in Brooklyn, April 4. He was born in Erie county, N. Y., August 20, 1831, and was graduated from Madison University, Hamilton, N. Y., and Jefferson Medical College, Philadelphia. He entered the Navy as an assistant surgeon in 1857, became past assistant surgeon in 1861, surgeon in 1862, medical inspector in 1865, and medical director in 1884. He was retired in 1893. After serving in Indian, European and Pacific waters, he was assigned to home duty in 1879. From 1886 to 1887 he had charge of the Navy Hospital at the Norfolk Navy Yard. He then took charge of the Naval Laboratory at the Brooklyn Navy Yard until his retirement.

WESTERN STATES.

Goats' Milk for Consumption.—Under the belief that goats' milk can cure consumption, Robert Williams is establishing an immense goat camp in the Migollin mountains near Phoenix, Arizona. Williams suffered from consumption and came to Arizona to be cured. With a few hundred dollars he bought a small ranch in the mountains and stocked it with Angora goats. On a constant diet of goats' milk he gradually regained his health, and in two years nearly doubled his weight. He insists on absolute diet of goats' milk and allows no meat, but advises moderate use of vegetables. His treatment provides a pint of milk with bread, morning and night, with a half pint at intervals of two hours during the day, and he avers that a dislike for milk soon grows into a craving for it, particularly after the patient has begun the daily exercise required. Williams wants the government to take up the matter. He has compiled statistics to demonstrate that the government could establish in the mountains of Northwestern Arizona a series of sanatoria, where more than 10,000 patients could be treated, the profits from the goats' wool, hides and meat being more than sufficient to pay for the care of the patients.—*Journal Wisconsin.*

Rush Medical College, Chicago.—The directors of the Rush Medical College announced, April 5, that all branches of the college would in the future be open to women.

Gregory Testimonial Banquet.—Arrangements for the Gregory testimonial banquet, to be held April 17, in St. Louis, have been completed. Over 8000 invitations have been sent out. It is announced that Dr. A. M. Dockery, Governor of Missouri, will preside, and will answer to the toast of the "State of Missouri." The toastmaster will be Dr. F. J. Lutz, of St. Louis. Among others who are expected to respond to toasts will be Dr. Nicholas Senn, of Chicago; Dr. DeForest Willard, of Philadelphia; Dr. Wyman, surgeon-general U. S. M. H. S.; Dr. Nancrede, of Ann Arbor; Dr. N. B. Carson, president of the St. Louis Medical Society, Dr. J. D. Griffith, president of the Missouri State Medical Society, and Archbishop Kain, of St. Louis.

Dr. Senn's Book Translated.—Dr. Nicholas Senn's book on the Spanish-American War has recently appeared in Spanish translated by the well-known surgeon, Dr. Juan Redendo, of Madrid.

Osteopathy in Iowa.—The House has passed the Senate bill in recognition of the Osteopathic School of Physicians, authorizing the State Board of Medical Examiners to is-

sue certificates to graduates of osteopathic colleges and to others who pass examination, and authorizing the choice by the governor of an osteopathic physician to become a member of the State Board of Health and State Board of Medical Examiners.

Osteopathy at the World's Fair.—Osteopathy is to be exhibited in reserved space at the World's Fair at St. Louis in 1904. Possibly the management might well afford a second thought as to whether it will be advisable to offer such a gratuitous affront to the 125,000 physicians of the United States. Certainly such a feature of an exposition would be most undesirable from every point of view. *Cleveland Medical Journal.*

SOUTHERN STATES.

Anatomical Research Bill.—The President has returned to the Senate, at the request of the Navy Department, the bill recently passed by Congress providing that medical schools in the District of Columbia be given the bodies, which have heretofore been interred in Potters' Field, for anatomical research. Under the bill, as sent up for the President's signature, the Army Medical Corps was allowed the same privileges as the Medical Colleges of the District, but no provision was made for the Navy, and the Secretary of the Navy has requested that a change be made to correct this oversight.

The Medical Society of the State of West Virginia will hold its 35th. annual meeting at Harpersburg, W. Va., May 21-23. Titles of papers to be read should be sent to Dr. W. W. Golden, secretary, Elkins, W. Va., not later than April 25. A large attendance is expected.

Army Medical School.—The graduation exercises of the Army Medical School occurred April 4, at the Army Medical Museum, Washington. Secretary Root presented 23 diplomas, and General Miles delivered the address. Surgeon-General Sternberg also spoke. That evening a reception was given to the graduating class by Surgeon-General and Mrs. Sternberg.

The Sundry Civil Appropriation Bill, now under consideration in the House, provides the sum of $6000 for improvements to the Marine-Hospital at Cleveland, Ohio; $500 for the purchase of books and journals for the use of the Marine-Hospital Bureau; and provision is also made for the purchase of State property at the quarantine stations of Fernandina, Mayport, Miami, and Boca Grande, Fla.

Smallpox at Norfolk, Va.—Smallpox has appeared in the negro quarter, and extreme measures are being taken to prevent the spread of the disease. The 286 prisoners in the city jail, nearly all colored, have been vaccinated, the jail having been disinfected. The colored people fear vaccination and will rarely submit to it unless force is used.

An Anniversary.—Dr. John P. Wales, of Wilmington, Del., has just celebrated his 50th year as a physician. Dr. Wales was graduated from the University of Pennsylvania Medical Department in 1852, his son, Dr. Joseph P. Wales, having graduated from the same institution in 1898. A handsome painting was given Dr. Wales on this occasion by his fellow physicians.

CANADA.

(From Our Special Correspondent.)

A Six-Year-Course.—McGill University has recently established a six-year-course in Applied Science and Medicine. Two years ago the corporation established a six-year-course in Arts and Medicine and now the same privilege has been extended to students in the Faculty of Applied Sciences. In the third year of Applied Science the student may attend lectures in the faculty of Medicine in anatomy, physics and histology: in the fourth year, in anatomy, physiology, histology, pharmacology, and medical chemistry. At the end of the fourth year the degree of B. Sc. will be conferred. The fifth and sixth years will be devoted to medical studies entirely, and at the end of the sixth year the degree of M. D., C. M., will be conferred.

Ontario Medical Association.—The next annual meeting will be held at Toronto, June 4 and 5, under the presidency of Dr. M. A. Powell, of that city, Dr. Harold C. Parsons, also of Toronto, being general secretary. Dr. John T. Fotheringham has been appointed chairman of the Business Committee, and it is understood that several new and interesting features will be introduced.

The Present Epidemic of Smallpox in Quebec, according to official records, dates from October 28; the largest number of cases on the books of the Board of Health at any one time being 82, and the total number of cases reported to date being 671. Out of this number there have only been 8 deaths, so mild has been the character of the disease. It is stated that there have been many cases of smallpox in the city of Quebec unknown to the health officials; and that persons have been known to court an attack of the disease in order to avoid vaccination. The above statistics apply to the city and not the province.

Dr. Roddick's Bill for a Dominion Medical Council, which for the past two weeks has been before a special committee of the House of Commons, is to be reported favorably by that committee. When the measure was before the House for its second reading, the Premier, Sir Wilfrid Laurier, intimated that he would not oppose its second reading, as Dr. Roddick had asked that it be referred to a special committee. Now that the measure has been reported favorably by the special committee, the further progress of the measure in the House will be watched eagerly. The medical profession in Canada is practically united for the passage of this bill.

Toronto University.—The new medical building of Toronto University is to be on the same plan as the new building being erected in connection with Harvard University.

Soda Lakes Found in Canada.—The mineral production of Canada during 1901, according to the geological survey, was valued at $69,407,031, a growth of 8 per cent. over 1900. Unusual mineral discoveries have been made in the Canadian Northwest. Among these are mentioned a natural soap mine, a paint mine, and several soda lakes, whose bottoms and shores are encrusted with a natural washing compound.

A Canadian Physician in the Philippines.—Dr. Harry J. Watson, of Toronto, who was graduated from Trinity Medical College in 1896, formerly in practice at Ottumwa, Iowa, has just been appointed chief of the medical department of the largest brigade hospital on the Islands. He entered the U. S. Army Medical Service, a year ago, and has recently been recommended for distinguished service in presence of the enemy. Over 475 physicians are on the active service list of the U. S. Army in the Philippines.

Montreal is Menaced With a New Danger, the reception of immigrants afflicted with favus and trachoma. In September last the United States Department of Immigration at Washington appointed an inquiry board at Montreal for the purpose of examining all immigrants destined for points in the United States. As many as from 40 to 50 of these have been rejected on account of the two diseases above mentioned, and have therefore come to Montreal. The Dominion Immigration and Health authorities have had their attention called to this condition, and it is hoped that some action will be taken to prevent the very undesirable class of immigration.

Canadian Medical Association.—The annual meeting will be held in Montreal September 16th, 17th and 18th. The president is Dr. Francis J. Shepherd, Montreal; the local secretary, Dr. C. F. Martin, Montreal; and the general secretary, Dr. George Elliott, Toronto. Dr. William Osler, professor of medicine in Johns Hopkins University, will deliver the address in medicine and Dr. John Stewart, Halifax, Nova Scotia, the address in surgery.

Death of Dr. Muir.—One of the most prominent general practitioners in the maritime provinces, Dr. W. S. Muir, of Truro, N. S., died in the latter part of March, of appendicitis. He was born in Truro, in 1853, and was graduated from the Halifax School of Medicine and from Dalhousie University, in 1874, and was house surgeon in the Halifax General Hospital. He was first elected secretary of the Medical Society of Nova Scotia, in 1887, a position which he held until his death. Last year he was president of the Maritime Medical Association.

MISCELLANY.

Cholera.—According to a telegram from the sanitary physician at Medina, cholera appeared March 19 and 20 among the pilgrims who had arrived there from Mecca.

70 deaths occurred in those two days. The symptoms noted were diarrhea, vomiting, anuria, cold extremities, sunken eyes, and cramps. According to the latest news, cases of cholera had occurred in Mecca as early as February 20, but no one outside of that city knew of it. This was due to the negligence and ignorance of the sanitary physicians who had been appointed by the central sanitary board. The disease appeared during the voyage from Mecca to Medina, which takes from 12 to 13 days. The great danger is the spread of the disease to the countries whence the pilgrims have come and whither they are to go. The great throng of the pilgrims have already gone to the Valley of Arafat, where they will worship. As many as 250,000 pilgrims made the journey this year. At a special meeting of the International Sanitary Council in Constantinople, steps were taken to prevent the spread of the epidemic. It was decided to prevent the pollution of the water which the pilgrims drink at Arafat, contained in open basins, and physicians were sent after the caravan, only Mohammedans being allowed to go on to the land of Islam. The epidemic of cholera generally has many victims among the pilgrims in the Hedjaz. In 1893, out of 90,000 pilgrims who entered the Hedjaz through Djeiddah, about 50,000 died of cholera. No interference with them has ever been attempted, partly because of the religious question, and partly because these pilgrimages are profitable to many who are not Mohammedans. During the week ending March 21, there were 928 deaths at Mecca and 61 at Jedda.—In spite of the fact that instant and vigorous steps were taken in Manila to prevent the spread of the cholera, the epidemic, here too seems to be spreading, but it is certain that the number of fatalities will be trifling compared to what would have been the result if the United States had not taken the Philippines. Up to April 7, 175 cases have been reported in Manila with 137 deaths.—In the provinces 32 cases have occurred with 19 deaths.—The latest news from China states that while cholera is abating in Canton, it is spreading in Seungshan and raging in Fatshan. While in Manila only natives and Chinamen have been affected, in China several foreigners have also died.

Strange Stimulants.—A number of young ladies were caught chewing "moth balls" at a Pennsylvania seminary the other day, their explanation being that they had grown used to the (at first horribly offensive) perfume of the candy-shaped disinfectant, then rather liked it, and before long became so passionately fond of it that they preferred it to chewing-gum. That confession, by the way, throws a suggestive light on the origin of many queer stimulant habits. Tobacco leaves, for instance, were at first probably used only as fumigators to expel mosquitoes; but the owners of the smoke-pot at last became more than used to the at first sickening fumes. They grew positively fond of them, and ended by preferring tobacco plugs to liquorice roots —*Health Culture*.

Texas Quarantine Regulations.—The Governor of Texas has issued a proclamation establishing quarantine on the Gulf Coast and Rio Grande border on and after April 15, to continue until closed by proclamation. This quarantine, which is established ten days earlier than usual, applies to all vessels, persons, or things coming from places affected by yellow fever, smallpox, bubonic plague, or cholera, and all places south of 25° north latitude are to be considered infected unless proof to the contrary be submitted to the State health officer, and special exemption be granted to said places, and persons from such places are prohibited from entering the State within a period of ten days. All vessels from places south of 25° north latitude will be disinfected and held three days outside the border of Texas ports, even if they show clean bills of health, unless special permission is given by the State health officer.

Bubonic Plague.—Bubonic plague has reappeared in Rio de Janeiro and in Pernambuco. In Rio, five cases have already been reported, but with no deaths. In Pernambuco, 12 new cases have occurred, 4 of which were fatal.—The plague in India seems still to be increasing, 70,000 deaths being reported monthly in the Punjab.

Obituary.—Dr. Rollin E. Cutts, at Minneapolis, Minn., March 19, aged 35 years.—Dr. Erwin J. Eldridge, at Americus, Ga., March 13.—Dr. John E. Richardson, at Brooklyn, N. Y., March 23, aged 51 years.—Dr. Paul Carlyle, at Mount Gilead, Ohio, March 21, aged 26 years.—Dr. Tandy L. Dix, at Holly Springs, Miss., March 23, aged 73 years.—Dr. Charles A. Seler, at Hay Fork, Cal., March 18, aged 32 years.—Dr. Henry M. Bishop, at Brooklyn, N. Y., March 15, aged 65 years.—Dr. Reuben O. Evans, at Malden, Mass., March 20, aged 42 years.—Dr. Andrew G. Nywall, at Chicago, Ill., March 23, aged 30 years.—Dr. Richard T. Isbester, at Chattanooga, Tenn., March 21, aged 45 years. Dr. O. B. Scott, at Cynthiana, Ky., March 20, aged 43 years.

Dr. Thomas L. Jackson, at Marvell, March 17.—Dr. Dryden Rogers, at Topeka, Kan., March 25, aged 75 years.—Dr. Vincent T. Hart, at Mineola, Texas, March 13, aged 72 years.—Dr. J. J. Judd, at East Las Vegas, N. M., March 28, aged 55 years.—Dr. Charles H. Berry, at Columbia City, Ind., March 31.—Dr. Henry C. Linn, at Butler, Pa., April 3, aged 70 years.—Dr. Delavan Bloodgood, at Brooklyn, N. Y., April 4, aged 72 years.—Dr. Charles G. Hirner, at Allentown, Pa., April 4, aged 67 years.—Dr. John Ahl, at York, Pa., April 4, aged 72 years.—Dr. Ulick W. C. Burke, at Brooklyn, N. Y., April 3, aged 40 years.—Dr. Lanxford Middleton, at Davenport, Iowa, April 5.

GREAT BRITAIN, ETC.

Government Bacteriologist at Hong Kong.—Dr. William Hunter, a graduate of Aberdeen University, formerly assistant bacteriologist at the London Hospital, has been appointed by the Colonial Office to be Government bacteriologist at Hong Kong.

Notes.—At an inquest recently held at Stratford on the body of a boy, aged fourteen, it was shown that, after successfully undergoing eleven operations for an internal trouble, the youth died at the end of the twelfth from heart failure, the result of the inhalation of chloroform.—One-twelfth of the population of England suffers from gout.—During January and February 16,335 aliens arrived in the United Kingdom, an increase of 2067 over the arrivals in the first two months of last year.—The Duke of Argyll has announced that there have been placed at his disposal, by the Transvaal Estate Company for emigration purposes, 10,000 acres of land in South Africa. Steps are being taken to utilize the ground for the use of children from Dr. Barnardo's homes.—A dealer in artificial limbs estimates that 300,000 Englishmen have lost one or both legs.—The succession of plagues which has visited them during recent years is the main reason of the desire of the Welsh settlers to leave Patagonia. In 1898 a plague of locusts devoured half the wheat crop and in both 1899 and 1901 there were great floods.—Looking-glasses were used by Anglo-Saxon women, slung to their girdles. The same custom obtained in the time of Elizabeth and James I. They formed the centre of many fans at that period and later. Before glass was invented, horn was used, and metal.—English statistics show that drunkenness among women has increased, and that in fifteen years the number of deaths from intemperance among women has doubled.—A thousand children are born yearly in London workhouses.—It is estimated that at the present rate of growth, London, which now has a population of 7,657,000 will in 1941 have over 13,000,000.

Charitable Bequests.—The residual estate of the late Miss Olivia Atherton, of Liverpool, amounting to over $1,000,000 has been left to the various Liverpool hospitals, homes and infirmaries.

CONTINENTAL EUROPE.

The One Hundredth Anniversary of the "Internat," Paris.—The laws which established the "internat" in the French hospitals went into effect February 23, 1802. Therefore the one hundredth anniversary really came upon February 23, 1902. The committee having the celebration in charge have selected May 24 and 25 for the anniversary. Of the 1800 living physicians who have been "internes" in the Paris hospitals, 1200 have subscribed over $10,000 for the expenses of the celebration. The ceremonies will begin Saturday, May 24, with a meeting in the large Salles des Fêtes, in the Trocadero and a banquet will follow that evening. At 2 P. M. on the next day, Sunday, May 25, the monument by Denys Puech erected in memory of the young men who died while on duty as "internes" will be unveiled in the court-yard of the Hotel Dieu. That evening a gala performance will be given at the Opéra Comique in honor of the "internat." The secretary of the committee, Dr. Raymond Durand-Fardel is preparing a book containing the names, addresses, and short

histories of the lives of all former "internes" of the Paris hospitals. The chairman of the committee is the former dean of the Paris Medical School, Dr. Brouardel.

Congress of the Medical Press.—The Congress of the Medical Press was held at Monaco, April 7 to 9, under the presidency of the Prince of Monaco. The committee in charge was composed of Drs. Cornil, Lucas-Championnière, Laborde, Richet, and Blondel.

German Surgical Association.—At the 31st congress of the German Surgical Association, held in Berlin last week, Professor Trendelenburg, of Leipsic, described the case of a young man who had attempted suicide by shooting. The bullet lodged in the right chamber of the heart, but the wound quickly healed. Under Röntgen rays the bullet was seen to move backward and forward in time with the man's heart-beats. Professor Trendelenburg said there were nineteen cases known to medical science in which bullet-wounds in the heart had survived. Professor von Bergmann, of Berlin, introduced several patients to illustrate the desirability as far as possible, of not molesting wounds of the heart by probing and other operations. Dr. Tietze, of Breslau, having removed a section of diseased bone from a woman's tibia, pieced it with a joint from her great toe, successfully preventing lameness. Dr. Roth, of Lübeck, gave a demonstration of an appliance for administering oxygen with chloroform, rendering it possible to anesthetize persons with weak hearts. Other surgeons confirmed the excellent results of mixing oxygen with chloroform. Dr. Reerink, of Freiburg, described successful operations on animals, in which he replaced stomachs by pieces of intestines. Six surgeons, four Germans and two Frenchmen, reported the discovery of the cancer bacillus. As each report was different, and as none of these doctors satisfactorily demonstrated his discoveries, not much confidence was felt by the Examining Committee. Many experiments as to the origin of cancer are still going on. Dr. W. W. Keen, professor of surgery at Jefferson Medical College, Philadelphia, who was present at the Congress, was elected an honorary member.

Congress of French Alienists and Neurologists.—The next annual meeting of the alienists and neurologists of France will occur at Grenoble, August 1 to 8, with Dr. E. Régis, professor of psychiatry in Bordeaux, as president. The main subjects for discussion will be upon neuropathology, mental pathology and medical jurisprudence.

Dr. Oppenheim's Retirement.—Dr. Heinrich Oppenheim, privat docent in the University of Berlin, for 14 years in charge of the clinic for nervous diseases, has resigned from the medical faculty, on account of the failure of the Government to promote him. His text-book on nervous diseases, which has already reached its third German edition, will soon appear translated into Italian, Russian, and Spanish. An English translation was published last year.

The Increase of Cancer in Germany.—According to Wutzdorff, the number of cases of carcinoma has considerably increased during the past year in Hamburg, Posen, and Bavaria, left of the Rhine. A less marked increase was also noticed in Hanover, Saxony, Westphalia, Hesse, and East Prussia. A decrease was only recorded in Hohenzollern, and Saxe-Coburg-Gotha. From the number of deaths in 1898 it was noted that cancer was most frequent in Lübeck, Hamburg, Baden, Bavaria, right of the Rhine, Berlin, Hesse, Württemberg, Saxony, Brunswick, and Bremen. Leaving out the younger classes of the population, it was seen that the number of deaths from cancer has increased in a considerably greater proportion than the growth of the the population. The assumption that the higher-age classes participate mainly in this increase is not confirmed by statistics. Cancer now occurs at a younger age than formerly, and, while women more frequently have carcinoma than men, the danger for men is greater than for women.

Obituary.—Dr. Johann Lasareweitsch, professor of obstetrics, gynecology and pediatrics in the University of Charkow from 1862 to 1887, died March 11, in St. Petersburg, aged 72 years.—Dr. Adolf Jarisch, professor of dermatology and chief of the dermatological clinic in the University of Graz, died of typhoid fever, in Graz, March 21, aged 53 years. His death is particularly to be regretted following, as it does, so soon after the death of Professor Kaposi, whose most probable successor he would have been.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

March 22, 1902.

1. Fifty Years Ago; A Farewell Retrospect. JOHN KENT SPENDER.
2. On the Treatment of Deafness of Middle-ear Origin. CHALMERS WATSON.
3. Hay's Reaction for Bile Salts. A. P. BEDDARD and M. S. PEMBREY.
4. The Isolation of the Typhoid Bacillus. A. MOORE.
5. A New Diagnostic Point in Typhoid Fever. HENEAGE GIBBES.
6. An Experiment With Ultraviolet Light. DAWSON TURNER.
7. Two Cases of Rare Orbital Tumor. F. T. PAUL.
8. A Case of Tumor of the Pons Associated With Degeneration in the Posterior Columns of the Cord. E. E. LASLETT.
9. Notes on Adrenalin Chloride Solution in Ophthalmic Practice. G. FERDINANDS.
10. A Case of Total Suppression of Urine Due to the Obstruction of Both Ureters by Renal Calculi. W. M. STEVENS.

2.—In the **treatment of deafness of middle-ear origin,** Watson has used a preparation of bone marrow. His theory is that the bone marrow produces an internal secretion which is of importance to the economy and which acts as a powerful prophylactic against the injurious action of various bacteria. The substance in question he has named **myelocene.** It is prepared from perfectly fresh bones from which the marrow is extracted with ether. The ethereal solution is then evaporated down and the fat is rubbed up with 1% of chloretone for preservative purposes. The resulting substance then appears as a whitish or faintly yellow fat with an odor, partly of ether and partly of chlorotone. The melting point of this fat varies widely. The author employs this substance as follows: He instills about ½ dram of equal parts of warm alcohol and glycerine into the ear and applies the same quantity of the same mixture to the skin around the ear. This is followed by an installation of 10 drops of myelocene into the ear and the application of 10 drops to the skin around the ear. This treatment is repeated every night for 6 nights. Out of 20 cases treated, 4 were of a mixed type, one was of post-suppurative origin and the other 15 were purely dry middle-ear disease. Of the 15 cases in the latter class, 11 were improved, 2 showed marked improvement in one ear only and 2 were uninfluenced by the treatment. Of the mixed cases, 3 showed improvement and one did not. The post-suppurative case improved. [J. M. S.]

3.—When powdered sulphur is sprinkled on a fluid containing bile, it gradually sinks. This is known as **Hay's reaction for bile salts.** The reaction depends upon the presence of bile salts alone, and when one part is dissolved in 120,000 parts of water, the reaction is still given. It depends upon the power of bile salts to reduce surface tension. The fluids in which a delicate test for bile salts would be most useful are vomit, feces and urine. This test, however, is less reliable in the case of vomit and feces than in the case of urine, because alcohol, ether, chloroform, acetic acid, acetone, turpentine, phenol, skatol and soaps may be contained in the former substances, and give the reaction, because they have the power of reducing surface tension. With urine, on the other hand, none of the normal constituents give the reaction, and none of the substances, other than bilt salts, which do give the reaction, have ever been found in the fluid in sufficient quantity to produce a fallacy. Furthermore, there is no drug at present known, which, when taken, invalidates the test. The simplest method of carrying out the test is to place the urine in a test-tube of about one inch in diameter and throw sublimed or finely powdered sulphur upon it. If any of the sulphur begins to fall at once, at least one part of the bile salts is present in 10,000; if none falls at once, the test-tube is given a gentle shake after waiting one minute, and if the sulphur then begins to fall there is at least one part of bile salts in 40,000 parts

of urine. The urine should be filtered before the test is applied. [J. M. S.]

4.—Moore describes an ingenious method of **isolating the bacillus typhosus** from the bacillus coli communis by the use of a tube shaped like a W. There were certain flaws in the method which prevented good results when applied to cultures containing different strains of colon bacilli. The bacillus typhosus was obtained, however, from very foul putrid Thames water which had been contaminated by a small quantity of typhoid broth culture, from tubes in which both organisms had been growing together for almost 3 months, from some old dejecta which had been kept in cold storage for 5 months and from the interior of some cockles which were suspected of causing an outbreak of typhoid fever. The suspected fluid was plated after it had been sown in a medium similar to the Elsner potato-iodine medium: but in which agar-agar was used instead of gelatine. [J. M. S.]

5.—Gibbes has succeeded in **photographing the eruption of typhoid fever** before it could either be seen or felt. He used autochromatic plates and made a number of exposures as quickly as possible. [J. M. S.]

6.—It has long been known that the oscillatory discharge of a condenser produced a very brilliant spark which was likely to have strong actinic qualities. Recently, Miller suggested that such a spark might be of service in the production of the **ultraviolet rays** for the treatment of disease according to Finsen's method.. Turner has experimented with comparisons of the **ultraviolet radiation** of an arc lamp and that **of a spark.** His experiments led him to conclude that the spark-gap radiation is more powerfully ultraviolet than that from an arc light, and also that rock salt forms the best compressing medium. A man, aged 55 years, who had suffered from a rodent ulcer on the right side of his nose for eight years, had been treated by the X-rays with slow but steady improvement. The X-ray treatment was replaced by exposures to ultraviolet light 3 times a week for from 2½ to 5 minutes at a sitting. Marked improvement was observed 3 days after the first exposure. After 5 exposures the only trace of the disease that remained was some slight scales toward the upper margin of what had been the ulcer. [J. M. S.]

7.—Paul reports a **chondroma of the orbit** occurring in a woman, aged forty-five years. The symptoms were exophthalmos, pain and loss of sight. The growth was removed without injuring the eye. He also reports a case **of carcinoma of the lachyrmal gland** occurring in a woman, aged fifty-six years. This proved fatal although the growth was widely extirpated and recurrences were treated with the application of the X-rays. [F. T. S.]

8.—Laslett reports the case of a negro, aged 36 years, who had been suffering from headache, vomiting and pain in the abdomen for a week. The patient was dull and apathetic; his tongue was dry and thickly coated with white fur; his temperature was 102.6° F.; his pulse was soft and rapid; and his heart sounds were clear and without murmur. There was no paralysis, and sensation appeared normal. The patient died, and at the autopsy an elongated **tumor** was discovered **in the pons.** This tumor proved to be a glioma. Microscopical examination of the spinal cord showed marked symmetrical degeneration of the intraspinal portion of the posterior roots of the first cervical nerves. There was also scattered symmetrical degeneration in the column of Goll and to less extent in the column of Burdach. [J. M. S.]

9.—Ferdinands has used a 1-1000 solution of **adrenalin chloride** in conjunctivitis, in iritis, in tenotomy and in advancement with satisfactory results. [J. M. S.]

10.—Stevens reports a case of **total suppression of the urine due to** the obstruction of both ureters by **renal calculi.** The patient was a man, aged 58 years, and the case presented a number of intercsting points. The urine contained sugar. The symptoms of renal calculus were of short duration, although the autopsy showed that the stone had been present in one of the kidneys for a long period. The onset of suppression of urine was sudden and the phenomenon was absolute for 7 days. There were no symptoms of uremia. The only treatment available in such a case is operative. [J. M. S.]

LANCET.

March 22, 1902.

1. The Milroy Lectures on the Etiology of Typhoid Fever and its Prevention. Lecture I. W. H. CORFIELD.
2. Three Lectures on the Pulmonary Circulation, more particularly in relationship to Variations in Cardiac Activity. T. G. BRODIE.
3. The Education of Epileptics. WILLIAM ALEXANDER.
4. A Short Contribution to the Study of General Infections produced by the Staphylococcus Aureus and by the Streptococcus. GIUSEPPE BELLEI.
5. Electric Shocks at 500 Volts. ALEXANDER PELHAM TROTTER.
6. A Criticism on the Visual Test as Used in the British Army. A. A. BRADBURNE.

1.—This abstract will appear when the article is concluded.

2.—Brodie delivered three lectures on **pulmonary circulation, more particularly in relationship to variations in cardiac activity,** before the Royal College of Surgeons. This article is an abstract of the lectures and it deals with: (1) The alterations in the pulmonary circulation due to purely cardiac changes; (2) the alterations due to variations in the systemic circulation, which may effect changes by alterations in the output of the left heart or by modification in the flow to the right heart and (3) an examination of any changes due to alterations in the resistance offered by pulmonary vessels. When the cardiac accelerator nerve fibres are stimulated the right side of the heart is generally affected more than the left, increasing the output of blood from the right side, and the blood-volume in the lungs. Stimulation of the vagus lowers the blood-pressure in the aorta and decreases the blood-volume in the lungs while the right auricle pressure rises considerably. This has led to the conclusion that the action of the vagus is more particularly upon the left than upon the right side of the heart. He points out that the effect of resisting the outflow of blood from the aorta, by blocking it at the lower end of the thorax, causes a rise in the aortic pressure followed quickly by one in the left auricle, and if the pressure is kept up for more than 15 seconds the blood pressure in the pulmonary artery rises. The right auricle pressure is usually undisturbed. The effect of the suprarenal extract upon the blood-volume of the lungs is, at first, a small decrease in the volume which is soon followed by a marked increase, which persists during and for a short time after the rise in the aortic pressure. He contends that the action of amyl nitrite is to cause slight congestion of the lungs with a slight rise in the pulmonary pressure. A number of experiments were performed in order to ascertain whether there are vasoconstrictor nerves to the pulmonay arteries. The conclusion arrived at is that there are no vasoconstrictor fibres of pulmonary vessels. Finally the author discusses the actions of some drugs upon the pulmonary circulation. [F. J. K.]

3.—Alexander discusses **the education of epileptics.** We are informed that twelve years ago the first step in improving the comfort of epileptics in England was taken at Liverpool by the establishment of epileptic homes at Maghull. Defective education of epileptics was due largely to these patients being kept at and confined to their homes. They were kept from school and their liberties were restricted in many other ways by their friends and relatives. The primary objects for establishing the colony at Maghull were to occupy and train their minds and bodies; to keep the patients safe, and to give them as many liberties as possible. Re-education of epileptics is a slow difficult and arduous process. The author describes the plans followed in this institution. [F. J. K.]

4. A short study of **general infections produced by the staphylococcus aureus and by the streptococcus** is contributed by Bellei. The author gives an account of some cases that have come under his notice in the course of his

practice. Two of these were previously published in an Italian Medical Journal, in 1898, and were caused by the staphylococcus aureus. The first case was one of pyemia of an exceedingly chronic nature, the illness lasting two months. The general infection was due to staphylococcus pyogenes aureus. The second case was one of pyemia of an acute character, the illness lasting only six days. The infection was due to the staphylococcus pyogenes albus. The third case he reports was one of mastoid suppuration followed by a general infection caused by the streptococcus. Death occurred in a week. The fourth case was one of inflammation of the gums accompanied by suppuration. The patient suffered from this dental trouble for a number of years and no one was able to effect a cure. A general streptococcus infection seemed to follow an abscess in the right tonsil. The illness was of short duration and terminated in death. Marmorek's serum was used in the cases of streptococcus infection without apparent effect. [F. J. K.]

5.—Trotter discusses **electric shocks at 500 volts** and reaches the following conclusion: The dangers of electric shocks at 500 volts have been much misunderstood, greatly exaggerated, and little investigated. The pressure of 500 volts has been deliberately chosen by electrical engineers, because it is not dangerous under ordinary conditions. The conditions under which serious shocks are not produced by 500 volts are discussed in the paper, and it is safe to assume that all shocks more serious than those which are recorded are dangerous. Dry wood and dry boots without large nails offer so great resistance to the electric current that it is perfectly safe to touch a trolley-wire while standing on a dry tram-car, or even while standing on the ground or on the rails. Wet weather makes a considerable difference, but boots must be very wet to allow enough current to pass to produce a severe shock. Men engaged in electrical traction work receive many slight electric shocks at 500 volts, and they might avoid most of them by taking more care. Dry clothing offers so great a resistance that no shock can be transmitted through it. The peculiar conditions under which shocks at 500 volts have caused death are discussed and are shown to be very exceptional. Experiments have been made on some 30 persons, including 12 women, and six children, and it is proposed to make other experiments. With sound dry boots hardly any one can feel a shock when standing on the live rail of an electric railway with one foot and a running rail with the other. With damp or wet boots a shock is felt, but neither the sensation nor the degree of wetness of the boots can be measured accurately. It is not possible to receive a shock by sitting or lying on a live rail so long as the clothes are dry and continous—that is to say, so long as the live metal is not touched by the bare skin. [F. J. K.]

6.—Bradburne writes a criticism on the visual test used in the British Army. He contends on the whole, the present means of testing the vision for admittance into the army is, though a low standard, yet sufficiently high for all practical purposes, if properly carried out; also that a small percentage of men unlikely ever to become efficient escape its test, and that such can subsequently be detected and got rid of by being referred to an ophthalmic surgeon.

[F. J. K.]

MEDICAL RECORD.

April 5, 1902.

1. Pathological, Therapeutic, and Clinical Notes on a Few Cases of Malarial Infection.
J. HERBERT FORD.
2. The Influence of Suprarenals in Pneumonia.
ETHAN ALLEN GRAY.
3. Plastic Operation for Restoration of the Sphincter Ani, with Report of a Case. CHARLES H. CHETWOOD.
4. Unnecessary Antiseptic Treatment in Midwifery.
VALENTINE BROWNE.
5. What Can we Diagnosticate in Acute Appendicitis?
CHARLES A. ELSBERG.

1.—J. H. Ford, an army surgeon, reports **11 cases of malaria** in which the local symptoms had been so pronounced that prior to admission to the hospital they alone had received attention. Local manifestations of malaria unattended by general symptoms usually take the form of **trigeminal neuralgia, cephalalgia or pseudorheumatic pains in various muscles.** Ford states that in his experience in a series of about 1100 cases he has only seen 3 cases of neuralgia. In 2 of these the first and second branches of the right trigeminus were affected; in the third, in addition to these, the supra-orbital branch of the left trigeminus. In all the pain was severe and of the usual neuralgic type, but atrophic changes were not observed. Neither was there any tendency to the regular periodicity in the recurrence of the paroxysms which, it is often stated, occurs. The patients appeared to be in good health, otherwise. Slight enlargement of the spleen was demonstrable and the estivo-autumnal parasite in all stages was found in large numbers in the blood. Ford remarks that the character of the parasite found accounted for the irregularity of the paroxyms. **Headaches** are quite frequent, usually general and progressive in character until other manifestations of malaria appear. Without blood examination these cases may be regarded at first as old cases of heat exhaustion, but in these there are neurotic symptoms, sometimes very slight. The writer calls attention to the importance of recognizing the association of heat exhaustion with malarial infection. A diagnosis in the field is frequently impossible until enlargement of the spleen can be detected. In this class of cases the **administration of quinine seems to do more harm than good and** reliance must be placed on **cinchonidia, eucalyptus, arsenic,** and more important still, a **change of climate.** The **pseudorheumatic type is** characterized by pains in the large muscles, especially those of the abdomen and the front of the thighs. It is usually dull in character and persistent, being at first aggravated by motion then relieved by it, but later, after a rest, it is quite as intense as at first. Ford mentions that these pains are most common in cases in which **malaria has complicated chronic intestinal disease** and he attributes this more directly to impaired metabolism than to the toxic products of the parasite. He cites 5 cases in which the pain confined to the abdominal muscles simulated appendicitis. Another case developed a **croupous pneumonia** in the course of malarial infection which may possibly have been due to this parasite. Four cases are reported in which **enteric fever and malaria coexisted.** The treatment of the series of cases reported is outlined. [T. L. C.]

2.—E. A. Gray reports **6 cases of pneumonia in which suprarenal extract was employed.** He concludes from his observations that in this remedy we have a most valuable heart stimulant which we are at liberty to use in cases of **impending heart failure, impeded pulmonary circulation, as in pneumonia,** and with coexisting **renal inflammation.** He has observed a temporary peripheral **increase of blood-pressure** in a few cases but this was not permanent.

[T. L. C.]

3.—C. H. Chetwood reports the successful result of **plastic operation for restoration of the sphincter ani.** The patient had suffered from incontinence of feces for many years which followed his having been gored in the rectum by a steer. He had been operated on 8 or 9 times previously without success. The technique of Chetwood's operation was as follows: The patient being placed in the knee-chest position, a large semicircular incision, with its convexity in the direction of the coccyx and extending just beyond it, was made from a point about one inch in front of the anterior limit of the anus and on a line, externally, with the tuberosity of the ischium on one side to a similar point on the opposite side. The flap thus made was turned down. The fatty tissue was dissected away, so as to expose the lower end of the rectum and the edges of the glutei

muscles. A ribbon-shaped piece of muscular tissue, about one-fourth of an inch in breadth and one-sixteenth of an inch in thickness, was now dissected on each side from the glutei muscles, leaving an attachment above. These two muscular ribbons were transposed, so that the fibres would decussate from one side to the other; in other words, the right-handed muscle was crossed over to the left, the left to the right, underneath the ligamentous connection between the anus and the coccyx. These two muscular strips were made to encircle the gut and to meet anteriorly, and were fastened by chromicized catgut. There existed a very small remnant of sphincter muscle on each side of the rectum, and to that the new muscular strips were attached by additional sutures. The finger in the rectum now recognized the constriction formed by this purse-string arrangement, and the flap dissected away was sutured back again in place. The operation proved to be completely successful and after a few weeks the patient had full control of the bowel. [T. L. C.]

4.—Valentine Browne, of Yonkers, N. Y., is not an advocate of the **antiseptic treatment in midwifery.** He states that he has had a mortality of one-half of one per cent. with antiseptic treatment, while his mortality without antiseptic medication was one-sixteenth of one per pent. He tells us, however, that he depends on absolute cleanliness, plenty of fresh air, and the free use of sterilized water. He washes his instruments in boiled water and depends on this method of cleansing alone. [T. L. C.]

5.—C. A. Elsberg discusses the question: **What can we diagnosticate in acute appendicitis?** He considers the position of the appendix and the difficulties of its exact determination before operation, as well as the class of cases in which no mass is to be felt, and states that it is generally impossible to diagnose correctly a perforation or gangrene of the appendix by palpation alone under such circumstances. He also discusses the class of cases in which a mass is palpable. As to the condition of the **general peritoneal cavity,** the diagnosis between acute appendicitis and other affections is generally easy. Occasionally an affection of the gall bladder, a torsion of the omentum a new growth in the intestine, an intestinal obstruction, an affection of the female adnexa or a reflected pain from thoracic disease may complicate the problem. Up to the present time we are able to recognize but few of the pathological changes that have occurred in the appendix, we must still depend on the pulse, the pain, the temperature, and the other symptoms as indications of the severity of the disease and of the treatment to be followed. [T. L. C.]

MEDICAL NEWS.

April 5, 1902 (Vol. 89, No. 14).

1. Treatment of Acute Puerperal Sepsis from a Surgical Standpoint. HIRAM N. VINEBERG.
2. Leukocytosis as a Point of Prognosis in Appendicitis. HENRY M. JOY and F. T. WRIGHT.
3. The Pneumatic Proctoscope. JAMES P. TUTTLE.
4. The Antirabic Vaccinations at the New York Pasteur Institute During 1900 and 1901. GEORGE GIBIER RAMBAUD.
5. The Saratoga Meeting. Preliminary Arrangements of American Medical Association Committees.

1.—H. N. Vineberg gives the following important points: (1) Every case of puerperal sepsis is wound fever or wound infection and should be treated on the same general surgical principles applying to wound infection elsewhere. (2) Each case of puerperal sepsis, no matter how slight, should be carefully observed and watched from the outset for we can never tell whether such a case may not develop into a serious infection which will be a menace to life. (3) When a case of uterine sepsis progresses unfavorably after curetting, irrigation and proper general treatment, as evidenced by the pulse, the temperature and the condition of the uterus, we are justified in opening the abdomen and removing the uterus, unless, after opening the abdomen we find some condition beside of the uterus to account for the persistence of the sepsis or if we find some condition in the uterus itself, as a single intramural abscess or a localized gangrene which would admit of removal without ablation of the whole organ. (4) When an uterine infection extends to a tube or ovary, setting up a violent grade of salpingitis or ovarian abscess, the abdomen should be opened without delay and the affected tube or ovary removed. (5) When an uterine infection sets up a septic peritonitis, the abdomen should be opened and the uterus ablated, the peritoneal cavity flushed with saline solution, and free drainage employed through the vaginal opening. (6) To operate for these conditions when the patient is evidently moribund is unjustifiable and can serve only to bring discredit upon the profession and upon the operation. [T. M. T.]

2.—H. M. Joy and F. T. Wright sum up their article on leukocytosis in appendicitis as follows: (1) The leukocyte count is a valuable aid to prognosis in appendicitis. (2) This is distinct from its diagnostic value. (3) A high stationary, or an increasing, count indicates a morbid condition of increasing severity which demands operation, no matter what its clinical symptoms may be. (4) A low stationary or decreasing count indicates that the severity of the case is abating and that operation may be safely postponed. Cases in which a falling count is accompanied by unmistakable signs of a generally bad condition form the rare exception to this second principle, and in them there is no chance of error. (5) No arbitrary set of prognostic values to be assigned to various degrees of leukocytosis can be constructed. The important point is to follow any scheme in which one learns to have confidence, provided the essential principle is preserved. (6) The count indicates when operation should be performed for the best interests of the patient. (7) Circumstances often render it desirable to postpone operation in appendicitis. Study of the bloodcount enables one to determine whether this may be done with safety and often renders such postponement permissible. [T. M. T.]

3.—J. P. Tuttle gives the advantages of his instrument as follows: (1) It does not require any uncomfortable position of the patient for its employment. (2) The lamp is outside of the main tube and this does not obstruct the view in any manner. (3) The descent of feces into the tube does not obstruct the light nor require its removal. The plug can be taken out and the tube cleansed by the introduction of small cotton wads held in long dressing forceps, without any material delay in the examination. (4) The plug containing the eye-piece is easily and quickly adjusted through the ground joint. [T. M. T.]

4.—G. G. Rambaud gives the clinical symptoms upon which he establishes the diagnosis of rabies in dogs: (1) Change in the disposition of the dog. (2) Unusual manifestations of attachment to its master. (3) Disappearance from its home for from several hours to two days. (4) Change of bark—or total absence of barking, even on provocation. (5) Lack of appetite, difficulty in chewing and swallowing solid food. (6) Excitement and hallucinations; the animal snaps at imaginary objects, may attack its own master. Excitement caused by the sight of another dog. This stage may be absent in the dumb form of the disease. (7) The animal eats its own bedding, tears cushions carpets etc. (8) Inability to eat, the animal takes food into the mouth, but it drops out after one or two attempts at swallowing; drinking, however, is little or not interfered with and [illegible]. (9) Unsteady gait which shows the beginning of the paralysis of the hind legs. Dilated pupils. (10) Later: paralysis of lower jaw, general paralysis. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

April 5, 1902 (Vol. LXXV, No. 14).

1. On the Treatment of Fracture of the Anatomical Neck of the Humerus by the Aid of the Rontgen Rays. CARL BECK.
2. The Differential Diagnosis Between Disease of the Gall-Bladder and Disease of the Vermiform Appendix: with Report of Two Cases. JAMES C. KENNEDY, JR.

3. Pulmonary Embolism After Operations Upon the Bladder and Prostate. EDWARD L. KEYES.
4. Human Asymmetry. WILLIAM S. ELY.
5. An Epidemic of Typhoid Fever in the Backwoods of Maine. E. F. BRUSH.
6. An Unusual Complication of Inguinal Hernia. A. C. SMITH.

3.—E. L. Keyes, Jr., considers three types of pulmonary embolism: (1) Simple syncope, when the patient dies immediately and without a struggle. It is very rare and such cases should suggest cardiac rather than pulmonary embolism. (2) The ordinary type of suffocation, soon terminating in death. (3) The cases in which death does not take place. Most frequently the patient cries out, is seized with extreme precordial distress and violent suffocation and dies in a few seconds or minutes. Or, when there is still some passage for the blood, the symptoms may be prolonged for hours or even days before the fatal termination. The symptoms of the occurrence of pulmonary embolism are the appearance of a painful sense of oppression in the chest, rapid respiration, intense dyspnea, pallor followed by cyanosis, turgidity of the cervical veins, exophthalmos, dilatation of the pupils, tumultous or weak and irregular heart's action, small, empty radial pulse, great restlessness, cold sweat, chills, syncope, opisthotonos and convulsions. The intelligence may be preserved, or there may be delirium, coma and other cerebral symptoms. Particularly striking is the contrast between the violence of the dyspnea and the freedom with which air enters the lungs and the absence of pulmonary physical signs; unless in the more prolonged cases it be the signs of edema of the lungs. Embolism after operation is quite frequent. Wyders reports nine cases of fatal pulmonary embolism after gynecological operations, several of them of minor character. Four of the patients were suffering from extensive carcinoma and another from septic endometritis. All the other cases were uninfected and uncomplicated. Mahler had 22 cases of pulmonary embolism, 10 postpartum and 12 after gynecological operations. Welch mentions four cases of thrombosis of the left leg occurring among 131 cases of appendicitis. Biggs reports the condition once subsequent to fracture of the neck of the femur, once to fracture of the acetabulum and spine of the ischium and thrice to operation. [T. M. T.]

4.—W. S. Ely's inference from his article is that the general practitioner must be symmetrically educated and trained in order to recognize asymmetrical conditions with pathological tendencies. To decide when the services of the specialist are required, the family physician must know something of everything. He also states there is no danger that the time will ever come that the calling of the general practitioner will be less dignified or important than at present. [T. M. T.]

5.—E. F. Brush in his article on an epidemic of typhoid fever, gives the points of interest as follows: (1) The contagion of typhoid fever was conveyed to a certain house by water, without fecal pollution, unless we consider the possibility of flies. (2) There was no difference in the intensity of the contagion between the positively fecal-contaminated and the mouth-contaminated water. (3) The continued use of the fecal-contaminated water produced the same yellow-colored diarrhea that characterized typhoid fever, after the fever had subsided, and the mouth-contaminated water had this effect. (4) The remarkable number of recoveries under such unfavorable environment. (5) The indefiniteness of the period of incubation: all those who were not affected first were attacked not earlier than about four weeks after exposure, and still some persons continued to use either the mouth or fecal polluted water for from two to six months before they sickened. (6) The limitation of the disease in these 19 cases, uncomplicated by any kind of treatment; the disease lasted from three to seven weeks, the average, taking all cases together, was four weeks. [T. M. T.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

April 3, 1902.

1. Angina Cruris (Intermittent Claudication) and Allied Conditions Including Painful Cramps, With Remarks on the Importance of Examining the Pedal Arteries. G. L. WALTON and W. E. PAUL.
2. Physiological Heart-Murmurs Produced by the Electric-Light Bath. THOMAS HOWELL.
3. A Congenital Malformation. SEABURY W. ALLEN.

1.—The affections associated with the names of "intermittent claudication," "claudication intermittente (Charcot)" and "intermittirendes Hinken (Erb)," "intermittirende Muskelparese (Grassmann)," "myasthenia paroxysmalis angiosclerotica (Higier)," and "angiosclerotische intermittirende Dysbasia (Erb)," has, for purposes of simplicity, probably been given the name of "Angina Cruris" by G. L. Walton and W. E. Paul, of Boston. Angina cruris, as well as allied conditions, are discussed by the authors with report of cases, and with especial reference to the importance of examining the pedal arteries. They call attention to the importance of examining the dorsalis pedis and posterior tibial arteries as well as the radial and temporal arteries in all cases in which impaired circulation may be involved in the process, be it of the brain, spinal cord or other organs. In their observations, the examination of the pedal arteries was of material interest in establishing the diagnosis. The following conclusions have been arrived at: (1) The concurrence of the paroxysmal pains of angina cruris with pulseless pedal arteries is too constant to be explained by coincidence, though it is true that pulseless arteries may be found without the pains, and, conversely, that such pains may appear with apparently normal arteries. (2) The painful paroxysms are probably of vascular origin, and result from vascular spasm coupled, perhaps, with increased blood pressure acting on vessels already partially occluded, whether from local or general disease (aneurysm, syphilis), from senile changes (atheroma), or from congenital tendency to angiofibrosis. (3) Recurring painful cramps of constant seat probably represent a modified form of angina cruris. (4) It is important to examine the dorsalis pedis and posterior tibial, as well as the radial and temporal arteries, in all cases in which it is desirable to estimate the bearing of the vascular condition upon disease in the central nervous system or elsewhere. [M. R. D.]

2.—Thomas Howell, in conducting a series of experiments to ascertain the physiological effects of electric baths upon the economy, has been led to believe that these experiments conclusively demonstrate how little weight should be attached to the mere presence of a murmur, in diagnosticating heart disease. In all 52 cases were examined, with special reference to the influence of the bath on the heart. Murmurs were heard in the heart or arteries, generally both, in almost every instance. Twenty-nine of the cases were women and 23 men. Several cases are described in detail. The author believes that, if the aorta is temporarily dilated and there is a vigorously acting heart, driving the blood through a now relatively constricted aortic orifice, it is reasonable to presume that vortices form and produce the murmurs. [M. R. D.]

3.—Seabury W. Allen reports a congenital malformation, accompanied by an illustration, and comprising a description of an individual who had been on exhibition at a museum and who had a third leg coming off the side and back of the pelvis. The third leg was under perfect control and had about 30° of motion at the hip joint. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 5, 1902.

1. Some Points in the Management of the Neurasthenic. JAMES H. McBRIDE.
2. Medical Education and the State. WALTER A. WELLS.
3. Further Report of a Previously Recorded Case of Blastomycosis of the Skin; etc. JAMES W. WALKER. and FRANK HUGH MONTGOMERY.
4. A Service View of Hernia. Its Prevalence Among our Troops in the Orient. E. F. ROBINSON.
5. Hypnotics- their Use and Abuse. ARTHUR W. ROGERS.

2.—An interesting article **on medical education and the State** is contributed by Wells. He points out that the standards of medical education in this country are far below those of Germany, Switzerland, Great Britain, Sweden, Austria, France and Italy. There is a superabundance of medical colleges in this country. According to the Association of American Medical Colleges, 170 schools of medicine exist in the United States. One-half of this number would more than suffice. He points out the interesting fact that we have the largest number of medical colleges, in proportion to population, in the world. He discusses the question why national and state regulation of medical education is imperative. He points out that there have been for some years established throughout the United States so-called agricultural experimental stations, supported by the general government, yet managed by the state. They have worked generally smoothly and have accomplished much good. He believes that a scheme of this kind applied to medical colleges would in a short time eradicate all the evils of our present system of medical education. The author emphasizes that we should direct as much attention to regulating the standard of medical education as we do to the regulation of our financial system, and further emphasizes that we come now to appeal to the medical profession and to the people at large (who, in fact, after all, are they who are most vitally concerned) that they shall adopt as broad views upon the subject of health as upon that of wealth; and that they shall not think more of dollars than they do of doctors; that they shall never cease their efforts until we have a system of medical education and a standard equal to the best, and until the products of our institutions, stamped as they are with the seal of government authority, shall no longer be discredited and regarded as spurious coin abroad, but shall pass current in any, even the most enlightened, country of the world. [F. J. K.]

3.—Walker and Montgomery contribute a further report of a previously reported **case of blastomycosis of the skin**; systemic infection with blastomycetes; death; autopsy. This case was reported before the American Dermatological Association, in 1900, as one of blastomycosis of the skin. Death finally occurred which was supposed to have been due to miliary tuberculosis of the lungs, but subsequent research showed that the lung tissue was full of typical blastomycetes, while diligent search failed to discover tubercle bacilli and it was therefore regarded as a case of systemic blastomycetic infection. A detailed history of this case is given with a report of the histological examination of the lungs. [F. J. K.]

5.—Rogers discusses **hypnotics—their use and abuse.** He contends that the use of hypnotic and sedative drugs has been much abused during recent years both by patients and in some instances even by the practitioner. Several factors are responsible for this misuse. In the first place, patients are not, as a rule, familiar with the dangers attached to excessive use of these drugs. The latter are alike in one respect, their potency gradually fails and increasing dosage becomes necessary. Rather than consult the physician, the apothecary is usually called upon to refill the original prescription many times. It is within the power of the physician to obviate this misfortune by writing his prescription in such a maner that refilling without consulting him becomes impossible. The author gives an account of a case of trional poisoning which occurred in a young man—a morphine habitué—who had taken 180 grains of trional in a single dose. The toxic effects were similar to those produced by intoxication from whiskey. The patient was given about the same treatment as if he had taken an overdose of morphine. Recovery ensued in about 36 hours. He also records some instances of toxic symptoms produced by 10 grain doses of sulphonal. He thinks that hyoscine hydrobromate must be used very guardedly and states that we might much better use duboisine hydrochlorate, a drug which possesses all of the good and none of the bad properties of the former. He thinks that hypnotic drugs should be looked upon as necessary evils which should be dispensed with at the earliest possible moment. He contends that chloral is a very efficient hypnotic which has been used too little of late years. He believes that chloralamide is quite unreliable. [F. J. K.]

AMERICAN MEDICINE.

April 5, 1902.

1. The Function of the Army Medical School. GEORGE M. STERNBERG.
2. Notes on Some Diseases of the Kidney and Bladder in Infancy. JOHN LOVETT MORSE.
3. The use of Eggs as a medium for the Cultivation of the Bacillus Tuberculosis. M. DORSET.
4. The Surgical Use of the Hair-Pin. J. TORRANCE RUGH.
5. Report of a Case of Bacillus Aerogenes Capsulatus, Probably Invading the Body from a Gangrenous Lung: Gas Cysts in the Brain of a General Paralytic. J. D. MADISON.
6. A Contribution to the Etiology of Appendicitis. ARTHUR J. PATEK

1.—George M. Sternberg discusses the **function of the Army Medical School.** He remarks upon the importance of this institution and the service which its graduates have rendered. Preventive medicine forms an important feature of the course. The measures to be taken for the prevention of disease among our soldiers falls naturally under two principal headings; (a) those which relate to the maintenance of a high standard of resistant power on the part of the individual units of the army; and (b) those which relate to protection of these individuals from infection by any of the various disease germs which have been proved by experience to be the principle causes of sickness and mortality among our troops. Under the first heading we have to consider food, clothing, ventilation, the heating of barracks, exercise, etc. The second involves a precise knowledge of the morphological and biological characters of all known disease germs, of the mode in which they gain access to the human body, and the best means of destroying them. He gives an interesting retrospective account of the progress of medicine during the time that he has been a surgeon in the army, 41 years. He emphasizes the value of **preventive medicine** and the importance of the knowledge of hygiene among lay as well as medical officers. [T. L. C.]

2. J. L. Morse presents notes on **some diseases of the kidney and bladder in infancy.** He discusses the condition of the **urine in the newborn; albuminuria** of the newborn; **uric acid infections;** and the **urine in infancy.** The notes of 5 cases of **hematuria in infancy** are given. **Acute nephritis, primary and secondary nephritis,** and **chronic nephritis** are considered with illustrative cases. The condition of **acute pyelitis and pyelonephritis is also mentioned** with a report of an interesting case of this condition. The notes of a case of **primary cystitis,** which is decidedly uncommon, are presented, as well as one of the more common **secondary** type. Morse calls attention to the importance of the routine examination of the urine in infancy which will often reveal the nature of obscure conditions. [T. L. C.]

3. M. Dorset presents a paper on the **use of eggs as a medium for the cultivation of the bacillus tuberculosis.** He has used three different media consisting of portions of hen's eggs as follows: (1) The whole egg contents, white and yolk mixed; (2) the yolk of the egg separated as far as possible from the white; (3) the white of the egg alone. Perfectly fresh eggs are generally used and seem to give slightly more rapid growths than older eggs. In using the whole eggs' contents and the egg yolk medium very satisfactory cultures were secured with rapidity and certainty, **especially from the first. The medium made** from the white of the egg has proven entirely unsatisfactory, negative results being obtained in every case. [T. L. C.]

4. J. T. Rugh contributes an ingenious paper on the **surgical uses of the hair-pin,** in which he outlines a number of possibilities for their employment especially in emergency cases. Hair-pins lend themselves to be bent and

twisted into almost any form, and Rugh mentions a number of purposes that they may serve. [T. L. C.]

5.—J. D. Madison reports a case of **bacillus aerogenes capsulatus**, probably invading the body from a gangrenous lung. The case is interesting on this account as well as from the fact that **gas cysts** were present in the brain of a general paralytic. The report of the autopsy, as well as the result of the bacteriological examination, is given. The writer states that his case seems to be the first one reported in which cysts of the sort described have been found in the brain of the general paralytic. The cysts were small and the dilatation of the perivascular spaces only a little more than is often seen in general paralysis. Bacteriological examination revealed their nature. [T. L. C.]

6.—A. J. Patek furnishes a contribution to the **etiology of appendicitis.** He summarizes his paper by stating that: (1) Because of its anatomical characteristics and relations the appendix is an organ of lower vitality and less resistance than are other parts of the intestinal tract. (2) Micro-organisms are normally present in the intestines, and wait but an opportune moment when, in the presence of irritating secretions, they may excite an inflammatory reaction. (3) While appendiceal inflammation may undoubtedly originate *de loco*, there is no question but that—(4) in many cases the appendiceal inflammation is a secondary infection, the primary focus being in the intestine proper, the result of an acute indigestion or a catarrhal inflammation. (5) While we can rarely make the positive assertion that a disease has through our efforts been aborted, he believes that prophylaxis is the price of health, and that it may even be possible to do much toward the prevention of attacks of appendicitis, especially in the case of parents who have previously suffered, by careful attention to the regulation of diet and intestinal habit in health, no less than in securing good intestinal drainage and antisepsis in the various gastro-intestinal illnesses. [T. L. C.]

ANNALS OF SURGERY.

September, 1901.

1. The Blood Changes Induced by the Administration of Ether as an Anesthetic. J. C. DACOSTA and F. J. KALTEYER.
2. Studies of the Blood in its Relation to Surgical Diagnosis. R. C. CABOT, J. B. BLAKE and J. C. HUBBARD.
3. Frequency of Recurrence of Sarcoma. J. A. WYETH.
4. Teratoma of the Testicle. W. B. COLEY and B. H. BUXTON.
5. Sacculated Aneurysm of the Superior Profunda Artery. L. J. HAMMOND.
6. Fracture of the Skull. W. LATHROP.

1.—See **Philadelphia Medical Journal**, Vol. 7, No. 22, p. 1032.

2.—See **Philadelphia Medical Journal**, Vol. 7, No. 22, p. 1032.

3.—See **Philadelphia Medical Journal**, Vol. 7, No. 14, p. 637.

4.—See Department for Co-operation and Original Research for April, 1902.

5.—Hammond reports a case of **aneurysm of the superior profunda artery** of the left arm. The patient was a male, aged 37 years, who had sustained a fracture of the elbow when he was 5 years of age. Later, at different periods, the upper part of the radius had been fractured, then the lower portion, and finally he lost the index and middle fingers of the left hand as the result of a crushing accident. 9 months before coming under observation he had noticed a swelling on the posterior surface of the elbow somewhat nearer the internal than the external condyle of the humerus. Pulsation and bruit were present. At one time after striking the swelling it rapidly enlarged and became very painful; when seen by the author the aneurysm was about the size of a guinea-egg. After excision the tumor proved to be a sacculated aneurysm; the coats of the artery above and below the growth appeared to be normal. [F. T. S.]

6.—Lathrop gives a summary of the histories of 35 cases of fracture of the skull upon which he has operated. He urges early operation in all cases when symptoms of compression are present or when there is depression of bone. When symptoms of concussion persist for several days, with no sign of improvement, it is strongly indicative of injury to the brain from fracture of the inner plate or from hemorrhage. Fracture of the base of the skull, especially of the anterior and middle fossae should be treated by drainage. Lathrop usually employs the chisel, elevator, and rongeur forceps and rarely uses the actual trephine. [F. T. S.]

RUSSKI VRATCH.

January 12, 1902. (Vol. 1, No. 3).

1. On the Question of Limiting Working-hours in Especially Harmful Industries. L. B. BERTENSON.
2. A Simple Device for Determining Flat-Foot. The Table of Bradford and Lovett. G. I. TURNER.
3. An Apparatus for the Paralyzed. M. K. VALITSKAIA.
4. On the Pulse-curve and the Influence on it of Color-sensation. M. M. REZNIKOFF.
5. The Prevention and Treatment of the Plague. V. P. KASCHKADAMOFF.
6. The Condition of the Insane in St. Petersburg. A. L. MENDELSON.

1.—Bertenson points out the lack of laws for the adequate protection of workingmen in the Russian factories against the injurious employments. Objection is raised to the 11½ hour working-day established by law and certain suggestions made regarding the regulation of the industries which are injurious to health. The institution of regular and independent medical inspection and supervision, as carried out in England, is pointed out as *sine qua non* to success in this direction. [A. R.]

2.—Turner endorses the device invented by Bradford and Lovett for the diagnosis of **pes planus** and describes a slight modification which consists in the table being of such size that **both feet may be inspected at the same time.** An illustration of the modified table is given. [A. R.]

3.—Valitskaia describes a **brace for the treatment of paralysis of the lower extremities.** It consists of sandals fastened by means of a system of belts and bands, and can be best understood from the illustrations accompanying the article. [A. R.]

4.—Will be abstracted when concluded.

5.—Kaschkadamoff, from an exhaustive review of the literature and his own experiments, concludes that we are already in the position greatly to antagonize, if not conquer altogether, the dreadful malady—the plague. **In Haffkine's lymph and the antiplague-serum we possess two of the most powerful agents in the prevention of an epidemic.** Disinfection and the general sanitary improvement of the locality are, of course, important adjuncts. [A. R.]

6.—Mendelson criticises the present method of caring for the insane in the St. Petersburg hospitals and urges the adoption of reforms, including the family-care or the farming out of the mild and inoffensive inmates. [A. R.]

January 19, 1902. (Vol. 1, No. 4.)

1. On Finsen's Light-Treatment Based on Experimental and Clinical Investigations Made at the Surgical Clinics of the Academy. N. A. VELIAMINOFF.
2. Anterior Dislocation of the Shoulder Complicated with Fracture of the Greater Tuberosity. G. I. TURNER.
3. The Treatment of Tetanus by Intraspinal Injection of Antitoxic Serum. P. JACOB.
4. The Pulse-curve and the Influence on it of Color-sensations. M. M. REZNIKOFF.
5. Preventive Measures Against Gonorrheal Infection. L. IA. IAKOBSON.

1.—Veliaminoff relates the **results of the experiments made with Finsen's apparatus** at the surgical clinic of the Military Medical Academy. As to the clinical observations, 77 cases were selected. Of these 38 were of lupus vulgaris,

19 of erythematous lupus, 10 of rodent ulcer and 10 of telangiectasia. In the treatment of all these cases **results similar to those of Finsen were obtained.** The laboratory experiments were directed towards the solution of the following problems: (1) The effect of luminiferous energy on bacteria and (2) the effect of luminiferous energy on healthy and diseased animal tissue. One of the collaborators, V. N. Tomaschevski, performed about 500 ingeneously instituted experiments on the effect of light on 10 species of bacteria, including a number of pathogenic and spore-forming forms, (staphylococci, bacillus pyocyaneus, bacillus typhosus, bacillus anthracis, etc). He found that **light acts destructively on bacteria** and that the action is due to the specific effect of the light on the bacteria and not to any changes produced in the medium, the possibility of such changes having been excluded in the experiments. The bactericidal action of light, he found, resides almost exclusively in the shortest light-waves. The absolute amount of luminiferous energy necessary to destroy bacteria was also determined and was found to be 1-30 kilogrammeters for each square centimeter of infected surface, according to the nature of the organism. A destructive action of the light, especially the shorter waves, was also observed in the case of the lower plant and animal micro-organisms, such as spirogyra, ameba, flagellata, infusoria, etc. Two others, Glebovski and Gershouni, determined the effect of light on the granulations of lupus and rodent ulcer. Glebovski observed that as treatment progressed, the corium became gradually separated from the granulation-tissue, and finally, instead of a diffuse infiltration of the entire thickness of the skin with granulation cells, a fibrillar connective tissue made its appearance, approaching the normal structure. In cicatrices of one year's standing the presence of elastic fibres could be demonstrated. At the same time the giant cells, and the lymphoid cells were undergoing fatty degeneration. Gershouni, who considered rodent ulcer as an endothelioma, found that under the influence of the light the endothelial elements gradually disappear and are replaced by a mature connective tissue rich in fibres and poor in cells. **The epithelial elements, on the other hand, are more resistant to the action of light.** It thus appears that light possesses a destructive action on the lower organisms and some of the cell-elements, causing at the same time productive proliferation of fibrous connective tissue. On this double action depend the therapeutic effects of light. [A. R.]

2.—Turner is of the opinion that the reason for the difficulty often experienced in correcting old anterior dislocations of the shoulder lies in the fact that **fracture of the greater tuberosity or the head of the humerus is of frequent occurrence,** but escapes detection owing to the ease with which recent dislocations are corrected. In old dislocations, on the other hand, this complication **forms a serious barrier to a successful correction.** Three illustrative cases are reported and a number of museum specimens described. The mechanism of anterior dislocations of the shoulder is also discussed. [A. R.]

3.—Jacob treats of the **succesful attempts made by himself and others of employing subarachnoidal injection of antitoxin in the treatment of tetanus,** this method appearing *a priori* the more rational in a disease in which the central nervous system is primarily and directly affected. In two severe cases of tetanus in Prof. Leyden's clinic, reported in detail by Leyden before the *Charité Society* in Berlin in 1899, and the *Verein für innere Medicin* in 1901, **subarachnoidal injection of the antitoxic serum was employed with favorable results.** In one case, however, subcutaneous injections were made at the same time, and only the second case is therefore deemed conclusive. In a monograph on tetanus written by Leyden and Blumenthal 9 cases are reported in which the subarachnoidal method of injection was used. 3 of these recovered. Of the 6 fatal cases, 3 were in infants in whom the course of the disease generally differs from that in the adult. To the 3 successful cases may be added 3 others: 1 each in Jaksch's and Kast's clinics and 1 in Leyden's. **Thus two-thirds of the cases treated by this method recovered.** In considering the method of injection, the author points out the difficulty encountered in securing the proper position in cases of tetanus in which opisthotonos and extreme nervous irritability are usually present. It is therefore necessary to preceed the injection by a narcotic (a mixture of chloral and morphine) or an anesthetic. The antitoxin is introduced in the following manner: A Quincke needle is introduced between the 3d. and 4th. lumbar vertebra, reaching the subarachnoidal space. 5-10 cc. of the cerebrospinal fluid are allowed to escape, and as the last drop exudes, the needle is connected with the syringe and 10-20 cc. of the antitoxin injected under low pressure, 1-2 cc. at a time. When the operation is completed, the needle is allowed to remain for 1-2 minutes before withdrawal, and the puncture covered up with collodion. [A. R.]

4.—Will be abstracted when concluded.

5.—Will be abstracted when concluded.

BOLNITSCHNAIA GAZETA BOTKINA.

January 9, 1902. (Vol. XIII, No 2).

1. A Case of Endothelial Psammosarcoma of the Pia Mater of the Spinal Cord. G. S. KOULECHA.
2. The Scientific Principles Underlying Hospital Régime and the Acting Laws Concerning the Civil Hospitals in Russia. S. S. VIRSALADZE.
3. A Correspondence from Bombay. S. TH. PROSKOURIAKOFF.

1.—Koulecha reports a case of **psammosarcoma of the pia mater of the spinal cord** in a woman, 38 years old. She entered the hospital with symptoms of pneumonia and complete paralysis of the lower extremities, the paralysis having been first noticed some three years before admission. The clinical diagnosis was transverse myelitis, chronic pneumonia and decubitus. The patient died and the autopsy revealed chronic interstitial tubercular pneumonia of the superior left lobe and a tumor of the pia mater of the spinal cord. The tumor was found situated on a level with the first two dorsal vertebræ in the subdural space, filling almost completely the spinal canal and compressing the cord to a band several mm. thick. Upon microscopical examination the tumor was found to be an **endothelial psammosarcoma.** The psammoma-bodies were found in large numbers and stained a diffuse bright-red with Van Gieson's stain. From this tinctorial behavior of the psammoma-bodies and a study of their progressive development the author concludes that they are mainly composed of **hyaline masses, originating from hyaline degeneration of the cells and the bloodvessels of the new growth.** These hyaline masses subsequently undergo calcareous infiltration. An analogous process is seen in the formation of brain-sand in the aged, with the difference, however, that in this case the change is brought about by defective nutrition. No such etiological factor can be suggested for the formation of psammoma. [A. R.]

3.—Proskouriakoff, in a letter from Bombay, reviews **the report on the serum-treatment of the plague,** issued by the Arthur Road Hospital, covering a period from August, 1900, to May, 1901, inclusive. It appears from the report that the last epidemic was marked by a greater severity of the disease as shown by the frequency of multiple buboes, the intense and rapidly fatal septicemia and the frequency of complications and relapses. The resistance of the disease to the effects of serum-treatment was therefore unusually great. The effect of Lustig's serum may be seen from the following data: From August to March, 1900, 52 patients were treated with the serum. Of these 35 (67.3 %) died and 17 recovered. Of the 162 not treated with serum 125 (77.16 %) died and 37 recovered. For the months of March, April and May, 1901, 104 patients were treated with serum, of whom 81 (77.82 %) died and 23 recovered. During the same period 102 patients were not so treated, and of these 81 (79.42 %) died and 21 recovered. It was observed that if a patient has developed septicemia, the prognosis is extremely grave. Of 57 patients received in a state of septicemia and treated with serum 55 (96.66 %) died and only 2 recovered. At the same time nonsepticemic cases gave a mortality of 43 (56.50 %). Of 108 septicemic

cases not treated with serum 106 (98.14%) died; of 143 nonsepticemic cases not treated with serum 88 (61.53%) died. [A. R.]

January 16, 1902. (Vol. XII, No. 3.)

1. On Hemorrhages Following the Removal of the Nasopharyngeal Gland. N. I. LOUNINE.
2. A Case of Traumatism to the Spinal Cord with the Development of Brown-Sequard's Paralysis. M. L. ZAVADSKI.
3. Disinfection of Tubercular Sputum. A. BALOFF.

1.—Lounine reports 5 cases of **severe hemorrhage following the removal of the nosopharyngeal gland** in children from 6 to 14 years old. In considering the causes of hemorrhage, the author mentions (1) hemophilia and anemia; (2) heart disease, especially hypertrophy of the left ventricle; (3) anomalies in the nasopharynx, especially the so-called vertebra prominens; (4) the anomaly of the posterior inferior border of the septum described by Grünwald under the name of ala septi; (5) anomalies in the distribution of the bloodvessels; (6) the employment of cocaine which acts first as a vasoconstrictor and then as a vasodilator; (7) a remaining piece of the gland which remains attached by the mucous membrane only and acts as a foreign body; (8) menstruation; (9) very sharp instruments; (10) acute catarrhal condition of the upper respiratory passages accompanied by engorgement of the bloodvessels. As to treatment, the hemorrhage, if not very severe, may be controlled by the usual methods, such as injection of cold or hot water, insufflation of tannin, application of trichloracetic acid, ferropyrine, extract of the suprarenal gland, getol, dermatol, etc. The author found in ferropyrine an excellent hemostatic in slight hemorrhages used in a 5% solution of gelatine. If no success follows the application of the above methods, tamponade should be resorted to, but only as an *ultimum refugium* and with great caution in the case of small children, as in the latter the tampon causes obstruction of deglutition and breathing and may lead to complications in the ear. As a preventive, against subsequent hemorrhage, complete rest for several days after the operation should be insisted upon. [A. R.]

2.—Zavadski reports a case of **Brown-Sequard's paralysis following an injury to the spine** at the 7th.dorsal vertebræ in a boy 12 years old. On the day following the injury the lower extremities became paralyzed. Examination revealed the absence of active motion in the left lower extremity. On the **left side**, the cutaneous sensations as well as those of touch, pain, heat and electricity were higher than normal. The cutaneous reflexes were weaker than on the right side. The patellar reflex slower in appearing but greater in force. Electric irritability remained normal. There was a slight lowering of the temperature on this side. On the **right side** there was a marked lowering of cutaneous sensibility and trophic disturbances. Daily applications of electricity, light massage and subcutaneous injections of small doses of strychnine (0.001 gm.) brought about a gradual recovery. [A. R.]

3.—Baloff suggests the use of **ordinary pasteboard boxes** filled with any absorbent material for the reception of tubercular sputum. The advantage claimed for these boxes is that they are readily made or found about the house and can be destroyed without involving any pecuniary loss. [A. R.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

No. 50.

1. The Question of Early Tuberculosis of the Lungs. SCHMORL.
2. The Medical Treatment of Fever in Pulmonary Tuberculosis. F. KOEHLER.
3. Is the Slight Elevation of Temperature that Occurs in Patients Suffering from Phthisis after Slight Bodily Effort to be Considered as Fever? A. OTT.
4. The Early Diagnosis of Tuberculosis. A. MOELLER.
5. The Treatment of Pulmonary Hemorrhage with Subcutaneous Injections of Gelatine. A. HAMMELBACHER.
6. Purpura Hemorrhagica in Pulmonary Tuberculosis. E. COHN.
7. A New Apparatus for the Determination of the Amount of the Hemoglobin in the Blood. G. GAERTNER.
8. A Guiding Wire for the Stomach-Tube with an Apparatus to Keep the Openings in the Lower End Clean and Free from Fragments of Food. W. CLEMM.
9. The Diagnostic Value of The Röntgen Rays in Internal Medicine. H. HILDEBRAND.

1.—Schmorl endeavors to explain why **tuberculosis of the lungs** usually involves the upper lobe. He has found a sulcus in this lobe which starts above and extends downward and forward on the anterior surface. The degree of its development varies considerably. It is usually placed from 1 to 2 cm. below the extreme apex of the lung, and is exactly in the area of distribution of the bronchus, which according to Birch-Hirschfeld, is most frequently primarily involved. It is not due to contraction, the result of tuberculous processes, because it is present in young children. It is produced by an abnormal prominence of the first rib. It has long been known that this deformity is common in persons who have tuberculosis. [J. S.]

2.—Köhler, in view of the frequency with which hydrotherapeutic measures prove useless in the **fever of pulmonary tuberculosis**, believes that **medical treatment** is sometimes indicated. He is in the habit of using pyramidon, that is, dimethylamidoantipyrin. The advantage in reducing the fever is that it enables the patient, as a rule, to assimilate more nutriment, and to take more exercise in the open air. [J. S.]

3.—Ott has made a series of measurements in order to determine to what extent the **temperature** is elevated **in cases of pulmonary tuberculosis after moderate exercise.** For this purpose he has recorded the mouth and rectal temperatures before and after moderate walks. He finds that the mouth temperature is practically valueless for the purpose of determining the patient's temperature, but that on the other hand the rectal temperature is usually trustworthy. He also found that in a small proportion of cases albumoses could be recognized in the urine although previously they were absent, and therefore the elevation in temperature which amounted to 1° or 2° C. in his cases is to be regarded as unquestionably febrile. [J. S.]

4.—Möller calls attention to the great importance of making an **early diagnosis of tuberculosis.** For this purpose he uses various methods to increase the number of tubercle bacilli in the sputum. Among these he recommends a warm moist pack at night over the back, and in the morning the breast and back are rapidly rubbed with a cold damp cloth. The patient usually is irritated to cough and the secretion is more profuse. Tubercle bacilli are not as a rule found by the ordinary method, therefore the expectoration is collected for several days placed in a bottle, water and shot added and the whole vigorously shaken. The homogeneous mass is then centrifugated and in the sediment tubercle bacilli can be found. Another method is to place the sputum in the incubator for 48 hours, during which time the bacilli usually increase rapidly in numbers. At the end of 36 or 48 hours specimens are removed from microscopic examination. If the bacilli are not found, inoculation should be performed, and if this fails patients should be given injections of tuberculin, in fact these injections may be used earlier. The dose employed is at first 1/10 of a milligram, but if no satisfactory reaction occurs 5/10 are given, and for a third injection 1 milligram. Old tuberculin is best for therapeutic purposes. Möller has such slight confidence in its value that he gives it when urged to do so by the patient. It is important to begin with a dose so small that that no reaction ensues, and the ordinary hygienic treatment should also be employed. He has been successful in obtaining the agglutination reaction described by Arloing and Courmont. However, he found that in a dilution of less than 1 to 5 it was very uncertain, and that in this dilution it sometimes occurred in healthy persons. [J. S.]

5.—Two cases are reported. The first, a man of 22, had repeated hemoptysis. There were evidences of catarrh at the apex, and numerous tubercle bacilli in the expectoration.

As the hemoptysis continued, 120 cc. of a 2.5% solution of gelatine were injected under the skin. From 8 to 10 hours after the injection the patient had a taste in the mouth resembling sealing-wax, and the expectoration was much more tenacious. The hemorrhage seemed to be well controlled, but a slight bleeding occurred 3 days later and 60 cc. were again injected. The patient suffered more pain, but the sealing-wax taste occurred later, and was not quite as intense. The following day there was a profuse hemoptysis which was repeated once or twice. A renewed injection was made, the effects being as pronounced as in the first case, and from this time the pulmonary hemorrhage ceased with the exception of a slight mixture of blood at rare intervals in the expectoration. The patient was soon able to leave his bed, and there were no disagreeable secondary effects. The 2d. patient, a man of 20, had had hemoptysis, was emaciated, and there was consolidation of the right upper lobe. Slight hemoptysis was treated by an injection of 50 cc. of 2.5% solution of gelatine. There was pain afterwards, and 1½ hours after the injection there was a taste of rubber in the mouth. This could be reproduced the following day by the application of warm cloths to the skin. The injections were repeated and the tendency to hemoptysis ceased entirely. The authors in view of the very variable course of hemoptysis in pulmonary disease are not certain that in either of these cases the gelatine stopped the hemorrhage; there can be no doubt, however, that the hemorrhage ceased, and that the gelatine injections did no harm. [J. S.]

6.—A girl of 19, who had some valvular disease of the heart developed a purpuric eruption upon the legs and upon the lower part of the abdomen without involving the joints. The lungs were apparently normal. There was neither cough nor expectoration. The patient began to vomit and the vomit was mixed with blood. There was collapse, pain in the lower portion of the abdomen and some edema around the hemorrhagic eruption. The patient recovered from this condition but the eruption became worse. The patient again gradually improved, but developed signs of nephritis with hematuria, and rapid progressive pulmonary tuberculosis appeared from which the patient died. The question arises whether the tuberculosis was latent when the purpura developed or whether it occurred as a terminal manifestation? It appears that the relation between tuberculosis and purpura is not unknown, but just how the two are associated has never been satisfactorily explained. Cohn, however, believes that in his case the tuberculosis was latent and that the purpura represents the initial infection which produced the rapid development of the phthisis. [J. S.]

7.—Gärtner has devised an instrument for the estimation of the hemoglobin in the blood that depends upon an entirely novel principle and appears to possess some advantages over the apparatus now in use. He calls it the **hemophotograph** and has utilized in this instrument the fact that cells of oxyhemoglobin absorb the actinic rays of the spectrum and therefore interfere considerably with the alteration of the photographic paper. The apparatus consists of the photographic wedge that has a glass positive which grows progressively lighter towards one end, corresponding at one end to 100 in the hemoglobin scale and at the other to zero. The percentages are marked off is a scale placed at one side. This chamber consists of a glass plate of the same length as the positive with a rubber circle in its centre that has a depth of exactly 2 mm. Below this there is a small printing-frame. The lower portion of the chamber, which does not come in contact with the blood, is painted a clear violet color, and in using the apparatus a photographic exposure is made for such length of time that the paper just beneath the blood chamber becomes of exactly the same color as the painted portion of the chamber. The period of exposure usually lasts from 5 to 15 minutes. The paper is then removed and there is found printed upon it not only the blood but also the scale. The portion which shows through the blood is then cut out and placed in a small apparatus so arranged that the 2 may be brought together and viewed through a small opening, and when the place on the scale, where the blood is of the same color, is found, a reading is made. It is unnecessary to fix the print for ordinary work, but if it is desirable, they should be exposed slightly longer and the copy can then be kept with the history. The blood is diluted by drawing it up in a pipette and mixing with a given quantity of water. It is very important in using this apparatus to work quickly, because the solution changes its actinic qualities very rapidly. The instrument has certain advantages. First, certainty in reading, because colors are identical in shade; sensitiveness, because slight differences not perceptible by the ordinary methods are readily recognized; simplicity; and the possibility of making photographic reproductions. [J. S.]

8.—Clemm has devised a simple **apparatus for keeping the stomach tube free from obstruction.** This consists of a small V-shaped glass tube, the lower end of which is placed in the stomach tube and one of the limbs connected with the funnel portion of the tube and the other so arranged as to admit a copper wire, the lower end of which is provided with a small metal basket-shaped arrangement with sharp, cutting edged turned upward. When any obstruction is found, the copper wire is thrust down the tube and then drawn up 2 or 3 times, removing all solid particles of food which may obstruct the lower portion. [J. S.]

9.—Hildebrand discusses the **diagnosis** of aortic aneurysm **by the Roentgen rays.** He states that mistakes can be and are sometimes made if the aorta is slightly dislocated. Holknecht advises placing the patient in an oblique position and bending slightly forward. The radioscopy of the esophagus is particularly valuable when foreign bodies have been swallowed. Radioscopy of the abdomen is very difficult, partly on account of the continual movements of the contents. This can be obviated by a thorough evacuation of the bowels and the administration of opium. In all forms of abscess, hydronephrosis, carcinoma, etc., the X-rays are practically useless. It is possible by the administration of bismuth sometimes to locate the large intestine. This is best done by giving the patient large doses of bismuth and then opium. The colon is then distended with air and the picture taken. It is rather unpleasant for the patient, and the results are not yet definite. Renal calculi can often be seen, but it is not possible to recognize them in all cases. Gall stones are very difficult to see because they are transparent to the X-rays. In those cases in which a shadow is perceptible, the stones contain calcium carbonate. The method is of more use in recognizing the diseases of the spinal column. In conclusion he believes it may be stated that the Röntgen ray apparatus is valuable in the diagnosis of gangrene of the lungs, mediastinal tumors, aneurysm of the aorta, foreign bodies, and renal calculi. In all other diseases it is doubtful whether it is of any value. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

December 26, 1901. (XIV Jahrgang, No. 52.)

1. Pigmentation of the Skin in Pernicious Anemia, a Study of Vitiligo. ALFRED von DECASTELLO.
2. A Case of Peripheral Gangrene in Phosphorus Poisoning. FRANZ VOLLBRACHT.
3. A Case of Elephantiasis in a Native of Styria. HEINRICH FAVARGER.
4. A Case of Severe Pyrogallol Poisoning. PAUL RUSCH.
5. Spinal Anesthesia with Tropacocaine. FRIEDRICH NEUGEBAUER.

1.—Von Decastello reports three cases of **pernicious anemia in which pigmentation** of the skin occurred. In the first, a woman of 59, there were small brownish spots on the abdomen, groins, buttocks, and thighs, while her skin was pale yellow. These had first appeared 30 years before. Her blood showed 1,060,000 erythrocytes, 2,230 leukocytes, half of which were lymphocytes, 20% hemoglobin, poikilocytosis, etc. The pigment spots were metamerically distributed. In the second case, a woman of 43, the pigment first appeared on the abdomen and spread over the entire body. Her blood showed 820,000 erythrocytes, 6,200 leukocytes, 25% hemoglobin, poikilocytosis, etc. The third case, a woman of 45, showed symmetrical pigmentation all over, except on her hands and legs. She also had exophthalmic goitre. Her blood gave 950,000 erythrocytes, 2,500 leukocytes, 25% hemoglobin, poikilocytosis, etc. The autopsy also showed atrophy of the liver. In these cases the skin condition, with small pale areas only free from pigmentation, was vitiligo. The segmental arrangement of the

pigment pointed to central origin, an affection of the purely trophic centres. Similar cases are quoted from the literature. von Decastello concludes that the pigment distribution in some cases of pernicious amenia causes vitiligo; that it is often caused by an alteration of the central nervous apparatus; and that the appearance of the skin affection may precede the anemia, be coincident with it, or appear when the anemia improves, to disappear again later. [M. O.]

2.—Vollbracht reports the case of a girl of 18, with **gangrene of both feet and** symptoms of **phosphorus poisoning,** followed by death. The autopsy confirmed the diagnosis. Several other similar cases are quoted. A review of the literature show that in subacute phosphorus poisoning the bloodvessels are injured both anatomically and functionally; that high-grade fatty degeneration of the myocardium occurs; and that gangrene is due to a disturbance of the general circulation, especially in the periphery of the organism. This may be influenced by narrow arteries or circumscribed areas of pressure. [M .O.]

3.—Favarger describes an interesting case of **elephantiasis in a Styrian farmer,** aged 25, who had never left his native country. At 15 he had left-sided pleurisy, with recurrence the following two years. Edema was first noted at 18 years, in both feet. Later the legs and lower abdomen showed chronic edema with eczema. His heart was very weak, but the sounds were clear. The swelling and edema of the left leg continually increased until that leg became enormous. The scrotum, penis and right leg below the knee were also swollen and edematous, as the photographs show. He weighed 280 pounds. No other case of elephantiasis has ever been known in the vicinity. Favarger explains this strange case of sporadic elephantiasis, without a chance of filariasis, by supposing that the patient had a predispositon to chronic edema and an increase of connective tissue, from his weak heart; that he became infected with the cocci of erysipelas or some other bacteria; and that not only did lymph stasis occur, but cardiac stasis also. [M. O.]

4.—Rusch treated a woman of 37, seven months pregnant, with 10% **pyrogallol ointment for psoriasis. Symptoms of poisoning suddenly appeared** after four applications, and grew so much worse that death seemed imminent. As the fetal heart sounds had ceased, abortion was induced, and she recovered slowly, after being delivered of a macerated fetus. There were no signs of syphilis in the mother or fetus. Rusch believes that her pregnancy was the cause of her peculiar intolerance to pyrogallol. Whence it appears that pyrogallol is contraindicated in psoriasis complicating pregnancy. In such cases he advises gallacetophenon. [M. O.]

5.—Neugebauer has employed **tropacocaine as the anesthetic, by the spinal method,** in 60 cases, with marked success. He uses cocaine to anesthetize the skin before puncturing. A full description of his needles and technique follows. As a rule 0.05 gm. of tropacocaine causes anesthesia in a few minutes, the anesthesia spreading gradually down the legs. It is not advised in nervous or excitable patients who will not lie quietly on one side. He gave as much as 1 gm. of tropacocaine. The longest operation lasted one hour and a quarter. Patients should be kept in bed for a few days to prevent after-effects, such as fever, paresis, and paralysis of the lower extremities. Patients could be injected over and over, at intervals, and smaller amounts were needed each time. Neugebauer conclues that freshly boiled tropacocaine solution is a safe and sure means of producing analgesia of the lower extremities, perineum, and its surroundings. Its effect upon the upper part of the body is uncertain, and it is not advised in operations above the crest of the ilium. The case-histories of his 60 patients, operated upon, follow. [M. O.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

December 19, 1901.

1. The Hygiene of Dairy Products. LŒFFLER.
2. The Immunity Substances of the Blood. (Continuation). P. EHRLICH.
3. On the Immunizing Effect of Cholera Vibrio when Combined with Cholera Amboceptors. (Conclusion.) P. PFEIFFER.
4. Gonococci in the Blood in Gonorrheal Polyarthritis. E. UNGER.
5. Experimental Glycosuria. From a Lecture by F. W. Pavy. Translated by Dünschmann.

1.—Löffler first directs attention to the possibility of **poisoning from milk which comes from cows that have eaten poisonous plants** and have secreted the toxic principles in the urine, and emphasizes the fact that Hauser has determined that in certain regions there are numerous plants capable of causing poisoning in this way. He also notes that solanine is not frequently present in potatoes and that often, under such circumstances, the potatoes show grayish or blackish spots, which contain large numbers of bacteria capable of producing solanine. This solanine may cause severe toxic symptoms when the potatoes are themselves eaten directly, or when they are used, as they frequently are abroad, in making milk mixtures. If possible, it would be important to make it illegal to give cattle any food likely to produce poisons. This, however, is impossible of control. The author then calls attention to the possibility of conveying a number of diseases, such as foot-and-mouth disease, infectious enteritis, tuberculosis, and infection from mastitis, from cattle suffering with these conditions, to the children or older persons using the milk. He also touches upon the question of the communication of tuberculosis from cattle to other animals, and evidently leans strongly to the view that Koch is right in his recently expressed opinion concerning this matter. (To be concluded.) [D. L. E.]

2.—To be concluded.

3.—Pfeiffer has investigated the **possibility of determining the presence of the immunizing products of bacteria in the spleen before the appearance of antibodies.** He injected rabbits with cholera cultures which had been sterilized at 60°; and, 24 to 48 hours afterward, removed the spleen and rubbed it with sand, injecting the fluid from this emulsion into guinea-pigs. The latter showed no active immunity. Pfeiffer thought it possible that there had been such a firm union between the immune bodies produced by the spleen and the bacterial products that no effect was seen. He, therefore, made subcutaneous injections of large doses of cholera vibrio, to which large doses of immune serum had been added, and found that distinct immunity was produced in the animals so injected. In this experiment it seemed possible that the union between the bacterial bodies and the bodies produced by the injected animal had been more or less completely destroyed by heating to 60°, which was carried out after mixing the two together. For various reasons, however, the author does not think that this was so. He then tried the intravenous injection of small doses of the same, after saturating the vibrios with cholera serum. In this case, the active immunity of the latter series of animals was much less marked than that of the former series; consequently, the experiment spoke against the probability of a separation of the bacterial and antibodies by the heating. He then made intravenous injections of the filtered peritoneal exudate from guinea-pigs that had been intraperitoneally injected with a mixture containing cholera vibrios, which had been dissolved by cholera serum from immunized rabbits. All these animals acquire an active immunity of a very high grade. He also made intravenous injections into rabbits of small doses of dead cholera vibrios, after saturating them with normal goat serum. In spite of the fact that the vibrios had remained for 12 hours in contact with 10 to 20 times the necessary amount of

normal serum, they produced a pronounced immunizing effect. These results are difficult to explain on the basis of Ehrlich's theory, although the author says that it is possible that the union of the amboceptors with the vibrios does not need to be completed within a short time; and that it is also prossible that there may be a dissociation when in contact with the receptors or the body cells, which are, perhaps, more sensitive to their action. This is not probable, however, as so much time had passed before the injections were given. Some of Pfeiffer's results were directly contrary to those mentioned; he found, for instance, that the filtrate from cholera bacteria, which was sterilized and injected into a rabbit, produced a high degree of immunity, but that, when mixed with goat cholera serum, allowed to stand for 25 hours, and then injected into rabbits, it produced no immunity in these animals. This experiment was repeated a number of times, and it was found that in all these instances the filtrate, when mixed with the antiserum, produced practically no immunity. The contrary, however, was true when a typhoid filtrate was used instead of the cholera filtrate; hence, there was an evident difference between the action of the cholera serum of the goat and that of the normal goat serum. It is at present impossible to explain such results. [D. L. E.]

4.—Unger reports the case of a boy of 18, who injured himself, and after the injury developed multiple arthritis with fever. It was suspected that it was of gonorrheal origin, but no secretion was found in the urethra. A further examination, however, demonstrated the fact that the boy had hypospadias of the first degree; and that the meatus ended blindly about 1 cm. from its external opening, while from the other opening there was a free purulent secretion, which contained numerous gonococci. **Cultures were made from the blood, and bacteria corresponding in their characteristics to gonococci were obtained.** The boy also showed the evidences of aortic regurgitation, and, perhaps, of mitral regurgitation. The important points in making such cultures, the author considers to be: the use of a good deal of fluid in the cultures; diluting the blood well in order that its bactericidal action may be reduced; and the use of a culture medium that allows of a rapid growth. For the latter purpose, he prefers the fluid media. [D. L. E.]

5.—Abstracted from the *Lancet*, August 10, 1901.

December 26, 1901.

1. Chinoline-Bismuth Rhondanate (Edinger) as an Anti-Gonorrheal Preparation. E. JACOBI.
2. Clinical Observations concerning the Production of Plasmotropic Poisons in the Organism. GRAWITZ.
3. Hygiene of Dairy Products. (Conclusion.) LOEFFLER.
4. The Immunity Substances of the Blood. P. EHRLICH.
5. Further Contributions Concerning Biological Investigations of Natural Iron Water. O. ADLER.

1.—**The preparation is made as follows:** Crurine, 1 part, is rubbed with distilled water and glycerine, each 5 parts; then sufficient distilled water is added to make 200 parts. This is then used as an injection. Jacobi states that he has tested this substance for more than three years, and can recommend it highly. He considers it extremely important to have the prescription prepared exactly as stated above; stronger preparations are likely to cause marked irritation. Its use should be continued as long as the microscope shows the presence of the gonococcus. He has found the preparation valuable in both acute and chronic gonorrhea. [D. L. E.]

2.—Grawitz considers that **in the production of hemocytolysis we must differentiate between two processes:** In one, poisonous substances reach the circulation in small quantities, and, while they leave the blood corpuscles themselves in the circulation undisturbed, they influence the liver, the spleen, and the bone marrow in such a manner as to determine increased destruction of the red cells. On the other hand, the poisons may cause an actual solution of the red corpuscles in the circulation, with a hemoglobinemia, and its collateral effects. The first effect is called plasmotropic; the second, plasmolytic. Lead is an example of a purely plasmotropic poison. In lead poisoning Grawitz has never seen the faintest indication of a hemocytolysis, even in the most severe poisoning. He found that basic degeneration of the red cells was present in a large percentage of the patients who had hemorrhages in the intestinal tract, and, more particularly, in cases of gastric ulcer, gastric carcinoma, and cirrhosis of the liver. He, therefore, **suspected that this peculiar influence upon the red cells was due to such internal hemorrhages.** In order to determine whether this was true, he first found that in persons that had lost large amounts of blood from free surfaces, this basic degeneration did not occur; but he further found that, after taking large quantities of hemoglobin preparations by the mouth, basic granulation of the red cells did occur. He then tried feeding animals with blood; but moderate amounts caused no such effect—and he was afraid to use large quantities, because of the very great sensitiveness of the blood of one species of animal to that of another. He decided from his results, however, that **blood derivatives, when absorbed into the blood stream, do have a marked plasmotropic** effect. This, he thinks, is probably the explanation of the anchylostoma anemia. The blood is constantly being absorbed from the intestine under such circumstances, since small losses of blood are constantly being caused by the worm; and the products of the destruction of this blood are absorbed. Grawitz thinks, therefore, that the anemia is not primarily due to the worm or to any poisons which it produces, but is due purely to changes in the individual's own blood. [D. L. E.]

3.—Löffler states that he **agrees with Koch concerning the infrequency, at least, of food tuberculosis,** and the improbability of the transmission of tuberculosis through dairy products. He believes, however, that this is **not sufficient to indicate the advisability of doing away with all regulations of dairy products** which are now directed against the spread of tuberculosis. Our knowledge concerning the matter has not yet reached that point. He then calls attention to the great danger of transmission of other diseases through milk; particularly typhoid fever. He quotes records demonstrating such transmission. He then speaks of diphtheria and scarlet fever. While there are many positive records of the transmission of the latter disease in this way, the literature in regard to the former is more uncertain. Löffler describes two epidemics, the facts concerning which had been personally communicated to him by Deneke. The cases in one of the epidemics occurred only in the district supplied by one dairy, and one of the cows supplying milk for this dairy had been milked daily by a woman whose child had diphtheria. In the other epidemic, the man who collected the milk was the father of two children who were suffering from diphtheria. It is also possible for cholera to be transmitted through milk. The author then directs attention to the importance of cleanliness in receiving and preserving the milk, and to that of cooling. He then discusses pasteurization, and the treatment of milk at home. [D. L. E]

4.—Ehrlich concludes his article, which is of a type that is not suited to abstracting. He gives a general discussion of his theory of lateral chain immunity, and mentions many facts which have been brought forward in support of this view, and which, he believes, indicate the incorrectness of other theories. [D. L. E.]

5.—Adler states that, in continuing his investigations concerning the presence of organisms in natural iron waters, which cause the precipitation of the iron salts, he found that a **large series of waters from various regions showed the presence of these organisms,** and that the iron salts in these waters became precipitated with the organisms. He, therefore, attempted to secure better preservation of the water by sterilizing it, and found that by raising it to a temperature of 60°, he caused it to lose practically none of its

dissolved iron, but reduced the growth of the organisms very much, although he did not completely overcome it. He believes that, by proper methods of sterilization, waters can be maintained in practically their original condition. This is, of course, much more difficult to do with those that contain CO_2, but properly sealing the bottles and repeatedly sterilizing them at a low temperature will, he believes, accomplish it. [D. L. E.]

DEUTSCHES ARCHIV FUER KLINISCHE MEDICIN.

B. 71, H. 2-3.

10. To What Degree Do the Experiments of Pawlow Upon the Dog Agree with the Conditions Found in the Normal Human Stomach? The Influence of Hydrochloric Acid Curve by the Quality of the Nutrition. SCHULE.
11. Hysterical Deafness. WIEBE.
12. Adrenal Diabetes. BLUM.
13. Ehrlich's Dimethylamidobenzaldehyde Reaction. CLEMENS.
14. Investigations upon the Evacuation of the Stomach in Various Positions of the Body. LINK.
15. Congenital Narrowness of the Aortic System. BURKE.
16. Clinical Investigations upon Two Cases of Addison's Disease with a Special Consideration of the Condition of the Blood. HAMEL.
17. Alternating En- and Exophthalmus. STRUPPLER.
18. The periodic Course of the Deposition of Glycogen in the Liver of Rabbits in Normal and Febrile Conditions. OTT.
19. Books Received by the Editor.

10.—Schule has performed a number of experiments for the purpose of confirming or disproving the work of Pawlow, who believed he proved that the mere sight of food produced secretion of gastric juice. The experiments were quite ingenious and required considerabe tolerance on the part of the patient. The stomach was thoroughly washed until no trace of hydrochloric acid remained, then after an interval of 10 minutes the gastric juice was expressed and again tested for HCl. If this was still absent the patient inhaled the aroma from a cup of warm coffee, and again the gastric juice was expressed. No HCl however was produced by this method nor by stimulating tests, but chewing seemed to increase the quantity of gastric juice, and this was especially true if the substance chewed was agreeable to the taste, although a slighter effect was produced if it was insoluble. Further experiments confirmed Pawlow's observation that a certain latent period occurred after the ingestion of food before the HCl commenced to be excreted. Mere irritation of the gastric mucous membrane did not however appear to stimulate secretion. It appears that during mastication, gastric juice is secreted and when the food is finally swallowed commences to digest the masses at once. Schule then performed a number of experiments in order to determine whether the character of the food influenced the quantity of gastric juice secreted. That is to say, whether more HCl was secreted for nitrogenous substances than for carbohydrates. Twenty-seven patients were carefully tested, first after the test breakfast, and secondly after the test meal, and although a certain amount of variation occurred it appears that this was too irregular to be accounted for by the quality of the food. That is to say, in healthy human beings the HCl curve is practically the same after the test breakfast and the test meal. In pathological conditions, however, there is infrequently considerable difference; probably the test meal is more accurate than the test breakfast. [J. S.]

11.—Wiebe reports some interesting cases. The first, a vigorous merchant, who had always been peculiar and given to theatrical conduct, developed a varying degree of hardness of hearing. This was not due apparently to any defect either in the central or peripheral hearing apparatus and improved under static electricity. Subsequently he had a typical hysterical crisis. After a second hysterical crisis he became almost completely deaf. In both ears hearing by bone conduction was lost. A second case, a man of 32, received a severe injury to the head after which, from time to time, he had attacks of disturbance of consciousness and hallucinatory delirium. There was diminished power of hearing, taste, smell on the left side and total left hemianesthesia. After an hysterical crisis there was complete deafness on both sides with loss of speech, and bloody vomiting. The hearing apparatus was entirely normal. The patient finally became completely deaf in the left ear, the right ear being normal. The third case was of different character. After a serious accident the patient became deaf on both sides, and then recovered under suggestion. He then became suddenly worse and hearing remained permanently impaired. The hearing apparatus was apparently intact. Chloroform anesthesia failed to produce any return of hearing and as the patient had nystagmus and blepharospasm there was no reason to suspect some central disease. [J. S.]

12.—Blum has performed a number of experiments with the object of determining whether glycosuria could be produced by the administration of adrenals. He found that feeding animals with even enormous quantities of adrenals had no effect. On the other hand, a subcutaneous injection of moderate quantities produced regularly the appearance of sugar in the urine. The injected material was prepared by extracting the adrenal in cold with small quantities of water and filtering this through a clay filter. Or else by heating it to a moderate temperature for 2 or 3 days. In the majority of cases the injections were subcutaneous. The results are tabulated and the experiments briefly described. Adrenal bodies obtained from various animals were employed, and the animals were subjected to various forms of diet, or even starved, in spite of which the glycosuria always appeared. It seems probable that diabetes may be produced by an excess of adrenal substances in the blood, and that this is produced by some disturbance in the metabolism of the organs that have to do with the assimilation of the carbohydrate elements in the food. It is probable that bronzed diabetes is due to disease of the adrenals. [J. S.]

13.—Ehrlich having called attention to the fact that when dimethylamidobenzaldehyde is added to the urine sometimes a peculiar color reaction is produced, that is to say the urine instead of being red turns a dark brownish or claret color, especially in heat, Clemens undertook to study this reaction in 300 cases. He found it present in 19% of the cases. In analyzing his results he observed that it is not present in all cases of any one form of disease, and that in any particular patient it varies considerably. It is commonest in acute conditions of the stomach and intestines; is not common in cases of chronic enteritis, gastric ulcer, enteroptosis, cirrhosis of the liver, acute intestinal obstruction, etc.; it is very variable in carcinoma of the stomach. In acute febrile diseases it is more frequently present than absent; in pulmonary tuberculosis it is present when there are acute gastric disturbances, usually when the diazo reaction is present, and frequently when the specific gravity of the urine is high, although artificial increase in the specific gravity does not cause the reaction. In diabetic glycosuria it is not present. It must be remarked that a distinct reaction only occurs in pathological conditions, and therefore its chief clinical value would appear to be the exclusion of malingering in patients who seek admission to the hospital on account of an alleged diarrhea. Certain experiments appear to indicate that it is due to indol. [J. S.]

14.—Link has performed a number of experiments for the purpose of determining whether the stomach evacuates its contents through the pylorus more readily in one position than in another. He found in a careful series of experiments on a number of cases that when the patient lay on

the right side for an hour after eating, the amount of the stomach contents was notably less than if the patient lay on the left side, or on the back, or walked around. The difference was greatest in patients suffering from gastroptosis and therefore in any investigations which have for their object the determination of the motility of the stomach it is important to note the position of the patient after a meal. An interesting case is mentioned of anacidity with normal motor activity of the stomach. [J. S.]

15.—Burke contributes a valuable historical and casuistical account of **congenital narrowness of the aorta,** and tabulates the cases he has collected from the literature according to the various points of view. He reports 3 cases observed in the Vienna hospitals. The first was a girl of 18 years, who suffered from purpura and hemorrhagic diathesis. There was progressive anemia and death. At the autopsy there was found an internal hemorrhagic pachymeningitis, persistent thymus and hypoplasia of the aorta. The second case, a man of 27, had suffered from dyspnea after exertion for several years. From time to time he had hemorrhage from the nose, chills and pain in the back. The heart was enlarged, the tones were embryonic; there was a systolic murmur following the first sound. The patient developed a purulent pleurisy and endocarditis and died. There was general hypoplasia of the vascular apparatus. An analysis of the case shows that in the majority of cases the left ventricle shows hypertrophy and dilatation and usually insufficiency of the heart. Occasionally dilatation and hypertrophy of the right ventricle are also present. In several cases, however, the patient withstood typhoid fever without apparently injurious results. He reports a third case: A man of 23 years, doing severe manual labor, who frequently had symptoms of oppression after muscular exertion. The left ventricle was enlarged; there was a systolic murmur at the apex, accentuation of the second pulmonic tone and enlargement of the liver. The patient had several attacks of heart failure and finally died. The heart was enormously hypertrophied, the aorta narrow and atheromatous. The valves were normal. Patients suffering from this condition are usually small and weak. The pulse is ordinarily small but of high tension, and the color is pale. The symptoms are oppression in the breast and some dyspnea. In nearly all cases there is cough with catarrhal expectoration. Often there is an anxious expression. The heart usually shows signs of hypertrophy and dilatation. Sometimes there is splitting of the first sound, and in all cases an accentuated second sound over the pulmonic artery. Sometimes the symptoms resemble those of an aneurysm, or of mitral insufficiency or mitral stenosis. Death is usually due to heart insufficiency. In concluding his valuable paper Burke gives the following summary: Congenital narrowness of the aortic system may give rise to disease either by causing hypertrophy of the left, and occasionally of the right ventricle; by producing pulmonic congestion; by causing arterial sclerosis in young persons, and giving rise to characteristic clinical symptoms. The cause may be either congenital narrowness or failure to reach full development of the vascular system. It is impossible at present to reach any conclusions regarding the influence of this condition upon infectious disease. [J. S.]

16.—Hamel reports 2 cases of **Addison's disease.** The first, a man of 30, had never been seriously sick. Five months before admission he noticed emaciation, loss of power, loss of appetite, and 5 weeks before admission gradual darkening of the skin. He was emaciated, very feeble, deeply bronzed, with pigmentation of the mucous membranes. He died of exhaustion, and cheesy degeneration of the adrenal bodies were found. The second case, a man of 29, had noticed increasing feebleness for about 6 weeks, and, for 4 weeks before admission, gradual bronzing of the skin. There were evidences of tuberculosis of the right apex. The skin was bronzed, and there were bronze patches upon the mucous membranes. He improved for a time, and the bronzing grew less. The patient is still under observation. Examination of the blood in these cases showed in the first case, 4,200,000 reds and a specific gravity of 1055. There was no alteration in the morphology of the blood, and this condition remained until the end. The differential count of the white cells showed a relative decrease in the polymorphonuclear leukocytes. In the second case the number of red cells was 4,400,000, the specific gravity of the blood 1056, and the morphology of the blood and the differential count were practically the same as in the other case. Aside from the lymphocytosis the blood must therefore be regarded as normal. To explain the apparent anemia we are therefore compelled to assume the existence of a quantitative anemia, that is a reduction of the total quantity of the blood. Hamel concludes that anemia is an essential and inseparable symptom of Addison's disease, and that the poisons accumulated in the blood do not affect its morphology, and therefore the examination of single drops gives normal results. This is especially true of tuberculosis of the adrenals. In cases of carcinoma however, some morphological changes in the blood should be expected. It is possible that the differential diagnosis between tuberculosis and carcinoma could be based upon this fact. [J. S.]

17.—Struppler reports an interesting case. The patient a girl of 19, had pain in the neck, hot and chilly sensations, had been anemic, and there was exaggeration of the tendon reflexes. Otherwise the nervous system was normal. Hemoglobin was 45%. Pressure upon right side of the neck in normal narrow between the insertion and origin of the sternocleidomastoid, caused prompt right **exophthalmus.** When the pressure was removed, this disappeared and the eye was placed rather deeply in the orbit. The symptoms were probably produced by varicose dilatation of the retrobulbar veins. [J. S.]

18.—Ott has performed a number of experiments in order to determine whether **glycogen** is deposited in lesser or greater quantities **in the liver during attacks of fever.** He used rabbits and administered to them sugar, and then determined the quantity of glycogen in the liver by two methods. The animals were killed at various periods after the administration of the sugar and the amount of glycogen determined. A second series of experiments was similar with the exception that the animals were injected with a virulent culture of the streptococcus. It was found that the amount of glycogen deposited in the liver was considerably less. [J. S.]

ARCHIV FUER KLINISCHE CHIRURGIE.

[illegible] [Volume 67, No. 2].

15. The Role of the Periosteum in Myositis Ossificans Following a Single Injury. FRITZ BERNDT.
16. The Entire Colon on the Right Side, Partial Situs Inversus. [illegible] QUERVAIN
17. The Hyperplasia of the Connective Tissue in Fibroma and Adenofibroma of the Mammary Gland. ERICH FABIAN
18. Cancer of the Lip. L. J. JANOWSKY
19. Tuberculosis of the Lymph-Glands. B. K. FINKELSTEIN
20. The Diagnosis of Tuberculous Peritonitis in Children. A. A. KISSEL
21. Two Cases of Fracture of the Vertebrae. I. S. SPIRIDONOW
22. Tonic Contraction (Shrinking) of the Stomach and [illegible]. M. VON CACKOVIC
23. Statistics Upon Tumors of the Upper Jaw. ALBERT E. STEIN
24. The Disinfection of Bandages. M. BORCHARDT
25. Stenosis as a Demonstrable in Partial Resection of the Stomach. W. F. SNEGUIREFF
26. A Case of Rupture of the Central Tendon of the Biceps. F. DREYZEHNER

15.—Hamilt discusses that form of myositis ossificans which follows a single injury, omitting the multiple and [illegible] forms. He reports three cases of this rare [illegible]

tion in detail. From a review of those cases previously published, it seems most probable that the periosteum is involved. Microscopical and macroscopical examinations of the tumors removed by operation show that the injured periosteum invades the injured musculature and forms new bone on both muscle and bone. The process is begun by the inner cellular layer of the periosteum. When recurrence occurs, the new tumor is also periosteal, just filling the position of the old growth. Berndt concludes that that form of the disease which follows a single injury is **always of periosteal origin.** [M. O.]

16.—Abnormal position of the intestines may be due to an incomplete twist, a failure to twist, or a twist in the wrong direction, on the part of the embryonal intestines. When, in embryonic development, no twist at all occurs, the colon holds a posterior position; when the twist is incomplete, the colon remains on the left side. These abnormalities are not uncommon. When, however, the twist occurs in the wrong direction, but incompletely, **the colon will lie on the right side and partial situs inversus is found;** when the stomach and duodenum are also twisted, total situs inversus occurs. After quoting two cases in the literature, de Quervain reports a case which he observed accidentally, in the autopsy of a man of 50. The colon was altogether on the right, with the small intestines on the left. The cause of the abnormal twisting remains unknown. [M. O.]

17.—Fabian reports in full the case-histories of 14 patients with diffuse **fibroma.** From these it was seen that the connective tissue of the blood- and lymphvessels, fasciae, muscles, and fatty tissue increased to form the fibroma. The tumors were lobulated because of their multiple origin. Closely related to fibromata are papillomata and polypi. So similar are fibromata and sarcomata that the description of the one includes the other. The case-histories of four patients with sarcoma are given to show that here, too, there is hyperplasia of the connective tissue which grows into and about the tumor. The only difference between the two is that in sarcoma there are only cells in the center and fibres near the periphery, while in fibroma the fibres can be found with the cells in the centre also. In both tumors softening may occur in the center, with de generation. The case-histories of seven patients with **fibro-adenoma of the mammary gland follow.** In fibro-adenoma bits of the mammary gland are found embedded in the connective tissue hyperplasia. The tumor is also lobulated, containing more septa and lobules than fibromata and sarcomata. But fibro-adenoma never has a capsule. Here, too, calcareous degeneration or softening may occur in the later stages. **Permanent arterial hyperemia** is necessary for the occurrence of a tumor following some injury which irritates the vasomotor nerves, or in women from 20 to 30 years of age, following pregnancy. The congestion due to pregnancy often seems the exciting cause. The continuation of the irritation after extirpation of the tumor explains recurrence. [M. O.]

18.—Janowsky reviews the subject of **cancer of the lip,** the operations performed, the results, recurrence, etc., and concludes that recovery following operation for cancer of the lip generally occurs in from 9 to 15 days; that the submental and submaxillary lymph-glands must be removed with the tumor, with the performance of resection of the lower jaw if necessary, for the glands may become affected in two or three months; that 49% of recoveries follow operation; that recurrence occurs in the majority of cases in 6 months, in the same position or in the submental region; that operation is always indicated; that cancer of the upper lip is 19 times less frequent than of the lower lip; that cancer of the lip is 10 times as rare in women as in men; yet cancer of the upper lip is 5 times more frequent in women than in men; that, of 178 cases, cancer of the lip occurred most often between 60 and 70 years; and that, while 25%of all cases observed were malignant and 15% benign, 60% were between the two. [M. O.]

19.—Finkelstein reviews the literature of **tuberculosis of the lymph-glands.** He examined 201 cases and removed 250 enlarged glands. He concludes that tuberculosis of the lymph-glands is always a serious affection; that general constitutional treatment is indicated during the first stage, but when redness, swelling and necrosis occur, operation becomes necessary; that all diseased tissue be removed; and that after operation, constitutional treatment, good hygiene and sanitation will all be required to prevent recurrence. [M. O.]

20.—Kissel reports 54 cases of **tuberculous peritonitis in children.** He gives the case-histories of 21 patients in full. Laparotomy was performed upon 35 cases with 27 recoveries. He concludes that tuberculous peritonitis is very common in children; that almost all cases of spontaneous ascites are really tuberculous peritonitis; that the exudate is often absorbed; that the first signs are pallor and loss of flesh; that serous pleurisy may co-exist, facilitating the diagnosis; that the thickened peritoneum, with tuberculous masses, can be felt; that fluid withdrawn shows much albumin and high specific gravity; that cases occurring with tuberculous pericarditis are most difficult of diagnosis; and finally that tuberculous peritonitis rarely begins with marked abdominal symptoms. [M. O.]

21.—Spiridonow reports in full two cases of **fracture of the vertebrae,** with detailed post-mortem findings. Death in both cases was due to septicemia probably from the use of a septic catheter. In such cases Spiridonow advises resection with extension by the MacEwan and Lauenstein methods. [M. O.]

22.—von Cackovic gives the detailed histories of two cases of **total contraction or shrinking of the stomach.** A man of 36 could not eat much, as he felt full at once. Vomiting of small quantities, gastric pain and loss of flesh were also present. The stomach could not be palpated, even when inflated, nor did this cause pain. His stomach held only 100 cc. of liquid. The diagnosis of contraction of the stomach was made and laparotomy and jejunostomy were performed. He died a week later. The second case, a man of 60, showed gastric cancer, and though jejunostomy was done, death followed a week afterward from hypostatic pneumonia. Formerly these small stomachs, though rarely found, were considered the result of atrophy. Others consider them due to malignant degeneration of the muscles of the gastric walls, ulcerative or phlegmonous gastritis, etc. von Cackovic believes that the atrophy following hyperplasia of the connective tissue could not cause so concentric a shrinkage as occurred in his cases. The diagnosis is not difficult, and treatment may be radical, palliative, or symptomatic. Total extirpation of the stomach, duodenostomy, or jejunostomy may be indicated. **von Cackovic prefers jejunostomy by the Maydl method.** A description of the technique of the various methods follows. Nourishment after jejunostomy is most important. A table giving the statistics of 77 jejunostomies shows very poor results, 25 patients out of 67 dying soon after operation. Radical operation is only indicated in uncomplicated cases in strong individuals. Yet von Cackovic advises jejunostomy, as it is not difficult, not very dangerous and certainly lengthens life. [M. O.]

23.—Out of 118 cases of **tumors of the upper jaw,** 64 were in men, 54 in women. 49% were carcinoma, 28% sarcoma, 11% epulis. Most cases of carcinoma began in the antrum of Highmore; of sarcoma in the alveolar process. 31 were inoperable, and 87 operated upon, 47 total resections of the upper jaw, 23 partial resections, and 17 smaller operations. Preliminary tracheotomy was done in 14 cases. Preliminary ligation of the external carotid is the best means of preventing hemorrhage and aspiration pneumonia. 7 of the 47 total resections died soon after operation, four of them from pulmonary complications. But one of the 23 partial resections died after operation. Partial resection in 50% of the cases was followed by recovery lasting three years. Stein advises operation in all cases of malignant tumor of the uper jaw. [M. O.]

24.—From a large number of experiments upon the **disinfection of bandages** and dressings, all of which are described, Borchardt concludes that a good sterilizing apparatus is necessary for good disinfection. The details necessary for the perfect sterilization of bandages, etc. are given in full.

25.—Sneguireff reports a case of **partial resection of the spleen** in a woman of 29, in performing which operation steam was used to stop hemorrhage. She recovered. He had tested steam as a hemostatic previously, in operating upon animals with success. The case-history is given in detail. [M. O.]

26.—Dreyzehner reports a case of **rupture of the central tendon of the biceps** of the right arm, in a man of 61. The

lower end, after a long search, was found and sutured into its groove, as the upper end was too short for suturing. After the wound had healed, he recovered upon massage and passive motion. [M. O.

JOURNAL OF EXPERIMENTAL MEDICINE.

November 20, 1901. (Vol. VI, No. 1).

1. The Production of Sarcosporidiosis in the Mouse by Feeding Infected Muscular Tissue. THEOBALD SMITH.
2. A Study of Chronic Hyperplastic Tuberculosis of the Intestine, with Report of a Case. AUGUST JEROME LARTIGAU.
3. A Case of Multiple Myeloma. A. G. MacCALLUM.
4. Acute Epizoötic Leukoencephalitis in Horses. W. G. MacCALLUM and S. S. BUCKLEY.
5. On the Occurrence of Strongyloides Intestinalis in the United States. WILLIAM SIDNEY THAYER.

1.—A mouse, whose muscular system contains matured parasites of sarcocystis muris, presents a very striking appearance. All the skeletal muscles contain whitish streaks, which run parallel to the muscle fibers. Under a low power of the microscope, these whitish streaks are seen to be thin-walled, opaque tubes which are packed with the crescentic sporozoites. The outer wall of the tube is usually surrounded by a narrow rim of muscle fibrillæ which represents the remains of the invaded fiber. Within the tube there is a faint network that divides the entire parasite into chambers that inclose the sporozoites. In warm, normal salt solution the sporozoites exhibit peculiar movements, although no flagella can be made out. From a study of their life history, Smith concludes that the sporozoites, owing to their perishable nature, must enter another host after the death of the original host and that the second host is presumably warm-blooded. The movements of the sporozoites which resemble a boring or screw like action may come into play when they penetrate the mucosa. When muscular tissue containing the sporozoites was fed to mice, no evidence of infection was found until about the forty-fifth day. The parasite ripens within the muscular tissue in from 2½ to 3 months after the date of feeding, and is then capable of infecting the muscular system of another mouse. [J. M. S.]

2.—Lartigau reports the case of a man, aged 49 years, in whom no family history of tuberculosis could be detected. About 7 years before his death he began to lose weight and to become weaker without apparent cause. His skin became universally pigmented, the color changing to dark brown. Generalized cramp-like pains made their appearance, which occurred at irregular intervals without relation to meals and which were not influenced by pressure. Vomiting occurred from time to time and constipation alternated with diarrhea, although the periods of looseness of the bowels were of longer duration than the periods of constipation. There was nothing abnormal in the stools. A tentative diagnosis of Addison's disease was made. The patient grew progressively worse and died from right sided lobar pneumonia. The greatest interest in the autopsy was found in the intestine. From the upper third of the ileum to the sigmoid flexure of the colon, the wall of the gut was much thickened. The change from normal intestine to the thickened portion was very gradual, but in the cecum, where the thickening was best marked, the wall of the gut measured 2.5 cm. To the naked eye the wall appeared to be fibrous, no tubercles or caseous areas being visible. The lumen of the gut was quite normal, except in the lower ½ of the ileum and through the ascending colon, where it was reduced by about 1.3. The mucosa presented numerous club-shaped papillomatous masses, which were freely movable on narrow pedicles and which were covered with a normal mucous membrane. The peritoneal surface was smooth and showed neither evidence of old peritonitis nor tubercles. The mucosa was found to be 4 or 5 times thicker than normal. The epithelium showed little change and was not broken at any point. The tunica propria was infiltrated with small round cells that were closely packed together. The papillomatous outgrowths were directly continous with the submucosa, but the round-celled infiltration was less intense and more discrete. The epithelium covering them was similar to the epithelium in the other parts of the intestine. In the submucosa the accumulation of round cells was rather more diffuse and the cells were often massed around the bloodvessels. The muscular coat was from 3 to 5 times as thick as normal, which was due partly to hypertrophy and partly to round-celled infiltration. The subserosa was thickened, partly by round-celled infiltration and partly by an increase of the adult connective tissue. In places, this coat was 3 times as thick as normal. Tubercle bacilli were found in the epithelium, in the papillomatous outgrowths, in the submucosa, and in one place in the muscularis. The case was, therefore, one of chronic hyperplastic tuberculosis of the intestine. [J. M. S.]

3.—MacCallum reports the pathological conditions found at autopsy on a subject who died from multiple myeloma. The clinical features of the case, which include albumosuria, were spontaneous fractures, soft tumors attached to the bones, no marked anemia and no metastasis, have been recorded in *Bul. Johns Hopkins' Hosp.*, 1901, Vol. XII, p. 38. The tumors grew from the femur, the ilium, the clavicle, the sternum, the scapula and the skull. They had their origin from the marrow of the bones. The cells composing the new growths had the form and general characters of the bone-marrow cells, lacking the specific granules of the myelocytes, but possessing the peculiar nuclear structure found in the myelocytes and their formative antecedents. They differ in essential particulars from the plasma cells and, in view of these facts and the fact that they largely replace the myelocytes in the marrow in the neighborhood of the tumor, MacCallum considers them to be directly related to these cells, and probably derived from the nongranular forerunner of the myelocytes. Degenerative changes, the presence of numerous cell inclusions, and the abundance of red bloodcells scattered in the tumor mass were noted. [J. M. S.]

4. MacCallum and Buckley have studied the brains of 4 horses that died in the acute stage of cerebrospinal meningitis and the brain of another animal that had recovered from the same disease but that subsequently died from another cause. From their study of these brains the authors conclude that the disease is an acute one that is rapidly fatal. It produces large areas of complete destruction of the brain substance in which the anatomical elements are disintegrated and largely replaced by a colloid-like material. In the neighborhood of the degeneration the bloodvessels are acutely inflamed, there is exudation of leukocytes into the vessel-walls and throughout the adjacent tissues, and passage of red corpuscles into the perivascular lymph-sheaths and into the adjacent tissues. These focal extravasations give the inflammatory process its hemorrhagic character. Anatomically the condition is analogous to the various forms of acute hemorrhagic encephalitis seen in man, although the latter condition is less rapidly progressive and less violently destructive than the process in the horse. [J. M. S.]

5.—Thayer reports 3 cases in which strongyloides intestinalis was found in the stools. The cases were observed in the Johns Hopkins Hospital within 3 years after originally contracted in Maryland and Virginia. The writer first gives an historical résumé of the literature concerning the parasite. From a study of the 3 cases referred to Thayer is led to believe that the disease may be more frequent in the United States than has hitherto been supposed. There is no doubt but that diarrhea is due to the presence of the worm in the intestine of its host. The development of the sexually differentiated free-living generation was unusual in that there was a direct transformation of the rhabditiform embryos into filariform larvæ. This has now proved to be the rule in cases originating elsewhere than in temperate climates. [J. M. S.]

REVUE DE MEDECINE.

November 10, 1901. (Deux. Année, No. 11.)

1. A Study of Tympany in Acute Pneumonia. H. DE BRUN.
2. Should Fever be Treated, and How? E. JENDRASSIK.
3. A Study of the Hereditary Anomalies of the Jaws and Teeth. V. GALIPPE.
4. A Critical Study of Streptococcus Epidemics. R. BERNARD.
5. A Case of Ophthalmoplegic Migraine. C. MATHIS.

6. A Contribution to the Study of Psychic Paralysis.
G. HAUSER and L. LORTAT-JACOB.

1.—De Brun concludes that there are 3 varieties of **tympanic resonance in pneumonia:** (1) Premonitory tympany; (2) attending tympany (*tympanisme satellite*), and (3) pleximetric tympany. Premonitory tympany may be obtained at the beginning of the disease; it is a temporary phenomenon, and indicates that the pneumonic area is separated from the surface by a layer of healthy lung tissue. Attending tympany is very frequent. It is obtained at the apex of the lung usually, especially in the subclavian fossa and in the axilla. It may be elicited in both of these regions at the same time. As a rule, it is found in the neighborhood of the area of consolidation; more rarely it is obtained at some distance from the diseased area. In the latter case it is most commonly found in the lateral or posterior portion of the lung and is usually quite extensive. Its pathogenesis is probably more complex than the term compensatory or complementary resonance, which has been used to designate it, would indicate. In both of these varieties of tympany the lung itself furnishes the sonorous vibrations. In the third variety (pleximetric tympany), on the other hand, the lung acts only to transmit a sound that is elicited in the neighboring organs. When the lung is totally hepatized it is possible to obtain pleximetric tympany; first, in the subclavian fossa and, more rarely, in the paravertebral region. The sound obtained in these positions resembles the "cracked pot" sound, and originates in the trachea and the primary bronchi. It is exaggerated when the patient opens his mouth, and becomes more intense as one approaches the sternum. The second location in which pleximetric tympany may be obtained is at the base of the thorax, either anteriorly, posteriorly or laterally. Its resonance is clear and sometimes loud; it probably has its origin in the hollow viscera of the abdomen or in the healthy lung. The simultaneous existence of both these areas of pleximetric tympany is a very grave prognostic sign. In order that the superior area of pleximetric tympany may exist, it is necessary that the superior lobe shall be hepatized in its entire thickness and length. On this account, this tympanitic area is bounded inferiorly by an extensive area of dulness and always coincides with a very extended dulness in the posterior and superior region of the chest. [J. M. S.]

2.—Jendrassik is an advocate of the use of **antipyretics, which he prefers to the cold bath, in the treatment of fever.** Antipyrine, phenacetine, and, in some conditions, aspirin, are the best of these substances from the viewpoint of substantial results. Aspirin is particularly applicable in fevers of moderate intensity, in which it has a very agreeable sedative effect, as well as acting as a stimulant to the sweat glands. In cases of high fever phenacetine is the best drug, particularly for children, but often, after acting well for several days, the remedy suddenly loses its action, and then it is useless to increase the dose. In such cases it is better to substitute aspirin or antipyrine, the latter of which is best administered by rectal injection. The author has never seen either of these substances void of the desired action. There are cases of grave infection, however, in which it is almost impossible to lower the temperature, and in such cases it is necessary to employ other antipyretic means. It is easy, as a rule, to relieve fever if doses of sufficient size are administered; 1 gm. to 1.5 gm. (15 to 20 grains), phenacetine by mouth, or 3 to 5 gm. (45 to 75 grains) antipyrine by rectum. These doses ought not to be divided and, if necessary, the dose may be repeated at 4 hour intervals. Such a dose suffices for action for about 6 hours, at the end of which period the temperature will have reached its minimum. The thermometer then begins to rise rapidly, and all the inconvenient symptoms of fever return. The dose should then be renewed; although the physician should be guided by the amount of fever rather than by the time that has elapsed. There is no advantage in waiting until the temperature has reached its maximum before repeating the antipyretic; on the contrary, if the remedy is used as soon as the rise begins, a useless elevation of temperature is prevented and the inconvenience of a too sudden fall is obviated. For children, the doses given above are too high, and from 0.4 to 0.7 gm. (6 to 10 grains) phenacetine are recommended. These drugs are not only antithermics, but act in mitigating the influence of the toxins that are produced by the infectious agent. They should be employed in cases in which fever is badly borne, in which it aggravates the state of the disease. For weak patients it is advantageous to give a little alcohol or other stimulant just as the antipyretic begins to act. [J. M. S.]

3.—Will be abstracted when finished.

4.—Will be abstracted when finished.

5.—Mathis reports a case of **ophthalmoplegic migraine** in a soldier, aged 30 years. There was paralysis of the muscles innervated by the third pair of nerves. The first attack, which occurred at the age of 12 years, followed employment in an occupation which was very fatiguing for the eyes. There was no association of the paralysis with symptoms of general paralysis or of exophthalmic goiter. [J. M. S.]

6.—Hauser and Lortat-Jacob report a case of ordinary **hysterical monoplegia** following a traumatism in a predisposed patient. They also report a case of **partial monoplegia of psychic origin,** which developed after a benign traumatism, a case of flexor paralysis of the hand following traumatism and one of partial paralysis **of the right upper extremity,** accompanied by anesthesia, which was cured by psychotherapy. [J. M. S.]

LA SEMAINE MEDICALE.

December 4, 1901.

The Bladder Complications of Syringomyelia.
J. ALBARRAN and G. GUILLAIN.

These authors have reviewed the literature of **syringomyelia** and state that, for the most part, bladder complications are not mentioned. Bruhl has encountered a case complicated by cystitis. A patient of Seebohm suffered from constant desire with inability to urinate. These seizures were occasional and perhaps an hour later the patient might be able to pass urine freely. Another case of this sort has also been reported. A patient of Becker had incontinence and retention. Westphal relates a case in which the functions of the bladder and rectum remained for a long time unimpaired, but later functional disturbances developed. Hatschek relates a case of incontinence of urine and feces and at autopsy a condition of chronic cystitis was revealed. Schlesinger observes that patients frequently do not complain of bladder disturbances, owing to the insensibility of the mucous membrane of this organ, but that pathological states are frequently discovered by the attending physician. In a patient with syringomyelia he withdrew three liters of urine by catheterization. The patient had presented no symptoms. This author also mentions the fact that following catheterization the patient will frequently cease to have the desire to urinate. In treatises on neuropathology, Albarran and Guillain have found that bladder involvement is mentioned rarely. In general, it may be said that in works dealing with this disease most authors regard bladder complications as accidental and of no great importance. The authors of this paper, however, have become convinced to the contrary. From the service of M. Pierre Marie at the Bicêtre they have determined that vesical changes of a constant and characteristic type do take place. Only six patients suffering from the disease who were examined were free from bladder complications. They state that even those patients in whom there are no referable symptoms suffer, as a rule, from a loss of vesical contractility. There is present a condition of latent retention which must be determined by catheterization. Other patients with syringomyelia present a syndrome which consists of painful micturition, hematuria, polyuria, in other words a cystitis. The cystoscope reveals the presence of ulcerous cystitis and these ulcerations have a particular characteristic, they are **trophic.** Indeed, Marie in Charcot's service, observed a case at post-mortem in which bladder perforation had actually occurred from this cause. This was reported by P. Blocq and the fact was established that in certain cases of this disease perforation of the bladder, due to the trophic ulceration, occurs and that this may set up a fatal peritonitis. Latent changes of contractility of the bladder, ulceration, and perforation are the three stages found. Two illustrative cases are cited. At the autopsy of one of these an involvement of the right kidney was found. There were two ulcers in the posterior

wall of the bladder, one of which was perforated. The renal infection is readily accounted for by the abnormal dilatation of the orifice of the ureters which was found to exist. Clearly, from these facts the necessity of keeping the urine of such patients aseptic is paramount.

[T. L. C.]

December 11, 1901.

Are the Variations in the Mortality of Diphtheria Immediately Dependent on our Therapeutic Measures?

DE MAURANS.

De Maurans presents an interesting paper on the question of the actual **specific value of antitoxin treatment.** He recalls the fact that antitoxin has been in general use for about seven years, and he has made a study of the mortality of a number of European cities from diphtheria from 1883 to 1901. These mortality-tables will illustrate the death-rates from the disease in fourteen years, and, if antitoxin is a specific treatment, these tables should show a steady decrease of death for the past seven years. In a certain number of cities this is found to be the case, while in others the death-rate has been even higher than in the years immediately preceding the introduction of antitoxin treatment. There are three factors which are to be taken into account in explanation: Either that the antitoxin employed has not been in all cases of standard quality, but has varied widely; that it is not a true specific; or that this disease, like many others of infectious character, develops in a cycle. In other words, that in certain places differing at different times the disease attains an acme of virulence during which the mortality is highest, irrespective of the treatment employed; thereafter declining in virulence until the lowest death-rate is reached for that particular place in that particular epidemic, gradually to increase in virulence and repeat this cycle of development and decline. This explanation is the most probable one and, as the author remarks, the subject is worthy of further study. [T. L. C.]

December 14, 1901.

A special number of this date is devoted to abstract of recent medical literature from the French, English, and German. [T. L. C.]

December 18, 1901.

The Outline of the Heart by Percussion and Radiography; A Comparison of the Two Methods.

PROFESSOR POTAIN.

This article was written by Prof. Potain but a short time before his death. In order to appreciate the changes in the size of the heart, the points to be considered are: (1) The prominence of the precordial region. (2) The intensity of the cardiac impulse. (3) The exaggerated extent of the impulse. (4) The displacement down and outward of the apex. (5) The outline of the organ by percussion. In addition to these newer methods it is now necessary to add radioscopy and radiography, but we must not forget the means of diagnosis given above. By means of the X-rays the heart may in the great majority of cases be clearly outlined and Potain mentions that he has frequently found the outline obtained by percussion and by radiography to correspond exactly. However, there are certain other cases in which the shadows are not so easily interpreted and Potain believes that with skilful percussion and auscultatory percussion we possess accurate means of determination which are always at hand and are of much simpler application. Potain recommends outlining the heart by percussion by making strokes from the periphery and converging towards the organ and distinctly advises against beginning the percussion strokes over the heart and extending them outwards. He sounds a note of warning against neglecting the tried methods of physical diagnosis in this era of X-ray employment.

[T. L. C.]

JOURNAL DES PRATICIENS.

January 4, 1902. (16me. Année, No. 1.)

1. Crossed Paralysis in Syphilis. PROFESSOR RAYMOND.
2. Vegetative Mitral Endocarditis, Ulcerative Aortitis and Embolic Aneuryism of the Abdominal Aorta. HUCHARD and BERGOUIGNAN.
3. A New Theory to Explain the Sleeping Sickness. VAN DEN CORPUT.

1.—Raymond reports a case of **crossed paralysis** in a man of 21 years, who contracted syphilis at 16, but had never been treated. He complained of headache, vomiting, loss of power and sensation in the right arm and leg, with increasing stiffness. Total left-sided facial paralysis followed, with diplopia. His left pupil was contracted, and his left masseter and left external rectus oculi muscles were paralyzed. Raymond stated that the lesion was syphilitic in character, situated in the upper part of the medulla on the left side, reaching into the crura. The prognosis, upon specific treatment, is good. [M. O.]

2.—Huchard and Bergouignan report a case of **endocarditis** in a man of 26, who had had syphilis, malaria and rheumatism. He died after edema and swelling of the left leg and foot had occurred, which was supposed to be due to an embolus in the popliteal artery. The autopsy showed **vegetative endocarditis** of the mitral valve, **ulcerative aortitis and a small aneurysm of the abdominal aorta** close to its bifurcation. The left internal and external iliac arteries had contracted, and were filled with clots. The production of an aneurysm in the course of an infectious disease is rare. Yet Huchard insists that the infectious diseases can produce circumscribed arteritis and emboli, with the formation of an acute aneurysm; that the aneurysm may occur rapidly from chronic aortitis during an infectious disease; that infectious diseases may cause subacute or chronic aneurysm formation years afterward; and that circumscribed or pre-aneurysmal ulcerative arteritis may be due to emboli or to the invasion of the arterial coats by different micro-organisms. [M. O.]

3.—Lately Broden has described a **bacillus or diplobacillus as the cause of the sleeping sickness,** which van den Corput calls **cathypnosis** or toxinosis of sleep, so common in the Congo Free State among the natives. It is to be hoped that the production of an immunizing serum will result from his inoculations into animals. The pathology of the disease remains obscure. Serous effusions occur, causing the name of "sleepy dropsy." Van den Corput believes that the disease is due to the accumulation of toxins in the system, the results of which are fatigue and sleep. [M. O.]

January 11, 1902. (16me. Année, No. 2.)

1. A Case of Perforated Duodenal Ulcer. MAUCLAIRE.
2. Lithemia and Uricemia. HENRI HUCHARD.
3. Pain in the Neuroses. PAUL EMILE LEVY.

1.—Mauclaire reports an **ulcer of the duodenum,** a rare condition, difficult to diagnose and to treat. The patient had had pain between the margin of the ribs on the right side and the umbilicus, then all over the abdomen, sudden in onset and severe. When Mauclaire saw him, 36 hours after the pain had begun, vomiting had ceased, his temperature was subnormal, and his condition grave. There was marked tympany and the diagnosis of **peritonitis following intestinal perforation** was made. A history of a week of diarrhea previous to admission was obtained. Laparotomy was at once performed, and death occurred 16 hours later, 55 hours after the onset of the attack. Autopsy showed wide-spread plastic peritonitis following the perforation of an ulcer in the duodenum 2 cm. below the pylorus. These ulcers, found in men over 20, near the pylorus, sometimes heal spontaneously. Pain and melena, symptoms common to ulcer of the pylorus, are noted, while hematemesis and jaundice occur but rarely. Appendicitis and lead colic must be distinguished from the perforation of a duodenal ulcer. The prognosis is unfavorable always, while gastro-enterostomy is indicated if the diagnosis is made in time. Excision of the ulcer would be the ideal operation. [M. O.]

2.—Huchard believes that **uricemia exists in many cases** of lithemia and that as a result of the uric acid in the blood a condition follows which he terms the **uricemic heart.**

Myocardial symptoms appear without any lesions of the myocardium, due to the vasoconstrictor action of the uric acid. These symptoms are secondary to the angiospasm, the arterial hypertension being caused by the uric acid. He reports a case of pseudo-anemia in a woman of 45, of diabetic and gouty ancestry, with marked myocardial symptoms. In such case water, milk, and vegetables are indicated. [M. O.]

3.—Lévy discusses the limits of hysterical, neurasthenic, or nervous pain. This may be truly nervous or organic, the former when the seat of pain is unaffected by disease, the latter when the opposite is true. In the former class of patients, an imaginary pain becomes a truly nervous pain, and should be treated as such. Great care is needed to differentiate between these two classes of patients. Nervous pain may increase in intensity, in persistency, and in extent. Lévy advises effacing the imaginary pain, then treating radiating and persistent pains. The treatment will vary with each individual. [M. O.]

LA PRESSE MEDICALE.

January 1, 1902. (No. 1).

1. Peripheral Facial Paralysis. PROFESSOR RAYMOND.
2. Enteroclysis with Hydrogen Peroxide. HENRI ROGER.

1.—Raymond reports a case of **peripheral facial paralysis,** in a man of 32, who, after continued headache, noted right-sided facial paralysis. There was some deafness in the right ear, with homonymous diplopia and paralysis of the right external rectus muscle. The paralysis of the facial was total. A full description of the origin of the cranial nerves and the topography of lesions affecting them follows. Crossed paralysis is well explained. Facial paralysis may be of little, average, or great gravity, depending upon the presence of the reactions of degenerations. On potassium iodide and electricity the results are generally excellent. [M. O.]

2.—In acute dysentery and the infectious diseases of children, Roger uses **enteroclysis with hydrogen peroxide,** neutralized by adding sodium bicarbonate. One to three injections of this antiseptic solution, diluted in water one to five, have been given daily. Improvement follows in a few days. Its use is especially indicated in the intestinal infections of childhood, in which cases Roger advises two or three injections a week. [M. O.]

January 4, 1902. (No. 2).

1. A General Idea of the Dermatoses. L. BROCQ.
2. The Role of the Nasal Fossae in Tuberculosis. MIGNON.
3. Buchu in the Treatment of Gonorhea. ALFRED MARTINET.

1.—Brocq's experiments show that one cause may provoke dissimilar eruptions, depending upon the different individuals affected; or one eruption may be caused by widely different causes. Besides, **dermatoses** may be mixed, artificial eruptions of external origin, being complicated by cutaneous reactions or bacteria, or both together. Finally Brocq divides the dermatoses into nine classes, the pure cutaneous affections, such as urticaria, erythema, eczema, lichen, prurigo, psoriasis, etc.; dermatoses due to ordinary bacteria, such a furuncle, folliculitis, acne, impetigo, ecthyma, etc.; dermatoses due to specific microbes, as leprosy, tuberculosis, etc.; dermatoses due to vegetable or animal parasites; artificial eruptions due to external or internal causes; trophic, reflex eruptions and those due to lesions of internal organs; and cutaneous deformities. [M. O.]

2.—The hairs at the entrance to the nares act as a filter for microbes and dirt, while the normal nasal mucous membrane secretes a fluid which is relatively bactericidal. When catarrh occurs, the secretion is changed, and tuberculous infection frequently follows. **In tubercular patients special attention to the nasal fossae is advised,** to prevent further infection. A good respiration is necessary for the improvement of a tuberculous subject. [M. O.]

3.—Martinet advises **buchu,** from 20 to 60 drops of the alcoholic tincture twice daily, **in the internal treatment of gonorrhea.** He reviews the history of the drug, and notes its use in England and America, with cubebs, copaiba, and sandalwood. [M. O.]

January 8, 1902. (No. 3).

1. The Age of Rickets. A. DELPEUCH.
2. The Re-education of the Body in Locomotor Ataxia. G. CONSTENSOUX.
3. The Indications and Contra-indications to Phosphorus. ALFRED MARTINET.

1.—Delpeuch's researches in the literature show that **rickets was known in the earliest days of civilization,** and that it was then just what it is now. Since the disease is due to poor feeding and hygiene, these must be corrected. Hippocrates, Galen, Homer, Esop and many more of the ancient authors described typical rachitic subjects. [M. O.]

2.—Constensoux shows that, after a thorough examination of **patients with tabes** to discover the muscles and the movements which need especial exercise, **Frænkel's method of re-education** in locomotor ataxia gives excellent results. It is important to know the static relations necessary to keep the body erect for standing and walking. Exercises are needed for both the upper and lower extremities, and also for the muscles of the trunk. He explains the details of the methods used at the Salpétrière Hospital. [M. O.]

3.—Martinet, in a series of algebraical equations illustrates **Joulie's method of giving phosphorus,** and of regulating the dose by examining the urine for its acidity and phosphoric acid. In this manner the physician will easily note whether phosphorus is indicated or not. [M. O.]

January 11, 1902. (No. 4.)

1. The Changes in the Liver Following Renal Impermeability. A. GOUGET.
2. The Separation of the Urine from the Two Kidneys. GEORGE LUYS.

1.—In Bright's disease and as the result of experiments in which urine or urea has been injected into animals, changes occur in the liver, due to retention of urinary poisons, which are stored up in the liver. The liver increases in volume and crystals of urea are often found in the hepatic cells. On giving animals injections of urea in large doses, the **changes noted in the liver vary from a pale, transparent degeneration,** which does not attack the nuclei, **to beginning cirrhosis.** The cause of these conditions in man is **renal impermeability.** They are the result of physical rather than chemical action. An increase of osmotic pressure also occurs. [M. O.]

2.—Attempts to **separate the urine from the two kidneys** have been made by three methods, by **compression of one ureter** either by surgical intervention, directly closing one opening into the bladder, indirect compression through the rectum, or compression through the pelvis; by **catheterization of the ureters,** either by surgical intervention, inserting a sound into the ureteral orifice, inserting a catheter into the ureter, or using catheter and cystoscope; and by **dividing the bladder into two parts by inserting an instrument,** thus separating the urine of either side. Luys describes a new instrument for collecting the urine from each kidney separately. It is exceedingly complicated and difficult to introduce, yet is now being used in France. The results of its employment will be published later. [M. O.]

Society Reports.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

SECTION ON OPHTHALMOLOGY.

Meeting held March 18, Dr. William Thomson in the chair.

Dr. William Campbell Posey, exhibited a case of **tubercle of the iris** in a colored child, 6 years old. Notwithstanding cod-liver oil, mercurial inunctions, and the local application of atropine and boracic acid, the tubercle slowly reached the size of a large pea. Enucleation was advised. Dr. Posey also showed a **coquille to aid in the detection of diplopia.**

Dr. James Thorington exhibited the **De Zeng luminous retinoscope.** The great advantages of the instrument are its portability and greater illumination without heat. Drs. W. C. Posey and E. A. Shumway detailed the history of a case of **carcinoma of the eyelids,** with secondary involvement of the eyeballs, removed by extensive plastic operations, followed by recurrence, in a female, 61 years old. As a consequence, enucleation and evisceration were necessary. Dr. Sweet referred to a case of extensive epithelioma of the eyelids, in which the disease had caused destruction of the right eyeball, and had spread halfway across the nose.

Dr. G. E. de Schweinitz gave the history of a man, aged 23, suffering from **chronic inflammatory glaucoma and bilateral horizontal nystagmus.** Bilateral sympathectomy was performed, the interval between the operations being six weeks, by Drs. W. Joseph Hearn and J. Chalmers Da Costa. The operations accomplished nothing more than was secured with eserine. The pathological changes in the ganglia excised consisted of a marked hyperplasia of the connective tissue. The ganglionic cells were pigmented and degenerated. Dr. Harlan referred to the probability of the permanency of the myosis following excision of the sympathetic ganglia. Dr. Hansel agreed that the operation was justifiable after all other means had failed.

Dr. G. C. Harlan showed the eye of a negro boy, 15 years of age, removed for **congenital glaucoma.** Both eyes were buphthalmic and sightless. The eye was enucleated for the relief of pain. Examination of the specimen showed complete separation of the retina, the disc cupped, and the lens undergoing calcareous degeneration. Dr. Hansell described the clinical and microscopic points of interest in glaucoma following hemorrhagic retinitis, and in primary glaucoma in which profuse and destructive hemorrhage followed iridectomy. Dr. de Schweinitz showed sections of eyeballs removed for glaucoma, in all of which the interference with the excreting channels was well seen.

Dr. John T. Carpenter reported the clinical history of a **diabetic patient,** aged 51, with rapid changes in refraction accompanying variations in the amount of sugar in the urine. Glycosuria greatly lessened under suitable treatment and rigid diet. With this improvement vision rapidly failed. Upon the return to a liberal diet, vision again failed. The final result was low myopic astigmatism. Dr. Carpenter referred to the rarity of this condition in glycosuria. He attributed the rapid changes of refraction to alterations in the refractive index of the lens.

MANHATTAN DERMATOLOGICAL SOCIETY.

Meeting held March 7, Dr. W. S. Gottheil in the chair.

Dr. Geyser showed a woman whose left breast had been removed for **carcinoma** 9 years before. Three months ago, after a lacerated wound, nodular growths developed with pain. The right breast later showed hardness, pain, and retraction of the nipple, with moderate cachexia. After six X-ray treatments, the pain, discharge and nodules diminished. Dr. Geyser expressed his faith in this treatment, especially in inoperable cases. Rubber shields prevent dermatitis. Dr. Sobel thought better results could be accomplished with X-rays in superficial growths; in deep-seated tumors he would rely on surgery. Dr. Abrahams said the absence of adenitis and of retraction, and the appearance of the left breast favored a diagnosis of tuberculosis. Dr. Gottheil thought the left breast tubercular. Apparently good results with X-rays are often followed by relapse, dermatitis, and gangrene.

Dr. Oberndorfer presented a man with **eczema seborrhoicum annularis,** a red, scaly eruption on the back, chest, forearms and scalp, grouped in circles with white centres. Dr. Sobel presented a man with a somewhat similar eruption. Dr. Gottheil showed a woman with an eruption covering the buttocks and thighs, irregular, crescentic patches with light centres. He called this **pityriasis rosea.** Dr. Bleiman said that Dr. Gottheil's case was ringworm. Dr. Pisko called Dr. Oberndorfer's case tinea versicolor, the present appearance being due to treatment.

Dr. Abrahams presented a case for diagnosis, a woman who had sustained a slight injury to a finger tip 11 years before. Six months later the nail became blue and discolored and has so remained. The matrix bulges and there is pain affecting the entire arm, but the finger is normal, except for local hyperidrosis. The consensus of opinion was that a new growth was present. Dr. Geyser reported a similar case which showed a shadow when radiographed, and upon operation an encapsulated needle-point was found.

Dr. Gottheil then showed, under the microscope, a hair removed from a patient with typical **alopecia areata.** The mycelium was visible. Dr. Oberndorfer reported an interesting case of **lues,** with marked secondary symptoms, which did well on antisyphilitic treatment.

Dystocia due to Fibromata.—In his report at the recent Congress of Gynecology, Obstetrics and Pediatrics, at Nantes, France, Dr. Boursier says that the presence of fibromata in the genital tract leads to dystocia in three ways, by causing an improper position of the fetus, by preventing uterine contractions, and by mechanical obstruction to the passage of the fetus. When a fibromyoma causes dystocia in either of the two first-mentioned ways, the ordinary obstetrical maneuvers, dilatation, forceps, version, basiotripsy, or embryotomy may be performed. Some fibromata which seem to block the genital tract change their shape sufficiently to allow the fetus to pass. But when the above named obstetrical procedures do not help the fetus to pass by the tumor, when there is marked stenosis of the genital tract, surgical intervention is justified. When the fibroma is in the vagina, it can be removed at any time, even during pregnancy, without disturbing the course of the pregnancy. When the fibroma is in the pelvis or abdomen, myomectomy, symphysiotomy, Cesarean section, or total abdominal hysterectomy may be performed. Symphysiotomy is rarely indicated, Cesarean section is too dangerous, while **total abdominal hysterectomy,** including the fetus and the tumor, is the operation to be preferred. [M. O.]

Four Cases of Lupus with Epithelioma.—Morelle reports four cases of epithelioma which developed upon a pre-existing lupus. All of the patients were women, ranging from 41 to 58 years of age, and in three of them the tumors were extirpated. Of these only one recovered, having had no recurrence in five years. One case which was treated palliatively, died in four years. In another, the epithelioma recurred four months after operation, and in the last case, in whom both lupus and epithelioma were extirpated, the lupus alone recurred. Death occurred two years later, from cancer of the omentum. The case histories are given in full. With early extirpation of the tumor the condition may be cured. Otherwise the prognosis is unfavorable. Cauterization seems to help the development of the tumor. (*La Presse Medicale Belge*, August 25, 1901, No. 34). [M. O.]

Original Articles.

RUBELLA AND THE "FOURTH DISEASE."*

By J. P. CROZER GRIFFITH, M. D.,

of Philadelphia.

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The announced discovery of a fourth infectious eruptive fever in addition to measles, scarlet fever and rubella, if corroborated, might almost be regarded as a universal calamity. Already we have more diseases than we know what to do with and more than we can recognize or treat. We have struggled for years to distinguish rubella from measles and scarlet fever, not always with brilliant success. The addition of a fourth eruptive fever makes the matter only more difficult instead of easier.

The assumption that rubella includes in its name more than one disease, and that the two well-known types are really quite distinct affections, is not at all new. Thomas, writing in Ziemssen's Cyclopedia, suggests the possibility of this, and Filatow maintained the view in 1885, but the evidence was not conclusive. Jürgensen, in Nothnagel's *Pathologie und Therapie*, believes that many other conditions than rubella are included under the name "Rötheln," especially cases of measles and scarlatina, although he does not maintain the existence of any fourth distinctive infectious fever resembling them in any way. With such a well recognized authority as Dr. Clement Dukes stating so positively that what we have considered two forms are really distinct diseases, the matter deserves the most serious consideration, and the burden of proof seems almost to rest upon those who disagree. Dr. Dukes' claim rests upon the following experience: 1st. He reports an epidemic of 16 cases occurring in a school, which was first thought to be scarlet fever, but which he afterwards concluded was the "fourth disease." That they were not scarlet fever appeared likely from the fact that none of the children who went home for the holidays developed this. 2d. He observed an epidemic of 31 cases in another school, supposed at first to be the scarlatinal type of rubella, but afterwards proved, he thinks, to be scarlet fever and the "fourth disease" occurring simultaneously, inasmuch as 32.25% of the cases apparently passed through the same illness twice, one close after the other. Two died. He details the symptoms of the two diseases present, and bases upon this a description of the symptom-complex of his "fourth disease." 3rd. He reports an epidemic of 19 cases occurring at Rugby among patients, 42.1% of whom had already suffered from undoubted rubella. He describes the symptoms in these cases, which were peculiarly like those of scarlet fever, the rashes being almost identical and there being very extensive typical scarlatinal desquamation. There was, however, the absence of great acceleration of pulse, high temperature, and peeling of the tongue, on which account he claims that they were not scarlet fever, and consequently must have been the "fourth disease."

The view of Dr. Dukes has been upheld by some and disputed by others. It does not seem to me that the report of the epidemics is convincing, and for the following reasons: 1st. The first epidemic he assumed to be of a "fourth disease," because it was of the scarlatinal type, and because no cases of scarlet fever developed later. This merely indicates that the disease was not scarlet fever, but does not prove that there may not be two varieties of the one disease, rubella. None of the cases are stated to have had rubella previously. Consequently there is no proof that the disease could not have been rubella on this ground. 2d. The second epidemic apparently proves that two diseases existed at the same time, one of which we may admit, for the sake of argument, was scarlet fever of a mild form. This does not prove, however, that the other was an independent "fourth disease," and not rubella scarlatiniforme. Not one of these cases is said to have had rubella previously, and without this we are not justified in assuming that the two types as we recognize them are distinct diseases.

In neither of these two epidemics were the symptoms of the "fourth disease" different from those which are repeatedly observed in rubella, with the varying of symptoms, especially in the character of the rash, which it so commonly exhibits in house epidemics. 3d. The third epidemic, occurring as it did in a number of patients who had had rubella previously, shows that the second disease was not this. The cases in this instance, however, differed so greatly from those of the "fourth disease" of the first and second epidemics, and were so strongly like scarlet fever in so many instances—as Dukes himself admits—that proof is required that they were not really instances of an unusual form of scarlet fever. To prove that the supposition is impossible that they were really scarlatina, it is necessary, first, to assume that scarlet fever can never show any variation in type either in the individual or in epidemics—and this, we all recognize, is not borne out by facts; and, second, to show that some of the cases had had scarlet fever before or developed it later. This Dukes admits was not true in any instance.

Admitting, then, that Dr. Dukes has not established his point from the evidence of his own cases, let us see what evidence there is that the assumption of a new disease is not necessary, and is disproved by the experience of other observers.

To prove positively that the type called rubella scarlatiniforme is a distinct affection from the form more commonly seen, it is, first, necessary to make certain that one form does not protect from the other. We must find a series of cases which have had undoubted measles, scarlet fever, rubella and the so-called "fourth disease." This has not yet been done. Second, we must prove that the same original infection cannot produce either form in different individuals. This is certainly not the experience of very numerous clinicians. I shall mention only two of the reported epidemics in recent years. C. Haig Brown (*British Medical Journal*, 1887, I. 826) reports an epidemic of 13 cases in the Charterhouse School, in which the patients exhibited a rash that

*Read before the Section on Clinical Medicine of the Medical and Chirurgical Faculty of Maryland.

was almost identical with scarlet fever. Five had had scarlet fever previously, which excluded this disease. Not one of the 13 developed rubella in a later epidemic of the affection, which is strong inferential proof that the previous disease, which might with entire propriety have been called the "fourth disease," was certainly rubella. Williams (*British Medical Journal*, 1901, II. 1797) reports two epidemics which show that the symptoms of the so-called "fourth disease" may be exactly simulated by both rubella and scarlet fever, which fact has, he says, rendered Dr. Dukes' diagnostic symptoms almost valueless. He details an epidemic of 32 cases at Clifton School, which showed very great variation in the symptoms, some cases resembling scarlet fever very closely, yet in which all were with little doubt rubella.

I was particularly impressed, when first studying the subject in 1886, by the uniformity with which writers recognized the protean character of the rash and its tendency to vary:—not merely to a rubella scarlatiniforme and a rubella morbilliforme, clearly differentiated from each other, but in many other ways, and with cases showing many varying combinations of the two types in one person. Indeed, Maton, the first English observer to recognize the affection, writing in 1815, says: "But, after all, the true distinctions of this disease are, in my opinion, to be founded on the more general and constitutional circumstances."

In my own studies of cases of the affection I was so impressed by this tendency to vary toward two types that I designated them rubella scarlatiniforme and rubella morbilliforme even before I had read the reports of somewhat similar observations by a number of writers. In typical cases of the first form the spots are nearly or fully the size of a split pea, have the purplish-red tint characteristic of measles, are more or less grouped as in this disease, and are slightly elevated. In the second form the rash is confluent everywhere or in patches, is not elevated, and produces a general redness which may almost exactly simulate scarlet fever. Careful examination may reveal a few macules in the general redness, especially at the wrists or between the brows. In other cases it may be absolutely impossible to distinguish the rash from that of scarlet fever. Midway between these types comes the ordinary rubella with its characteristic rose-pink spots looking like red ink on moist blotting paper, as they have been aptly described, discrete or crowded into confluent patches, but without the characteristic grouping of measles. All gradations may be found from one extreme to the other. Then, too, the character of the eruption may sometimes be more like measles on the first day, and become greatly like scarlet fever on the second. Again, as already pointed out, in the same child the eruption may present different characteristics on different parts of the body.

When we are dealing with isolated cases it is impossible to prove that, after all, the different types may not be distinct diseases, since we know not the source of infection. But when we see such variations in house epidemics we are forced to admit that we are dealing with one disease which has a rash of a protean character with a special variation towards two distinct types, unless we maintain that two distinct diseases are prevailing among the children at the same time. That such a thing should occur with such frequency is scarcely conceivable.

I may relate an experience in one house epidemic which thoroughly convinced me of the unity of the two types of the disease. In a home containing about a hundred children, who had practically no intercourse with the outside world, rubella of a nature beyond doubt was brought by a child from outside who developed the disease almost as soon as she entered. In a short time other children began to exhibit it, 28 cases developing in 11 days, and about 50 children in all being attacked. The presence of any other infectious disease in the house was of the greatest improbability. The general symptoms of all the cases were much the same, and the study of them as a whole could have left no other conclusion in the mind of any unprejudiced observer than that they were instances of one and the same disorder. Yet while most of them exhibited the rash in the ordinary form, all the gradations of which I have spoken were present. In most the rash was of the ordinary form. In some it was so like measles that the diagnosis would have been difficult or impossible in isolated cases, especially as some of the other symptoms, too, strongly suggested measles. In others it resembled strongly the eruption of scarlet fever. In still others the various combinations and changes to which I have referred were well shown. Lying in bed in the ward at the same time were the following two cases. I quote the notes made at the time, not because the patients constituted the best examples of rubella morbilliforme and rubella scarlatiniforme that I have ever seen, but on account of the fact that one was clearly dealing with instances of the same disease, as proved by the circumstances I have mentioned:

Katie Glendening, 5 years old.

March 4. Yesterday evening her eyes were inflamed. This continues this morning, and a rash has appeared on her face. Examination at 11.30 shows pea-sized blotches, more or less confluent on the face, and a very few on the legs, trunk and arms. Her eyes are running and sore and much injected. The child is drowsy, and has convulsive twitchings. The temperature is 103.8° and the pulse 153. The submaxillary and superficial cervical glands are enlarged, but the posterior auricular are not. The throat is somewhat red, and the tonsils are enlarged.

March 5. Yesterday afternoon her eyes grew better, and the child brighter, the rash being still confined largely to the face. The temperature this morning is 100.3°. The rash has to-day spread over the body, is much elevated, deep red, shows many groupings into lines and crescents, and is almost exactly like that of measles. On the back it is more confluent and of a somewhat brownish-red color.

March 6. The temperature has fallen to 99.9°, the eruption has left the face, and is now most marked in pea-sized and smaller maculo-papules at the ankles and wrists.

March 7. There is to-day a branny desquamation on the face and arms.

Bertha Lewis, 8 years old.

March 6. A rash appeared this morning, attended by inflammation of the eyes. Now it consists of pinpoint measles, confluent to a large extent throughout the body, producing in many places an almost even, red color. The face is almost solidly red, with only an indistinct mottling on it. The palms of the hands and both surfaces of the fingers

are quite red. The submaxillary, superficial cervical and posterior auricular glands are enlarged. The anterior pillars of the fauces are red, and the pharynx in general slightly so. There is no eruption in the throat. There is some coughing and sneezing. The temperature is 102.4° and the pulse 147.

March 7. The rash is now confluent and uniformly red everywhere, with no evidence of macules except in a few places, as at the wrist and the outer edges of the feet. It presents the greatest likeness to that of scarlet fever. On the forehead, just between the eyes, there are a few discrete pin-head macules. The cough continues; the temperature is 102.7°; the pulse 129.

March 8. The rash has paled and is very slightly visible on the face. It is gone from the arms and trunk, but still visible on the legs. The temperature has fallen to 99.6°. Yesterday evening the throat was sore and there was pain on swallowing. The pillars of the pharynx and the tonsils are bright red.

The first of these cases I should certainly have called measles if it had been an isolated one. The second case, if occurring alone, might easily have been mistaken for mild scarlet fever, although I think the diagnosis could have been made. I have seen other cases in private practice still more like scarlet fever, and I am free to confess that I have mistaken the one disease for the other more than once. Yet, occurring here together, where there were other cases showing the true nature of the affction, and where the possibility of a combination of diseases could be almost positively excluded, they illustrate well the extremes of the two types of rubella.

So far, then, as my own experience goes, I can see no possible reason for, and every reason against, the assumption of the existence of a "fourth disease." I believe that every infectious disease is liable to variation in its type, both in the individual and in the epidemic, and that aberrant cases and forms, and even aberrant epidemics arise. We cannot give a new name to each such. The history of rubella shows that it is peculiarly liable to vary. As I have already said, we still lack entirely the most important evidence of all that any "fourth disease" exists; namely, we have yet to see the occurrence of rubella scarlatiniforme, as generally understood, fail to protect from an attack of rubella morbilliforme, or *vice versa*.

While, therefore, the high reputation of Dr. Dukes makes us all properly open to conviction, the evidence seems to me strong in favor of the generally accepted view.

A CASE OF INTERMITTENT CLAUDICATION, TERMINATING IN GANGRENE.*

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Intermittent claudication is a condition that was first described by Charcot in 1858. Since then Erb and Goldflam have added extensively to the literature of the subject. It is characterized by the occurrence of cramps in either one or both extremities induced by walking. The cramps are usually localized in the calves. It resembles the intermittent limping of horses described by Bouley in 1831. The cramps come on after walking a short distance, disappear after a short rest, only to recur when walking is resumed. If the condition progresses it may lead to various vasomotor disturbances, such as redness, swelling, and cyanosis of the extremity, and eventually may terminate in gangrene.

In Charcot's first case, the post-mortem revealed an aneurysm of the upper portion of the right common iliac artery, while the lower portion was converted into a fibrous cord. The obstruction to the circulation seems to be the main anatomical lesion. Among the symptoms, Erb has pointed out the absence of pulsation in the arteries of the affected extremity. This sign is rarely absent in intermittent claudication, and, on the other hand, is rarely found in health or in any other affection.

Among causative factors may be mentioned all conditions which lead to arteriosclerotic changes, as syphilis, alcoholism, abuse of tobacco and exposure. Women are rarely attacked. Russia furnishes a large proportion of the cases.

As far as determined the pathology shows changes similar to those found in erythromelalgia and Raynaud's disease, namely a thickening of the intima of the smaller arteries.

On May 21, 1901, I saw H. L., who gave the following history: He is thirty-three years of age, a native of Russia, an optician by trade. His father is alive and well at sixty-four. His mother died at thirty-five of consumption. One sister died of the same disease at nineteen. One brother and one sister are living and in good health. There is no history of any nervous trouble in the family. He is the father of four healthy children. When fourteen years old he had an attack of malaria, which lasted three months. At twenty he entered the Russian army, served three years and nine months. During this time he was much exposed to hardships. At twenty-five he came to the United States, and for three years led the life of a pack-peddler. At thirteen he had a felon of the right index finger. A year later one developed on the middle finger of the same hand. These healed with the destruction of the finger tips. Four years ago a felon destroyed the terminal phalanx of the left index finger. For years he suffered from attacks of severe headache, but of late he has been free from them. He has always been very nervous. He could not sit still for any length of time. He was in the habit of pacing the floor even while conversing. He denies ever having had any venereal disease. For the past seven years he has consumed about three ounces of whiskey daily, and about four ounces of tobacco weekly.

His present illness dates back to the fall of 1898, when he began to have an annoying feeling (not a pain) in the region of the sciatic nerve near the right hip joint. Later the same feeling manifested itself on the left side. These annoying sensations would always come on at night. At first they lasted about an hour, but later they would continue during the entire night. These attacks were never present in both extremities at the same time. He soon began to have the same trouble in the knees. As in

*Read at the semi-annual Meeting of the New York State Medical Society, held in New York, October 15 and 16, 1901.

the hips, both knees were never affected at the same time. Still later the tendo Achillis of the right side became the seat of this annoying feeling. The left tendo Achillis never troubled him. During this time he noticed that his legs felt weak, and that he could not walk as well as heretofore. He also got out of breath easily.

In the spring of 1900, or about six months after the beginning of his trouble, he began to have paroxysms of pain in the big toe of the right foot. He did not notice whether the toe was swollen or reddened during the paroxysm. The pain was of a sharp and shooting nature. At times it would last but a few minutes, at other times it would endure for an entire day. Usually it would come on while walking. Occasionally even when at rest. Walking would sometimes relieve it. As the attacks increased in frequency, other portions of the extremity became the seat of these pains. Now he felt a dull ache in the leg extending from the knee to the ankle. Then a sharp pain in the soft parts above the ankle. The heel then became the seat of intense pain. The skin covering the heel was much thickened, and cracked in several places, leaving small ulcerations. One of the ulcerations on the under surface of the heel discharged for more than a year. Healing, it left a contracted scar.

In the fall of 1899, or at the beginning of the second year of his illness, he was taken with sharp cramps in the calf of the right leg. The first attack occurred while walking on the street. He fell, but with help managed to reach a nearby hotel, where, after a brief rest, he was able to resume his walking. About three months later the cramps came on in the left leg. After that they came on in both extremities whenever he walked. As a result he walked but little, and it was with difficulty that he could get about. It would take him about an hour to walk a square of about 500 feet. The cramps would come on after taking a few steps, would disappear after a brief rest, only to recur when he started again. If he continued to walk, the attacks came on more frequently, while the intervals between them grew shorter.

After these cramps had existed about a year he began to suffer from sharp paroxysmal attacks of pain in the entire right foot. The foot became red and swollen, and during the attack was bathed in a profuse perspiration, and felt warm. These attacks would usually come on at night while in bed and make sleep impossible. He noticed that elevating the part would cause the redness and swelling to disappear, while the dependent position would bring them on. He also learned that cold applications relieved the pain while hot ones would aggravate it. Alcohol also gave him relief and permitted him to rest.

In February, 1900, his condition became so bad and he was so weakened from loss of sleep and pain that he had to take to his bed. After resting five weeks he improved sufficiently to take up his work again. In June, 1900, he had another such attack. He was in bed for six weeks and again improved so that he could be about. In July, 1900, he became aware of the loss of the sexual function. From then on he was able to spend but little time out of bed, and in March, 1901, he became a confirmed invalid.

When I saw him on the 21st. of May, he presented the following appearance: A medium sized man, of muddy complexion, with dark rings under the eyes, extremely nervous, and features indicative of much suffering. Temperature normal, pulse above a hundred, small and weak. Organs otherwise normal. Reflexes normal. No disturbance of the bladder or rectum. Eyes react normally. No Romberg symptom. Urine normal. When the right foot was elevated it appeared quite normal. When it hung over the side of the bed it began to swell. At first it grew red, then cyanosed, purplish and dusky. The discoloration was most marked about the toes and heel. The outer side of the foot was darker than the inner. About the middle of the sole there were several deeply colored bluish spots which were very sensitive. The discolored area extended about half-way to the ankle on the dorsum. The capillaries were enlarged and prominent and gave the foot a mottled or marbled appearance. There was a contracted scar on the under surface of the heel, a dark, dry, cup-shaped depression on the outer side of the little toe, a scar under the big toe, another on the inner side of the little toe. The foot was cold and dry, pitted very slightly on pressure, the white area slowly disappearing. It was extremely sensitive to both tactile and painful impressions. Suddenly touching it would cause the cold sweat to stand out over his entire body. It was very sensitive to electricity, and he could only endure a very weak current. Hot applications increased the pain, while cold relieved it. Extending the leg relieved the pain, but had the disadvantage of bringing on the cramps. So even when in bed he had to keep the knee semi-flexed, the foot hanging over the edge of the bed, supported on a bench covered with a cushion. In no other position could he sleep. The nails were very much thickened, yellowish, longitudinally striated and had not grown since his trouble first began. The muscles of the calf and thigh were atrophied, the left side measuring fully an inch more than the right. The right femoral artery pulsated strongly. At times I thought that I could detect a faint pulsation in the popliteal. The posterior tibial and the dorsalis pedis pulse I could never feel.

The left foot never pained him. However, its temperature was subnormal. It was less sensitive than normal to both painful and tactile impressions. In this respect it differed markedly from the right. When dependent it became slightly swollen and perceptibly reddened. Pulsation was also absent in both posterior tibial and dorsalis pedis arteries.

He was taking about three grains of morphine daily at this time to quiet his pain. I did not see him again until June 15th when he came under my care. At this time there was already evidence of marked progression. The entire little toe was now gangrenous and black. He did not sleep any. The morphine would quiet the pain, yet no sooner would he fall asleep than he would be awakened by a jerking and jumping of the extremities. He was given large doses of the iodides, some bromide

for his nervousness, and, locally, electricty and mild massage. The disease continued to progress. The fourth toe became gangrenous and soon the big toe also; its nail came away and from the matrix there was a slight discharge of pus. The skin about the base of the toes on the dorsum was also destroyed, leaving a dark, dry area extending half-way to the ankle. He was now having a mild elevation of temperature. The fear of septic infection, together with the exhaustion from loss of sleep and pain, made it evident that radical treatment was necessary or death would soon ensue. Accordingly, after consulting with Dr. Jacobson, an amputation was decided upon. Dr. Jacobson operated. Owing to the rapid progression of the gangrene he thought it advisable to amputate above the knee. On the 4th. of July the patient was anesthetized and the leg removed. Macroscopically it was evident that the arteries were much thickened. There was no spurting of the smaller vessels, nor was there any oozing for some minutes. The flesh had a pale and blanched look. However, union was complete in about three weeks. The leg was given to Dr. Broad for pathological study. Specimens were hardened in alcohol-formalin solution. Sections were made of the posterior tibial, anterior tibial, external and internal plantar nerves, also of the anterior and posterior tibial vessels and the dorsalis pedis artery and vein, also of the skin above the gangrenous area. The nerves were found apparently normal. The arterial walls were thicker than normal. The intima was quite markedly increased in thickness, but aside from this and slight round-cell infiltration, were quite normal. The media of the veins was also somewhat thickened. Otherwise there were no perceptible changes in the specimens.

The patient has improved since the operation. He has very little pain. Sleeps well without the use of drugs. Does not use alcohol nor tobacco. His left leg remains stationary. He walks about on crutches. The cramps, however, still come on. Pulsation in the arteries still absent. He is now taking five grains of potassium iodide and 10 minims of tincture of strophanthus three times daily. Locally electricity is used. Massage was tried, but was given up as it did not act well. The fate of this extremity will no doubt be the same as its mate, but how long we will be able to delay the gangrenous process is a question.

This case presents some interesting features. The appearance of the cramps shortly after beginning to walk, their disappearance after a short rest, together with the absence of the pulse in the posterior tibial and dorsalis pedis in both extremities, make this a typical case of intermittent claudication, as described by Charcot and Erb. But we must also consider the vasomotor disturbances. The redness, the swelling, the sharp attacks of pain coming on at night, when at rest, the marked hyperesthesia and hyperalgesia, the beneficial influence of cold, the aggravation of the symptoms in the dependent position—together make the symptom complex of erythromelalgia, as described by Weir Mitchell in 1872. The elevated temperature and increased arterial pulsation alone are lacking to make a typical case. But mixed cases of erythromelalgia have been reported, and in the chronic state the active congestion frequently gives way to passive, and subnormal temperature may be present. Gangrene frequently follows intermittent claudication and may follow erythromelalgia, as Elsner's case shows. In my case the gangrene was of the Raynaud's type. First there were the ulcerations which led to superficial destruction of the skin and subcutaneous tissue. Later the toes became involved. The gangrene was not due to simple arterial sclerosis, as there was no evidence of arterial sclerosis in the other vessels. Nor did the microscopical examination show sufficient arterial obstruction in the smaller vessels to warrant such a diagnosis.

While this is not a typical case of either erythromelalgia or Raynaud's disease, yet there are sufficient symptoms of both these conditions to warrant calling this one of those mixed cases, which show the close relationship between intermittent claudication, erythromelalgia and Raynaud's disease. Cassirer, in his extensive monograph on the Vasomotor Trophic Neuroses, which recently appeared, recognizes the similarity of the symptom picture and the difficulty of making an accurate diagnosis in some of these cases. He calls attention to the insufficiency of Erb's differential points and concludes that no one is skilful enough to distinguish all cases of intermittent claudication from erythromelalgia and Raynaud's disease. He points to Mitchell and Spiller's case as an example. Not only is the clinical picture occasionally similar, but the pathology is likewise the same. The most constant find in the three conditions is the thickening of the intima of the medium and smaller-sized arteries. These vascular changes account for all the vasomotor trophic changes. In a few cases of erythromelalgia and Raynaud's disease the nerves were found involved, but this neuritis is of rare occurrence and may be secondary to the arterial obstruction.

The appearance of the felons deserves a moment's notice. In 1883 Morvan, of Brittany, described a disease characterized by the appearance of a crop of painless felons which lead to the destruction of the deeper tissues. Its pathology is not yet settled. Some observers rank it as a phase of syringomyelia, because the spinal cord was found involved in some cases diagnosed as Morvan's disease. Others classify it as a peripheral neuritis. From the three felons appearing at long intervals the diagnosis of Morvan's disease cannot be made, but coming in connection with the other symptoms it shows some underlying weakness which favors tissue breakdown.

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OPHTHALMIA NEONATORUM.

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Purulent conjunctivitis in the newborn is the result of local infection occurring during or after birth from contact with secretions containing the gonococcus. The infection may occur either from primary contact with the vaginal secretion, or from secondary transmission by means of contaminated media. In the first instance the implantation of the elements of infection takes place upon the rim of the eyelids during the passage of the child's face over the vaginal mucous membrane; in the second, the infection of the conjunctiva may occur by means of (1) the hands of the attendant, (2) the clothing of the child, (3) the environment of the mother.

The gonococcus of Neisser, by reason of the universal frequency with which it is found in the conjunctival secretion, is regarded as the cause of the infection. Generally speaking, conjunctivitis in the newborn may present, in addition to the specific form of ophthalmia, two atypical forms of inflammation; one consisting in the mild catarrhal process which appears usually in the latter days of newborn existence; the other in the nonspecific purulent inflammation. In both of these varieties the gonococcus is absent from the secretion. As to the milder form the fact should be remembered, in its causal relationship, of the sensitiveness of the conjunctiva in the newborn to mild irritation, resulting rapidly in hyperemia, swelling and hypersecretion. In some instances the irritation of a noninfectious leukorrhea in the mother may set up a catarrhal conjunctivitis. The bacillus of Weeks ordinarily characteristic of acute contagious conjunctivitis (pink eye) has been found in the late developing nonvirulent blennorrhea (Valude).

As to the active nonspecific variety Schmidt-Rimpler states unequivocally that the affection differs in no respect from the specific inflammation except in the absence of the gonococcus. On the other hand, he has observed in even the milder forms of blennorrhea the presence of the specific coccus.

Widmark was unable to find the gonococcus in 39 instances among 103 cases of ophthalmia.

The opportunity for infection arises immediately upon rupture of the amniotic sac. The numerous instances which have been cited of intra-uterine infection have had to do with cases in which the head has been arrested in the pelvic canal for some time after the rupture of the membranes. The mistaken interpretation of the earlier of these cases has arisen from ignorance, on the part of observers, of the existence of the infective element which is present. Later the visionary belief in the possibility of the penetration of the amniotic sac by the gonococcus has misled other observers. The case cited by Meiden, in which the child, born in the intact amniotic sac and thereby escaping contact with the mucous lining of the vagina, developed a blennorrhea in 24 hours after birth, deserves careful study in this connection. In this instance the gonococcus was not found in the conjunctival secretion, although in previous deliveries the mother had given birth to infants affected later with ophthalmia proven to be of specific origin.

Pathological Evidences.—Runge describes the pathological process as characterized by swelling and hypertrophy of the papillæ and folds of the mucous membrane. The swelling affects especially the mucous membrane of the fornix conjunctivæ, which appears as a broad circular band of inflammation at the junction of the palpebral with the bulbar lining. The swelling imparts to the conjunctiva as a whole an uneven, raw appearance. The affected membrane may present small areas of extravasation. The epithelium in the later stages undergoes proliferation. Beneath the epithelial layer of the mucous membrane there is found a diffuse small-celled infiltration. According to Bumm the gonococci penetrate both between the epithelial cells and within their protoplasmic interior, they reach in their invasion finally the papillæ of the mucous membrane. This invasion of the conjunctiva is limited, as to the extent of the bulbar surface, by the border of the cornea.

Clinical Evidences.—The first appearance of inflammation is marked by swelling of the upper lids and redness of the palpebral borders. The lining mucous membrane is slightly swollen and intensely red colored.

Usually one eye is the seat of infection at the start, the second eye as a rule being invaded promptly.

Course and Duration.—The premonitory evidences make their appearance usually from the third to the fifth day, rarely later than the seventh day, except in the milder form of ophthalmia. The period of crudescence is marked by the appearance of a citron-colored secretion corresponding in fluidity to the serum. This secretion exudes from between the eyelids and can readily be expressed by the slightest manipulation of the lids. Coincidently with the establishment of secretion and, corresponding to the second or third day from the incipiency of the catarrh, the swelling increases rapidly and the lids seal by their closure the palpebral sac. The latter now becomes filled with a rapidly accumulating serum-pus and thereafter secretion wells out from between the palpebral borders. The upper lid loses its motility by reason of the swelling; in the meanwhile the conjunctiva becomes wrinkled and swollen.

The period of full development is marked by increasing swelling of the lids, abundant discharge of a creamy purulent secretion, deep injection and exuberant swelling of the palpebral conjunctiva.

With the subsidence of the acute manifestations a diminution in swelling together with the disappearance of the photophobia and immobility of the lids is noticed. The granulations of the palpebral mucous membrane are covered with shreds of fibrin mixed with the now somewhat scanty purulent secretion. Gradually the secretion ceases and the eye returns to its function, although the redness of the conjunctiva may persist for ten days or more.

The duration of a frank ophthalmia, without complications, affecting the cornea may be from two

weeks, in mild cases, to three or six weeks, in the severer inflammations.

Complications.—Ophthalmoblennorrhea runs its course usually as a conjunctivitis pure and simple. The cornea however may be affected. The first indication of such complication is a slight cloudiness marking the point of infiltration in the cornea. In the centre of this area is observed a loss of epithelial substance, the disintegration not usually extending to the periphery of the zone of infiltration. Within a few hours there may be observed at a point corresponding to the original loss of substance a minute yellowish area which marks the seat of the ulcer or abscess of the cornea. When the ulcer is situated in the centre of the cornea it may extend in depth and peripheral enlargement until it constitutes a perforation. More often in the newborn the septic infiltration attacks the border of the cornea, producing a linear ulcer which shows a rapid tendency to deepen (Valude). This latter ulcer may so increase in extent as to completely encircle the cornea, inducing its rapid destruction.

Arthritic and peri-arthritic complications have been observed in the newborn by Widmark, Lucas and Davies-Colley.

Prognosis.—The prognosis of ophthalmia depends largely upon the treatment. If the conjunctival sac can be kept drained and cleansed, the termination in recovery may be looked for. In cases of rapid involvement of the cornea in weakly infants the best efforts in treatment may be futile as to the destruction of the eye. On the other hand, superficial ulcers may become re-invested with epithelium, leaving only the slightest cloudy area or speck. A nonulcerative abscess of the cornea usually becomes entirely dissipated. Improper nourishment or depression in the nutritive powers of the infant, causing a decline in its physical condition, may be responsible, in the course of a hitherto mild infection, for the simultaneous invasion of the cornea. Prolonged cases of purulent conjunctivitis with a furrowed and villous swelling of the membrane are not infrequently met with. The later results of involvement of the cornea include the following conditions: (1) Anterior synechia, (2) leukoma, (3) partial and complete staphyloma, (4) atrophy of the globe.

Diagnosis.—The characteristic evidences, such as swelling of the lids, chemosis, hyperemia, the presence of a citron-colored secretion followed rapidly by a purulent discharge, leave no question as to diagnosis. The presence of the gonococcus in the secretion is conclusive. Gonorrheal stomatitis, occurring in the form of yellowish-white plaques upon the hard palate, when found as an accompaniment of the blennorrhea, may be indicative of gonorrheal infection. Stomatitis however rarely precedes conjunctivitis and is therefore of little value in confirming the diagnosis.

The antecedent condition of the mother, shown in the presence of specific vaginitis, is to be considered in its diagnostic relationship.

Among the infrequent ophthalmic lesions in the newborn, diphtheritic conjunctivitis is to be recognized by the membranous deposit. The rare condition of keratomalacia in its incipiency may simulate secondary involvement of the cornea following conjunctival inflammation. This condition however is unaccompanied by purulent ophthalmia and is present only in cachectic children.

Congenital opacity of the cornea, when accompanied by catarrhal conjunctivitis in the newborn, may lead to confusion in diagnosis. An example of this occurred in the author's experience. The prompt discovery, immediately after birth, however, of the lesion and the absence of conjunctival swelling and marked blennorrhea excluded the diagnosis of infection of the cornea.

Treatment.—The therapeutic measures in ophthalmia group themselves under four general headings:

1. Prophylactic.
2. Antiseptic.
3. Astringent.
4. Detergent.

As to prophylaxis, by far the most important step in the way of prevention is the elimination of the danger present in the infected vaginal discharge preceding labor. This particular of treatment may be carried out equally in hospital and house practice—the only exception being found in emergency cases. The daily application of a solution of silver nitrate (30 gr. to the ounce) to the cervical canal and the administration of an astringent vaginal douche are the essential measures. If repeated douches of bichloride of mercury are employed, the strength of the solution should not exceed 1 in 6000.

As to that particular of Credé's method, consisting in the routine instillation of nitrate of silver (1 drop of a 2 per cent. solution) into the conjunctival sac immediately following birth, the writer cannot acquiesce in its unrestricted employment. By reason of the sensitiveness of the conjunctiva an irritation resulting in a mild catarrh is often created. In private practice this may or may not be of importance, but in hospital practice, where the chances of contact are ever present, the opportunity for an infection of the hitherto unaffected eyes which have been so treated is thereby increased. The truer prophylaxis, for his advocacy of which the profession is indebted to Credé—comprised in the antecedent care of the vaginal canal and especially in the scrupulous cleansing of the lids immediately after birth of the head—seems to be the more rational procedure.

In hospitals, strict isolation is the essential in treatment. The individual isolation of the infant with beginning gonorrheal conjunctivitis is secondary in importance only to cleanliness as a factor in treatment. Isolation must be complete to be effective One nurse in attendance—the strict guarding of the mother and observation of her every movement during nursing—the washing of the infant's clothing and bedding separately—must constitute the rule of management. Iced cloth compresses are contrary to strict cleanliness. Their careless use constitutes undoubtedly a means of contagion.

As to the cleansing of the lids, this is best accomplished immediately upon the expulsion of the head by wiping them first with a piece of sterile gauze in order to remove the vernix caseosa and the discharges incident to labor, then by douching them thoroughly with a warm saturated solution

of boric acid applied by means of pledgets of absorbent cotton.

Valude has practiced insufflation within the palpebral sac of a small quantity of iodoform as a prophylactic measure in place of nitrate of silver. He considers its action more permanent than that of the latter on account of the retention of the powder within the sac.

Of antiseptic drugs, boric acid is the most important. It is used in saturated solution for irrigation of the conjunctival surface. Potassium permanganate is also used in the same way in solutions of 1 in 3000 to 1 in 5000. A mild solution of bichloride of mercury (1 in 6000) may be used for irrigation. Formaldehyde solution (0.5 per cent.) may be instilled into the eye during the period of beginning suppuration (Valude).

All such solutions may be used as frequently as it is necessary to cleanse the palpebral sac of the accumulating pus. It is commonly recommended that they be applied by means of a small bulb syringe or an eye dropper.

The astringent treatment consists in the repeated application to the conjunctiva during the stage of suppuration of a solution of silver nitrate, or of protargol, 5 per cent. The strength of the former solution usually employed is 10 grains to the ounce. If a stronger solution be used it should be neutralized by the subsequent application of saline solution. The method of application is by the dropper. In obstinate cases with exuberance of conjunctival granulation the solution may be brought more actively in contact with the membrane by the employment of a cotton stick as an applicator. Corneal involvement may require the instillation daily of one drop of an atropine solution of 4 grains to the ounce.

The method of treatment about to be described is the best protection from complications just mentioned:

Detergent Treatment.—This is by far the most promptly successful method of treatment. It may be carried out as follows:

The infant, held head downward in the nurse's lap, which is protected by rubber cloth, submits to the separation of the lids by one hand of the nurse (in cases of great swelling it may be necessary for an assistant to separate the lids) while with the other hand the nurse directs into the palpebral sac through a glass irrigating nozzle, the calibre of which corresponds to the diameter of an ordinary bone knitting needle, a stream of normal salt solution (0.6 per cent., or 466 grains to the pint). The temperature of the solution should equal 104°. The pressure should be equivalent to the elevation of an ordinary glass irrigating can to the height of 7 feet. The duration of the irrigation should be 5 minutes. The frequency should be once in every half-hour during the stage of accession, after the establishment of the citron colored secretion, and once in every hour as the purulent secretion begins to diminish.

The rationale of such treatment is to be found in the thorough cleansing of the palpebral sac from pus and the relief of the turgescence of the conjunctival vessels.

To summarize, the demands in the matter of treatment are met by the following method of procedure:

1. The antepartum care of the birth canal.
2. The scrupulous cleansing of the lids following expulsion of the head, and constantly thereafter in suspicious cases.
3. The noninvasion of the palpebral sac by separation of the lids before the appearance of typical discharge.
4. Prompt and absolute isolation upon the appearance of conclusive signs of specific inflammation.
5. Thorough and systematic irrigation.
6. Astringent application of silver nitrate in cases of prolonged suppuration.

In conclusion, as an important adjunct to local treatment attention should be given to the general condition of the child in cases of debility and malnutrition. The measures directed toward the care of the infant are comprised in cod-liver oil inunctions, small doses of whiskey internally, and breast feeding. At the same time the mother should receive some form of tonic treatment.

ADENOID VEGETATIONS AND THEIR INFLUENCE ON THE PALATAL ARCH.*

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Mr. President and Gentlemen: I will speak this morning upon a subject which a few years ago was scarcely noticed by the medical profession, but which is now considered a serious condition, although there are still many medical men who do not give it the prominence it deserves. This disease is the fundamental cause of many serious diseases, both general and local, and I think among those conditions, general in character, but with local manifestations, may be found that pathological condition, the V-shaped palatal arch with its irregular teeth.

Adenoid vegetations, or, more properly speaking, hypertrophy of the pharyngeal tonsil, is an abnormal hypertrophy or enlargement of the natural lymphoid structures found in the pharyngeal vault, whose existence has been recognized since the days of William Hunter. Czermak, in 1860, described a case of growths in this region, and, in 1862, Sir Andrew Clark wrote a short article on "Naso-Palatin Gland Diseases." The frequency and clinical importance of these hypertrophies of Luschka's tonsil were, however, for the first time clearly insisted on by Wilhelm Meyer, of Copenhagen, in 1868. This accomplished specialist, with the record of one hundred and two cases, gave an admirable account of the symptoms and treatment of the condition called by him, as a result of microscopical examination, "adenoid vegetations."

Perriquet, in 1803, in an elaborate essay on the history of the disease and death of Francis II. of France, showed that this monarch had suffered from adenoids, which were responsible for a putrid catarrh of the middle ear, leading to meningocephalitis, from which he died in his seventeenth year.

Meyer (1895), doubtless stimulated by this com-

*Read before the New York State Medical Association.

tribution; showed that adenoids did not constitute a new disease. This he did by a careful inspection of European galleries of painting and sculpture. He came to the conclusion that the portrait of Francis II of France confirmed the history given by Potiquet, and that Charles V and Ferdinand II of Austria were each the subject of adenoids. While among the statuary in the Vatican the figures of Marcus Antonius and three others were declared by him to come under the same category.

The disease is generally one of child life, developing in infancy, and probably not infrequently congenital. It thus begins, as a rule, before the bones are thoroughly hard and formed. Like other glandular hypertrophy or enlargements, these growths show a remarkable tendency to disappear, or apparently disappear, at puberty. This may be explained by a diminution in the size of the tonsils and a certain amount of shrinking which occurs in this peculiar form of growth at this age, and also by the fact that they occupy a relatively small space in the now more widely developed pharyngeal vault. The cause of the disease lies in that general disposition by which, in young children, a morbid process develops and has its highest activity in the epithelial and lymphoid structures which disappear at puberty. Heredity and a lymphatic temperament are undoubtedly the causes. In the locality which interests us the lymphatic tissue appears in the aggregated as well as disseminated form, and is distributed uninterruptedly throughout the pharynx and nasopharynx. Its position is almost vertical, and, beginning at the vault of the nasopharynx with the pharyngeal or Luschka tonsil, it extends to the orifice of the Eustachian tube, where we have a large aggregation of follicles, the tubal tonsil.

It must be remembered that these structures are normal to these parts; that in the normal healthy condition they are not visible to the eye, not even the faucial tonsil; and only when they become permanently enlarged as a result of disease do they become important factors in producing the many grave diseases of the surrounding structures.

Disease of these glands is found in all countries and in all climates in varying degree, and there is much diversity of opinion as to the cause. There is no doubt that heredity, also rheumatism, syphilis, and kindred diseases play an important role in causation, enlargement of these glands having been observed in children born even before term. Bad hygienic surroundings, frequent colds, and neglected catarrh may also be considered as causes, or at least they greatly aggravate a case whose tendency is toward hypertrophy. It is of course a disease which manifests itself during child life. It is much more common than is generally supposed, and many cases which have sufficient enlargement of the glands to produce serious trouble, especially in the ears, do not manifest the marked symptoms supposed to be characteristic of the disease.

Symptoms and Effects.—First, the impairment of the normal nasal respiration, and mouth-breathing. In some cases these growths fill up the entire cavity, thus shutting off the air passages of the nose entirely; at other times they partially close the air passages, merely closing them entirely when the person is suffering from a cold or an acute coryza; a thick, toneless, or dead voice, the voice of one with a cold in the head; stammering and more or less stuttering, backwardness in study, derangement of spirits and energy, nightmare, snoring, teeth-grinding, disturbed sleep, and dry mouth and throat on waking; laryngeal and pulmonary troubles, disordered digestion, reflex group. The old ladies are in the habit of saying that when the child grinds its teeth it has worms. This may be true, but it is sometimes certain that the child has adenoid vegetations.

The diagnosis is often instant, for the facial aspect is almost alone sufficient—the open mouth, flattened cheeks, collapsed and dimpled alae, widened bridge, and puffy and edematous roof of the nose, downdrawn inner canthi, and the nasolabial furrow. The eyes are somewhat wide apart, and, although the children may be bright and intelligent, they have a more or less well defined appearance of stupidity. The teeth are irregular and frequently diseased; the lips are pale and anemic, due to deficient oxygenation of the blood; the faucial tonsils are invariably enlarged; the child sometimes has great difficulty in swallowing, although at this time there is no evidence of a disease other than the conditions stated. There is frequently excessive discharge of mucus or mucopus, the source of the discharge being undoubtedly in the diseased glands themselves. They are mouth-breathers, and it is a fact that the teeth of mouth-breathers, generally in the upper front row, are frequently dry; and it seems to me that the early dental caries common in these subjects is in some measure a result of the habit. As we all know, the teeth of men in their normal position are arrayed in a symmetrical order, side by side, their outline as a whole describing very nearly a parabola or semi-ellipse, their variations from these geometrical figures consisting principally in a slight flattening in the region of the incisor teeth and a tendency to angularity in the region of the canines, owing to the marked prominence of these teeth. As we know, irregularity as to their origin may be hereditary or acquired, the one resulting from causes operating before the birth of the individual or the eruption of teeth, the other from circumstances during and attending their eruption or subsequent to it. The exact causes operating to bring about either of these kinds of irregularities are not as yet perfectly understood, but they are explainable to some degree by certain facts that are known, or by hypotheses that are very plausible. For instance, in respect to the hereditary feature, we know the tendency on the part of nature to reproduce herself, as we see the offspring resembling its parent in its dental organism, just as it does in form, feature, voice, and gait; or it may inherit some peculiarities from one parent and some from the other, thus embodying in itself the individualities of both. This being the case, if the parents be of different nationalities or different in size or feature, the one having large teeth and large jaws and the other small teeth and small jaws, it is very presumable that the child may inherit the small jaws of the one and the large teeth of the other, the disparity between the two resulting in crowding or malposition of the teeth from insufficient room to accommodate them. The acquired form

of irregularity we know to be partly due, first, to the early extraction or the too long retention of the deciduous teeth; second, to accident; third, to improper habits, such as thumb or lip-sucking; and fourth, but by no means least important, we have the enlarged tonsil.

Now, I do not wish to make the assertion that the irregular or V-shaped maxilla is caused entirely by the pressure of these growths upon the formed or forming superior maxilla. Nor do I wish to state that the pressure of the muscles of the jaws causes this deformity. These are plausible hypotheses, but I do think that all cases of adenoid vegetations can and do cause a tremendous alteration in the facial expression, such as the atrophy of the antra of Highmore owing to the closing and disuse of the nasal passages. This, in connection with deficient ozygenation of the blood and the general sickly condition of the subject, has a tendency to cause an irregular arch as well as poor teeth. I think that the V-shaped palate and irregular teeth are caused by breathing insufficiently and underdevelopment caused by nonoxygenation of the blood. I think that before the teeth of a person from ten to eighteen years of age are regulated, or before we attempt to treat their ears or any ear trouble, we should first ascertain that they are not mouth-breathers and that there are no adenoid vegetations present. If these are found, they should be promptly removed. The diagnosis is simple, merely placing the finger in the nasopharynx. Almost anybody with but little experience can diagnose their presence or absence, and even without this the enlarged faucial tonsils and facial expression are sufficient. Of course there are still surgeons living who object to removing adenoids, as there are still some who depreciate the removal of the faucial tonsils, on the ground that children will grow out of them. But it ought to be remembered that even if tonsillar hypertrophies do become reduced with advanced age, the subjects have in the meantime *grown into their symptoms*, and these are found every day in cases of deafness. The wide-awake dentists have an unusual opportunity to detect these symptoms and conditions, and with this opportunity comes a duty to add to their already useful vocation, that of aiding parents to see the importance of subjecting their afflicted children to operative interference and freeing them from these conditions with their long train of attendant symptoms and serious results. Every advancement in the science of medicine and surgery, as well as from increase in knowledge and in efficiency in the individual members of the medical and dental professions, means the saving of human life and the alleviation of human suffering.

VACCINATION.

By T. F. CAMPBELL, M. D. C. M.,

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The experience of physicians in vaccination in the past year has probably been the most varied, and to some perplexing, since the discovery of this beneficent achievement.

During the winter of 1899-1900 the demand for vaccine in such great quantities brought it out in all qualities and from almost all sorts of sources. The modern aseptic and discriminating physician chose purified vaccine from standard drug houses using only tested calves and furnishing glycerinized vaccine, and applied the same with happiest results and with no pain, scar nor sickness.

The indifferent seemed undecided, and, if using the refined quality, apparently did not apply it with the thoroughness necessary, and where no "takes" occurred, the vaccine was blamed as "too weak" or attenuated.

Then there were others and the laymen who used the vile vaccine found in grocery stores, or anywhere, on consignment. These parties of course could not control or limit a bad process once started and so the "sores" ran wild with contiguous and constitutional infection. From such cases came complaints that vaccination was "worse than smallpox", the complainants hesitating not to compare their worst cases of vaccinia with the mildest possible ones of smallpox.

The present epidemic fortunately seems to have been a mild southern type of smallpox from Cuba and the Philippines, and it is only now in absence of present or past vaccination beginning to attain its old time northern virulence. So the comparison has been rather odious to really representative physicians, and seriously embarrasing to the others. The latter's only answer vouchsafed was usually that the "good" kind of vaccine was "no good" and "wouldn't take".

People rushing for vaccination would complain if they did not get "takes" in three days, when in proper vaccination one or two weeks is necessary, the three days symptoms being septic. This however, had often not been explained to them, and in fact the directions on at least some of the best vaccine have only this winter stated correctly the proper interval of incubation of vaccinia, that is one or two weeks.

Hence, antiquated methods curried favor temporarily with the unknowing; and made for retrogression, especially, where "trade" was an object. Even the best pharmaceutical houses seemed influenced by the majority's criticism of attenuation; forgetting that majorities are not always right, and that real minds are rare. Certain it is that some of the best brands of vaccine in use this winter do not seem as fully purified or as mild in effect, as last season's. Possibly also the unprecedented demand tempts the use of more, and other, than the purer portions of bovine vesicles.

For all the above reasons vaccination to be properly done should be attended to in advance of epidemics; and should not be lightly undertaken at any time, nor for the usual paltry fee, it requiring the same skill and technique as modern surgery.

Alcohol which evaporates rapidly may be used to surgically clean the arm, so difficult to be sure to clear follicles and ducts of the skin. Then aseptic vaccine applied with judicial lance used simply to abrade or scrape the skin to the "pink" and to distribute the vaccine and almost tattoo it in for some time gives most reliable and safe results. The clothing should not be replaced until the site is coated over with the glazed appearance of protective lymph; as soon as the "take" occurs, the arm

should be inspected every day, and if the process is becoming vicious, by fault of the patient or otherwise, the same may be minimized or limited by poulticing off the scab with a one in thirty solution of phenol in boiled water. The lance may assist in loosening the scab and allowing this solution, or hydrogen peroxid, to permeate and irrigate the depression and clear out the pent up and eroding pus, which causes the "pit."

The same procedure averts pitting in smallpox when the scab exceeds its protective function, and is sealing up harmful phagedenic material. The solution of carbolic acid one in thirty sponged over the surface corrects the redness and the itching so intolerant and so constantly present.

From all the foregoing, and until we have federal supervision of, or at least uniformity in vaccine, it has come, that the physician has vaccination to defend, and an argument to make locally, in the public interest. Happily, however, there are available indisputable facts sufficiently convincing to all reasonable people.

One hundred years ago a smooth face was as rare as a pitted one is to-day, and this improvement and the mitigation of the disease is due to vaccination.

At that time it seems that the wealthy ladies with pitted faces had begun to notice with serious concern the much better complexions of their maids, and it was then discovered that milk-maids who contracted cowpox from cows were subsequently immune to smallpox.

Hence, vaccination, (vacca, a cow) the whole elaboration of which is accredited to the immortalized Dr. Jenner in 1798.

The question had been mentioned by medical observers for some time previously; and like all additions to public welfare, it was a matter of composite and gradual evolution, culminating about the time mentioned in the records.

Since then and along with the march of antisepsis, vaccine has in the last decade been practically purified of all extraneous germs, simply by a three weeks solution in glycerine. This clears it of harmful material without in the slightest impairing its virtues.

So by the use of purified vaccine properly applied discomforts and dangers are eliminated; and vaccination is made safe and effective even for the infant, invalid, or prospective mother, the latter so especially needing the safeguard of protection from variola.

Quarantine is another means used to prevent the spread of smallpox, but this at best is only local and temporary, and would be unnecessary except for the unvaccinated; besides it is by no means a pleasant, thorough or always practicable undertaking. It seems impossible to control others, but individuals can protect themselves by vaccination.

Thorough tests, where purified vaccine is used, show it protects much better than the old kind, giving absolute immunity for six months or more, and a protection always even to the second generation against severe forms. Everyone should be vaccinated not only for personal, but for public welfare, for then no one can propagate smallpox, and it is the only known way to make the disease quit a community.

The writer, by this means chiefly, stamped out an epidemic of smallpox at Wallace, Neb., last winter, in thirty days. There were then, and especially there, no quarantine laws enforcible; but the people had never been spoiled by bad vaccination and put up their arms trustingly and with the results stated.

In the great epidemic at Montreal, Canada, in 1884, the French speaking people objecting to vaccination died to the number of four thousand; while the English speaking people, accepting vaccination, lost few cases.

In Ireland the people fought smallpox by inoculation when they could not get vaccination. In Germany once the disease had its stronghold. Now since compulsory vaccination it has practically disappeared as shown by statistics of the German army.

Vaccination is recommended by every reputable medical authority, is popular with the vast majority of people, and is advised and often made compulsory by the governments of all civilized countries.

The following is from the **Philadelphia Medical Journal,** December 21, 1901. The results in Porto Rico where the mortality has been reduced from over 600 to less than two per year since the universal vaccination of the people by the officers of the United States Government, are sufficient proof, if any were needed, that vaccination is, as someone has expressed it, "the greatest boon conferred upon mankind".

THE RELATION OF THE TUBERCLE BACILLUS TO PSEUDOLEUKEMIA (STERNBERG'S DISEASE).

By JOSEPH SAILER, M. D.,
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(Continued from Page 621).

A still more remarkable case was reported the following year by Brentano and Tangl. A woman, 57 years of age, had swelling of the inguinal and cervical lymph glands; irregular fever with evening rise; ascites; pleural exudate; progressive anemia and cachexia and death. The necropsy showed enlargement of the mediastinal, mesenteric and retroperitoneal lymph glands; chronic peritonitis, tuberculosis and ulceration of the intestines. The liver was not enlarged. The lymph glands were not necrotic, and presented none of the histological characteristics of tuberculosis, but inoculation of a guinea-pig with the glandular substance caused death from tuberculosis. The authors contend this case proved that negative histological evidence is insufficient to exclude tuberculosis, although it must be admitted that a single inoculation experiment is not absolutely conclusive.

In 1893 Cordua described some glands removed from a woman of 22 years, who was supposed to be suffering from Hodgkin's disease. The clinical history is incomplete. The glands, upon histological examination, presented the appearance ascribed to Hodgkin's disease, but Cordua was able to dem-

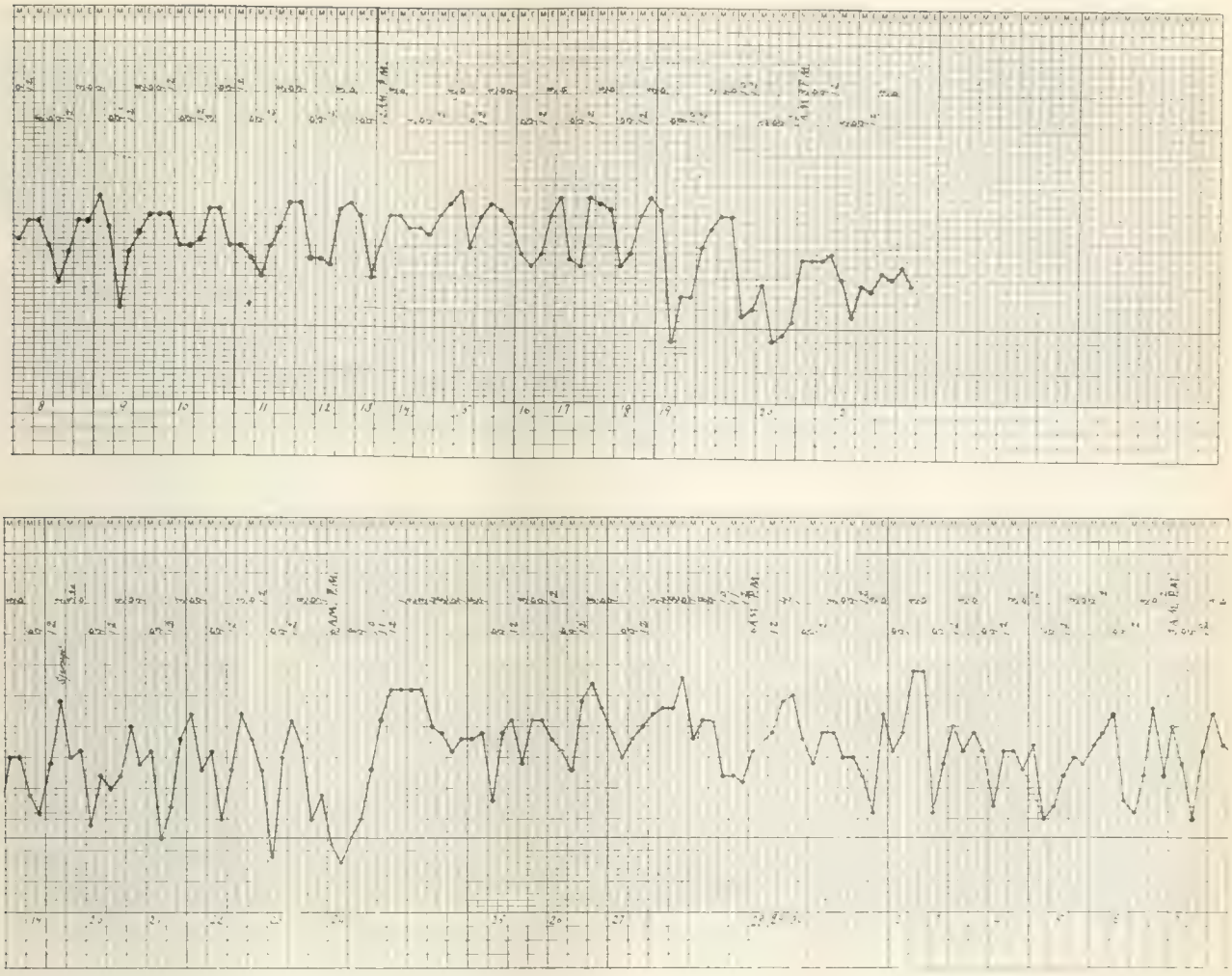
onstrate the presence of tubercle bacilli in their substance. He calls the disease malignant aleukemic lymphoma, apparently not regarding the presence of the tubercle bacilli as excluding Hodgkin's disease. A similar case was reported by Sabrazés in 1891, who, however, only proved the tubercular infection of the glands by inoculation.

In 1894 and later, Askanazy reported 3 cases. The first was a woman of 30 years, who had enlarged glands in the neck, an enlarged liver, and recurrent fever. At the necropsy the mediastinal and bronchial lymph glands were enlarged, but the spleen and retroperitoneal glands were normal. Tubercle bacilli were found in the lymph glands. The second case, a woman, 37 years of age, complained of pain in the left side of the chest. There was severe anemia and fluctuating tumors arising from the ribs on the left side. These were incised and found to contain a sterile cheesy material, and to communicate with the thoracic cavity by narrow sinuses. Tubercle bacilli were not found in the sputum. At the necropsy the mediastinal glands were found to be enlarged and partly necrosed, and showed marked tendency to fibroid induration. The liver was enlarged and contained numerous tubercles. The retroperitoneal lymph glands were greatly enlarged, and guinea-pigs inoculated with the glandular tissue developed tuberculosis. Microscopically the glands exhibited the characteristic picture of tuberculosis. The third case, a woman of 30 years, complained of chills, night sweats, and expectoration. There was moderate anemia, and fever of an irregular type. She developed hydrothorax and later a hard, immovable tumor appeared in the neck. Tubercle bacilli were found in the sputum. At the necropsy all the glands were found to be enlarged and firm but not necrotic. The liver was enlarged and contained yellow nodules. The costal pleura was greatly thickened and dense. All the organs presented the characteristic histological changes of tuberculosis, and tubercle bacilli were found in the tissues. Askanazy calls attention to the many features of resemblance between this case and pearl disease in cattle, a valuable suggestion which I shall discuss more thoroughly later.

In 1896 Brosch reported the case of a man, 25 years of age, who had pain in the limbs, a petechial eruption, fever, icterus, enlargement of the spleen, albuminuria, and death. At the necropsy tuberculosis of the lymph glands was diagnosed.

In 1898 Sternberg published a paper that he had evidently had in preparation for a considerable time. In view of the occasional discovery of tubercle bacilli, or of the evidence of tuberculous infection in a number of cases that clinically resembled pseudoleukemia, he determined to study the us





sues from a considerable number of cases in order to determine whether the micro-organisms bore any actual relation to the disease or not. For this purpose he obtained specimens from 18 cases of pseudoleukemia, of which he says fifteen in their anatomical changes, and usually in their clinical course, resembled the peculiar cases of pseudoleukemia which had attracted his attention. For reasons that Sternberg does not explain, the clinical histories of his fifteen cases are not given; in fact, in some even the clinical diagnosis is lacking, and it is not, even when given, always pseudoleukemia. But it is not improbable that in all cases pseudoleukemia was suspected at some time in the course of the disease.

Briefly epitomized the cases are as follows:

CASE 1.—Clinical diagnosis, pseudoleukemia, bilateral pleuritis sicca, miliary tuberculosis which was doubtful, and splenic tumor. The lymph glands were generally enlarged and formed tumor-like masses in the mediastinum and retroperitoneal space. The spleen was enlarged and contained numerous white nodules. The right pleural cavity was obliterated by adhesions, and the left contained clear fluid. The right lung was filled with grayish nodules. There was clear fluid in the abdominal cavity. The nodules sometimes showed necrosis and in some of them a few tubercle bacilli could be demonstrated.

CASE 2.—Clinical diagnosis, pseudoleukemia. The lymph glands had enlarged and several had suppurated, or showed caseous degeneration. The liver and spleen were enlarged and contained numerous tubercles; the bone marrow was embryonal. The histological picture was in general that of tuberculosis, but tubercle bacilli could not be found.

CASE 3.—No clinical diagnosis. The lymph glands were enlarged and in part caseous. The spleen was enormously enlarged and contained numerous miliary tubercles. There was general icterus. The tissues contained necrotic areas with giant cells, but tubercle bacilli were not found. There was general arteriosclerosis.

CASE 4.—Clinical diagnosis, pulmonary tuberculosis, cirrhosis of the liver, considered doubtful, and degeneration of the myocardium. There was enlargement of the lymph glands and of the liver and spleen, and the latter contained miliary tubercles. The histological changes were those of atypical tuberculosis; tubercle bacilli were not found.

CASE 5.—No clinical diagnosis. The lymph glands were enlarged; the spleen and liver were enlarged and contained numerous tubercles. The tissues showed atypical tuberculous lesions and these contained numerous tubercle bacilli.

The tissues from cases 2, 3, 4 and 5 had been preserved for many years.

CASE 6.—Clinical diagnosis, pseudoleukemia; icterus due to compression of the common duct by swollen lymphatic glands. The lymph glands were generally enlarged and necrotic; there was chronic tuberculosis of the right lung. The spleen was enlarged and contained numerous miliary tubercles. Ulcers in the cecum. The histological changes indicated tuberculosis, but tubercle bacilli were not found.

CASE 7.—Clinical diagnosis: chronic tuberculosis of the lymph glands and serous membranes. There was universal edema, profound anemia; enlargement of the lymph glands and spleen; subacute nephritis and hypertrophy of

the left ventricle. Cheesy areas, giant cells, and tubercle bacilli were not found in the tissues. The spleen showed considerable amyloid degeneration.

CASE 8.—Clinical diagnosis, pseudoleukemia with recurrent fever. There was tuberculous infiltration of the apices of both lungs; the lymph glands were enlarged and firm; the liver and spleen were greatly enlarged and contained white masses and miliary tubercles. The tubercles were composed of cellular aggregations and necrotic areas containing giant cells and a few tubercle bacilli.

CASE 9.—Clinical diagnosis, tuberculosis pseudoleukemia, tuberculous infiltration of the right lung, compression of the common duct by enlarged glands. There was enlargement of the lymph glands with caseous degeneration. The liver and spleen were enlarged, the bone marrow contained numerous nodules. The nodules showed cellular proliferation and some necrosis that was not caseous. Tubercle bacilli are not mentioned.

CASE 10.—A boy of 10 years with typical pseudoleukemia; an extirpated gland showed the cellular proliferation with necrotic areas; tubercle bacilli were not found.

CASE 11.—No clinical diagnosis. The anatomical diagnosis was pseudoleukemia and tuberculosis of the retroperitoneal lymph glands. The liver and spleen were enlarged and contained numerous nodules. The retroperitoneal glands were also greatly enlarged and consisted of fibrous tissue containing spindle cells, lymphocytes and giant cells. The borders of the glands were very red.

CASE 12.—Clinical diagnosis, tuberculous pseudoleukemia, tuberculosis of the lung and lymphatic glands, and enteritis. Anatomical diagnosis, lymphosarcoma of the lymphatic tissues and chronic tuberculosis of the glands. The lymph glands contained a large amount of fibrous tissue, groups of spindle cells and giant cells, or proliferated endothelial cells and erythrocytes. In some cases cheesy degeneration was present, and tubercle bacilli were found in the lymph glands.

CASE 13.—Clinical diagnosis, pseudoleukemia. Anatomical diagnosis, pseudoleukemia with general enlargement of the lymph glands and spleen, hydrothorax, and ascites. The lymph glands and spleen showed fibrous alterations, enlargement of the capillaries and desquamation of the epithelium.

CASE 14.—Clinical diagnosis, tuberculous lymphadenitis. Marked tuberculosis of the lungs; spleen greatly enlarged. Lymph glands were enlarged and contained necrotic areas and foci of epithelioid and giant cells. Tubercle bacilli could be demonstrated in the serous membranes. The liver contained numerous nodules.

CASE 15.—Clinical diagnosis, pseudoleukemia and tuberculosis of the lungs. Anatomical diagnosis, miliary tuberculosis of the lungs; cirrhosis of the liver; tumor of the spleen, and marked tuberculosis of the lymph glands. The lymph glands showed caseous degeneration and tubercle bacilli were found in them, and in the spleen. The liver contained numerous nodules.

The critical examination of these cases is not entirely as favorable to the relation between tuberculosis and pseudoleukemia as the enumeration appears to prove. In Delafield's case the clinical symptoms of pseudoleukemia were not distinct enough to enable a diagnosis to be made. In Waetzold's case the long course of the disease renders secondary infection with tubercle bacilli possible, and the same may be said of the case reported by Brentano and Tangl. The cases of Cordua and Sabrazés appear to be more certain. The clinical course and the histological changes in the glands were identical with pseudoleukemia; there were no evidences of tuberculosis in other parts of the body, or of tuberculous cachexia, nevertheless tubercle bacilli were demonstrated in the glands removed by operation. Askanazy's first case also appears to be very conclusive, but the second and third cases may merely have represented diffuse tuberculosis of the lymphatic glands and not pseudoleukemia. The 15 cases of Sternberg are not all of such a character as to prove his contention regarding the relation of the two conditions. It will be noted that the clinical diagnosis of uncomplicated pseudoleukemia was made in only three cases, and that of recurrent fever, that is, Ebstein-Pel's disease, in two others. In two cases the diagnosis was pseudoleukemia complicated by tuberculosis, and in a third tuberculous complication was considered probable. In four cases a diagnosis was made of lymphatic tuberculosis simulating pseudoleukemia; and in one the diagnosis was pulmonary tuberculosis and cirrhosis of the liver, a condition which, it appears, is difficult to differentiate from pseudoleukemia due to tuberculous infection. In three cases no diagnosis is given. In these 15 cases no inoculation experiments were made; no cultures were made, and tubercle bacilli were found in only 5. Therefore Sternberg's diagnosis of tuberculosis was made in the remaining cases because of the presence of lesions resembling those found in the tissues of the cases in which tubercle bacilli were demonstrated, but not resembling the lesions ordinarily found in tuberculosis of the lymph glands, and therefore not certainly the result of the activity of the tubercle bacillus. If it were not for the cases that have been already reported, we should be obliged to regard the work of Sternberg as doubtful. It is only the fact that this work confirms the results obtained by other men who have made careful examinations of the lymph glands in cases of pseudoleukemia that we are justified in considering it as establishing his contention that in a large proportion of the cases supposed to be pseudoleukemia the tubercle bacillus is present either as a causative or as an associated factor.

The negative evidence is even more scanty, and, in view of the incomplete studies made in the majority of cases, far less satisfactory. In 1891 Czerny reported the case of a boy, 4 years of age, who had a tumor on the right side of the neck. There was continuous fever, moderate leukocytosis, progressive anemia, enlargement of the liver and spleen, pain in the abdomen, and emaciation. Shortly before death there was epistaxis and anasarca. At the autopsy a purulent exudate was found in the abdomen; the liver and spleen were enlarged and contained miliary nodules. The histological appearances were not characteristic of tuberculosis, and tubercle bacilli could not be found. Five years later Dietrich reported 3 cases with enlargement of the cervical and axillary glands. In one of these there was considerable fever, emaciation, and edema; the spleen and liver were enlarged and contained necrotic areas in which giant cells were found. The lymph glands were enormously enlarged.

In another case the cervical and axillary glands were enlarged and contained necrotic areas, but tubercle bacilli were not found. But as the tissues had been hardened in Müller's fluid, it is possible that they had lost their staining power. Inoculations were not made, and for that reason the evidence must be regarded as doubtful. In 1897, Fischer, stimulated by Dietrich's paper, attempted an ex-

perimental investigation of the whole subject. Unfortunately, this has only been published in the form of a lecture, and the details of the individual cases were not given. His general results, though, are stated very clearly. In all he studied 12 cases, 10 men and 2 women. In none of them was there leukocytosis, and cultures and inoculations made from the blood were without success, with the exception of one case of recurrent fever, in which the inoculations were positive during the febrile periods and negative during the intervals. He does not state the nature of the organism found, but merely calls it "secondary infection." Four of the cases died, and in all there was general involvement of the lymphatic structures in the lymphomatous change. One of these cases had in addition tuberculosis of the lungs and mesenteric glands, and the other, tuberculosis of the lungs, spleen and liver. In both the process was recent, and must therefore be regarded as a secondary infection. In all the cases the glands were extirpated, and from these glands inoculations, cultures and histological examinations of the tissues were made. The guinea-pigs inoculated were killed 2 or 3 months later, and only one showed any tuberculous change, and this was not in either of the cases complicated by tuberculosis. Cultures were negative and histological examination was negative, and eosinophile cells were found in great numbers in the glandular substance. According to Kanter, who has made a careful study of the changes in lymphomatous and tuberculous lymph glands, and has reached the conclusion that they are essentially independent diseases, although they may co-exist, eosinophile cells are strongly against the existence of tuberculosis. Fischer does not share this view. The positive case was a girl of 16, who had enlarged cervical lymph glands. They were removed and found to contain numerous eosinophile cells, but no areas of necrosis, and no giant cells. Tubercle bacilli could not be stained, but fragments of the glands inoculated into two rabbits caused their death in 7 or 8 weeks, and both presented typical tuberculous lesions. Later the patient developed tuberculosis of the lungs, and the tubercle bacilli could be demonstrated in the sputum, and the scar of the operation by which the glands had been removed re-opened and suppurated. This case seems particularly valuable for the purpose of proving that in the absence of characteristic histological changes of tuberculosis, or of the ability to stain the tubercle bacilli in the tissues, what appears to be certain tuberculous infection may have existed. Since Fischer's paper no important article has been written excepting that of Freudweiler. He reports the case of a woman, 31 years of age, who at the age of 30 had swelling of the cervical lymph glands, then pain in the abdomen followed by swelling and finally ascites. She became cachectic and there was profuse diarrhea. She then developed a large abscess in the wall of the abdomen, which ruptured spontaneously. The pus was sterile. Animals inoculated with this pus did not develop tuberculosis. At the autopsy the cervical and mesenteric lymph glands were enlarged, and the latter were cheesy. There were ulcers in the gastro-intestinal tract, but there were no nodules in the spleen and liver. The glands showed the characteristic changes of sarcoma and in the cervical glands there were, added to these, the changes characteristic of tuberculosis. The diagnosis, therefore, is one of lymphosarcoma, which he believes developed in the tuberculous glands.

In this series of cases the only ones of any value are those of Fischer, and even they appear to be insufficient to establish the conclusion that pseudoleukemia is sometimes due to other lesions than tuberculosis. It is almost unnecessary to call attention to the valuelessness of the inability to discover the tubercle bacillus in the glandular tissues as a proof that tubercles do not exist, for in the case of Sabrazés and in that of Brentano and Tangl tubercle bacilli were not found, and yet the inoculations were positive, and the same thing was true of case IV in my series. Inoculations, too, can only be regarded as satisfactory evidence, if they are made in sufficient number, or if the results are positive. In case II of my series the presternal abscess was unquestionably tuberculous, and yet only one of several guinea-pigs inoculated with a large quantity of the pus developed tuberculosis. Nevertheless, it must be admitted that Fischer's paper furnishes the strongest evidence, and practically the only absolute evidence that we have at present against the tuberculous theory of Hodgkin's disease. Excepting it therefore, we are obliged to consider two possibilities; either the etiology of Hodgkin's disease, so-called, is multiple, that is to say, there are a variety of factors that can cause it, or that there is some other single etiological factor, and that the tubercle bacillus, when it does occur in a gland, must be regarded as an accidental or mixed infection. There is no particular reason why the first of these possibilities should not be so, because in other conditions with similar clinical course, such as cerebrospinal meningitis, the variety of etiological factors is considerable. If, however, this is not the case, we must assume either that tuberculosis is the invariable cause, but for some unaccountable reason was not detected in any of Fischer's cases, or that the tuberculous infection in some cases is secondary. If this latter supposition were correct, we should expect to find tuberculous infection not so infrequent in cases of leukemia, and also occasionally in other forms of tumor. It is of course well known that cases of pseudoleukemia may develop a terminal leukocytosis (Fleischer and Penzoldt) and present before death the characteristic picture of leukemia. In 1892, Francksen, whose original paper I have been unable to procure, was able to collect a few cases in which leukemia and tuberculosis apparently co-existed. In 1900, Junger reported an additional case in a man, 25 years of age, who had a sudden swelling of the tongue, which was relieved by a copious discharge of pus, edema of the hands and feet, enlargement of the cervical, axillary and inguinal glands and of the spleen. There was bronzing of the skin. The leukocytes were at first 40-and later 125,000. The fever was intermittent and the temperature often

fell below 35°. The patient died, and at the autopsy miliary tubercles were found in all the serous membranes and in the liver and spleen. The hyperplastic lymph glands were also tuberculous. In the blood from the hemorrhagic lymph glands tubercle bacilli could readily be demonstrated. The lungs were free. He supposes that the case was one of latent tuberculosis awakened by the development of the leukemic process. The following year Sturmdorf reported an additional case occurring in a woman, 35 years of age, who at the age of 33 developed enlargement of the spleen. Two years later she awoke one morning with pain in the throat, cough and hoarseness. She lost weight; there was moderate fever, tuberculosis of the larynx, and the characteristic blood picture of leukemia, the leukocytes being 156,000. The fever was irregular and it was found that the myelocytes varied inversely with it. Tubercle bacilli were readily demonstrated in the sputum. This case can easily have been a tuberculous infection of the larynx complicating leukemia. Brückmann has also reported a case of myelogenous leukemia in a boy of 13 years. At the necropsy the lymph glands showed old tuberculosis and there was recent miliary tuberculosis of the pleura and peritoneum.

In regard to the infection of other forms of tumor with tuberculosis, the evidence derived from a study of the literature would seem to indicate that it is of the rarest occurrence. In 1895, Ricker reported two extraordinary cases. A woman was operated on for sarcoma of the breast. Two years later there was recurrence with the symptoms of general sarcomatosis followed by death. The necropsy showed miliary tuberculosis of the lungs which contained hard nodules without caseation or giant cells, and great enlargement of the spleen, which contained miliary tubercles. In the breast there were two tumors, one caseous, the other resembling the metastases in the lungs, but containing giant cells. Tubercle bacilli were found in both tumors. Ricker admits that this was possibly a secondary infection of the tumor from tuberculous lesions that already existed in other parts of the body. He argues against this, however, that there is no other case on record in which a tumor has become infected in this manner, or in which a wound has become infected during operation, nor is there any case on record in which a wound has become infected as a result of tuberculosis in other parts of the body; leaving the impression that it is his belief that either sarcoma and tuberculosis co-existed, or that the process was tuberculous from the beginning. The second patient was a boy, who at the age of 10 years had some swollen lymph glands removed from the neck. These recurred, and at the age of 15 years the boy was brought to the hospital emaciated, pale and complaining of severe pain in the lumbar region. A diagnosis of lymphosarcoma was made. Subsequently paraplegia developed and the patient died. At the necropsy large tumors were found in the neck, in the mediastinum, in the lungs and in the bodies of the vertebræ. These tumors showed the structures of lymph glands. Scattered throughout the lymphoid tissue there were groups of six or seven endothelial cells, but typical giant cells were absent. Great numbers of tubercle bacilli were found in the sections. Ricker regards the tubercle bacilli as undoubtedly the cause of the tumors in this case, although he admits that further investigations are necessary in order to determine what relation the tubercle bacillus bears to malignant lymphoma or lymphosarcoma. He is convinced that when it involves the lymphatic tissues it can produce a clinical type of disease that differs greatly from the ordinary pulmonary form. In 1899 Whartin reported two cases of carcinoma of the breast; the first, in a woman of 42, appeared, three years after the organ had ceased to functionate, as a small lump that grew rapidly. At the same time there was enlargement of the glands in the axilla. The breast softened and an abscess was found in it, and after a partial amputation the patient made a perfect recovery. Histologically, it showed the characteristic picture of carcinoma simplex associated with tuberculosis, and tubercle bacilli were found in the pus. The other, a woman of 39, had carcinoma of the breast with metastasis to the axilla. Carcinoma associated with tuberculosis was found both in the breast tissue and in the involved glands. But on account of the hardening fluid (Müller's) tubercle bacilli could not be stained. He accepts Lubarsch's classification of these structures.

I am inclined to believe that these cases are analogous to the cases which have been reported of lupus and carcinoma of the skin, and tuberculosis and carcinoma of the esophagus. Of the latter a number of cases are now on record, particularly those of Cordua, Letulle, Michaux, Zenker, and Pepper and Edsall. These cases are characterized usually by the presence of old tubercular lesions in the lungs and the absence of metastases to the glands surrounding the structures, although Michaux states that in his case some of the glands were softened and some firm and white, as in glands affected by carcinomatous metastases. As no histological examination was made, his statement must be received with reservation.

I think there is considerable doubt regarding the nature of these so-called carcinomatous tumors. Ribbert has shown that epithelium separated from its basement membrane by pathological processes may proliferate, and he attempts to find in this an explanation for the cause of carcinoma. It is possible that in these circumstances, however, the proliferation, although morphologically similar, is etiologically distinct from that characteristic of the true carcinomatous growth. The long history of some of these cases seems to be strongly against a malignant proliferative process.

The evidence regarding the tuberculous nature of pseudoleukemia, aside from that which we have quoted, is so scanty and inconclusive as to be almost worthless. Delbet inoculated a dog with bacilli, whose nature is not mentioned, from a case of lymphadenoma and produced chronic abscesses with enlargement of the lymph glands. Galasso has ob-

served improvement in cases of tuberculous lymphoma after the use of Maragliano's serum. Jaccoud, Mosler and Birch-Hirschfeld have observed infectious adenitis following infectious diseases. Tuberculosis, of course, often follows infectious disease, but there is no other reason for supposing the two processes the same. Liebmann has observed miliary tuberculosis as a complication of adenitis. He supposes that it may be a true complication, or else either assume the appearance of adenitis or actualiy cause it. Phillipart calls attention to the similarity between a case of cutaneous lymphomata and leprosy.

Assuming the tuberculous nature of these conditions, the question naturally arises, why tuberculosis of the lymph glands sometimes produces such extraordinary symptoms. In 1894 Askanazy suggested that the lesions in one of his cases resembled pearl disease in cattle. In 1898 the careful studies of Theobald Smith proved that there was more than one variety of the tubercle bacillus. He believed at that time that the chief distinction lay between the bovine and human tubercle bacillus, and that the greatest difference existed in the degree of virulence of these two organisms. His paper has since been amply confirmed by Koch, Ravenel and others; Koch even going so far as to claim that the human tubercle bacilli were not pathogenic for cattle, nor the bovine tubercle bacilli for human beings, a statement that has been conclusively disproved by the work of Ravenel. In 1901 Lartigau showed that a considerable variation existed between specimens of tubercle bacilli obtained from different lesions in human beings, and Ravenel has found the same thing to be true. It seemed possible, therefore, that perhaps in the pseudoleukemic forms of tuberculosis we had to deal with a variety of the tubercle bacillus that differed somewhat from the one ordinarily infecting human beings. Such a hypothesis could only be regarded as established if in a sufficient number of cases certain constant peculiarities were observed in the cultural and pathogenic character of the tubercle bacilli obtained from them, and it is needless to say that no such studies have as yet been made. In fact, case IV of my series is the only one, so far as I know, from which cultures have been made.

When I began to prepare this paper it was my object to find some common clinical features in these cases that would render possible during life their differentiation, on the one hand, from cases of true pseudoleukemia, if such actually exist, and, on the other, from cases of ordinary tuberculosis of the lymph glands. I now have great doubts whether any such clinical differentiation is possible. Yet, from the data at hand the following symptoms appear to be usually present in the forms which have certainly been determined to be tuberculous: Fever, continuous, irregular or recurrent; in fact, the forms described originally by Gowers, moderate anemia, more frequently associated with leukopenia than with leukocytosis; progressive emaciation; enlargement of the spleen and, less frequently, the liver; frequent enlargement of the superficial lymph glands, and, occasionally, the physical signs of enlargement of the thoracic and abdominal lymph glands; tenderness over the abdomen, especially in the right hypochondriac region, and hemorrhagic diathesis, or at least a very pronounced tendency to epistaxis; albuminuria, and, as terminal symptoms, anasarca and jaundice (probably due to pressure by the enlarged retroperitoneal glands.) Death apparently occurs in many cases as a result of the eruption of miliary tubercles. Not infrequently in these cases the following conditions occur and may be regarded as contributory evidence. The signs of pericardial adhesion and of myocardial involvement, the painless, fluctuating tumors arising from the thoracic cavity and lying between the skin and the ribs. Of course, the presence of tubercle bacilli in the sputum or other discharges must be regarded as highly significant. Excision of enlarged superficial glands with either histological examinations or inoculations into animals may confirm the diagnosis (von Noorden), and in some cases injections of tuberculin may give rise to the characteristic reaction, although in case II of my series 5 mg. of an active preparation produced rather a depression than an elevation in the temperature.

In conclusion, then, it can only be said that the time has not yet come for any dogmatic statement upon this question. None of the evidence hitherto presented can be regarded as decisive, and yet, as Pinkus says, the gradual accumulation of positive evidence, and the absence of entirely satisfactory negative evidence rather tends to confirm the supposition that the majority of cases of pseudoleukemia, if not all, will ultimately be recognized as tuberculous in nature.

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A Few Rare Cases of Extra-genital Infection with Syphilis.—Rozenqvist (*Medicinskoie Obosrenie*, September, 1901) reports the following interesting cases of **extra-genital syphilis:** Case 1. A little girl, 2½ years old, was found to have indurated labia majora and syphilitic papules on the genitalia and around the anus. Both parents suffered from recent syphilis. The infection probably took place from the dirty rags which the mother used to clean the child. The whole family lived in one small room. Case 2. Hard chancre of the pharynx in a woman, 27 years old. The source of infection not explained. Case 3. Hard chancre of the right ala nasi in a midwife, 36 years old. The patient has had acne vulgaris on the same place. She traced the infection to the amniotic fluid from a syphilitic woman whom she attended in confinement. Case 4. Hard chancre of the pharynx in a woman, 48 years old. The patient lived with a syphilitic family. Case 5. Edema and induration of the labia majora and papular syphilides in a little girl, 2 years old. The source of infection could not be ascertained, except that the family lived in extremely unhygienic surroundings, occupying a "corner" of a room. Case 6. Hard chancre of the finger of the left hand in a midwife, 22 years old. Infection traced to a syphilitic woman whom she had attended in confinement. Case 7. Primary syphilitic ulceration of both breasts in a woman 30 years old. The patient was infected by her little girl, 15 months old, who suffered from acquired syphilis of unknown origin. Case 8. Hard chancre of the right hand in a nurse, 55 years old. Acquired the disease through a bite of a syphilitic child under her care. Case 9. Hard chancre of the chin in a girl 12 years old. The disease was acquired from a syphilitic child under her care. [A. R.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ending April 5, 1902:

			C.	D.
SMALLPOX—United States.				
CALIFORNIA:	Los Angeles.	Mar. 15-22.	4	
	San Francisco.	Mar. 16-23.	4	
COLORADO:	Denver.	Mar. 15-22.	9	
FLORIDA:	Jacksonville.	Mar. 22-29.	3	
ILLINOIS:	Belleville.	Mar. 22-29.	1	
	Chicago.	Mar. 22-29.	14	
	Joliet.	Mar. 15-22.	1	
INDIANA:	Evansville.	Mar. 22-29.	3	
	Indianapolis.	Mar. 14-21.	21	
KANSAS:	Wichita.	Mar. 22-29.	1	
KENTUCKY:	Covington.	Mar. 23-30.	13	
MAINE:	Portland.	Mar. 22-29.	3	
MASSACHUSETTS:	Boston.	Mar. 22-29.	15	4
	Cambridge:	Mar. 22-29.	3	1
	Lawrence.	Mar. 22-29.	1	
	Medford.	Mar. 22-29.	1	
	Newburyport.	Mar. 15-22.	2	
	Taunton.	Mar. 22-29.	1	
MICHIGAN:	Detroit.	Mar. 22-29.	15	
	Grand Rapids.	Mar. 22-29.	1	
	Ludington.	Mar. 22-29.	9	
MINNESOTA:	Minneapolis.	Mar. 15-29.	31	
MONTANA:	Butte.	Mar. 23-30.	2	
NEBRASKA:	Omaha.	Mar. 22-29.	29	1
NEW JERSEY:	Camden.	Mar. 22-29.	2	
	Hudson County.	Mar. 23-30.	28	7
	Jersey City.	Mar. 23-30.	25	
	Newark.	Mar. 22-29.	11	9
	Passaic.	Mar. 1-15.	2	
NEW YORK:	New York.	Mar. 22-29.	69	4
	Yonkers.	Mar. 21-28.	2	
OHIO:	Chillicothe.	Mar. 22-29.	2	
	Cincinnati.	Mar. 21-28.	18	
	Cleveland.	Mar. 22-29.	1	
	Dayton.	Mar. 22-29.	1	
	Toledo.	Mar. 22-29.	1	
PENNSYLVANIA:	Lancaster.	Mar. 1-29.	3	
	Philadelphia.	Mar. 22-29.	38	3
	Pittsburg.	Mar. 22-29.	5	
RHODE ISLAND:	Providence.	Mar. 22-29.	2	
	Warwick.	Mar. 24-Apr. 1.	10	
SOUTH DAKOTA:	Sioux Falls.	Mar. 22-29.	1	
TENNESSEE:	Memphis.	Mar. 22-29.	5	
UTAH:	Salt Lake City.	Mar. 15-22.	1	
WASHINGTON:	Tacoma.	Mar. 16-23.	4	
WISCONSIN:	Green Bay.	Mar. 23-30.	8	
	Manitowoc.	Mar. 1-31.	26	
	Milwaukee.	Mar. 22-29.	3	
SMALLPOX—Foreign.				
AUSTRIA:	Prague.	Mar. 8-15.	8	
BELGIUM.	Antwerp.	Mar. 8-15.	13	4
	Liege.	Mar. 8-15. present		1
BRAZIL:	Rio de Janeiro.	Feb. 9-16.		6
CANADA:	Halifax.	Mar. 22-29.	1	1
	Hamilton.	Mar. 1-31.	1	
	Quebec.	Mar. 22-29.	11	1
COLOMBIA:	Cartagena.	Mar. 10-19.		1
FRANCE.	Paris.	Mar. 8-15.		7
	Rheims.	Jan. 5-12.	12	8
GREAT BRITAIN:	Cardiff.	Jan. 25-Mar. 8.	2	
	Dundee.	Mar. 8-22.	3	
	Glasgow.	Mar. 15-22.	23	4
	Liverpool.	Mar. 8-22.	20	1
	London.	Mar. 8-15.	450	81
	Plymouth.	Mar. 15-22.	2	
	Sheffield.	Mar. 1-15.	6	
	Southampton.	Mar. 8-15.	1	
INDIA:	Bombay.	Feb. 24-Mar. 4.		7
	Calcutta.	Feb. 22-Mar. 1.		7
	Karachi.	Feb. 23-Mar. 2.	8	1
	Madras.	Feb. 15-28.		4
ITALY:	Naples.	Mar. 1-15.	16	3
MEXICO:	Mexico.	Mar. 9-16.	3	
RUSSIA:	Moscow.	Feb. 15-Mar. 6.	18	5
	Odessa.	Mar. 8-15.	1	
	St. Petersburg.	Mar. 1-15.	15	3
STRAITS SETTLMTS	Singapore.	Feb. 1-15.		1
YELLOW FEVER.				
BRAZIL:	Rio de Janeiro.	Feb. 9-16.		27
CHOLERA.				
CHINA:	Canton.	Mar. 29 almost disappeared.		
	Shanghai.	Mar. 29 sporadic.		
	Tsang Mun.	Mar. 29 sporadic.		
INDIA:	Bombay.	Feb. 24-Mar. 4.		3
	Calcutta.	Feb. 22-Mar. 1.		158
STRAITS SETTLMTS	Singapore.	Feb. 1-15.		7
PLAGUE.				
CHINA:	Tsang Shang.	Mar. 29.		20
INDIA:	Bombay.	Feb. 24-Mar. 4.		856
	Calcutta.	Feb. 22-Mar. 1.		247
	Karachi.	Feb. 23-Mar. 2.	84	62

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The Patrick Case.—Few cases have attracted more attention than the trial of Patrick for the murder of Rice, and few cases have illustrated how almost useless and actually dangerous so-called expert testimony may be. In the first place, the fact that any one who is satisfactory to an attorney may qualify as an expert, is manifestly wrong, for as a rule the very men who are least expert are most prone to be tempted by a large "expert fee," and to really believe that their personal opinions are equivalent to the best. Any attempt on the part of the attorney for the opposite side to cast doubt on the actual value of the so-called expert's opinion is prevented by the fear that his opponent may resort to similar filibustering tactics and so damage his side of the case, and the judge not infrequently rules that, as a man has sworn he is competent, doubt cannot be cast on his testimony unless it can be proved he is manifestly guilty of perjury. While much might be said on both sides of this question, the judge cannot permit side issues, and so the jury, absolutely ignorant of the standing of the man himself and of the subject at issue, must take good, bad and indifferent testimony for what it seems to be worth, and often believes the most plausible but least reliable witness. Again, the law, which deals with absolute facts as nearly as possible, will not permit the expert to testify as he would testify in a medical gathering, but insists upon a positive "yes" or "no" to a given question, thereby getting a reply which is the truth, but not the whole truth. These criticisms are true of all expert testimony, and not of the Patrick case alone.

So far as the medical facts in this case are concerned, it can only be said that no case ever illustrated to better advantage how impossible it is to make positive statements without guarding them with modifying opinions, which latter were not permitted. There is not the space in an entire issue of the **Journal** to discuss all the medical testimony, but two facts seem certain from the best testimony adduced, namely: that the organs of the victim were not diseased, but simply senile and exceedingly feeble, the patient being for many reasons profoundly asthenic and hanging to life by that thread so often seen in the aged. This thread had been attenuated by the use of bad food and by various semipoisonous drugs, like massive doses of mercury protiodide, given him with evil intent by an ignorant valet. When in a deep sleep a cone with chloroform on it was placed over the old man's face with the object of killing him, and half an hour later he was found dead. If an old man of 84, in a profoundly feeble state, is dealt a blow by a footpad and is found dead shortly afterwards, and at autopsy no pathological changes are found in his organs except that his lungs are hyperemic, it is a fair supposition that the assault is the cause of death, although it is possibly not the cause. It may be argued that most persons, on hearing a footpad approach, call for help or make some resistance, but in this instance the heaviness of mind and dim perception of a tottering old man explain the exception to the general rule of action. So, in the case of Mr. Rice, who had been worried by business, hounded by a brutal valet, made ill by bad food, poisoned by mercury and oxalic acid (?), we believe it to have been possible to give chloroform in the manner indicated while he was in a profound stuporous slumber of exhaustion, and so produce his death. Had the autopsy revealed any lesion sufficiently grave to cause death, or had the condition of the patient been that of a man of ordinary age and activity, we believe the room for doubt would have been greater.

The lesson from this case is that the law should provide some suitable method of determining the real value of expert testimony instead of permitting an ignorant jury to do so, when their untrained minds are confused by the nice distinctions of opposing counsel and the unavoidable use of even the simplest of medical terms by the conscientious expert. Those terms convey clear distinctions to medical men, but seem synonymous to the mind of even highly educated laymen, who, if they call etymology to their aid, still fail to appreciate the dif-

ferences in meaning which are recognized in medicine.

The Case of Mrs. Haines.—This case was an important one, not for what it showed but for what it failed to show. The prosecution utterly broke down. They did not show that Mrs. Haines had ever had any arsenic or had ever given any of the poison to the child; they even failed to show that the child had died of arsenical poisoning; and, finally, they neglected to show that the arsenic which was undoubtedly found in the body, could not have been put there in an embalming fluid. With such signal failure in the main points of contention, it is no wonder that the jury could place no confidence in the alternative theory that, if the child did not die of arsenical poisoning, it nevertheless was killed by its stepmother with lack of kindness. From the medico-legal standpoint the case falls naturally into the category of State's failures, and may rank with the cases of LeConey and Annie Borden as among the great "unproven." The prosecuting attorney himself could hardly have been surprised at the result.

The main points of scientific interest in the case are two: The absence of the lesions of arsenical poisoning, and the injection of an arsenical embalming fluid. These points are ably discussed elsewhere in this number of the **Journal** by Dr. Henry Leffmann, a toxicologist of acknowledged high standing. We take pleasure in presenting this lucid commentary by Dr. Leffmann. Questions of medico-legal toxicology are always of interest to physicians, for every practitioner may at some time be confronted with some of these problems in his own experience.

The Surgery of the Prostate.—In another column of our present issue will be found an interesting article on the treatment of prostatic enlargement by Dr. John B. Deaver. The treatment of this condition, like that of many others, has undergone considerable change during the past few years. It must be admitted, however, that prostatic hypertrophy presents many points in pathology as well as in treatment which yet remain to be solved. The surgeons who have devoted most time to the study and treatment of this condition seem to have agreed that radical prostatectomy can best be performed by the perineal route, and it is this operation which Deaver urges in suitable cases. He gives a general résumé of the subject and presents it in a comprehensive and interesting manner. The older methods of catheterization, suprapubic prostatectomy, vasectomy, castration, and the Bottini operation, are discussed and their application indicated. Although a strong advocate of perineal prostatectomy, Deaver does not recommend it in every case, but shows distinctly that it should not be performed in cases too far advanced to stand the shock of the operation. He makes no mention of the combined perineal and suprapubic operation, which has been practised and highly recommended by some of the English surgeons. The lesson to be drawn from this paper by those undertaking the treatment of these unfortunate patients, is that the best results from prostatectomy are to be obtained when the operation is done early in the disease, and not when the patient has reached a stage at which no radical operation would be justifiable.

The Training of Nurses.—We wish to call the attention of our readers to the communication by Dr. Jopson in a recent number of the journal, in which he criticises our editorial on the trained-nurse question. Dr. Jopson's letter is a temperate and careful discussion of the subject, and, we believe, a valuable contribution to it. While admitting some of the facts alleged in the editorial as true, he takes exception to certain of the statements and gives what are apparently adequate reasons therefor. As the object of the editorial was to challenge discussion, it cannot be supposed that its conclusions were intended to be a satisfactory solution of the question. In fact, certain reservations were expressly made. Nevertheless, we were keenly alive to the arguments suggested by Dr. Jopson, and after very careful consideration we decided to advocate tentatively the restriction of training-school facilities to the general hospitals. Dr. Jopson instances two hospitals in Philadelphia which have a deservedly national reputation, and whose training-schools are known for the excellence of the instruction they afford their students, and the competent nurses whom they graduate. No one would suppose for an instant that a nurse trained in either of these hospitals would be incompetent to nurse any ordinary case of sickness; as a matter of fact many women not trained in any hospital have proven competent nurses, and many of the qualities required in nursing, as in all other professions, are those that belong to individual character rather than to instruction. The question, however, is broader than its application to any particular hospital. It has long been argued that men who purpose adopting a specialty, as for example the eye, or the nose and throat, or obstetrics, should not be obliged to take the general medical course, and although it has generally been concluded at the present day that it is necessary for them so to do, there is still a large

body of physicians and laymen who believe that some distinction should be made between students of medicine and students of surgery in our medical schools. American medical educators have not hitherto seen fit to adopt this course, and our own opinion is entirely in accord with their practice. The question is whether, as a matter of justice to the nurse, the patient, and the physician, some distinction should not be made between nurses studying for a short time, or even a long time, in a special hospital, and those studying for three full years in some large general hospital. We know of one large general hospital in Philadelphia which, lacking a maternity department, sends its nurses during a portion of their course to a maternity hospital in the city in order that their training may be completed. This seems to us to be an admirable method. We know of another large hospital which contemplates the erection of a maternity hospital for which there is no actual charitable need, in order that its nurses may be trained in this branch, showing intelligent appreciation on the part of the directors of the well-rounded training of their student nurses; and these instances are sufficient to indicate the general broadening trend of the education of the trained nurse. As for the other points that Dr. Jopson makes, we admit that they are open to discussion, although we beg leave to remind him that for the exceptionally skilled nurse, as well as for the exceptionally skilled physician, there is always plenty of work.

Porencephalus.—This term is used to describe certain cavity-formations in the brain. These cavities usually occur on the surface of the encephalon, and are situated beneath the arachnoid membrane, which forms a sort of roof to them. They extend to various depths, some of the more extensive ones communicating with the lateral ventricle: in such cases a great crater-like cavity exists, and a large area of the brain-mass appears to have collapsed or fallen in. These conditions of porencephalus are usually of prenatal origin, or else they occur in very early life. They are generally believed to be due to a vascular lesion, such as a thrombus or embolus in an artery; in fact, they usually occupy pretty accurately the territory of some particular artery of supply. The existence of such a cavity is incompatible with normal mental development; the victims are usually imbecile or idiotic, paretic and epileptic. Kundrat was among the first to describe this condition, and since his time the literature has grown to very respectable proportions.

We are reminded of this very interesting lesion by the handsome monograph on the subject just issued by the Royal Victoria Hospital at Montreal, from the pen of David A. Shirres, M. B. of McGill University. The case of Dr. Shirres is of exceptional importance from the fact that his patient had attained the advanced age of seventy-six years, had been twice married, and although hemiparetic and somewhat mentally impaired, was not an individual who would have been suspected of having such an immense lesion in the brain. The monograph is also of great interest from the fact that it contains a very exhaustive anatominal and pathological description of the brain. Cases heretofore reported have usually been merely described in the gross, but Dr. Shirres has given a minute description of the histological lesions. Hence the paper must take front rank.

We have not the space to follow this description here. It is enough to point out that in Dr. Shirres' case the cavity occupied the territory of the middle cerebral artery after it had given off the branches that supply the basal ganglia. The atrophy of the vessel was plainly made out, and the history of the case, which could be clearly ascertained, indicated a prenatal lesion due to an accident and threatened abortion in the mother.

The fact that this patient lived to such an advanced age and had twice assumed the marital relation, gives the case a unique value. Most of these cases have been observed in children and young persons. We wish especially to call the attention of neuropathologists to Dr. Shirres' paper, because of the thoroughness with which he has depicted the anatomical changes. The study throws light upon many problems in brain anatomy and development. In fact, such a case is to the human subject what carefully performed experiments are to the lower animals.

A New Treatment for Leprosy.—The remedies which have been brought forward in apparently good faith for the treatment for leprosy are probably only less numerous than those which have been seriously advised as cures for tuberculosis and cancer. And yet we seem as far from possessing a specific against this dread malady as when the disease was first known. The apparent betterment of the condition of many patients who have borne strong testimony to the efficiency of this or that remedy may be justly regarded as but a phase in the course of the disease which would have occurred quite independent of treatment. During the past few years no small number of synthetic as well as other preparations have been tried in vain, but the interest of the profession has been more seriously aroused by the results which have been claimed for Chaulmoogra oil

by Hallopeau, Brousse, Vines and others, and the result which Dyer, and those following his suggestion, have secured in the employment of Calmette's antivenene. The use of these remedies seems to be based entirely upon empiricism. Within a few days the newspapers have reported glowing results following the use of what is evidently a tincture made from the *tua-tua* in the Sandwich Islands. It seems that this plant, which is comparatively unknown, is indigenous to the soil of Venezuela. We have as yet seen no reference in the literature to the employment of the drug by medical men. According to the report a kind-hearted school-teacher proved the benefactress of a little patient whose condition in the course of a few months improved from a most pitiable state to the point of his being practically regarded as cured. The same account states that the remedy is now being used by a number of physicians. It is no doubt probable that the study of the flora of our newly acquired territories may furnish us with a few remedies which may prove of value. It is far less likely, however, that a specific for leprosy will be found in this list.

The Cannibalistic Habits of Mosquitoes.—It is satisfactory to reflect that mosquitoes eat one another. This fact is brought out by a correspondent in the *British Medical Journal*. Mr. K. B. Barnett writes from India, and says that he has observed that the larvæ of the *culex* hatch out in such great numbers that the question is raised: what do they live upon? He quotes Mr. Christy, who says that he has on several occasions watched the older and stronger ones devour the younger and weaker. Mr. Barnett says that these larvæ universally do this. The older and larger devour the younger and smaller ones until none but the bigger ones remains, and he regards this as an example of the Darwinian law of the survival of the strongest. It would be interesting to turn these cannibalistic propensities of the mosquito to our benefit. Why not go hunting after mosquitoes with mosquitoes? Barnett indeed suggests that the larvæ of the *anopheles* and of the *culex* be pitted against one another. This is not a mere evidence of a Briton's game-fighting proclivities, but is a serious proposition on his part. He hopes that the two species might exterminate each other. He says that the larvæ of these two genera do not feed on the same things, one being a vegetable and the other an animal feeder; hence he wants to see what would happen if they were put into the same puddle.

Grateful Patients.—These citizens deservedly form a class by themselves, and they are frequently spoken of affectionately as G. Ps. We are sure that everything concerning them is of interest to the profession—especially their manner of making their wills and of giving gifts. That they do not always give with the best judgment, however, is forcibly proven by a recent English case. An old lady (who was in every sense a G. P. in capitals) gave her doctor $4000 in various sums, simply as a kindly expression of her appreciation and gratitude. The doctor, as the records show, accepted the gifts in the spirit in which they were made. After the old lady's death her unfeeling executors brought suit to recover this money, and, to our mortification be it told, succeeded. According to the *British Medical Journal*, the learned judge held that "the relation of patient and physician is a confidential relationship, and where it exists, as it did in this case, the donor must have had competent and independent advice before a gift can be supported. There is no exception to this rule." The physician was not accused of having used undue influence in obtaining this large sum of money, but he had merely omitted to call in some of the neighbors or forty-second cousins as an advisory committee. How willingly and cheerfully this old lady's lawyer and relatives would have advised her to give her doctor four thousand dollars for nothing, can readily be imagined.

The case is of interest to gift-hunting doctors and to doctors who pride themselves on their G. Ps. It would perhaps require a stiff command of one's self to decline a trifling gift of four thousand dollars from an overgrateful old lady, but before pocketing the money it would be well to secure for her guidance the advice of the house-maid or the butler.

Quackery at the Fair.—A great World's Fair offers too many possible opportunities to quacks and impostors to be ignored by those people. Many patent medicine venders and many sham systems of treating disease will probably clamor at the gates of the St. Louis Exhibition for admission. They will probably claim the privilege of free-born American citizens to exhibit themselves and their products. They will demand space for their wares. They will want to demonstrate how they have contributed to the "development" of the country; how they have advanced its "progress." All the issuelets of money and some of the patronage of politics will probably be theirs, and they will use any and every instrument to accomplish their ends.

But it is to be hoped that they will fail. The

managers of the Fair have but one course to pursue in this matter. They should keep their great Exhibition free from charlatanry and bogus exhibits. The educational value and the authenticity of the show must be like Caesar's wife, above suspicion. The general public should not be invited to any spectacles of miracle-healing and patented therapeutics that would disgrace a country fair. If one such system is to have admission, there are a thousand and one other fakes that cannot with good grace be kept out. Time is yet left for the management to consider carefully this whole repellent business.

One of the standing arguments in favor of changing the date for the inauguration of the President of the United States, is that the ceremony on the 4th of March is a menace to the health of a large concourse of people. The present agitation of the subject in Washington should be continued. The number of cases of bronchitis, pneumonia, rheumatism and other ailments due to this patriotic function will probably never be known. A change of date to the latter part of April would be a hygienic measure.

Current Comment.

THE INFLUENCE OF KOCH.

Professor McFadyean, the Principal of the Royal Veterinary College, issues a note of warning and regret in the annual report just published. He points out that there is a distinct slackening of voluntary effort to deal with tuberculosis of domesticated animals both at home and abroad, attributable, in his opinion, to the doubts raised by Professor Koch as to the causal connection between the human and the bovine disease. The result is natural, though regrettable; but there is still the satisfactory fact that foreign importing countries have not shown any tendency to relax the regulations designed to prevent the introduction of tuberculous cattle.

—*The Sanitary Record.*

CECIL RHODES' BENEFACTIONS.

The direct effect, however, of Mr. Rhodes' legacies will be to estrange more or less a number of promising American youths from their country. My opinion has been sometimes asked as to the expediency of sending young Americans or Canadians to be educated in England. I have always given it in the negative, holding it to be the best for a youth to be brought up and to have his ideas and sympathies formed in the social and political elements in which his life is to be spent. My opinion would be the same even if I believed that the education now given at Oxford and Cambridge were superior to that which is given at a first-class American university. But this I do not believe. I believe that the first-class American universities, though differing somewhat in their system and curriculum from Oxford and Cambridge, give, practically, as good an education as well as one more suited to American requirements.

—*Professor Goldwin Smith in the Philadelphia Press.*

BOGUS BUTTER.

Things have come to a strange pass when the steer competes with the cow as a butter maker. When the hog conspires with the steer to monopolize the dairy business, it is time for self-respecting men to take up the cudgels for the cow and defend her time-honored prerogatives. As a matter of poetic justice, if nothing else, we ought not to forget the bountiful favors of earlier years that were conferred by that faithful creature, and we ought not now to desert her or to permit her to be displaced, her sweet and wholesome product supplanted by an artificial compound of grease which may be chemically pure, but has never known the fragrance of clover, the freshness of the dew, or the exquisite flavor which nature bestows exclusively on butter fat to adapt it to the taste of man.

I desire butter that comes from the dairy, not from the slaughter house. I want butter that has the natural aroma of life and health. I decline to accept as a substitute caul fat, matured under the chill of death, blended with vegetable oils and flavored by chemical tricks. The man who makes this compound may have clean hands; he may wear a clean, white apron, but he is no friend of mine.

—*Congressman Quarles in the Congressional Record.*

BEN BOLT.

The late Dr. English's condemnation of his most popular song, "Ben Bolt," was, after all, not extraordinary. The old gentleman possessed a critical and independent mind, as many acts of his attest, and naturally every year of critical growth strengthened his dislike for the poetical flapjack of the twenty-fourth Spring. "Ben Bolt" is the song of the youthful poet—sentimental and a bit lachrymose.

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Dr. English fell short of true philosophic attainment in that he scorned the popularity of his pathetic song. He was almost as one who ridicules children for fondling dolls—as a man who strangely forgets that he was once a simple youngster himself. Du Maurier, who used "Ben Bolt" in "Trilby," as much as rebuked the poet. The English artist—artist in a double sense of the term—unaffectedly appreciated what may be described as the vulgar excellence of the lines, and the proof of the soundness of his judgment was the circumstance that once again "Ben Bolt" took its place at all the upright pianos and all the parlor organs of English-speaking people.

—*The Boston Journal.*

Correspondence.

HUMAN AND BOVINE TUBERCULOSIS.

By J. GEORGE ADAMI, M. D., of McGill University, Montreal.

To the Editor of the Philadelphia Medical Journal:

My attention has been called by Dr. Salmon, head of the Bureau of Animal Industry, to a passage in my article upon the Relationship between Human and Bovine Tuberculosis, published by you on February 22, which, I confess, appears to include Chaveau among those who hold that human and bovine tuberculosis are not identical. It is but due to Dr. Salmon as to all interested in this matter that I should remove my ambiguity.

That article, it may be remembered, was essentially a critique of Dr. Koch's London address, in which he stated "If one studied the older literature of the subject and collects the reports of numerous experiments that were made in former times by Chaveau, Gunther * * * * one finds that animals that were fed with the milk and pieces of lungs of tuberculous cattle always fell ill of

tuberculosis, whereas those that received human material with their food did not." (Philadelphia Medical Journal, page 358.)

In preparing my article I took particular care to verify my statements, and doing this could find nothing by Chaveau which would permit so positive an assertion. On the contrary, the abstract I had by me from Chaveau's address before the Second Congress for the study of tuberculosis in 1891, showed me that this observer took for his title "'L'identité de la Tuberculose de l'homme et de la Tuberculose du boeuf," and pointed out that emulsions from the lungs of human beings who had died from acute miliary tuberculosis fed to calves led to the development of the disease, and that generalized, in these animals; tuberculous material of human origin inoculated subcutaneously into calves led to purely local disturbance.

Believing that Koch must have referred to some other work of Chaveau, not known to me, and for which I could not find any reference, I was nevertheless careful in view of these known observations by the French pathologist, to modify materially Koch's statement. Thus I remarked "several observers have noted either that tuberculous sputum from man when fed to calves had no effect upon them, or that pure cultures of the bacilli isolated from lesions in man were similarly without effect, at most leading to localized disturbance at the point of inoculation with little or no liability to lead to generalized disease. (Chaveau in France, Günther, and Harms, and Bollinger (1894) in Germany, etc. * * * *)"

I have recently, at the Surgeon-General's library, looked up the various works by Chaveau upon tuberculosis from 1878 onwards, and find that he has consistently urged the identity of the two diseases. I have discovered nothing which supports Koch's positive statement with regard to my own, studying *in extenso* the address already referred to. *

I find that what Chaveau used for his subcutaneous inoculations was not a pure culture of the bacilli, but material from cases of tubercular arthritis and acute miliary tuberculosis respectively, both, it would seem, in the form of emulsions. I see further that, while he dwells upon the local character of the disturbance induced, he notes evidence of local infection of the nearest lymph gland. To this extent my statement needs correction and amplification.

Stated briefly, Chaveau developed tuberculosis in calves by feeding them with material from acute miliary tuberculosis in man, as again by intravenous injection of the same material, but found that, whereas bovine tuberculous material, injected subcutaneously, led inevitably to a rapid generalization of the disease, human tuberculous material caused "a localized disturbance at the point of inoculation with little * * * * liability to lead to generalized disease."

This subject is one of so much interest and importance at the present time that, although there is more to explain than to correct, yet some correction has to be made, and it appears only right to detail M. Chaveau's contribution to the matter at issue.

*Compt. rend. du Cong. pour l'etude de la Tuberculose, 1891. Paris, 1892, p. 51.

Reviews.

A Treatise on Surgery by American Authors. For Students and Practitioners of Medicine and Surgery. Edited by Roswell Park, M. D., Professor of Surgery in the University of Buffalo, N. Y. New (3d) edition in one royal octavo volume of 1350 pages, with 692 engravings and 64 full page plates in colors and monochrome. Cloth, $7.00 net; leather, $8.00 net. Lea Brothers & Co., Philadelphia and New York.

The fact that this is the third edition of this work in five years speaks well for its merit. The book is the work of a number of different men, but possesses the distinct advantage of having the writer's name attached to each chapter. Part I deals with "Surgical Pathology," and is very complete, presenting the latest and most rational theories. The chapter on the "Blood in Surgical Diseases" is particularly good. This portion of the book and Part II, which includes "Surgical Diseases," is largely written by Park, who is especially fitted for the task of presenting these subjects in a scientific manner and at the same time showing their clinical and practical value. In Part III is found "Surgical Principles and Methods and Minor Procedures," including local, intraspinal, and general anesthesia. The latter subject is dealt with rather extensively from a physiological standpoint, but we cannot refrain from observing that a little more space might have been allowed the practical part of the subject, viz., the administration of the various anesthetics and their combinations. Part IV, devoted to "Injury and Repair," is ably written by Nancrede, and contains a very interesting chapter on gunshot wounds. The chapters devoted to "Cysts and Tumors" are well written and the illustrations well chosen. Gaylord's work in connection with the cause of cancer is given and is said to "appear to establish the protozoan nature of the cancer parasites." The toxin treatment of inoperable sarcoma is considered as yet experimental, although to us, considering the cases in which it is recommended by Coley and others, it is a treatment deserving description in every text-book on surgery. It is noticeable, too, that no mention is made of the treatment of carcinoma or of rodent ulcer by the Röntgen rays.

The chapters dealing with the diseases and injuries of the lymphatics and blood vessels are especially to be commended and the illustrations are particularly good. In the chapters on joints the limited space allotted to "internal derangement of the knee-joint" and more especially to the treatment of this condition is disappointing. The treatment of fractures is a subject upon which surgeons are apt to hold such diverse and yet determined views that it is not surprising that a reviewer should find in this portion of the book points seemingly deserving of criticism. In the first place it is thought that the directions given for the dressing of fractures are too indefinite, and in the second place that the author has confined himself too closely to one form of dressing for each fracture. Illustrating this point we would note that no mention whatever is made of the very excellent method of Jones applied to fractures of the lower end of the humerus involving the elbow joint. Although stress is very properly laid upon the importance of making absolute reduction in fractures of the lower end of the radius, we think that Mudd does not recommend passive motion as soon as it should be instituted in these cases.

It is impossible in the limited space allowed for review to go minutely into each chapter of so large a work, but one cannot pass over the portion devoted to injuries and surgical diseases of the head without a word of praise.

Richardson presents the surgical diseases of the abdomen in a most thorough and satisfactory manner. The only criticism possible is that but one method of gastrostomy is described and of course the excuse for this lies in a limitation of space.

The editor has been most fortunate in his selection of contributors and the book probably contains more valuable information than any other of its size. It is to be regretted, however, that there is no separate chapter devoted to the Röntgen rays. With few exceptions the illustrations are very satisfactory. [J. H. G.]

A Manual of Determinative Bacteriology. By Frederick D. Chester, Bacteriologist of the Delaware College Experiment Station, and Director of the Laboratory of the State Board of Health of Delaware; Member of the Society of American Bacteriologists; of the Society for the Promotion of Agricultural Science, and of the American Public Health Association. New York. The Macmillan Company. 1901. Price $2.00.

Bacteriology has advanced so rapidly and accumulated such a mass of material in observation and experiment that

specialization has become necessary. The author tells us that the present work came into being through his undertaking an arrangement of the several hundred bacterias found in cultivated soils, and already described. Having done the work for his own benefit he believed that it might be of use to others. His pages "serve only for purposes of identification and not necessarily" for classification. The work covers some 400 pages; its leaves come uncut, so that no germs from the outside air should mingle with the hundreds he describes and protest at neglect or favoritism, but one hardly cares, when in a hurry, to have to cut the leaves of a dictionary or any work of reference. The author believes that, with this book to assist him, the teacher "can place a given culture in the hands of his pupil and expect him to determine it." Anybody can expect anything.

One naturally looks for "Tuberculosis" under "bacillus" in the elaborate index, but finds it absent; it is, however, classified as "mycobacterium," on page 356. This should be a cross reference, as one naturally turns to the organism itself in looking it up. Under "habitat" we find that the organism is "associated with tuberculosis in man and the lower animals," though a separate division is made of "tuberculosis avium." Chapter first deals with the Morphology of Bacteria. Chapter second with the Cultural Characters of Bacteria. Chapter third with the Classification of Bacteria and covers some 338 pages, and the book ends with a valuable glossary of bacteriological terms,—a list of the most important words on descriptive bacteriology and the index.

The author deplores the confusion existing in bacteriological terminology, many bacteria having as many as four names, whereas "each bacillus should be given its proper name, and that name should be strictly adhered to." "The rules governing the naming of bacteria should be those of the Paris code of 1876 together with those of the Botanical Club of the American Association for the Advancement of Science, adopted at the recent Rochester and Madison meeting." The use of trinomials and quadrinomials is to be avoided in naming species,—a trinomial indicating "a varietal form."

Under the term "Myco-bacterium Syphilides," and throughout the work, the bacillus of syphilis described by Lustgarten is accepted as the etiological factor of syphilis. No mention is made of the work of van Niessen nor in the index is there any reference to smallpox or scarlet fever, thus omitting the work of van Niessen, which has recently been confirmed by Baginsky. Of course it is to be understood that this work under notice is of little value to those studying pathogenic bacteria, but only for work with the bacteria from the soil. Fortunately, however, the student now has the recent work of Lehmann and Neumann translated by Weaver which gives him an excellent working manual. Chapter I and II are illustrated tolerably with wood-cuts but for more complete illustration one can use Lehmann and Neumann's Manual and Atlas. The book of Dr. Chester, however, will be found of greatest value in the special study for which he devised it, the two standard works on Systematic Bacteriology, those of Eisenberg and Sternberg no longer representing the present state of our knowledge. The recent (3d) edition of Sternberg having omited this very valuable part of the first edition (1893) and the second edition (1896).

[E. W. W.]

The American Year-Book of Medicine and Surgery. A Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, drawn from Journals, Monographs, and Text-Books of the Leading American and Foreign Authors and Investigators. Under the General Editorial Charge of George M. Gould, M. D. W. B. Saunders & Co., 1902

Saunders's American Year-Book is constructed on the same general plan that has characterized this popular work for the past three or four years. Two volumes are issued, one on Medicine and one on Surgery; for the general practitioner this constitutes a convenience in handling, and for the physican or surgeon a saving of money as he is not forced to buy the whole in order to secure the part in which he is especially interested. The Surgical volume is the subject of the present review. Owing to the absence of Dr. W. W. Keen from the United States, Dr. J. Chalmers DaCosta with the assistance of Dr. John H. Gibbon, has assumed charge of the department of General Surgery, otherwise the staff of contributors remains the same as last year. In addition to the department of General Surgery which occupies about one half of the volume there are included sections on Obstetrics, Gynecology, Orthopedics, Ophthalmology, Otology, Diseases of the Nose and Larynx, and Anatomy.

The abstracts are well chosen, clearly worded, and show great care in preparation. Some year-books are so compressed as to be practically wortmess except for the references which they contain; this is not the case with the work before us, notably in the chapters on medullary narcosis, local anesthesia, and intestinal anastomosis in which methods and manipulations are given in great detail. The chapter on orthopedics, however, seems to us to contain too few articles, the majority of which are so condensed as to be of little use.

The bracketed critical comments which are found at the end of many of the paragraphs and which in many instances indicate the scientific status of the abstracts, are interesting, instructive, and signally valuable.

The book is well bound, profusely but not over-illustrated with admirable cuts and plates, and is printed in clear type sufficiently large for comfortable reading. It is by far the best year-book for the general practitioner which has come under our notice.

There are a few typographical errors; several subjects, as nephropexy, carcinoma of the appendix, and rectal prolapse under gynecology, are ectopic, and there are at least two papers whose epitome is found twice in the volume, having been abstracted by different contributors. [F. T. S.]

Leitfaden fuer den geburtshilflichen Operationskurs. von Dr. Albert Döderlein, Professor der Geburtshilfe und Gynäkologie, Direktor der Königlichen Universitäts-Frauenklinik in Tübingen. Fünfte verbesserte Auflage. Mit 149 Abbildungen, Georg Thieme, Leipzig, 1902. Pages 190.

The fifth edition of this practical little manual appears ten years after the book was first published. The author states that the demand for the book has necessitated the careful revision and the bringing up to-date of the minor operative procedures in obstetrics. The chapter on the mechanism of labor is profusely illustrated, the diagrams, many of which are original, clearly portraying the various phases of normal and abnormal delivery. The operations of version, decomposition of the breech, application of the forceps, and embryotomy are described and profusely illustrated. Almost as much could be learned by a mere examination of the illustrations as from a persual of the text. As a hasty guide for obstetric complications the manual can be heartily recommended. Professor Döderlein should be congratulated on the little work he has presented to the profession. [W. A. N. D.]

Dry Gangrene of the Left Leg.—Douillet reports a case of gangrene of the left leg occurring in a soldier, aged 21, following the defervescence of a lobar pneumonia. The leg was amputated below the knee, with excellent results. Examination of the leg amputated revealed the posterior tibial artery completely obliterated by thrombosis, possibly due to the slowing of the arterial circulation from the feeble contractions of the heart throughout the attack of pneumonia. The case-history is given in full. (*Archives de Médecine et de Pharmacie Militaires*, September, 1901).

[M. .O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Pennsylvania Society for the Prevention of Tuberculosis.—At the annual meeting, held April 9, Dr. H. S. Anders was elected president for the ensuing year. Dr. Guy Hinsdale, the retiring president, reported that plans had been made for a consumptives' pavilion at the Philadelphia Hospital, and that it was probable that eight such structures will ultimately be erected there. The trustees for the Rush Hospital for Consumptives have established a country branch at Malvern, Chester county. The property is as yet only partly paid for. Only incipient cases will be sent there.

An Appointment.—Dr. Joseph J. Kinyoun, late surgeon U. S. M.-H. S., director of the Hygienic Laboratory, U. S. M.-H. S., Washington, has accepted the position of director of the biological laboratories of the H. K. Mulford Company at Glenolden, Pa.

Calorimeter Tests.—Dr. Armsby, of State College, has found, by experiments with the respiration calorimeter, that a steer loses 4½ ounces a day standing and 6½ ounces a day when lying down. Feeding-animals, therefore, need a place to lie down. The heat generated in fattening animals is more than they need, so warm stables are unnecessary.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Wednesday evening, April 23, County Medical Society, and Thursday evening, April 24, Pathological Society.

Infectious Diseases in Philadelphia.—Typhoid fever seems to be spreading, 125 new cases with 14 deaths being reported for the week ending April 12. Thirty-five cases of smallpox with 4 deaths were also reported. There was a marked decrease in the number of cases of diphtheria, while the number of scarlet fever cases remains about the same as during the week previous. An epidemic of measles is reported at Tacony, affecting not only the children, but, in many cases, adults. The attendance at the schools has markedly diminished in consequence. The quarantine of the Philadelphia Hospital, enforced since last October on account of the prevalence of smallpox in the city, has been discontinued. Visitors are now admitted on Tuesday and Thursday afternoons as formerly, but no one carrying, or under the influence of, liquor will be admitted.

College of Physicians, Philadelphia.—At the last meeting of the section of medicine of the College of Physicians, held April 14, Dr. William Osler, of Johns Hopkins University, read a paper upon the "Clinical Manifestations of the Diseases of the Adrenals." Later Dr. Frederick A. Packard gave a reception at his home in honor of Dr. Osler.

Bequests.—By the will of the late Mrs. Mary A. Allison, $5,000 are left to the Methodist Episcopal Hospital, Methodist Episcopal Orphanage, Methodist Episcopal Home for the Aged, and $2,500 to the Presbyterian Hospital.—By the will of the late Owen Lamb, $500 are left to St. Joseph's Hospital, St. John's Orphan Asylum, Little Sisters of the Poor, Catholic Home for Destitute Children, Catholic Home for Destitute Boys and a number of other Catholic institutions. The residuary estate, estimated at $50,000, was left for the support of St. Mary's Hospital and for the education and maintenance of poor orphan children.

English Visitors.—On Sunday evening, April 13, Dr. Charles K. Mills, professor of nervous diseases in the University of Pennsylvania, gave a dinner at the University Club in honor of Dr. William Aldren Turner, of London, the well-known neurologist, and his brother, Dr. Logan Turner, of Edinburgh, the laryngologist. Both gentlemen are the sons of Sir William Turner, of Edinburgh.

New Siamese Twins.—The Wistar Institute of Anatomy of the University of Pennsylvania recently received the bodies of two still-born male infants, weighing together 16 pounds, joined by a broad ligament connecting at the umbilicus. There was one umbilical cord with one placenta only. The twins were born in Kensington.

The Death of Miss Ward.—Miss J. M. Ward, for some time a student of the Women's Medical College of Pennsylvania, since 1892 instructor in massage in the Nurses' Training Schools of many of the hospitals of the city, died in the Presbyterian Hospital, April 6, after an illness of some weeks.

NEW ENGLAND.

The American Pediatric Society will meet at Boston, May 26 to 28, under the presidency of Dr. W. S. Christopher. Drs. Blackader and Rotch are in charge of the coming meeting.

Fire at the Franklin Hospital, Boston.—What threatened to be a serious fire occurred in the Franklin Hospital, in the South End of Boston, April 4. The damage amounted to about $500, and the fire was supposed to have been caused by an overheated furnace. All the patients were removed to safety.

Elliott City Hospital, Keene, N. H.—The children and grandchildren of the late Edward Joslin have presented to the Elliott City Hospital the sum of $12,000, for the erection of a three-story building to be known as the Edward Joslin Home for Nurses.

A Hospital Dedicated.—The new hospital of the Sisters of Charity, Lewiston, Me., was dedicated April 8. Bishop O'Connell, of Portland, officiated.

WESTERN STATES.

Chicago's Dispensaries.—Free medical dispensaries connected with the 30 medical schools of Chicago, together with the dispensaries conducted as charities, gave aid to 105,[illegible] patients last year at a total cost of $44,229.43. Forming the greater part of this cost are 124,259 prescriptions at 20 cents each, and 120,000 visits, costing on an average 16 cents each.

The Milwaukee County Medical Society held its annual meeting April 11, when 80 new members were elected. The following officers were appointed for the ensuing year: Dr. H. M. Brown, president; Dr. W. H. Washburn, vice-president; Dr. F. E. Grey, secretary; Dr. C. G. Wilson, treasurer, and Drs. A. B. Farnham, Ernest Copeland, and L. W. Frank, censors.

Presidio Hospital, San Francisco.—A despatch says that the army general hospital at the Presidio is so crowded with patients that 47 convalescents have been ordered to Fort Logan, Colorado.

The New Embalming Fluid.—The body of an aged negro who died at Battle Creek, Mich., 6 months ago, and which was turned over to an undertaker in order that he might test a new embalming fluid, has been exhumed. It has the consistency of vulcanized rubber, and might readily pass for a statue of black marble, as the petrified flesh is hard enough to take a polish. There was not the slightest trace of decomposition or wasting, the features retaining their fullness. The experimentor says the fluid will preserve the body for centuries.

SOUTHERN STATES.

Union Protestant Infirmary, Baltimore.—The Union Protestant Infirmary, which was closed 6 months ago for repairs, will be opened to the public on April 23. A number of adjoining dwellings have been converted into a nurses' home, while a new four-story building has been erected behind the old building. This contains a large children's ward, kitchens, isolation rooms, surgical dressing-rooms and nurses' rooms. The cost of the new building was $10,000. The operating room in the old building has been wholly reconstructed. The equipments of the entire building are now thoroughly modern.

Epileptics in the Government Hospital for the Insane, Washington.—The purpose of providing for the detention and treatment of indigent female epileptics and feeble-minded persons resident in the District of Columbia, at the Government Hospital for the Insane, cannot be carried out as even when the new buildings now being erected are completed, the entire space provided will be required for the patients at the hospital according to the report of the superintendent. It is most important that epileptic and feeble-minded persons of both sexes should be sequestered, both for their own protection and because of the serious menace to the community when such persons are at large, perpetuating offspring. There is considerable agitation in the various States at present upon the custody of these classes. Only a few States, Massachusetts, New York, Ohio, and others, have thus far established colonies for epileptics; but the need for such institutions is now generally acknowledged and movements are on foot to start them in additional States. The Commissioners of the

District of Columbia recommend that, since the number of these classes in the District of Columbia is not large enough to warrant a separate asylum, authority should be given and an appropriation made confining such persons in the institution of some nearby State, established especially for the care and treatment of epileptics. This plan is now pursued in caring for the blind and feeble-minded children.

Association of American Physicians.—The 17th annual meeting of the Association of American Physicians will be held in Washington, D. C., April 29. and 30, and May 1.

Medical Legislation.—A conference was held in Washington, D. C., April 10, by the Legislative Committee of the American Medical Association, of which Dr. H. L. E. Johnson, of Washington, is Chairman. The medical societies represented were those of New Hampshire, North Carolina, District of Columbia, Arkansas, New Jersey, New York, Massachusetts Alabama, South Carolina, Minnesota, Michigan, Indiana, Pennsylvania, West Virginia, Maryland, Connecticut, Wisconsin and several other Western States. There also were present representatives from the army, navy, Marine-Hospital service, and Bureau of Animal Industry of the Agricultural Department. The conference adopted committee reports which have for their object the securing of uniform legislation by the States and Territories which will permit a physician to practise in any State or Territory, and the organization of State medical organizations to secure enactment of legislation of importance to the profession. The conference declared itself favorable, with some modifications, to the Perkins-Hepburn bills now pending in Congress to increase the efficiency of the Marine-Hospital Service, and to change its name to the United States Public Health Service.

The Mississippi State Medical Society held its annual meeting at Jackson, Miss., April 16 to 18.

In Memory of Dr. Johnston.—A meeting was held by the Medical Society of the District of Columbia, April 10, as a memorial to the late Dr. W. W. Johnston. Addresses were made by Drs. A. F. A. King, H. D. Fry, W. Osler, W. Reed, S. Ruffin, G. M. Kober, and W. B. Carr.

MISCELLANY.

Notes.—Frost bells are tolled in some districts of France and Switzerland when frost is threatened. Immediately the inhabitants place quantities of tar between the rows of vines. The tar is lighted, and volumes of dense smoke arise, thus protecting the vines.—The consumptives wintering in the Swiss Alps sleep with their windows wide open in the coldest weather.—Experiments have been made in the Swiss Army as to the effect of smoking on the march. The results were favorable, and the troops are allowed to have their pipes. It is said that their discipline is better.—No fewer than 61% of German students are short-sighted, states Prof. Cohn, of Breslau.—The total census returns for Newfoundland and Labrador show that the population numbers 220,000, an increase of 18,000 since 1891.—By a recent decree of the minister of education in Saxony, no girl wearing a corset may attend the public schools or colleges.—Greece uses more than 5000 tons of copper sulphate per annum for killing insects, especially those that feed upon the currant bush.—The City of Mexico, with a population of nearly 370,000, still has an annual death-rate of 52.2 per 1000.—An injury to the tongue is repaired by nature with more rapidity than is the case with any other part of the system.—In Central South America, eggs, cocoanuts, and chocolate pass as currency of the realm.—The first visit of pestilential fever to America was in 1702. It was brought from the West Indies to New York by trading vessels.—One smoker contracts diphtheria to three nonsmokers.—The doctor, who examined a man charged in New York with feigning epileptic fits, said that the man was a physical curiosity, being able to increase, at will, the pulsations of his heart to 105 a minute.

The Health of the Army.—The Surgeon-General of the Army has received a report in regard to the health of the troops in the Philippines during the month ending February 15. There were 2611 cases of sickness, a percentage of 6.39 to the entire command, a slight increase over the previous month, due partly to measles brought on the transport *Sheridan*. Malarial fever is on the increase among the troops, but this is more than compensated for in the decided falling off of cases of gastric and intestinal diseases from 31.9 to 18.50. The bubonic plague has not yet appeared among the troops, and there was only one case, that of a native, in the entire archipelago during the month.

Yellow Fever in French Guiana.—A despatch dated March 27, from the American consul at Demerara, British Guiana, states that yellow fever has broken out in Cayenne, French Guiana.

The Cholera in Arabia.—Further details concerning the outbreak of cholera in the Hedjaz have just come to hand. The origin of the outbreak is entirely unknown. The first reported cases appeared somewhere between Rebouk and Medina. Caravans which followed reported that the disease developed after passing Rebouk. After March 8, the flow of pilgrims northward from Mecca to Medina ceased, and the return flow southward set in. As a result, the mortality in Medina promptly decreased, but, as the residents of that city have not altogether escaped, some deaths occur there daily still. As the great festivals at Mecca began March 20, and lasted 3 days, the number of deaths increased in great numbers. Of the 250,000 pilgrims of all nationalities, 1129 deaths are already reported. The dispersal of this large number of persons to all parts of the Moslem world will offer great risk of the spread of cholera. The Ottoman Board of Health, therefore, has adopted measures directed toward rapidly dispersing the pilgrims. The large caravans will leave Mecca at once instead of waiting 10 or 15 days, as formerly. Pilgrims leaving by sea may depart only from Jedda and Zambo. Upon entering and leaving these towns, they will be subjected to medical inspection, sick persons will be isolated, their clothes and effects disinfected or burned. Pilgrims going southward will be quarantined 5 days at Camaran; those coming northward will be quarantined 10 days at El Tor. Russian pilgrims and Turkish pilgrims will return upon separate vessels, passing the Suez Canal without communication with the shore. The Turkish pilgrims will undergo another 10 days' quarantine before entering Turkey; while the Russian pilgrims will pass the Dardenelles, the Sea of Marmora, and the Bosporus in quarantine, being forbidden to land anywhere on Turkish soil.

The Plague and Cholera in China.—News from Canton, March 29., states that 20 deaths have occurred from the plague in Tsang Shing, that sporadic cholera has appeared in Sheshing and Tung Mun, and that the cholera at Canton has almost disappeared.

Cholera in Manila.—Four Americans have contracted cholera in Manila, and 2 of them died. Up to this time the epidemic has been absolutely confined to the native population. Its appearance among the foreigners has excited intense uneasiness. The conditions, however, in the province are becoming alarming. The total of cholera cases in Manila up to April 15. is 275, while there have been 215 deaths from the disease. In the provinces there have been 495 cases and 318 deaths. The United States Army transport *Grant* put into Legaspi, in Southern Luzon, having on board a teamster with cholera. She was quarantined for 5 days. On her return journey to Manila the teamster died of the disease.

Obituary.—Dr. Albert C. Corr, at Carlinville, Ill., April 2, aged 63 years.—Dr. Thomas N. Bryan, at Indianapolis, Ind., April 3.—Dr. Oscar Guyer, at Lewisville, Ind., March 31st.—Dr. R. R. Ricker, at Lewiston, Me., April 14, aged 62 years.—Dr. F. G. Clock, at Chicago, Ill., April 9, aged 65 years.—Dr. L. D. Morse, at San Matoo, Cal., April 7, aged 80 years.—Dr. George M. Ramsey, at Washington, Pa., April 13, aged 82 years.—Dr. Robert W. Dailey, at Romney, W. Va., April 12, aged 80 years.—Dr. John F. Dowd, at Manchester, Mass., April 12, aged 38 years.

GREAT BRITAIN, ETC.

The Proposed Liverpool University.—Two months ago a meeting was held to consider the movement for the conversion of the University College, Liverpool, into the University of Liverpool. $725,000 have already been subscribed, while over a million and a half will be needed to

provide for other studies necessary for any complete system of university education.

Belgrave Hospital for Children, Pimlico, has received a gift of $2500 from the Duke of Westminster to aid in the erection of the new hospital building now being built at Kennington.

Typhoid in Syphilitics.—Lieutenant Col. F. J. Lambkin, R. A. M. C., states that a much greater proportion of syphilitic persons succumb to typhoid fever than other people. This statement, according to Surgeon Fowler, R. M., causes no surprise. Were syphilis untreated, it is quite natural that any intercurrent disease might prove fatal. If, however, a syphilitic patient, well under the influence of mercury, were attacked by typhoid fever or any other intercurrent disease, there are many cases on record to show that the occurrence of this disease has practically cured pre-existing syphilis. These instances, however, while not in large numbers, may possibly have been due to errors in the diagnosis.

A Bequest.—By the will of the late Mr. Robert Irvine, of Royston, Edinburgh University has received $150,000 for the foundation of the professorship in bacteriology.

British Medical Association.—The 70th. annual meeting of the British Medical Association will be held in Manchester, July 29 to August 3. The section on pediatrics will be under the presidency of Dr. Henry Ashby. Among the subjects to be discussed are the following: Feeding in the cachectic conditions of children, respiratory exercises in pediatrics, surgical treatment of chronic hydrocephalus, congenital or fetal rickets, infantile anemia, and the education of backward children.

Gift to an infirmary.—Lord Mount Stephen, former president of the Canadian Pacific Railroad, has given £30,000 ($150,000) to the Royal Infirmary at Aberdeen. He has previously paid off a debt of £25,000, ($125,000).

Westminster Hospital—A post-graduate course of clinical demonstrations will be given during the coming summer session at the Westminster Hospital, London. The demonstrations will be held on Tuesdays at 4.30 P. M., commencing May 13.

Obituary.—Dr. Edward Long Fox, a graduate of Oxford consulting physician in the Bristol Royal Infirmary for the past 25 years, one of the most representative members of the medical profession in the West of England, died March 28., aged 70 years. He became attending physician to the Bristol Royal Infirmary in 1857, and was 20 years later made consulting physician. He was a Fellow of the Royal College of Physicians of London, and delivered the Bradshaw lecture in 1882. He was a former president of the Bath and Bristol branch of the British Medical Association, of the British Medico-Chirurgical Society, and of the British Medical Association.

CONTINENTAL EUROPE.

Italian Society for the Study of Malaria.—The fourth annual meeting was held in Rome, March 20, under the presidency of Dr. Fortunato. Professor Celli described the results of the study of malaria during 1901. The epidemic in 1901 was milder than that of the year preceding. Estivo-autumnal parasites were found in every part of Italy, more severe in Southern Italy. In Northern and Central Italy milder malaria occurs, generally tertian; the quartan fever was the most scarce and the most uniformly observed. Recurrence after long intervals in spite of all treatment was characteristic of malaria in Italy. The anopheles was never absent. There were numerous places with paludism and anophelism in Central and Northern Italy absolutely without malaria. Severe tertian fever was precisely estivo-autumnal; mild tertian developed first in the spring; the quartan was principally autumnal. Dr. Caccini observed true quotidian fever. Even with treatment in the pre-epidemic period, the development and extension of malaria could not be prevented, yet, when quinine bisulphate and hydrochlorate were given prophylactically, out of 208 persons barely 2% of cases occurred. Mechanical prophylaxis, especially in the protection of houses, gave brilliant results. Quinine in the future will be given gratuitously and abundantly by employers to workmen.

The Congress of French and Foreign Anatomists was held at Montpellier, March 24, with Dr. Sabathier as president. About 60 delegates attended, coming from Switzerland, Belgium, Spain, Italy, Germany and France. The main feature of the congress was a desire to establish a closer union between anatomy and physiology.

University Notes.—Basel: Professor von Herff, recently tendered the position of professor of gynecology at the University of Giessen, left vacant by the death of Dr. Löhlein, has declined the offer.—**Berlin:** At the time that Professor von Leyden celebrates his 70th birthday, April 20 will also occur his 25th. anniversary as a teacher. On the 24th. the Verein für innere Medicin will give a banquet in Leyden's honor, and on the 16th. the Congress für innere Medicin in Wiesbaden held a Leyden celebration.—Dr. Albert Hoffa, of Würzburg, has been appointed professor of orthopedic surgery in the place of the late Dr. Julius Wolff.—**Besancon:** Dr. Prieur, professor of histology, has been appointed director of the medical school for the next three years.—**Cagliari:** Dr. G. Gonella has been appointed professor of ophthalmology, and Dr. L. Sabbatani, professor of pharmacology and materia medica.—**Dorpat:** Dr. Carl Dehio, professor in the University, celebrated the 25th. anniversary of his graduation as a physician, March 2.—**Giessen:** Dr. Johannes Pfannenstiel, of Breslau, has been appointed professor of gynecology, replacing the late Professor von Löhlein.—**Graz:** Dr. Friedrich Kraus, professor of medicine, has declined the offer of a similar position at Greifswald.—**Innsbruck:** Dr. Maximilian von Vintschgau, professor of physiology, has been retired.—**Jena:** Former Professor Ottomar Dormich, at present living in Meiningen, celebrated, March 21, the 60th. anniversary of his graduation as a physician.—**Kiew:** Dr. A. Chodin, professor of ophthalmology, recently celebrated the completion of his 30th. year in practice.—**Lille:** Dr. Carlier has been appointed professor of pathology.—**Lyons:** Dr. Jaboulay has been appointed professor of clinical surgery.—**Moscow:** The library of the late Professor Koschewnikow, the distinguished neurologist, consisting of several thousand volumes, has been bequeathed to the University of Moscow.—**Munich:** Dr. Joseph Amann, professor of gynecology, celebrated his 70th. birthday on March 13.—**Odessa:** Dr. Bogdanow, of Charkow, has been appointed professor of pathology, and Dr. Wilhelm Massen has been made professor of obstetrics and gynecology.—**Padua:** Dr. Achille de Giovanni, professor of medicine, is soon to celebrate his 30th. anniversary as director of the medical clinic.—**Paris:** Dr. Sebileau has been appointed laryngologist in the Lariboisière Hospital, replacing the late Dr. Gouguenheim.—**Prague:** Dr. F. Scherer has been appointed professor of children's diseases, and Dr. Kimla professor of pathological anatomy in the Bohemian University.—**Poitiers:** Dr. Faivre has been appointed professor of clinical medicine.—Dr. Delaunay, professor of physiology, has been appointed medical director of the medical school for the next 3 years.—**Strassburg:** Dr. Hayo Bruns, of Hanover, first assistant in the Institute for Hygiene and Bacteriology, has been appointed director of the newly erected Bacteriological Institute at Gelsenkirchen.—**Tuebingen:** Dr. H. Vierordt has been appointed honorary professor.—**Vienna:** Dr. von Krafft-Ebing celebrated the 30th. anniversary of his professorship on March 14, when a "Festschrift," prepared by his former pupils, was presented to him. He is to be retired next month.—The direction of the clinic in charge of the late Professor Kaposi has been given, temporarily, to Dr. K. Kreibich.—Dr. Arthur Schattenfroh has been appointed professor of hygiene, Dr. Sigmund Freud, professor of neuropathology, Dr. Emil Fronz, professor of pediatrics, and Dr. Julius Mannaberg, professor of medicine.—Dr. Riehl, of Leipsic has just been appointed professor of dermatology, replacing the late Dr. Kaposi.

Government Appropriations.—The Prussian budget for 1902 includes appropriations of 20,000 marks ($5000) for further study of means of prevention and early diagnosis of typhoid fever, 10,000 marks ($2500) to the Committee of Cancer Research and 50,000 marks ($12,500) for a cancer hospital and laboratory.

Obituary.—Dr. Krouzat, professor of obstetrics in the University of Toulouse died recently.—The death is also announced of Dr. Fleurot, professor of surgery in the Dijon Medical School and surgeon of the Civil Hospital at Dijon.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

March 29, 1902.

1. Remarks on Cases of Lymphangiectasis with Enormous Overgrowth of Cutaneous and Subcutaneous Structures. WALTER WHITEHEAD.
2. Remarks on Some Points in the Treatment of Morbid Anatomy of Enlarged Prostate. CUTHBERT S. WALLACE.
3. Total Extirpation of the Prostate for Radical Cure of Enlargement of that Organ. CHARLES ROBERTS.
4. A Short Note on the Surgical Use of Subcutaneous Injections of Carbohydrates in Exhausting Diseases, and as a Preliminary to Severe Operations. A. E. BARKER.
5. Intravenous Injection of Normal Saline Solution in a Severe Case of Hematemesis; Recovery. H. E. BRUCE-PORTER.
6. Single Nontuberculous Ulcer of the Bladder; Suprapubic Cystotomy; Cure. J. B. CHRISTOPHERSON.
7. Suprapubic Cystoscopy. E. HURRY FENWICK.

1.—Whitehead reports the case of a man, aged 32 years, who had a fracture of his right arm between 5 and 6 years of age. About 18 months after this accident a rash appeared on the back part of his right arm, and shortly after this it was observed that the flesh on the posterior part of the arm began to swell and hang down in folds. Up to his sixteenth year the enlargement very slowly and gradually increased. After this the mass commenced to grow much faster, and, at the age of 27, the rate of increase became still further accelerated. The hand was perfectly free from any abnormal conditions. The operation consisted of enucleation of outer 2/3 of the clavicle, ligature of the axillary and subclavian vessels, high division of the brachial plexus, disarticulation at shoulder and sawing through acromion, and enucleation of scapula with its own muscles. Drainage was employed. The tumor with the arm and the scapula weighed 70¼ pounds. The after-progress was uneventful. The patient was readmitted, later, to have a mass of growth removed from the anterior chest wall on the same side from which the arm had been reremoved. This growth resembled the abnormal condition of the arm. The tumor had grown almost entirely on the extensor surface of the limb and around the region of the shoulder joint. There was practically no abnormal growth of the skin over the greater part of the flexor surface of the forearm and arm. About the lower 3/5 of the growth presented the usual appearance of a huge **molluscum fibrosum** with pendulous folds, having a coarse irregular ridged surface dotted here and there with the enlarged openings of sebaceous glands or hair follicles. There was a large ulcerated surface on the largest lobule, opening into a cavity in the tumor. Underlying the entire skin from about the elbow and spreading up to and around the shoulder joint, so as to mask deeper parts, was a huge lipomatous growth. Microscopical examination showed an outgrowth commencing in the base of the papillary layer of the corium, and consisting chiefly of white fibers mingled with a few yellow elastic fibers. The papillae of the affected area protruded and pushed in front of them the epithelial layers which were stretched and at first thinned out. Cell infiltration was well-marked in the region of the plexus of cutaneous bloodvessels and the lymphatics were distended. The author thinks it improbable that the entire condition can be referred to any one pathological factor. The etiology of the growth is thus premised by the author: The lymphatic spaces in the neighborhood of the injury were originally damaged; as the growth extended, implication of neighboring lymphatic spaces took place, so that a chronic lymphangitis was set up, leading to a retarded outflow of lymph. With a further extension of the growth other superficial lymph-spaces were involved so that most of the lymph was returned directly to the axillary glands; but some, following the course of the cephalic vein, led to an alteration in the lymphatic vessels of the subclavian region, and accounted largely for the recurrence noted in this region after the first operation. The author also reports the case of a girl, aged 18 years, who complained of pain and some swelling in her left knee. A diagnosis of hip joint disease was made, and a Thomas's hip splint was applied, after a month's rest in bed. The splint caused much discomfort and pain at the bottom of the back, and during this time the swelling at the knee gradually spread upward and increased in size. Later, she was again treated for hip disease by means of extension, and blisters were applied to the hip; after which for 2 months she again wore a Thomas's hip splint. After this treatment she felt well enough to discard the splint, but 2 or 3 weeks later the swelling began to increase, and reached the groin. No redness and no pain were noticed at this time. Subsequently, the rate of growth was variable; sometimes the increase in bulk was rapid, at other times it appeared to be stationary. During her 18th. year, about every 3 weeks she was laid up for a day or two on account of rigors, vomiting, and general malaise, such attacks coming on after walking. At these times the swelling became harder, broke out in several places, and discharged a varying quantity of clear fluid, which contained albumins, fat and lymphocytes. A diagnosis of **chronic lymphangitis** with lymphatic obstruction and hypertrophy of the subcutaneous tissues was made. The case was a typical example of **pseudo-elephantiasis.** The main mass of the growth, which was composed of fat and fibrous tissue, with greatly enlarged lymphatic spaces and vessels, was removed. A second operation was performed, later, to remove some small growths of fibrous tissue from the upper end of the scar. A third case was seen in a woman, aged 40 years, who sprained her ankle 17 years before. From that time she had periodic swellings of the leg, which would commence in the ankle and extend to the knee. The swelling would increase after walking or long standing. This condition continued without any marked change for 14 years, when the patent had a severe illness supposed to be rheumatic fever. This illness was associated with swelling of the knee, and was accompanied by much aching pain. The swelling gradually extended to the thigh, and, eventually, to the lower part of the abdomen. She remained for some weeks in this condition, when the swelling gradually subsided, leaving the leg rather larger than normal. During the 3 years previous to admission to the hospital the lower extremity had increased in dimensions by successive stages, each stage being marked by attacks of pain and swelling with erythema confined to the foot and the leg. The right leg was four times the thickness of the left. The treatment consisted of systematic massage, elastic pressure from the toes to the knee and compression of the femoral artery by means of Skey's tourniquet. The knee, which had become ankylosed in a flexed position, was straightened by sawing through the site of the original joint. This eventually afforded her a wide range of movement and enabled her to walk with comfort and freedom. All the induration and discoloration of the skin disappeared. The condition was believed to be a **lymphatic engorgement of the leg,** which was caused by the injury to the ankle 17 years before. [J. M. S.]

2.—In order to determine the possibility of completely extirpating the **prostate gland,** Wallace has examined a large number of specimens of diseased prostates and has experimented on the cadaver. Leaving the presence of the urethra out of the question, it does not appear possible to enucleate the normal prostate, which has no separable capsule and which is intimately connected with the urethra. When the organ is the seat of an adenomatous enlargement, the tumors may be enucleated. The adenomatous prostate differs from the normal gland, in that its structure is made up of firm smooth masses instead of the spongy tissue, in the arrangement of the fibromuscular tissue which instead of forming bands radiating from the posterior aspect of the urethra now forms irregular septa running between the lobules, and by the presence of a thick definite capsule in the place of the thin fibrous covering of the normal gland. In the normal state the fibrous covering is intimately combined with the organ, and, except for a small area on the rectal surface, any attempt at separating it leads to a tearing of the prostatic tissue. The capsule found in the hypertrophied gland is simply the compressed peripheral portion of the gland as is proved by the amount of prostatic tissue found in it. If a rapidly growing adenomatous mass springs from the center of one of the lateral lobes, a considerable zone of tissue may be left to protect the urethral wall during enucleation, and when adenomatous masses from each side fuse together, the mass which has been enucleated may closely simulate an entire prostate gland. The ease of enucleation, the absence of bleeding,

and the safety of the ejaculatory ducts thus may be easily explained. There are some cases in which the tumor is not readily shelled out and which necessitate morcellation; there is no way to determine this fact before operation.
[F. T. S.]

3.—Roberts describes a total **extirpation of an adenomatous prostate** which he performed on a cadaver. The bladder was opened suprapubically, the mucous membrane over the prostate snipped with scissors, and the enlargement enucleated. The parts were then removed from the body and examined. The urethra was unaffected to the level of the openings of the ejaculatory ducts. From this level to the internal orifice, where it it was torn across, the wall of the urethra was separated from the prostatic sheath, and lay quite free in the fossa left after removal of the gland. The ejaculatory ducts could be traced into this fossa where they had been torn. The cavity from which the prostate was removed was quite smooth except at one small area where an adenomatous nodule had been left behind. It was completely lined by a fibrous layer outside of which lay the prostatic venous plexus which separated it from the thin fibrous sheath derived from the pelvic fascia. The space containing the prostatic venous plexus was nowhere opened up and no extravasation of urine could have taken place
[F. T. S.]

4.—Barker directs attention to the use of **glucose administered hypodermically** as advocated and practised by Lennander for preparing exhausted patients for operation and supporting them afterwards. A 5% solution of glucose in normal saline fluid is employed; a liter of this solution which equals 25 grams of glucose may be given in 24 hours. There is no pain, no ill effects on wound healing, and no sugar appears in the urine. This solution is isotonic with the blood and causes no reaction. [F. T. S.]

5.—Bruce-Porter reports the case of a woman, aged 40 years, who **vomited** about a pint and a half of bright colored blood. She said that she had vomited a larger quantity the day before. She was very weak and was blanched to an alarming degree; there were the usual symptoms of gastric ulcer and a history of previous, though not severe, hemorrhages. A quart of **normal saline** solution was injected **intravenously.** The patient recovered. [J. M. S.]

6.—Christopherson reports a single **nontubercular ulcer of the bladder,** about 1.9 cm. in diameter and situated between the ureters, which was cured by suprapubic cystotomy and drainage. He believes it to have been caused by overdistension of the bladder or straining and that muscular contractions and contact with irritating urine prevented its healing. [F. T. S.]

7.—Owing to the fact that Kraske (*Centralbl. f. Chir.*, No. 6, 1902), states that he has employed a **trocar-pointed cystoscope** by plunging it into the bladder suprapubically and thus examining the interior of the viscus, Fenwick points out the following paragraph which he published in 1894: "The difficulties of sounding for stone in certain cases of much enlarged or in irregularly enlarged prostate are great, for calculi are sometimes so deeply fixed behind and below an upraised median lobe or collar, that the sound introduced *per urethram* cannot reach them, however much rotated it is, or however forcibly it is thrust toward the base over the lobe. Moreover, harmful pressure is often exercised in this manœuvre upon the prostate, and cystopyelitis and hemorrhage are apt to ensue. I suggest that whenever the prostate is very large, or whenever it is difficult to traverse, or if it bleeds easily, that an aspirator trocar and cannula should be thrust suprapubically into the full cleansed bladder, the trocar replaced by a loosely-fitting blunt pilot, and the post prostatic pouch and bladder base carefully prodded with the latter to ascertain the absence or the presence of stone without incurring those risks which are consequent upon urethral sounding. Through the same cannula a straight electric cystoscope can be introduced into the washed-out bladder, and the interior examined. I advise this latter procedure only in cases of much enlarged prostate in which a suspicion of benign growth exists; for in these cases the ordinary cystoscope cannot be used. If a stone or benign growth is discovered, a director can be passed through the cannula, the latter withdrawn over the director, and the bladder opened by a limited incision on the director. The disease can then be dealt with and the bladder drained. I believe that this method of sounding and cystoscoping saves exploratory cystotomy, which is a severe procedure in old age, and one which should not be undertaken lightly." [F. T. S.]

LANCET.

March 29, 1902.

1. The Lumelian Lectures on the Comprehensive Study of Thoracic Phthisis. F. T. ROBERTS.
2. Notes on the Treatment of Furunculosis, Sycosis and Acne by the Inoculation of a Staphylococcus Vaccine, etc. A. E. WRIGHT.
3. The Surgery of Nonmalignant Gastric Ulcer and Perforation. C. B. KEETLEY.
4. An Example of Universal Hirsuteness.
A. J. BALMANNO SQUIRE.
5. A Case of Appendicitis in which the Appendix was Lodged in and Adherent to the Femoral Canal.
JOHN HENRY GALTON.

1.—Roberts delivered the first lecture **on the comprehensive study of thoracic phthisis** on March 13, 1902, before the Royal College of Physicians of London. The author employs the term "thoracic phthisis" advisedly in order to emphasize two important points, namely: (1) That in many cases of chest disease, usually grouped as consumption, the lesions are by no means restricted to the lung but involve other thoracic structures; and (2) admitting the disease to be of such a manifestation of tuberculosis, other pathological changes may be associated with the tuberculous mischief from the very onset, or may result during the course of the disease. The author contends that the terms "thoracic phthisis" and "pulmonary tuberculosis or consumption" are by no means synonymous. he, therefore, discusses thoracic phthisis on a comprehensive basis under the following general headings: (1) Pathology and etiology; (2) morbid anatomy and pathological changes; (3) clinical history; and (4) treatment and prevention. In discussing the pathology and etiology, he mentions that other well-known pathological organisms, besides tubercle bacilli, are, as a rule, associated in thoracic phthisis, particularly the pneumococcus and pyogenic microbes. Such secondary infections have, in all probability an effect in hastening necrosis and softening. He thinks the profession is generally agreed that the main source of infection is dried sputum. Mention is made that the contagiousness of consumption has created quite a scare amongst large numbers of people and, undoubtedly, too much importance has been attached to this subject. He cites the position maintained by the United States Government in excluding tuberculous immigrants from the country which he believes is an unreasonable measure. He emphasizes that too little importance is attached to the prevention of tuberculosis through sputum and that, at present, things are certainly anything but satisfactory. In most large communities enough phthisical sputum can be found in the streets, on the pavement, or on the roadway, to infect a whole district or city. He also maintains that tainted urine or feces containing tubercle bacilli are responsible for infection in many instances. He believes that there are a number of conditions which may be described as predisposing influences favoring the infection which are of great importance in the etiology. The etiology is discussed from the following viewpoints: (a) Definite infection from without; (b) infection from within—autoinfection; (c) personal inherent predisposition; (d) causes acting on the general system—acquired personal predisposition; (e) external condition and environment; (f) general causes; (g) local causes, acting more or less directly on the respiratory apparatus; (h) local predisposing morbid conditions; and (i) general or remote predisposing diseases. The post mortem room, the bacteriological and pathological laboratories may contribute to direct infection. Infection from one individual to another and the inhalation of tubercle bacilli in a room, office, work-shop, or other

place of work, are also examples of direct infection. Auto-infection is commonly brought about by the tuberculous glands in the vicinity of the chest, especially the neck, through tuberculous disease of the bones or joints, through affection of the throat, tonsil, and nasopharyngeal passages, from ischiorectal abscess, from tuberculous abdominal lesions and from latent foci of infection within the chest. He discusses personal inherent predisposition from the standpoint of heredity diathesis, temperament, bodily confirmation, and general condition. The causes acting on the general system he discusses in the following order: (1) Insanitary conditions and surroundings; (2) deficiency of proper nutrition; (3) intemperance; (4) occupation; (5) conditions which occasion a more or less frequent drain upon the system, such as diarrhea, menorrhagia; and (6) mental depressing causes of various kinds. He thinks that external conditions and environment undoubtedly have an important influence on the production of thoracic phthisis. Three factors are discussed under special causes, namely, the influence of air and alcohol and occupation. Under the heading of local causes he considers conformation of the chest, traumatic causes and the effect of local irritants, the effect of coughing and, finally he admits that the relation of pulmonary hemorrhage to thoracic phthisis is an important etiological factor. He considers the following as local predisposing morbid conditions: (1) Catarrh of the air passages; (2) prolonged chronic bronchitis; (3) various forms of pneumonia; (4) pleuritic conditions; (5) pressure on the trachea or main bronchus; and (6) lesion of the lungs, such as syphilis, abscess or growth. The general or remote predisposing causes are measles, whooping cough, influenza, occasionally enteric fever or other acute specific diseases, also congenital syphilis, diabetes, gastric ulcer, hepatic cirrhosis, chronic Bright's disease, arterial syphilis, chronic cardiac disease and various nervous diseases. Certain conditions are believed to be antagonistic to tuberculosis, particularly the gouty predisposition, and he thinks that there is sound foundation for these statements. In conclusion, he writes that a full and comprehensive knowledge of the pathology and etiology of thoracic phthisis is necessary in order to place preventive treatment upon a proper foundation and further that the prevention of infection is of first importance. In relation to this question he emphasizes on this occasion that he should like to see far more stringent measures taken in regard to the disgusting habit of spitting in public places; that he considers it much safer to destroy by fire all phthisical sputum, when this is practicable, rather than merely to disinfect it; and that he is strongly in favor of voluntary notification of cases of phthisis. [F. J. K.]

2.—Wright contributes notes **on the treatment of furunculosis, sycosis, and acne by the inoculation of a staphylococcus vaccine.** In this article he sets forth the results of some recent work in connection with staphylococcus inoculations in the treatment of localized staphylococcus invasions. The vacine was prepared by heat sterilization. A report of 6 cases is given which includes the clinical history, the data of bacteriological examinations of the local lesions, the data of blood examinations and investigations of the agglutinating power exerted upon the serum by the staphylococcus. He contends that there is a wide field of usefulness for antistaphylococcus vaccine as a prohylactic and curative measure. [F. J. K.]

3.—To be abstracted when concluded.

4.—A. J. Balmanno Squire reports a case of **universal hirsuteness** and presents pictures of the patient and her mother who was afflicted in the same way. [J. H. G.]

MEDICAL NEWS.

April 12, 1902. (Vol. 80. No. 15).

1. On Amebic Abscess of the Liver. WILLIAM OSLER.
2. Spa Treatment of Gout. CHARLES C. RANSOM.
3. On the Early Diagnosis of Pleuritic Effusions. JAMES K. CROOK.
4. Report of a Case of Removal of the Gasserian Ganglion. JOHN F. ERDMANN.
5. The Etiological Classification of Varicose Veins of the Legs. WILLIAM S. TERRIBERRY.
6. A Peculiarity of Vision with Illustrative Cases. FREDERICK C. RILEY.
7. The Misleading Significance of Ovarian Pain. C. LESTER HALL.

1.—William Osler reports a number of cases of this disease and emphasizes the question of leukocytosis in amebic abscess of the liver. In one of his cases on admission the leukocytes were only 6,000 per cubic millimeter, and only once rose to 11,000; in another 9,000 per cubic millimeter; in another 22,000 and in another 15,000. Three of his cases had practically no leukocytosis. He thinks the statement should be modified, that leukocytosis is always present in abscess of the liver. That amebic abscess of the liver is not always associated with existing ulceration in the intestine has been proven by one of his cases. Patients may have had dysentery months before and the ulceration heals completely. [T. M. T.]

2.—Charles C. Ransom gives the general principles involved in the treatment of gout: (1) The treatment of an acute paroxysm, with speedy relief of pain; (2) the treatment of a subacute or chronic condition, with prevention of an acute attack, or of that condition known as goutiness, in which various irregular manifestations may appear from time to time, but in which an acute paroxysm rarely, if ever, occurs; (3) treatment of the clinically affected joints, with removal of the uratic deposits and deformities, and restoration of their functions. The uric acid theory of gout is the most popular and generally accepted theory. Garrod contends: (1) That uric acid is normally formed in the kidneys and the onset of gout depends upon the absorption and retention of uric acid in the blood, due to partial failure in the uric acid excreting function of these organs; (2) the separation of the urates from the blood and deposition in the tissues occur when the blood is no longer able to dissolve the uric acid (a) because the uric acid is in excess, and (b) because the alkalinity of the blood is diminished. He also states that the uric acid output is diminished during the seizures. The bathing procedure is one of the most important. The effect said to be obtained by the method are due to the influence upon the organism of thermal stimuli. In the bath procedure there are 3 stages: (1) The preparative stage, in which the body surface is put in a receptive condition; (2) the treatment stage, consisting in the application of the thermal stimuli in such order and intensity as to produce precise results, as regards heat production and abstraction and the avoidance of subsequent reaction; (3) in the reaction stage the object is to retain or to intensify the effect of the thermal stimuli upon the nerves and circulation that has been produced by the bath and thus to insure the precise result that has been the object of the treatment. In the chronically affected joints he advises the local douche, either of hot water alone or of hot and cold water alternately. The method of applying the douche is as follows: A fairly good-sized stream is thrown with considerable force upon the affected part. The water, which is at first as cold as it will come from the nozzle, is changed to hot after half a minute, and is made as hot as the patient can possibly bear it; this temperature is continued for a minute, when it is again changed to cold, the process being repeated for 20 or 30 minutes. The action is a purely local one and is produced by the great stimulating effect of the repeated alternating temperatures upon the circulation about the joint, thereby increasing tissue changes and favoring absorption. The stimulating effect is greatly enhanced by the force of the stream and this should be limited only by the comfort of the patient. Massage of the joint should be used in conjunction with the douche and is best applied immediately after the latter, as the tissues then are in a relaxed condition and are more favorable to manipulation. The hot air treatment of such joints is in some instances of

great service, and especially in those, in which there are considerable pain and soreness, it seems to give greater relief than anything else. [T. M. T.]

5.—W. S. Terriberry in conclusion states that it may be proper first to make a broad distinction between those cases which occur with predisposing cause and those cases in which there is no acquired or congenital defect in the vascular apparatus. Further, with or without predisposing cause, all cases of varicose veins may be placed in 3 groups, viz: (1) Those cases due to regurgitation following stenosis above the saphenous valves; (2) those cases due to regurgitaion with stenosis inferior to the saphenous valves; and (3) those cases due to stenosis without regurgitation. [T. M. T.]

MEDICAL RECORD.

April 12, 1902.

1. The Traumatisms of Pregnancy. DENSLOW LEWIS.
2. A Clinical Report Relating to (a) Hemorrhage Persisting notwithstanding Curettage, and (b) Secondary Hemorrhage Following Abdominal Section. EGBERT H. GRANDIN.
3. General Treatment of Measles. LOUIS FISCHER.
4. Rhinoliths and Foreign Bodies in the Nose. J. M. INGERSOLL.

1.—Denslow Lewis discusses the **traumatisms of pregnancy** by which term he designates the untoward effects of accidents or injuries. Traumatism is sometimes accidental and usually injurious, but under certain conditions it is conservative although often used as a synonym for wound, it is susceptible of a wider and more generalized definition, or at least of a construction that will include **microscopical lesions** as well. He divides the subject into a consideration of those injuries which are due to attempts at an interruption of the pregnancy and a consideration of injuries which occur incidentally, often by accident. As curiosities he cites 2 cases in which women produced abortion on themselves by forcing respectively a hair pin and and a knitting needle into the uterus through the abdominal wall. Two cases are also included of fatal rupture of the uterus as the result of falls. In one case the pregnancy continued until term, a period of two months, before the fatal effect of the injury became apparent. He also quotes a case of traumatism in which a multipara, 30 years old, received a severe beating at 4½ months of pregnancy. The injuries included **ecchymoses** of the abdomen over the **right iliac fossa.** She had a normal delivery at term. Lewis has collected **8 cases of gunshot wounds of the abdomen.** When the uterus is not entered, the pregnancy usually goes on without incident. Even when the bullet **perforates the uterus,** it does not necessarily result in an interruption of the pregnancy unless the fetus is killed. The treatment of these conditions in general is outlined and a bibliography of 85 references is appended to the article. [T. L. C.]

2.—E. H. Grandin presents a clinical report relating to **hemorrhage persisting notwithstanding curettage; and secondary hemorrhage following abdominal section.** Uterine hemorrhage is suggestive of **three cardinal conditions,** (1) either there is something in the uterus requiring removal, (2) there exists disease of the uterus, or (3) there is present an extra-uterine condition demanding careful scrutiny and often speedy operation. He illustrates these premises by reporting 6 cases. He does not agree with the statement made by a well-known operator that the symptomatology of internal hemorrhage within 24 hours after abdominal section is not sufficiently exact to warrant us in re-opening the abdomen. His own opinion is exactly the reverse and he contends that vaginal section will always enable us to settle this question, which is of vital interest to the patient and to the reputation of the attending physician. [T. L. C.]

3.—Louis Fischer presents a paper on the **general treatment of measles** dividing it into **hygienic, medicinal and dietetic measures.** He exercises the usual prophylactic care and advises, medicinally, tincture of aconite in addition to spirit of mindererus. His method is to combine aconite with the diaphoretic when it is necessary to have both an **antipyretic and a diaphoretic** effect. One of the most frequent causes of death next to pulmonic complications is intestinal catarrh, and great care must be exercised in the use of purgatives. He advises **phosphate of sodium** and small doses of **citrate of magnesia.** Fischer mentions some of the complications of measles and presents his views as to their treatment. [T. L. C.]

4.—J. M. Ingersoll contributes an article on **rhinoliths and foreign bodies in the nose,** and presents cuts of a number of foreign bodies removed; of 2 rhinoliths in which the nucleus of one was a **pea** and another a **bean.** The symptoms which the patients presented and the methods of treatment followed are given. [T. L. C.]

THE NEW YORK MEDICAL JOURNAL.

April 12, 1902. (Vol. LXXV, No. 15.)

1. State Care of the Insane. L. J. MORTON.
2. A Case of Roundcelled Sarcoma of the Stomach with Secondary Manifestations in the Already Adenomatous Thyroid. JOHN McCRAE.
3. Reflections on Some of the Causes for the High Death-rate and High Venereal Nonefficiency of the Tropics. P. R. EGAN.
4. The Mammary Glands in Primiparae. THERESA BANNAN.
5. The Management of Cases of Cephalopelvic Disproportion by the General Practitioner. EDWARD A. AYERS.
6. Surgical Shock from a Clinical Standpoint. EUGENE BOISE.
7. A Case of Sarcoma of the Tonsil. ARTHUR G. ROOT.
8. A Phenomenon Observed on the Tongue in Acute Malarial Infection. LUCIEN LOFTON.

1.—L. J. Morton says that for a hypnotic that has to be used any length of time he prefers paraldehyde to the bromides, opium, morphine or chloral. Some object to its use, owing to the fact that the patient may contract a habit, but the habit is not so bad and the physiological effects are not injurious. In dram doses, mixed with simple elixir, it may be given early in the evening. Trional may be given in 10 or 15-grain doses, in a hot drink at bedtime. Hyoscine may be used in sthenic cases, if the patient is violent and dangerous, or when there is excessive muscular excitement, but, even then, it should be given with great care, and by no means indiscriminately, or to weak or delicate patients. It is a dangerous drug to use in the insomnia and excitement of delirium tremens, especially if the patient has used liquor for any length of time. Hyoscine, being an alkaloid taken from an alkaloid, should only be administered by those who have had *wide experience* in its use. [T. M. T.]

2.—From the reports of cases of the above condition J. McCrae deducts the following facts: (1) Apart from procuring the neoplastic tissue, there is no way by which, during life, sarcoma can be definitely distinguished from carcinoma of the stomach. (2) The lymphosarcomata are most diffuse, the myosarcomata and fibrosarcomata the largest; the muscular layers are the commonest site. (3) The lymphglands are the commonest site of metastasis; secondary growths are less common than in carcinoma. (4) Splenic enlargement occurs in many cases, without involvement of the organ by growth. (5) A large number of the reported cases are in patients over 40 years of age. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

April 10, 1902.

1. The School in its Effect upon the Health of Girls. E. G. BRACKETT.
2. The Health of School-Girls. ROBERT W. LOVETT.
3. Statistics Regarding Health of School-Girls. EDWARD MUSSEY HARTWELL.
4. The Effect of Public School Education upon the Health of the College-Girl. JANE KELLY SABINE.

1.—E. G. Brackett, in discussing the **influence of the school upon the health of girls,** states that when a large

number of children are seen during the most important part of their lives, the observer is impressed by a large number of girls that are weak, anemic, and nervous, as well as by the marked difference between the condition of the girls from that of the boys when the developmental stage is reached. Of children who apply to the hospital on account of physical developmental defects, barely more than 5% are of the male sex. He believes that the school is responsible for many of the conditions found among our women, and that it is also responsible in so far as the competitive ranking system increases the demand on the mental powers during the time of accelerated growth, training the mind at the expense of the body. [M. R. D.]

2.—Robert W. Lovett, in considering the **health of school-girls**, is of the opinion that the worry before examinations is detrimental, and that the stimulating effect of competition is undesirable, apart from the well-established fact of mental exhaustion from continuous mental application. The health of school-girls about puberty appears to be far from what it ought to be, due, according to the author, to the result of school work, from outside demand. Proper gymnastics, and a sufficient attention to physical training, is given as one of the important remedial measures. [M. R. D.]

3.—Edward Mussey Hartwell, secretary of the Boston Statistics Department, presents statistics regarding the **health of school-girls**, and the amount of imposed work. As to the several classes of schools, the following facts are stated: (1) Kindergartens: Maximum enrollment in April, minimum in September, in two years, for girls and boys alike; difference between maximum and minimum, or less, equalled 13.1% of the maximum in the first, and 13.9% in the second year, for girls, against 11.9% the first, and 13.4% the second year, for boys. (2) Primary schools: Maximum in Jaunary, minimum in September, for girls and boys alike, in the first year; second year, maximum in January, minimum in September, for girls and for boys maximum in April, minimum in September; the loss equalled 4.8% of the maximum in the first, and 3.5% in the second year, for girls, against 5.4% in the first, and 3.6% in the second, for boys. (3) Grammar schools: For girls, maximum in October, minimum in June, first year; maximum in November, minimum in June, second year; for boys, maximum in October, minimum in June, first year; second year, maximum in January, minimum in June; the loss was 5.9% of the maximum in the first, and 5.7% the second year, for girls, against 6.7% in the first, and 6.3% in the second year, for boys. (4) High and Latin schools: For boys and girls alike in both years the maximum enrollment fell in September and the minimum in June; the difference between the maximum and minimum equalled 20.1% of the maximum in the first, and 20.9% in the second, for girls, against 20.5% in the first, and 19.8% in the second, for boys. (5) Normal school: Pupils all females, and mostly young women over 19, the maximum enrollment was in September and minimum in June in both years; the loss amounted to 28.8% of the maximum in the first, and 42.9% in the second year. The increase of loss in the second year is explicable on the ground that the requirements for entrance and continuance in the school had been raised. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 12, 1902.

1. Report of Cases Treated with Röntgen Rays. WM. ALLEN PUSEY.
2. A Brief Review of Finsen's Phototherapy. P. C. CLEMENSEN.
3. The Use and Abuse of Morphine after Abdominal Section. L. H. DUNNING.
4. Some Points in the Differential Diagnosis of Abdominal and Pelvic Tumors. RUFUS B. HALL.
5. The Bacillus Coli Communis in Human Infections. AUGUST JEROME LARTIGAU.
6. Medical Aspects of Cholelithiasis. ROBERT B. PREBLE.

1.—Wm. A. Pusey reports the results of the **X-ray treatment** of tuberculosis of the skin, epithelioma, carcinoma of the breast, deep-seated carcinoma of the head and neck, sarcoma, keloid and other conditions, and presents photographs showing great improvement in a number of cases. His conclusions are as follows: 1. It is painless. 2. It destroys diseased tissue, but leaves the healthy tissue in its place. 3. It leaves small scars. 4. It can be used in cases in which the surrounding healthy tissue can not be sacrificed. 5. Hence, it is available for cases in which ordinary methods involve extensive operations and serious subsequent disfigurement, as, for example, about the eye and nose. 6. It is available in cases in which ordinary methods are impossible because of the amount of destruction of tissue which complete removal would require; in other words, it is applicable to many inoperable cases. 7. It often relieves pain. As a general proposition the use of X-rays should, in my opinion, be limited to those cases which for any reason it is inadvisable or impossible to treat by ordinary methods. In other words, until our experience with X-rays extends over a longer time, their use should be a reserve-method of treatment. He particularly wishes to make it clear that he does not advise the use of X-rays as a substitute for operations in operable malignant growths. As regards cutaneous carcinomata—epitheliomata—he believes no strong objection is to be found to the use of X-rays as a primary method of treatment and some advantages are to be urged for it. Every other malignant neoplasm should have the advantage of operation where it is practicable. On the other hand, he believes, with the present evidence of the effect of X-rays upon malignant neoplasms, we are justified in maintaining the following propositions: 1. In all cases of malignant disease, which have been operated on, there is reason to urge the subsequent use of X-rays as a prophylactic measure. 2. In all inoperable cases of malignant disease the use of X-rays should be tried. 3. In all such cases there is a probability of relieving pain and a possibility of inhibiting the progress of the disease. [J. H. G.]

3.—L. H. Dunning discusses the **use of morphine after abdominal section**, showing the great diversity of opinion and practice among surgeons. His views are summarized as follows: 1. The routine use of morphine and other preparations of opium is to be condemned. 2. For the relief of severe pain and marked restlessness morphine is much superior to codeine, though more prone to be followed by unpleasant symptoms, such as nausea, vomiting, diminished secretions and constipation of the bowels. 3. The serious after-effects of morphine may be largely overcome by the drinking of liberal quantities of water before the operation and the rectal injection of a pint or quart of normal salt solution immediately after the operation, the systematic use of the colon tube and the early action of the bowels. 4. In persistent vomiting not due to sepsis or peritonitis small doses of morphine hypodermically not infrequently afford relief. 5. In secondary shock, due to fright or overanxiety, morphine in small doses is often a potent remedy. [J. H. G.]

4.—Hall states that in studying the **differential diagnosis of abdominal and pelvic tumors** it is essential to keep in mind the normal anatomy of the regions involved. The site at which the tumor first appears may often aid in the diagnosis of the nature of the disease. Careful inspection, palpation, percussion, mensuration, auscultation, and exploratory puncture are to be employed. The latter, however, he believes rarely necessary or advisable. An ovarian cyst must be diagnosed from pregnancy, fibroid tumor, and dropsy. The diagnosis should not be difficult. Malignant tumors in the pelvis are, as a rule, not difficult to diagnose, since there is more or less emaciation and loss of strength together with a rapid growth and marked general adhesions. A large suppurating ovary may be mistaken for an ovarian cyst or a fibroid tumor. The clinical his-

tory should aid in the diagnosis. Ruptured tubal pregnancy with a large accumulation of bloodclots may be confusing if seen several weeks after primary rupture, but again the clinical history should aid materially in making the diagnosis. Appendicitis with a large accumulation of pus, enlargement of the liver with distended gall-bladder, and fecal accumulation in an exceedingly fat abdomen may be somewhat difficult of diagnosis. A careful examination of the physical signs, however, should reveal the condition present. Phantom tumors are rarely difficult to diagnosticate. [W. A. N. D.]

5.—A. J. Lartigau contributes an article **on the bacillus coli communis in human infections.** He discusses the distribution of this micro-organism in the body; its virulence: the lesions in which it has been found and draws the following conclusions: (1) The bacillus coli comunis is widely distributed in the normal body and in nature. It is usually present as a saprophyte in all parts of the alimentary canal, and may also be present as such in the lower portion of the common bile duct, on the skin, especially in the neighborhood of the mouth and anus, and in the anterior portion of the urethra and vagina. (2) The bacillus coli communis may, under what seem to be normal conditions, be carried during life from the intestine to healthy viscera. This invasion takes place from the intestine into the abdominal viscera, more especially the liver and kidneys, through the portal circulation. It is possible that similar invasions may take place from other parts, especially the mouth, pharynx, etc. Further, it is probable that under similar conditions to which these invasions occur, bacteria may sometimes reach the systemic circulation. (3) Agonal and post mortem invasion of the tissues of the body is common, occurring with great frequency under the most diverse circumstances with or without apparent lesion of the mucous membrane of the intestine. (4) The virulence of the bacillus coli communis is influenced by 2 factors: (a) changes in the physiological activities of the intestine; (b) growth in new host environments. (5) The role of this organism as a primary inciting factor in infection is frequent. It is as a secondary invader of tissue previously occupied by micro-organisms, or of the tissue already injured from other causes that it claims our chief attention. (6) The bacillus may induce inflammatory lesions, mainly suppurative, in the body tissues generally; the infection may originate in the intestine. (7) Its role in acute inflammatory lesions of the intestine, more particularly of the appendix, peritoneum, and urinary passages, has been generally overestimated. Whilst it may be the primary inciting factor, other organisms usually take this part, the bacillus coli communis more commonly acting as an accessory factor. (8) It is a factor of importance in the incitement of cholelithiasis. [F. J. K.]

6.—R. B. Preble discusses **the medical aspects of cholelithiasis.** He mentions that the diagnosis of cholelithiasis usually falls to the lot of the medical man, while the surgeon rarely sees these cases first. The medical man also, as a rule, decides which cases should be operated upon and which should be treated by medical means. He divides the cases into 2 groups, those with colic and those without. He mentions that there are some cases of tabes dorsalis which resemble gall stone colic. Error in diagnosis can be easily avoided by directing attention to the Argyll-Robertson pupil, the Romberg symptom and the knee-jerk. Pleurisy may simulate gall-stone colic: a systematic physical examination will usually clear up this difficulty. He refers to the posibility of right-sided pleurisy occurring as the result of gall-stones. Lead colic may in some instances lead one into error, which, however, can easily be avoided by direct attention to the history of the case, the blue line along the border of the gums, and the fact that in lead colic the pain is usually centered about the umbilical region, and does not radiate. He states that the differentiation between gall-stones and indefinite conditions grouped under the term gastralgia or neuralgia of the stomach is often exceedingly difficult. He believes that the indications for surgical interference are: (1) Frequent attacks of colic; (2) septic symptoms in a patient suffering with gall-stones; (3) empyema of the gall-bladder; (4) localized or general peritonitis; (5) persisting jaundice; (6) intestinal obstruction; and (7) fistula. He considers at some length these indications and, finally, he refers briefly to the general plan of treatment in patients who, because of mildness of the symptoms or on account of the presence of some other more serious ailment or because of failure of relief after mechanical means, are to be placed under medical treatment. There are no measures at our command which are capable of dissolving gall-stones. The first indication should be to prevent the formation of additional stones which may be brought about by a reasonable amount of outdoor exercises, by the wearing of loose-fitting garments, by massage, by regulating the diet which should be a simple and well-proportioned one, taken regularly and rationally. Attention should also be directed to the gastro-intestinal tract which should be kept in the best possible condition. The most useful of drugs which will bring about such results are some of the mineral waters, salts (Carlsbad, Epsom, Glauber) and mercurials. He refers to the danger of establishing the morphine habit in the treatment of biliary colic. [F. J. K.]

AMERICAN MEDICINE.

April 12, 1902.

1. What can we Diagnosticate in Acute Appendicitis? WILLY MEYER
2. Rheumatic Appendicitis. WILLIAM A. EDWARDS.
3. Indications of the Mastoid Operation. PHILIP HAMMOND.
4. The Epidural Method and its Indications. DUDLEY TAIT.
5. Acute Lymphatic Pseudoleukemia; with Report of a Case and Autopsy. JOHN L. HEFFRON.
6. Gastrotomy for Remoal of Foreign Bodies. GEORGE F. INCH.
7. Palmar and Plantar Syphilides. WILLIAM F. BERNART.
8. Spontaneous Rupture of the Heart. DON D. GROUT.

1.—Willy Meyer discusses the question: **What can we diagnosticate in acute appendicitis?** His remarks have reference to **severe cases of acute appendicitis** that are seen on the first, second or third day of the first attack. In a pronounced second or third attack he always urges immediate operation. After having grossly diagnosticated the case as one of acute appendicitis the further determination of such diagnosis may be directed: (1) Toward the location of the appendix; (2) the classification of the true pathological lesion; and (3) toward the degree and extent of a complicating peritonitis. These points are discussed in detail. The question which he propounds at the beginning of his paper resolves itself into the only important one: When shall we operate for acute appendicitis? [T. L. C.]

2.—William A. Edwards presents a study of **the relation of rheumatism to appendicitis.** He states that for the past several years there have been found occasional references in the literature to the relation of appendicitis and rheumatism (rheumatic appendicitis). With the object of eliciting the opinion of the profession on this point he directed a number of inquiries to American physicians. The testimony of those observers which he furnishes is almost unanimously against the existence of a condition styled rheumatic appendicitis. [T. L. C.]

3.—Philip Hammond discusses **the indication for the mastoid operation** and summarizes his paper as follows: (1) Mastoiditis is always subsequent to a purulent inflammation of the middle-ear; (2) tenderness of the bone is an important symptom when present, but the mastoid may be full of pus with absolutely no tenderness; (3) bulging of the

canal wall is the most important symptom; (4) the absence of pyrexia is no guide whatever; (5) improvement in the hearing usually indicates subsiding inflammation in the middle-ear; (6) the operation is safe; delay may be dangerous. [T. L. C.]

4.—Dudley Tait prefers the **epidural method of spinal analgesia to the subarachnoid route.** He believes that it is less difficult and absolutely harmless. This method has proven of value in relieving sciatica, tabetic pains, and in gastric ulcer. The author does not believe the analgesia so induced is sufficiently powerful for operative work. [T. L. C.]

5.—J. L. Heffron reports a case of **acute lymphatic pseudoleukemia** with autopsy findings. He states that repeated examinations of the sputum were made during life and of the fluids after death. No tuberculous lesions were discoverable; on the other hand, the microscopical examination of the lymphnodes showed the characteristics peculiar to **lymphosarcoma.** [T. L. C.]

6.—G. F. Inch reports the case of a woman who suffered from **profound melancholia** and upon whom a **gastrotomy** was performed and a number of foreign bodies removed. The patients' mental condition markedly improved after the operation and she was discharged cured in 4 months. [T. L. C.]

7.—W. F. Bernart presents the statistics of **200 cases of syphilis** with special reference to the percentage of occurrence, time of appearance, and influence of occupation, as a factor in the production of the **palmar and plantar syphilides.** Of his series there were 17.5% who suffered from these lesions at some time during their disease. In the cases in which they did occur nearly 60% had both surfaces diseased; the palms were involved alone in about 35%, while the affliction of the **plantar surfaces** was only one in 100. Nearly 50% more of soft and tender hands were affected as compared with others. He states that irritation and friction does not play an important part in the production of palmar lesions. [T. L. C.]

8.—D. D. Grout reports **3 cases of spontaneous rupture of the heart.** In the first there was a complete rupture nearly an inch in length in the lower anterior portion of the left ventricle; in the second case a rupture one inch in length was found on the anterior wall of the left ventricle near the apex, and in a third case a similar lesion was found. His second case was interesting from the length of time that intervened between the inception and culmination of the rupture, at least 7 days, and possibly 17 days. [T. L. C.]

JOURNAL DE CHIRURGIE.

December, 1901-January, 1902. (Première Année, No. 12.)

1. Extensive Resection of the Small Intestine. LAUWERS.
2. Uterine Fibromyoma. DEBERSAQUES.
3. Fibroma of the Broad Ligament. A. DELETREZ.
4. Resection of the Elbow for an Old Intra-articular Fracture. F. DEJARDIN.
5. Pleurotomy and Laparotomy in a Case with a Penetrating Wound of both Thorax and Abdomen. F. DEJARDIN.

1.—**Lauwers considers a resection extensive when over six feet of the small intestine are removed.** He has collected 10 cases from the literature and describes 2 cases of his own in detail. In one case he removed 100 inches of intestine for gangrene; in the other, 106 inches, for a large subumbilical hernia which followed Cesarean section, with successful recovery in both cases. The intestines were matted together by adhesions. Gangrene following strangulation is the main indication for resection, while volvulus, invagination, stricture, injury with perforation, tumors, and thrombosis of the superior mesenteric veins have caused the operation. The operation itself is not serious. Healthy abdominal walls are needed, with rigid asepsis and antisepsis. After resection an artificial anus, entero-anastomosis with the Murphy button or by suture will be necessary. [M. O.]

2.—Debersaques reports 35 cases of **fibromyoma of the uterus.** But 13 of these patients had borne children. They were found in 3 unmarried sisters, over 30 years of age, whose histories follow in detail. As fibromyomata degenerate early, their removal is indicated as soon as a diagnosis is made. Enucleation may be performed, but in 34 of his cases Debersaques did total hysterectomy, 6 times per vaginam, with successful recovery in all 6 cases. Of the 28 abdominal hysterectomies but one patient died, of hemorrhage. The details of his technique are fully described. Among the complications noted after operation were delirium tremens, psychoses, etc. [M. O.]

3.—Delétrez reports the case of **a fibroma of the broad ligament** in an unmarried woman of 42. These cases are exceedingly rare. The tumor, removed by laparotomy, weighed 2,500 grams. The patient recovered rapidly. [M. O.]

4.—Déjardin reports the interesting history of a girl of 10, who fell from a height of 9 feet, an **intra-articular** fracture of the elbow resulting. When first seen, 2 weeks after the accident, ankylosis already existed, the elbow being at an obtuse angle. Arthrotomy, with resection of the elbow, was done, and massage begun on the eighth day. Paralysis of the entire arm was noted upon the removal of the dressing, by constriction. With massage, motion, and electricity, a good result was obtained. [M. O.]

5.—A boy of 9, running, fell upon a bottle which he was carrying, a piece of which penetrated the left side of his chest. **A wound was found, 3 cm. long,** 2 cm. to the left of the left nipple, **in the fourth interspace,** through which the omentum protruded. Percussion showed left-sided pneumothorax. The omentum and part of the stomach were found in the pleura, and a perforation 3½ cm. long was noted in the stomach wall. The omentum was resected and the stomach wound packed. Laparotomy was performed, the stomach returned to the abdomen, and sutured, with drainage left in. The diaphragm was sutured through the thoracic wound, the pleural cavity cleansed, and drainage established. In spite of stimulation, the child died the next day from asphyxia, due to the shock and pneumothorax. It was strange that the lung, the heart and the pericardium escaped injury. [M. O.]

LA PRESSE MEDICALE.

January 15, 1902. (No. 5.)

1. Trunecek's Serum. LEOPOLD-LEVI.
2. Koch's New Bacterial Treatment of Tuberculosis. R. ROMME.
3. The Constant Presence of Eberth's Bacilli in the Blood of Typhoid Patients. BUSQUET.
4. Heart Disease with Syphilis and Gonorrhea. G. FISCHER.

1.—**Trunecek's serum** consists of a solution of sodium sulphate, chloride, phosphate and carbonate, with potassium sulphate, in water. This is given in hypodermic injections of 1 cc. every 3 or 4 days, increasing to 5 to 7 cc. or in rectal injections of 35 cc. After 10 injections of one sort, 10 of the other are given, and this is kept up, alternately. It is indicated in arteriosclerosis of the cerebral and other vessels, of the aorta and heart, and in arterial cachexia, chronic rheumatism, etc. It is especially useful in aneurysm, and for dyspnea, vertigo, and other symptoms of cerebral arteriosclerosis. Twenty-four cases were reported improved upon this treatment, including 14 patients who were quite deaf. [M. O.]

2.—Romme abstracts **Koch's last unconvincing article upon agglutination in tuberculosis, and the advantages of his new tuberculin.** [M. O.]

3.—Busquet adds to a former report of 21 patients with typhoid fever, in the blood of whom Eberth's bacilli were constantly found, 62 more cases, making a total of **83 patients from the blood of whom typhoid bacilli were obtained.** In a few cases streptococci, pneumococci or staphylococci were also found. The blood was always examined during the period of infection and fever, in the first three weeks. [M. O.]

4.—Syphilis affecting the heart is rare. When it occurs, interstitial or gummatous myocarditis results. It may af-

fect the coronary arteries alone. The symptoms are the same as in other forms of myocarditis. Some improvement will follow specific treatment, which confirms the diagnosis. The prognosis depends upon the age of the patient. In gonorrhea, on the other hand, endocarditis is not uncommon, the myocardium only becoming involved secondarily. **Gonorrheal endocarditis** may be acute and malignant, or chronic and benign. The diagnosis is not so difficult as is that of **syphilitic myocarditis.** The treatment of both conditions will be practically the ordinary treatment of myocarditis or endocarditis with the addition of specific treatment for the syphilis, and energetic treatment for the urethritis, should this still persist. [M. O.]

January 18, 1902. (No. 6).

1. Trunecek's Serum. LEOPOLD-LEVI.
2. The Antituberculosis Movement in France and Belgium. PHILIP BLUMENTHAL.
3. Czolgosz's Mental State. CHARLES JARVIS.

1.—**Trunecek's serum** acts upon the blood of patients with arteriosclerosis in 2 ways, **diminishing the blood-pressure and** in some manner **changing the composition of the blood.** The latter is certainly the case in chronic rheumatism, in which injections of Trunecek's serum cause immediate improvement. Neurasthenia or hysteria often accompany arteriosclerosis, yet both conditions improve upon this serum treatment. A number of case-histories are given to illustrate its action. Léopold-Lévi concludes that the effects of Trunecek's serum are due to its **hypotensive arterial action.** Thus it is indicated in all arterioscleroses. It may also be indicated in epilepsy, uremia, paralysis agitans, diabetes, etc. It may be of service in reducing local congestion. Léopold-Lévi believes that it should be used to prevent the occurrence of those affections in which it can cause improvement. [M. O.]

2.—Blumenthal, of Moscow, reviews the **progress made recently in France and Belgium in the fight against tuberculosis.** He praises the work done in this direction in Germany, France and Belgium, and describes the dispensaries, sanatoria, etc., for the treatment of tubercular patients. He hints at the fact that such progress in Russia would be of much benefit to the many tubercular people there. [M. O.]

3.—**Jarvis reviews the reports of MacDonald and Spitzka** upon the murderer of the late President McKinley. He concludes that **Czolgosz was a social pervert, not insane.** [M. O.]

January 25, 1902. (No. 7).

1. The Clinical Use of Hemolytic Substances. P. E. LAUNOIS, J. CAMOUS, and P. PAGNIEZ.
2. Four Cases of Cancer of the Esophagus Cured by Cancroine. A. ADAMKIEWICZ.
3. Massage in Ordinary Practice. M. MARCHAIS.
4. Plehn's Treatment of Dysentery. R. ROMME.

1.—The material in a serum which destroys the red blood-corpuscles of a serum added to it, disappearing when the serum is heated to 56°, is called the **hemolytic substance.** alexin, cytase, or complement, by different observers. The materials which seem to aid the action of the hemolytic substances are called **sensabilitrices,** among which are the hemolytic antibodies, preventive substances, immune bodies, amboceptors philocytase, desmon, copula, fixator etc. These are not destroyed by heating to 56°, as has been shown experimentally. **Antihemolytic substances** are also found, in spite of heat as high as 58°. A number of experiments were made with fluid from ascites, which was added to the blood of well human beings, of the patients themselves, and of rabbits. They conclude that normal human red corpuscles may be destroyed by liquids such as serum, ascitic or pleuritic fluid from patients; that the corpuscles of the patients themselves offer a peculiar resistance to destruction; and that these liquids contain alexin [illegible] to human blood-corpuscles and anti-hemolysin. [M. O.]

2.—Adamkiewicz has isolated a toxin from cancer juice, which he calls **cancroine,** very like neurine (trimethylvinyl-ammonium hydrate in composition). He reports 4 [illegible] of cancer of the esophagus cured by the injection of small doses of cancroine into the blood. Not only did the general condition of the patients improved, but the cancerous [illegible] tures receded. The case-histories follow in detail. [M. O.]

3.—**Massage** is indicated in fractures in which [illegible] ing has caused edema. For it increases absorption, softens the tissues, and strengthens the muscles. This is [illegible] dislocations, acute arthritis, phlebitis, wounds of tendons or muscles after suturing, burns, abscesses, etc. Immediate massage is indicated in muscular and articular contusions or rupture, periarthritis, synovitis, etc. It is especially indicated in sprains. It is also indicated in fractures which have caused little primary displacement and show no tendency to secondary displacement. This is true also when the fracture is near a joint. [M. O.]

4.—Plehn first gives 30 grams of castor oil in dysentery, then 12 tablets of calomel (0.03 gr. each) are given daily, every hour. This is kept up three days, the mouth being washed with a salicylic acid solution after each tablet. Then a ½ gr. of bismuth subnitrate is given every hour for 12 doses daily for 3 days, then half of that for 2 days. Milk diet is first given, followed by liquid diet, and [illegible] in 8 to 10 days. [M. O.]

JOURNAL DES PRATICIENS.

January 18, 1902. (16me Année, No. 3).

1. Unsuspected Hypertrophy of the Prostate. E. DESNOS.
2. The Surgical Treatment of Pericarditis. M. DEGUY.

1.—A number of old men with **hypertrophy of the prostate** and consequent urinary infection are treated for simple troubles of digestion. Their main symptoms are loss of appetite, thirst, constipation, dilatation of the stomach, polyuria without glycosuria and rarely with albuminuria, while the patient is thin and pale, often yellowish in color. Rectal palpation shows a normal or small prostate, not at all tender. Closer examination shows the loss of appetite to be a true bucal dysphagia. While no fever is noted in the mouth, a slight increase in temperature exists in the rectum. Micturition will be delayed, though frequent, and nocturnal incontinence may occur. The urine looks milky and pus cells collect on standing. The distended bladder from vesical inertia causes retention of the urine, following the pressure of the enlarged anterior lobe of the prostate which is rarely palpable through the rectum. On catheterizing, an enormous quantity of urine is withdrawn. The symptoms are due to urinary infection following retention, and the cause of the retention is often unsuspected. While the catheter alone will be needed in some cases others will necessitate hypogastric incision, total or partial prostatectomy, or the galvanocautery by the Bottini method. [M. O.]

2.—Deguy states the indications and describes the **operative treatment of pericarditis,** giving excellent diagrams. The technique of paracentesis pericardii, the selection of the point of puncture, etc., are given in full, with the accidents, such as puncture of the pleura, heart or great vessels. Pericardiotomy is also described in detail, though too few operations have as yet been performed to confirm its practical usefulness. Chronic pericarditis should be left undisturbed by operation. [M. O.]

ANNALS OF SURGERY.

October, 1901.

1. A Contribution to the Pathology of the Sphincters. E. M. CORNER.
2. Milton's Method of Exposing the Anterior Mediastinum Modified for Ligature of the Innominate Artery. B. F. CURTIS.
3. Abscess of the Liver. E. ELIOT, JR.
4. Foreign Bodies Accidentally Left in the Abdominal Cavity. A. SCHACHNER.
5. The Worsted Truss in Inguinal Hernia. J. C. HUBBARD.
6. Pneumococcus Arthritis, Primary in the Knee Joint. D. P. ALLEN and C. LULL.
7. Some Observations on Fracture of the Skull, Based on One Hundred and Forty-six Cases. R. H. HARTE.
8. Suppurative Pericarditis following Appendicitis; Recovery after Incision and Drainage of the Pericardium. A. H. MANN.
9. A Report of Two Cases of Facial Anthrax Treated With Injections of Carbolic Acid, with Recovery. L. H. MUTSCHLER.
10. The X-Ray and Photographic Technique Necessary to bring out Bone Detail in the Print. E. R. CORSON.

1.—Corner defines active retention as a condition in which the urine or feces are retained owing to the inability to overcome the mechanical, physical, or active resistance. In passive retention there is not sufficient muscular power to force the normally opposed walls of the urethra or lower rectum apart. By active overflow of urine is meant the passage of a few drops of urine every few minutes; this is due to the rhythmic contractions which the bladder normally exhibits and which only disappear when the distention is very great. When there is a continuous dribble of urine, the condition is called passive overflow. In 70 cases of concussion of the brain the sphincters were affected in 16 only; the effects in the order of their frequency are unconscious micturition, active retention, active overflow, passive overflow, and absolute retention. Of 13 fractures of the base of the skull, 8 showed some affection of the sphincters. The effects of compression of the brain on the sphincters are tabulated as follows: Bladder—passive retention, active paralytic overflow, passive paralytic overflow; rectum—incontinence of feces, passive retention of feces and constipation. Spinal injuries may be divided with regard to the sphincters into the supralumbar, those above the centers in the cord, and into the lumbar, those involving these centers. In the supralumbar lesions there is first active retention of urine owing to the concussion having dulled the lumbar centers. A variable time after the accident, the lumbar center regains its tone and micturition occurs reflexly and periodically. Later still the center becomes hypersensitive and micturition like other reflex acts becomes exaggerated, the bladder expelling its contents at short intervals. The same effects are noticed in the case of the rectum. When the lesion is nuclear and involves the lumbar center, the typical paralytic conditions given under compression exist for both bladder and rectum. It is probable that the bladder and rectum each have a double nervous supply, one emanating from the lumbar, and one from the sacral nerves. Interference with the lumbar nerve supply would cause active incontinence of urine and incontinence of feces; paralysis of the sacral nerve would bring about active retention of urine and active retention of feces.

[F. T. S.]

2.—Curtis's **modification of Milton's method of exposing the anterior mediastinum** is as follows: A median incision is made from the larynx to the middle of the sternum, dividing the skin and deep fascia above and the periosteum below. The soft parts are retraced and a transverse incision made through the periosteum along the upper border of the manubrium; the periosteum and muscles are detached from the posterior surface of the bone as far as can be reached. Next the manubrium is sawn down the middle, the lower part of the separation being effected by the chisel. Next a transverse incision is made in the periosteum across the face of the bone at the level of the first or second intercostal space and the chisel is used to complete the division of the bone. Strong retractors are inserted in the median saw cut and with little force the two halves can be sufficiently separated to allow access to the periosteum which is carefully scratched through with the point of a knife. After the posterior periosteum has been divided, the interval between the two halves of the bone may measure as much as two inches. The muscles and fasciæ are then divided by blunt dissection in the median line and double ligature applied to all veins which are encountered. The trachea and great vessels at the root of the neck may be freely exposed. Curtis has successfully employed this method for ligating the innominate artery for subclavian aneurysm. Later the subclavian and carotid arteries were tied because of some return of pulsation in the sac. Seven months after the latter operation there were no traces of the aneurysm. [F. T. S.]

3.—Eliot reports 3 cases of **abscesses of the liver.** In the first case the symptoms had been present 10 days, in the second 2½ months, and in the third 13 months. Two of the patients had resided in the South and one had had dysentery. All presented an irregular type of fever, but chills were present in the third case only. The first case became jaundiced while the remaining two retained a clear skin. In all the cases there was a marked leukocytosis. All were operated upon by the transperitoneal method, an incision being made along the outer border of the right rectus muscle. In the first 2 cases several days were allowed to elapse between the opening of the abdomen and the evacuation of the abscess; in the third case the abscess was opened at the primary operation. The second patient died from sepsis, the autopsy showing a condition of multiple abscesses of the liver, of which the largest had been incised and drained.

[F. T. S.]

4.—To be abstracted when concluded.

5.—Hubbard sets forth the advantages of the **worsted truss** for treatment of inguinal hernia in children. It is cheap and when soiled may be washed. It may be worn in the bath and does not irritate the skin. Worsted is sold in a skein made up of two laps; a lap or half of a skein is sufficient for a truss. The method of application is as follows: The child is placed on his back, the lap is passed under him and pulled far enough so that the end just reaches the internal ring. The other end is then passed through the loop of this first end and the hernia is reduced. The bunch of worsted made by the looping of one end through the other is fitted over the ring, the free end is then passed under the leg and fastened by a piece of bandage to the portion surrounding the body. Hubbard has traced 27 cases of inguinal hernia in which worsted was applied as a truss. Six were cured and in 11 the treatment proved unsatisfactory. The 6 cases which were cured had as an average 49 weeks; the truss was worn from 6 months to 2 years and 2 months before it was discarded. The cures occurred in much younger children than the failures. [F. T. S.]

6.—Allen and Lull report a case of **primary pneumococcus arthritis of the knee joint** occurring in a female, aged 40 years. Following an attack of abdominal pain, the left knee joint swelled and became excessively tender. Symptoms of sepsis supervened and aspiration of the joint revealed thick yellowish pus. About 4 days after the onset of the joint inflammation, the knee was opened and drained, this caused a brief amelioration of the constitutional symptoms, but later it became necessary to amputate above the knee. The patient died from toxemia 12 days after the primary operation. Pneumococci were found in the pus from the knee and from the amputation stump, but were not isolated from the blood from any of the viscera. Cave has collected 31

cases of pneumococcus arthritis, 3 of which were primary. Two of these 3 cases died, and cultures showed secondary infection of the other organs. [F. T. S.]

7.—Harte discusses the mechanism, diagnosis, prognosis, and treatment of fracture of the skull. Of 146 cases, 84 or 57.5% were fatal. Of the recoveries 11 or 15.06% were partial only. Fifty-four or 87.1% died within 24 hours. Twenty-six of the cases were trephined and of these 23 or 88.5% recovered. [F. T. S.]

8.—Mann's case of **suppurative pericarditis following appendicitis** occurred in a girl of 12 years. The abdominal symptoms persisted for 4 days and then disappeared after a free movement of the bowels; the appendix was not excised. At this time several of the joints became swollen and painful. A few days later the pericardium was found distended with fluid. General septic symptoms were present. The pericardium was opened by excising 2 inches of the fourth rib. The pericardium was sutured to the skin and gauze drainage inserted. The pus was nearly all posterior to the heart. The day after operation it became necessary to remove the gauze and insert rubber tubes, the gauze failing to drain the pus Recovery ensued. [F. T. S.]

9.—Both of the cases of **anthrax** reported by Mutschler occurred in individuals who had been working among goat-skins and both occurred on the left upper eye-lid The appearance of each case was typical of anthrax pustule and in each there was extensive edema. The cases were treated with injections of carbolic acid around the focus of infection and with wet bichloride dressings. The temperature was but slightly elevated in each case and microscopical examination confirmed the diagnosis in each. Both recovered. [F. T. S.]

10.—Corson says most of the published skiagraphs are either made from underexposed plates or show a lack of proper fixation of the part skiagraphed. He mentions the electrolytic break of Welmelt by which the amount of current going through a tube is enormously increased and the time of exposure correspondingly shortened; snapshots may be made with its use, but it is not necessary in bone work, because good detail requires a longer time. The part which is to be skiagraphed should be bandaged to the plate and weights should be placed on the limb above and below the plate to prevent even the slightest movement from arterial pulsation. One of the great disappointments of X-ray work is the great inferiority of the print compared with the negative. This is due to the inequality of the negative. Corson proposes to remedy this varying thickness of the film by flowing the back of the plate with "Hance's Ground-glass Substitute," which is a solution of certain gum resins in ether and which gives a uniform coating into which pigments may be rubbed. With an artist's stub, burnt umber or burnt umber and yellow ochre are lightly rubbed into the thinner parts of the negative by transmitted light. By this process the thinner portions of the negative are retarded in printing. Two skiagraphs are reproduced to show the result of this method. [F. T. S.]

AMERICAN JOURNAL OF OBSTETRICS.

January, 1902.

1. The Surgical Aspects of Carcinoma Uteri Complicating Pregnancy, Labor, and the Puerperium. CHARLES GREENE CUMSTON.
2. Technique of Labor in Private Practice. STANLEY P. WARREN
3. Developmental Anomalies of the Uterus, with Reports of Cases. A. L. STAVELY.
4. Uterus Diadelphys Found With a Pyosalpinx. J. M. WARD.
5. Intestinal Anastomosis with Suturing of the Entire Thickness of the Intestinal Wall Method and Instruments. OSCAR H. ALLIS.
6. Report of a Case of Primary Carcinoma of the Urethra. ABRAM BROTHERS.
7. Elephantiasis of Labium Majus. Fibroma of Labium Majus. LOUIS J. LAVINSKI.
8. Vaginal Hysterectomy with Four and a Half Months Pregnancy and Closed Cervix. J. H. CARSTENS.
9. General Treatment in Gynecological Patients. WALTER B. CHASE.
10. Pelvic Fracture During Labor. U. S. BIRD.
11. Cases in Practice. THOMAS C. SMITH.
12. Iodoform and Carbolic Acid Intoxication. I. S. STONE.
13. A Catheter. F. F. SIMPSON.

1.—Cumston believes, when **carcinoma of the cervix** is diagnosed and operated on in time, that it is possible that the patient may survive quite a time, and even experience a complete cure. He believes that radical operations are indicated in a very large percentage of these cases. **Pregnancy complicated by carcinoma of the cervix** is of far less frequent occurrence than pregnancy associated with fibroid tumors or ovarian cysts. The maternal mortality at term in this condition, according to Herman's statistics, is 30%. 50% of the children, according to Herman, are lost. Pregnancy, it is generally admitted, exercises a very bad influence on the neoplasm, which rapidly extends during this period. Frequently such patients die before labor begins. Oldham, in 1851, was the first to recommend the Cesarean operation in these cases. Cumston remarks that the Cesarean operation is far more dangerous when performed on account of carcinoma of the cervix than when it is done in cases of narrow pelvis. This operation, however, gives the best chance of saving the child, while it is almost always mortal for the mother. Cumston considers methods of treatment that may be employed at different periods of gestation, and states that total vaginal hysterectomy during the very early months of pregnancy is an easy operation, with excellent chances for a successful result. Later in pregnancy, total abdominal hysterectomy, as advocated by Freund, may be employed. In other cases it may be advisable to induce an abortion and subsequently to perform a radical operation for the relief of the malignant growth. [W. A. N. D.]

2.—Warren gives the **technique of labor in private practice**, as adopted by him in the four divisions of cases of labor, namely, those who have a trained obstetrical nurse, those who have the ordinary monthly nurse in all her varying usefulness, those who can have only some ignorant relatives, and those who must deliver themselves without any help whatever. He describes the various processes employed by him to meet the complications of labor as well as the technique adopted when forceps are employed and when post partum hemorrhage occurs. [W. A. N. D.]

3.—Stavely states that there are distinct types of **uterine anomalies**, but that many transitional forms exist, from total absence of the uterus to its most complete subdivision, and a satisfactory classification has been difficult. The uterus is absent in many of the monstrous conditions met with in nonviable children. Burrage gives references to 360 cases of absence of the uterus: Stavely gives a brief review of the embryology of the internal genital organs and follows with a description of the various well-recognized forms of uterine anomalies, with illustrative cases. He considers the possibility of pregnancy in this condition with the accidents that may result, and also discusses menstruation in the bicornate uterus. He says that the possibility of pregnancy seems to be enhanced by the presence of a double organ. [W. A. N. D.]

4.—Ward reports a case of **pyosalpinx with operation** during which a **uterine diadelphys** was discovered. After the relief of the trouble of the appendage the patient made a good recovery and was free from the cramps of which she had complained prior to operation. [W. A. N. D.]

5.—Allis describes his experience in **intestinal anastomosis** and the difficulty he had experienced in the use of the Murphy button. To overcome this and dispense with the use of the button he has advised a method of suturing the entire thickness of the intestinal wall. For this purpose he employs two instruments a tenaculum forceps and toothed forceps with serrations on the edge which he uses for turning in the mucous edges, adjusting the serosa, and holding the parts approximated until sutured. He reports illustrative cases. [W. A. N. D.]

6.—Brothers reports a rare case of primary carcinoma of the urethra, which was excised. He gives a brief review of the most recent literature on the subject, which

he remarks, is barely mentioned, if at all, in the text-books. Many gynecologists have never encountered the condition and he has found in all but 29 cases reported in the literature. [W. A. N. D.]

7.—Lavinski reports 2 interesting cases of **neoplasms of the vulva,** one a case of elephantiasis and the other a case of fibroma of the labium majus. Both tumors were excised. [W. A. N. D.]

8.—Carstens records a case of **vaginal hysterectomy in early pregnancy,** the cervix being closed. The patient was 4½ months pregnant. No os could be discovered. Scissors were plunged into the place where the os should be, and the opening thus made was further dilated by the fingers. After delivery of the fetus, which process was accompanied by profuse hemorrhage, a complete vaginal hysterectomy was performed. A good recovery followed. Carstens gives a tabulated statement of this condition and remarks that operations are very successful and are always indicated in cases of uterine cancer complicated by pregnancy. [W. A. N. D.]

9.—Chase urges the importance of **general treatment in gynecological patients.** He claims that among the younger specialists there is too great a tendency to neglect the body generally and to concentrate the treatment upon the local organ. Chronic constipation should be corrected and the circulatory and nervous systems improved in all cases. Blood dyscrasia, malaria and anemia are important factors in the etiology of certain conditions, such as menorrhagia and metrorrhagia. Hysterical manifestations and pelvic pain may be materially lessened by the proper attention to the body generally. Faulty excretion of uric acid lays the foundation of poor health in multitudes of women, while lithemia is a fruitful source of ill health during the menstrual life. Tuberculosis as a complication of pelvic disorders is too often overlooked, and needful constitutional and hygienic treatment, therefore, is not instituted. [W. A. N. D.]

10.—Bird records a rare case of **pelvic fracture occurring during labor,** the fracture taking place in the right horizontal ramus of the pubis. A firm pelvic bandage was applied and convalescence both from the labor and the fracture was uninterrupted. [W. A. N. D.]

11.—Smith records a series of **interesting cases in practice,** including one of hemorrhage from the gums during pregnancy, a case of sudden suppression of milk due to fright, a cyst in the vulvovaginal gland, a cyst of the vagina, a small abscess pointing in the vaginal wall and a phlegmonous erysipelas of the scalp in a new-born infant. [W. A. N. D.]

12.—Stone records 4 cases of **iodoform and carbolic acid poisoning,** one of which was fatal. He remarks that the symptoms point to cerebral disturbance, headaches, hallucinations and melancholia. Occasionally there is dilatation of the pupil, while at other times the pupil is contracted. The pulse is always accelerated, ranging from 130 to 150 per minute. There is elevation of temperature; the patients have nausea and vomiting, dizziness and confusion of ideas. Later they become lethargic and have paralysis of the sphincters. Dermic irritation is often observed. [W. A. N. D.]

RUSSKI VRATCH.

January 26, 1902. (Vol. 1, No. 5).

1. The Treatment of Urethral Strictures by Electrolysis. B. N. CHOLTSOFF.
2. Addressing the Patients "Thou." V. PH. BUSCHUEFF.
3. A New Reaction for Some of the Reducing Substances in the Organism. G. N. GABRITSCHEVSKI.
4. The Pulse-curve and the Influence on it of Color-sensations. M. M. RIEZNIKOFF
5. Prophylactic Measures Against Infection with Gonorrhea. L. IA. IAKOBSON.

1.—Cholstoff sees no reason for the **neglect of electricity in the treatment of urethral strictures,** since in his hands it has proved a **most valuable agent.** In none of the 9 cases observed for periods varying from 6 to 20 months did the stricture removed by varying from 6 to 20 months did the stricture removed by electrolysis recur. His conclusions are: (1) Of all methods of treating urethral strictures, the best results are obtained by electrolysis. (2) The circular electrolysis is preferable to the linear. (3) Weak currents should be employed. (4) In the majority of cases bougies should not be used along with the electricity. The immediate result of electrolysis is a rapid dilatation of the stricture. (6) At the first sitting it is possible to dilate the stricture to a considerable caliber. (7) These results are obtained in gonorrheal as well as traumatic strictures; in recent as well as old and obstinate. (8) Owing to the short period of observation (about 2 years), no definite statement can be made as to the remote effects of electrolysis, but at all events, the dilatation of the stricture accomplished by electrolysis remains for a long time. In all cases in which the treatment was pursued to the end, no recurrence of the stricture was observed, although in some cases the observation extended over a year. (9) From the point of view of remote effects, electrolysis acts more beneficially in gonorrheal than in traumatic strictures. (10) The treatment of urethral strictures by electrolysis is not any more dangerous than that with bougies. The details of the treatment are given. [A. R.]

3.—Gabritschevski discovered accidentally that a **number of substances found in the organism in disease and in health give the iodine reaction with iodized starch.** Substances which were found to give the reaction are: Peptone, human urine, uric acid, alloxantin, alloxan, pyrocatechin, hydroquinon, guaiacol, morphine, hydroxylamine, hydrazine, hydrogen sulphide, sodium sulphate, thioacetic acid, mercaptan and other combinations containing the sulphohydrylic group. Pyrogallol and tannin (in dilution of 1:10,000) give at first a yellow coloration, but the sediment turns blue in 24 hours. To a slight degree, the reaction is obtained slowly with egg albumen and horse's serum (1:10), also with solutions of ptyalin, trypsin and papaine. The reaction was not obtained with the various forms of sugar (dextrose, levulose, galactose and maltose), glycogen and some of the ferments (diastase and invertin); also urea, xanthin, creatinin, guanin, caffeine, tyrosin, hippuric acid, glycocoll, coceine, resorcin, salicylic acid, sulphate of iron and formic, benzoic and salicylic aldehydes. Certain substances as diacetic acid, maloric acid, acetylacetone and antipyrin prevent the appearance of the reaction. The best method of applying the test is to add 1 cc. of the iodized starch to 4-5 cc. of the suspected liquid in such a manner that the 2 fluids come in contact without intermingling. The reaction appears as a blue ring at the point of contact. No definite results have been obtained by the author with this test, and he only submits it for further investigation. [A. R.]

4.—Rieznikoff gives a detailed account of experiments performed on 2 healthy individuals with a view of determining **the effect of color on the circulation.** In a room, especially arranged for that purpose, the subjects, in a state of rest, were exposed to various colored illuminations and sphygmographic tracings taken. It appears from the carefully conducted observations that of the elementary colors of the spectrum only the violet affects the character of the pulse. [A. R.]

5.—Iakobson quotes various authorities to prove that **a 20% solution of protargol in glycerine injected into the meatus immediately after coitus will prevent gonorrheal infection.** The objections to the syringes devised for that purpose are that too much of the solution may be injected by the overzealous, that the syringe may be introduced too deeply into the urethra and that they can be used repeatedly, thus in themselves becoming sources of infection. To overcome these objections, the author devised an apparatus consisting of a small heavy glass tube 4 cm. long. One end is olive-shaped, 0.45-0.6 cm. long and 0.3-0.4 cm. in diameter. At a distance of 1 cm. from the end there is a bulbous expansion 0.8-1 cm. long and 0.5-0.6 cm. in diameter. The upper end of the tube is provided with a rubber cap used for pressing out the contents, while the lower end is protected by a rubber cap which is removed before use. The capacity of the syringe is 2-4 drops which are injected into the meatus. For women, the author recommends double the dose in gelatine capsules introduced into the vagina before coitus and followed by an irrigation of the external parts with 1% solution of protargol. [A. R.]

BOLNITSCHNAIA GAZETA BOTKINA.

January 23, 1902. (Vol. XIII, No. 4.)

1. A Contribution to the Pathological Anatomy of Primary Phlegmonous (Streptococcus) Enteritis. A. MOISEIEFF.
2. The Principles and the Mode of Participation of the [illegible] in the Restriction of Epidemics. N. I. TEZIAKOFF.
3. The Scientific Principles Underlying the Hospital Régime and the Acting Laws Concerning the Civil Hospitals in Russia. S. S. VIRSALADZE.

January 30, 1902 (Vol. XIII, No. 5).

1. On the Treatment of Herpes Tonsurans and Favus in Children by the X-Rays. D. A. SOCOLOFF.
2. The Principles and the Mode of Participation of the [illegible] in the Restriction of Epidemics. N. I. TEZIAKOFF.
3. A Contribution to the Pathological Anatomy of Primary Phlegmonous (Streptococcus) Enteritis. A. MOISEIEFF.
4. One of the Problems of Public Hygiene. A. BALOFF.

1.—Socoloff achieved **remarkable success in the treatment of herpes tonsurans and favus by the X-rays.** He employs weak sparks from 15 to 20 cm., the tube being placed at a distance of 30-40 cm. from the head. In 2 cases, one of herpes tonsurans and one of favus, the recovery was complete and the results of the treatment could not be equaled by any other method. Six cases are reported. In one of herpes tonsurans, in a child, 2 years old, 7 sittings of 10-20 minutes each accomplished a cure. In another of the same affection, in a girl, 10 years old, it required 14 sittings and an aggregate of 230 minutes. In another, in a boy of 8, 30 sittings were required. In 2 cases the patients discontinued treatment after considerable improvement. In one case of favus, in a girl of 9, 53 sittings during a period of 3½ months accomplished a cure. [A. R.]

3.—Moiseieff reports 4 cases of **primary phlegmonous enteritis due to the streptococcus pyogenes.** Full accounts of the post mortem findings are given and the following conclusions presented. (1) Primary (idiopathic) phlegmonous enteritis may occur secondarily to catarrhal inflammation of the intestines, owing to an extension of the infection into the submucosa, without any visible solution of continuity in the mucosa. On account of the hemorrhages and necrosis of the mucous membrane, secondary superficial ulceration may take place. Microscopically, areas of superficial necrosis are discovered, especially over the lymph follicles and Peyer's patches. (2) Primarily, phlegmonous enteritis has the character of a lymphangitis accompanied in the beginning by edema of the connective tissue of the intestinal wall and ending in a purulent infiltration. These changes are especially marked in the mucosa and muscularis mucosæ. (3) Phlegmonous enteritis is complicated early in its course by suppurative peritonitis, owing to the rapid occlusion of the efferent lymphatics, stasis of the infected lymph and a back-flow of that lymph into the peritoneal cavity. The intensity of the enteritis does not stand in direct relation to the peritonitis which may develop before any purulent infiltration into the mucosa has taken place. (4) Phlegmonous enteritis is caused, at least in the cases herein reported, by the streptococcus, apparently identical with the streptococcus pyogenes. [A. R.]

4.—Baloff discusses the dog question and points out the various dangers to health lurking in our canine friends. Not alone is the dog the most important factor in the causation of rabies, but echinococcus and other infectious diseases may be traced to the dog, not to mention the propagation of fleas, which find an excellent breeding place on the hairy bodies. Destruction of street dogs, compulsory muzzling and universal registration are suggested as the best sanitary measures. [A. R.]

EDINBURGH MEDICAL JOURNAL.

February 1902. (Vol. XI, No. 2.)

1. Membranous Colitis. MICHAEL G. FOSTER.
2. Two Cases of Malignant Stricture of the Upper End of the Esophagus in Women. A. LOGAN TURNER.
3. Diabetes and Pregnancy. G. ERNEST HERMAN.
4. A Phase in the History of Cholera in India. ANDREW DUNCAN.
5. On "The True Elixir of Life." JOHN HADDON.
6. The Report of the Indian Plague Commission. CHARLES HUNTER STEWART.

1.—Is the case in which the patient, after an attack of abdominal pain, passes a few pellets of mucus, of the same nature as the one in which, after symptoms of such severity as to simulate intestinal obstruction, the sufferer passes large intestinal casts, and then experiences a period of temporary relief? In watching a protracted case during a term of years, from its gradual inception, through its periodical attacks of varying severity, to its ultimate cure, one may observe almost every variety of mucous discharge from the bowel. Experience leads Foster to believe in the unity of the slight and severe cases of **membranous colitis.** The 3 cardinal symptoms of membranous colitis are the passage of mucus, whether in the form of glairy fluid, shreds or membranes, irregularity of the bowels and abdominal pains of greater or less intensity and frequency. The appendix forms part of the mucous membrane of the colon, and, *a priori*, one would suppose that the morbid process would tend to involve the appendix and produce symptoms of appendicitis. In 18 cases that have come under the observation of the author, he has twice seen undoubted appendicitis. In spite of the removal of the appendix, however, 4 subsequent attacks of pain, coupled with the passage of membranes, occurred. The majority of the victims of this disease suffered from neurasthenia. In some cases there is slight fever in each attack. In the experience of the writer, he observed neurasthenic symptoms long preceding any passage of either mucus or membrane from the bowel. The most reasonable supposition would appear to be that hypersecretion of mucus may take place under certain, at present unknown, conditions of the nervous system. And this amorphous secretion may be converted into membranes by the concomitant loss of tone of the bowel. In the therapeutics, the first aim should be the treatment of the neurasthenia. Alcohol, as a rule, should be avoided; morphine should be given with great care. The bowels must be regulated with castor oil. In the majority of cases, enemata are beneficial. To soothe the intestinal pains, bael, in dram doses of the confection is sometimes useful. Other drugs that have been recommended are aromatic sulphuric acid in 20 m. to ½ dram doses, strychnine and silver nitrate. [J. M. S.]

2.—Turner reports 2 cases of **malignant stricture of the upper end of the esophagus.** In each case the patient was a woman above middle life; in both instances the maternal parent died from cancer of the breast. In each the growth was pathologically the same, a squamous-celled carcinoma that occupied the upper end of the esophagus. In both there was ulceration of the tumor surface and an enlargement of the cervical glands. The 2 cases differ entirely from each other in regard to the duration of the disease. The remarkably slow growth of the tumor in the first case contrasts markedly with its rapid development in the second. We have distinct proof of the existence of a stricture, diagnosed by the passage of a bougie 3½ years before the final operation. A portion of tissue removed from the first patient by the forceps was found to consist of healthy mucous membrane in an edematous condition from the arytenoid region and not from the tumor mass itself. On this account, in removing portions of tissue from the larynx for diagnostic purposes, considerable caution must be exercised in forming conclusions with regard to the appearances

noted through the microscope. If the clinical symptoms and signs are in favor of carcinoma, and the histological examination gives a negative result, the clinical aspect of the case must be considered of greater value than the microscopical examination. On the other hand, provided that the microscopist is a man of experience, a histological examination demonstrating cancerous tissue should outweigh all negative clinical evidence. [J. M. S.]

3.—Herman reports the case of a woman, aged 30 years who had **diabetes with pregnancy.** This condition is rare and is usually a severe form of the disease. Diabetes coming on during pregnancy may get well within a few days or weeks after delivery and recur again in subsequent pregnancies, though not necessarily in every pregnancy. In these intermittent cases coming on during pregnancy, the prognosis is better than in cases in which diabetic women have become pregnant. Some of the intermittent cases have recovered when child-bearing has ceased; in others the disease has got worse with each succeeding pregnancy. When a diabetic woman has become pregnant, the symptoms of the disease usually become aggravated and its progress hastened. Premature delivery, due to intra-uterine death of the child, has occurred in about two-thirds of the published cases of pregnancy with diabetes. Hydramnios has been observed in an unusual portion of cases and the children have often been large. In 2 cases the amniotic fluid was found to contain about 3% of sugar, and in one the fetal urine contained sugar. When a diabetic patient has been delivered, the lying-in may go on normally, whether the diabetes improves or not. But some patients have died from collapse and coma, with quick pulse, subnormal temperature, cold extremities, and unconsciousness, within a few hours or days of delivery. There are strong reasons for expecting that the early termination of pregnancy will prove the best treatment for a pregnant diabetic. [J. M. S.]

6.—Stewart gives an abstract of **the report of the Indian Plague Commission.** The manner in which plague was introduced into Bombay city defies elucidation, and even the exact date of its introduction cannot be ascertained. There must have been 130,500 deaths for the whole of India during the epidemic. That the bubonic and septicemic varieties of plague may be produced by the virus coming in contact with an abraded surface, is proven. The frequency of infection through the skin surface is shown by the percentage of primary buboes which developed in connection with lymphatics originating in the skin. Concerning the spread of primary plague pneumonia there is need for further inquiry. The average period of incubation was under 3 days; from the evidence there does not seem much to support the view that the incubation period may be 10 days. The danger of direct infection from plague patients is very small, under conditions such as those of hospitals in India, where attention is paid to the proper ventilation and cleanliness of the buildings, where the floors are, in a considerable number of the hospitals, periodically treated with disinfectants, and where precautions, such as the wearing of shoes, are, as far as possible, insisted on. In pneumonic plague, on the other hand, a high degree of infectivity has been found. The Commission very strongly suggests that the infective material derived from a case of pneumonic plague tends to reproduce the disease in the same form. In primary pneumonic plague the sputum contains the bacillus during the whole course of the disease. In ordinary bubonic cases, on the other hand, the bacillus is for a time completely shut off from the surface, and only when septicemic symptoms supervene does the infective matter escape by the discharge from nose, lungs and intestinal tract. This infective period may last from a few hours to a few days. In fatal cases it may roughly coincide with the last 24 hours of the patient's life. In cases which run a favorable course, the pus from the suppurating bubo and sputum and saliva may contain the infective material. Till such time as future experience shall have established some degree of certainty, it would seem prudent to suspect all convalescents as long as any symptoms of disorder remain perceptible, and more especially in regard to such in whom the buboes continue open. Of 3,035 fatal cases admitted to hospital, death occurred within 2 days in more than one-third, within 3 days in more than ½, and within 5 days in 93% of the cases. Bombay presidency and the native states connected with it, during the period from September, 1896, to June 1, 1900, gave a plague mortality of 78.53%. Introduction of plague into uninfected places seems to have been brought about almost entirely by travelers in whom plague was incubating, or who had brought infection in their effects, though they themselves did not suffer from the disease. The following are among the conclusions of the Commissioners concerning restriction of the movements of travelers by railways: "(2) Any system of land quarantine imposed with the object of detaining all passengers from infected areas, either at a point where the infected and uninfected areas join, or at different places within the infected area has not been found, in practice, to prevent the spread of plague. (4) Any system of medical examination on railways which falls short of keeping travelers under detention for the ordinary period of incubation, must be defective. (6) It appears to be unnecessary to examine people medically who are travelling between places in an infected area." Plague has shown very little tendency to spread on board ship. That infection of rats is very frequently associated with the epidemic occurrence of plague, is now a matter of common knowledge, and the evidence laid before the commissioners abundantly substantiated this view. A knowledge of the mode in which rats become infected is of great importance. The Commissioners think that infection through the alimentary canal cannot be common. The data that are available concerning post mortem appearances in rats do not permit of final judgment as to whether the system is generally invaded, in a state of nature, through the skin. Of all channels of infection the mucous membrane of the nose seems to be most likely, for instance, as in those cases in which an outbreak of plague among rats appears to have been traceable to an importation of plague-infected clothing. Simond's theory is entirely fallacious. There are instances in which a very considerable number of plague cases in a village have been directly attributable to an epidemic among rats. When plague is once established in a place, there seems to be no doubt that human agency is a more important factor in spreading the disease than rats. Marsh found that in tubes containing agar cultures of the plague bacillus, buried at a depth of about 1 foot, either in the floor of a native house or in garden mould in the open, both the growth and the virulence of the bacillus were increased and also that cultures of the organism, when grown in an artificial atmosphere containing 3% carbonic acid, grew particularly well. The experiments show that this gas has a favorable influence on the growth and virulence of the plague bacillus. The slow rate at which plague has spread has been attributed by some to the time required for a preliminary process of acclimatization to the local conditions. The President of the Commission believes that it is obvious that the occurrence and extension of plague are independent of climatic conditions. There appears to be no satisfactory explanation of those regular and exceptional incidents in the history of the plague epidemic other than that the predominating factor in the extension of the disease is to be found in the conditions which exist within and not outside the houses. The majority report makes this statement: We have been unable to find anything in the nature of statistical evidence, or in the nature of inference from scientific observations, to establish the proposition that any of the sanitary defects referred to or any combination of them exercises any marked favoring influence on the spread of plague. Overcrowding is only harm-

ful in increasing the posibility of contact. Sewage pollution of the soil is very general, and, as a rule, very gross. But while this is so, the evidence of the plague officials points almost entirely to the conditions inside the dwellings as the great cause of the spread of plague. These conditions are, especially, insufficiency of light and ventilation, over crowding, dampness, a polluted atmosphere, and, to a less extent, uncleanliness. The President does not regard plague as a filth disease in the ordinary acceptation of the term. He considers that the influence of filthy conditions is a secondary one. While there is much indirect evidence that plague bacilli continue to exist for long periods of time in filth, there is no direct bacteriological proof of this. The failure to detect the bacilli in cow-dung floors, etc., is probably due to the absence of any method of separating them from the saprophytic organisms found there. Plague is an infectious disease, fostered chiefly (a) by unsanitary conditions, the most important of which is air pollution within dwellings, and (b) by rats. If both (a) and (b) are present, the suppression of a widespread epidemic is practically impossible unless complete evacuation of every infected place is carried out. If there is no considerable number of rats, the suppression is less difficult. If there is no gross air pollution within dwellings, the suppression is not especially difficult, as the chief agency in enhancing infectivity and virulence would be absent, and rat infection would cease to be an important factor in the spread of the disease. [J. M. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

January 6, 1902. (39 Jahrgang, No. 1.)

1. Abnormality of the Thorax as Predisposing Cause of Phthisis and Emphysema. W. A. FREUND.
2. The Antibodies and the Bacteriolytic Immune Bodies of Cholera. R. PFEIFFER and E. FRIEDBERGER.
3. Blood Examinations in Phthisical Patients. L. APPELBAUM.
4. Angina, Articular Rheumatism, Erythema Nodosum, and Pneumonia with Remarks Upon the Etiology of the Infectious Diseases. MENZER.
5. Experimental Cholecystitis and Cholangitis of Auto-infectious Origin. H. EHRET and A. STOLZ.

2.—From a series of **experiments with cholera serum from goats upon rabbits and guinea-pigs** it appears that 0.03 gm. of antiserum will neutralize from 1 to 2 mg. of goat cholera serum, and that this ratio remains the same for higher doses. From the table of results given, Pfeiffer and Friedberger conclude that anticomplementary bodies exist in antiserum, which spoil the effect of the complementary bodies produced from the peritoneum of guinea-pigs; and that there are anticomplementary bodies in the antiserum of rabbits which are satisfied by the complementary bodies of goat cholera serum injected at the same time, and only affect the complementary bodies of the serum of the guinea-pigs secondarily. Therefore, by the injection of goat cholera serum in rabbits, anti-immune bodies are produced. Besides, cholera-immune bodies of the goat and rabbit are specifically different, while the cholera amboceptors of normal goat serum and of that of the specifically immunized goat are probably identical. The rapid disappearance of injected immune bodies is easily understood from the production of anti-immune bodies. [M. O.]

3.—**Blood examinations of phthisical patients** vary according to different observers. After a review of the literature, Appelbaum gives the results of his examinations. In the early stages anemia is generally found, with decreased hemoglobin, erythrocytes, leukocytes, and specific gravity. Some patients, however, small, fat, and ruddy, show a normal blood. The longer the illness and the poorer the nutrition, the more marked is the anemia. In the second stage, a relative increase occurs in the hemoglobin, erythrocytes, leukocytes and specific gravity, really an oligemia, following the night sweats, diarrhea, etc. In the third stage the anemia becomes more marked. When phthisis florida or high fever is noted, leukocytosis is found. The toxin finally destroys the erythrocytes, which explains the enlargement of the spleen. The leukocytosis which may occur shows the last reaction of the individual to the intense infection. In the early stages polymorphonuclear leukocytes predominate, with increased eosinophiles; the latter decrease in the second stage and transient forms appear, which in the third stage form the great mass of neutrophilic polymorphonuclear leukocytes. [M. O.]

5.—In man **cholangitis** without the introduction of bacteria often occurs, with gall-stones, following sudden cholecystitis, or by the outwandering of such stones into the bile ducts. In 5 experiments upon dogs, Ehret and Stolz caused the production of auto-infectious cholecystitis, in 6 others, of auto-infectious cholangitis. Bacteria of the colon group predominated in the cultures obtained. They conclude that the chances of infection in the gall-tracts are very abundant, yet it only follows stoppage of the bile. Foreign bodies in the gall-bladder, in dogs as in man, more rarely cause infection than foreign bodies in the bile ducts. Colon bacilli easily enter the common bile duct and thus reach the cause of the stoppage of the bile. Auto-infection then follows. [M. O.]

January 13, 1902. (39 Jahrgang, No. 2.)

1. A Tumor of the Spinal Cord. H. OPPENHEIM.
2. Electric Light and Internal Infection. KREBS.
3. A Clinical Method for the Immediate Quantitative Analysis of the Uric Acid in Urine. I. RUHEMANN.
4. Abnormalities of the Thorax as Predisposing Causes to Phthisis and Emphysema. W. A. FREUND.
5. Angina, Articular Rheumatism, Erythema Nodosum, and Pneumonia, with Remarks Upon the Etiology of the Infectious Diseases. MENZER.

1.—Oppenheim discusses the case of a man of about 40 years, with pain in the left hypochondrium, in the regions innervated by the eighth and ninth dorsal nerves, for over 2 years. This had lately become severe. The umbilicus was on the right side of the median line, there was some weakness of the left abdominal muscles, and the abdominal reflex was absent on the left side. In spite of the few symptoms, Oppenheim believed the condition to be due to a **tumor of the spinal cord.** One month later there was lessened sensation to touch and pain in the left hypochondriac and umbilical regions, with decreased temperature sensation in the right leg. Six weeks later there was paralysis of both legs most marked in the left, with Babinski's reflex, foot-clonus, and girdle pains. The patient was operated upon, as Sonnenburg reported in detail in the *Deutsche medicinische Wochenschrift* (1901, No. 32, page 242). Operation through the sixth dorsal vertebra showed a swollen dura, and, upon incision, an oval, bean-shaped tumor, 3½ cm. long, was found, compressing the cord. The tumor, a myxolipoma or fibromyxoma, was removed, and the patient improved; then symptoms returned, and he died 18 days after operation of purulent cerebrospinal meningitis. It is noteworthy that the exact position of so small a tumor was correctly diagnosed before operation. This case also shows that surgical interference may offer the only possible cure. [M. O.]

2.—As the results of experiments made with **electric incandescent lights** upon animals with infectious diseases were contradictory, Krebs undertook a series of investigations himself, in mice and guinea-pigs. He concludes that the light outside of producing sweating from the heat, has absolutely no effect, good or bad, upon artificially produced internal infections in animals. [M. O.]

4.—Freund reviews the anatomy and physiology of the thorax, drawing attention to the **small size of the cartilage of the first rib in cases of phthisis and emphysema.** The manubrium is drawn in, the first intercostal space is narrow and the upper thorax opening is almost closed. When the shortening of the cartilage of the first rib is greater on one side, primary asymmetrical stenosis of the upper thorax opening follows. Further developmental and functional disturbances are prevented. From the efforts of the attached muscles perichondritis and periostitis occur sometimes with areas of ossification. Expansion of the apices of the lungs is thus hindered. This abnormality is noted in childhood as a predisposing cause of phthisis. But phthisis does not always follow, since certain muscular compensatory movements occur. But, in some cases, resection of the cartilage of the first rib near the manubrium would be the [illegible] proceeding. In emphysema, also, certain muscles hyper-

trophy and cause compensatory movements with respiration, which counteract the deformity. 250 thoraces were examined and the results confirmed Freund's conclusions of 40 years before. 50 of them showed phthisis. Freund hopes that a case will appear in which his suggested operation may be necessary; yet he advises waiting for just the right case. [M. O.]

5.—In the examination of bits of tonsils removed from 3 patients with **acute articular rheumatism and angina, Menzer found diplococci and streptococci.** Evidently the tonsils keep these germs from entering the respiratory tract. When the germs are specific cocci, however, they may enter the blood, depending upon the constitution, resisting powers, etc., of the individual, and cause the symptoms of acute articular rheumatism, with angina. The description of a case of **erythema nodosum** with angina is also given, but the cocci found resembled the staphylococcus albus. Menzer collected evidence to show that aspiration pneumonia is improbable, while **pneumonia** of hematogenic origin, through the tonsils, is much more likely to occur. From his investigations he believes that in the origin of the infectious diseases, the kind of bacteria and its peculiarities are not important, but rather the person affected, his constitution, age, and other conditions, relations, etc. As with the ordinary skin bacteria, which only become harmful when there is a wound, so, perhaps, with the nasal and pharyngeal mucous membrane, some injury is needed to make common bacteria pathogenic. For the germs found in coryza are exactly like those in angina, pneumonia, etc., so that other circumstances seem to determine the symptoms which follow in different individuals. Cholera is frequent in hot weather, measles and scarlet fever are common in cold weather; and childhood seems a predisposing cause to all the infectious diseases. The immunity of infancy may be due to the attention received, and the fact that the child is so little open to contagion. These are but hypotheses, but they are founded upon well-known facts. Thus it is that the human organism, at different ages, according to its congenital and acquired constitution, is placed in opposition to these ubiquitous parasites, and a series of disease forms results, of common origin, yet clinically different, showing the changing relations of the human body cells to microorganisms under different external conditions. [M. O.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

January 2, 1902.

1. Concerning Plague. W. KOLLE and MARTINI.
2. Critical Contribution to the Discussion Concerning Glycolysis. E. BENDIX and A. BICKEL.
3. Can the Diagnosis of Pernicious Anemia be Established through the Blood-Picture? E. KORMOCZI.
4. On the Value of the Theory of Traumatic Origin of Malignant Growths, and on a Cured Case of Central Giant-Cell Sarcoma of the Tibia. V. SCHMIEDEN.
5. Temporary Colostomy in Chronic Dysentery. A. NEHRKORN.
6. A Case of Lateral Hermaphroditism. B. O. KELLNER.

1.—The authors first direct attention to the very **marked importance of the cutaneous method of infection with plague organisms,** reported by Weichselbaum, Albrecht, and Ghon. The infection can, in this way, be carried out with more certainty and with greater precision than was previously possible. The authors then indicate the results they have obtained with various cultures, and show that it is readily possible to demonstrate different degrees of virulence in different cultures. Mice are not at all suited to tests of the virulence of plague cultures, nor are rabbits. Plague cultures soon lose their virulence, unless they are passed through animals, particularly rats. In order to infect rats and maintain the virulence of the organisms at a satisfactory level, it is best to infect rats through the respiratory tract, with the inhalation apparatus of Martini, which produces plague pneumonia. By further infecting them from the juice of these lungs, the virulence of the organisms may be kept extremely high. The authors also insist upon the importance of their observation that **there is a chronic form of plague in rats.** This may explain the occurrence of epidemics which are difficult to trace. They also indicate how difficult it is to stamp out plague that has once obtained a hold upon rats, as considerable numbers of the animals may, perhaps, have a chronic form of the disease, which, therefore, does not kill them; and the disease tends to spread through them. In making a diagnosis of plague, the authors recommend the inoculation of 1 to 20 drops of blood in 50 cc. of bouillon, thus overcoming the bactericidal effect of the extravascular blood. [D. L. E.]

2.—The authors direct attention to three facts which are often overlooked in a study of glycolysis: (1) One must be sure that there are no errors in the method used to determine the amount of sugar; (2) one must be sure that the sugar has not been destroyed through bacterial action; (3) one must be sure that the sugar has not been destroyed, or has not apparently been destroyed by purely chemical processes. While the authors do not claim that there is no such thing as glycolysis in the blood, due to ferments, they do insist that this has never been proved. In much of the work which has been done, bacterial infections have not been excluded; and in none of the work that has been done has there been definite proof that chemical processes did not cause the change in the sugar. They have found that the **alkalinity of the blood is sufficient, at body temperature, without the action of other (fermentative) processes, to cause a loss, or an apparent loss, of sugar.** They found that in thirty-six hours this loss reduces the sugar from 70 mgm. to 64 mgm. of dextrose, the loss depending upon the percentage of alkali added, and increasing above this point if more alkali is added. The explanation of this depends upon the fact which has been demonstrated by Lobry de Bruyn, that glucose in an alkaline medium undergoes a stereochemical intramolecular change, and becomes fructose; and that fructose becomes mannose. The result is evident. Copper will be reduced to a less marked degree, and the rotation in the polarimeter will become less marked or will disappear. What place glycolysis may actually have in physiology, we absolutely do not know. There is, as yet, no testimony worthy of belief that any ferment is active in the tissues in reducing the quantity of sugar. [D. L. E.]

3.—The point of the paper lies in the conclusion that **a large percentage of the cases of pernicious anemia may be unaccompanied by the presence of megaloblasts in the circulating blood, and nucleated red cells may even be entirely absent; but** post mortem examination in these cases nevertheless demonstrates the usual lesions of pernicious anemia, with numerous megaloblasts in the bone marrow. The author reports five cases of pernicious anemia in which the diagnosis was established post mortem. In the first, the blood was of normocytic character; nucleated red cells and megaloblasts were not present. In the second, the blood was of macrocytic type; there was occasionally a normoblast, and there were numerous megaloblasts. In the third, the blood was of normocytic type, and nucleated red cells were wholly absent. In the fourth, the blood was of macrocytic character, and there were numerous normoblasts and megaloblasts. In the fifth, the blood was of macrocytic type, and nucleated red cells were wholly absent. A negative condition as to megaloblasts is, therefore, without absolute diagnostic importance; on the other hand, when the question arises whether magaloblasts are diagnostic of pernicious anemia, we must—more particularly from recent contributions to the literature—decide that they are not absolutely indicative of pernicious anemia. They do, however, indicate its presence to some extent, and should lead to the tentative diagnosis of pernicious anemia, in the absence of signs of other disease. [D. L. E.]

4.—The case reported was that of a girl of seventeen, who slipped from a step and severely twisted her foot. She at once found it impossible to walk. A physician told her that the bone was broken. The leg was kept in plaster for eight weeks; even after this time, walking was pain-

ful, and there was an increasing degree of swelling over the lower part of the tibia. Examination then made it evident that there was a mass of considerable size at the lower end of the tibia. Operation was advised, and the growth was entirely removed. The patient completely recovered, and a year afterwards had shown no sign of a return. Schmieden then discusses the literature and the various statements that have been made about the effect of trauma upon the development of tumors, and he insists that wholly unscientific opinions have usually been expressed concerning this matter. He thinks that the observations reported are, in most instances, not at all convincing. Authors have been inclined to forget that a tumor may have existed before, and its growth may have been excited by trauma; or that the patient is generally disposed to lay undue weight upon a previous injury. Similar factors should always be given consideration. [D. L. E.]

5.—The case reported was an interesting one from the standpoint of diagnosis, because it began gradually, with increasing tendency to diarrhea, increasing pain in the abdomen, and a tendency toward the passage of considerable amounts of mucus and large quantities of blood. With gradual increase in the symptoms, the condition became so bad that, after about six months, the patient was unable to work. The question in the diagnosis was chiefly as to the existence of tuberculosis, syphilis or dysentery. The entire absence of a tubercular history or of evidence of tuberculosis, and of tubercle bacilli in the stools, spoke strongly against its being a case of that disease; there was no evidence of syphilis; and there was, also, absolutely no distinct proof of malignant tumor. The whole transverse colon could be felt as a thickened band, and it was decided that the entire colon was diseased. The character of the stools and the appearance of the rectal mucous membrane were such as to lead to the belief that this was a widespread ulcerative process. Not only had internal medication caused no improvement, but the man was losing ground constantly. It was then decided to do a colostomy. This was carried out on the right side. A few days afterward, daily washings of the colon were undertaken. The patient began to improve very soon after this; and, within $3\frac{1}{2}$ months from the time of the operation, the hemoglobin had increased from 30 per cent. to 75 per cent., and the patient had gained much weight, and seemed practically well. The artificial anus was closed since the intestinal symptoms had entirely disappeared; and the patient recovered without further trouble. Nehrkorn considers that it is not yet sufficiently appreciated that, when medical treatment not only does not cause improvement, but seems to be accompanied by actual continuous loss of health, in cases of this kind, we have still a surgical means of aiding the patient, and, perhaps, of bringing him back to entire health. [D. L. E.]

6.—The case was that of a Kaffir, about twenty years old, who was brought into the hospital in an almost dying condition. Consequently, no early history could be obtained. The general appearance of the body was that of a female, but there was pronounced hermaphroditism. There was a well-developed penis and the right testicle was of fair size. The left was hardly at all developed. A uterus was present, but was very small. One ovary was present, and apparently contained imperfectly developed corpora lutea. [D. L. E.]

WIENER KLINISCHE WOCHENSCHRIFT.

January 2, 1902 (XV Jahrgang, No. 1.)

1. Myiasis Intestinalis. H. SCHLESINGER and A. WEICHSELBAUM.
2. Intestinal Bacteria Giving the Granulose Reaction. FRITZ PASSINI.
3. The Significance of the Iodine Reaction in Bacteriological Diagnosis. R. GRASSBERGER and F. PASSINI.
4. The Etiology of Pneumothorax in Childhood. ZUPPINGER.

2.—Many anaerobic bacteria are found in the feces which show the granulose reaction turning blue when iodine is added. Passini's experiments have resulted in the separation of three distinct bacterial cultures, two of them aerobic, the third facultatively anaerobic. A detailed description of these bacilli follows. All three gave the granulose reaction. A more detailed account of his results will be published later. [M. O.]

3.—In studying the butyric acid bacillus, Grassberger found that iodine colored it blue. This begins in spots, until the typical clostridium is noted. A full discussion of the pleomorphism of bacteria follows. Both aerobic and anaerobic bacteria have shown the granulose reaction in feces. So full of the conditions which tend to produce this reaction is the intestinal tract, that many bacteria show it when they reach the feces. Therefore the reaction is of no diagnostic value in the differentiation of the different bacteria. [M. O.]

4.—Zuppinger reports the occurrence of total right-sided pneumothorax, in a girl of $2\frac{1}{2}$ years, suddenly at night during sleep, followed by death in 36 hours. The autopsy showed a grain of wheat, which had been aspirated, sticking from the bronchus into the pleural cavity. A small abscess had formed at the point of lodgment of the foreign body, and pyopneumothorax followed perforation. The lymphglands, spleen, and diaphragm showed tuberculosis, and in the kidneys was parenchymatous degeneration. A foreign body as the cause of pneumothorax is unknown throughout medical literature. The bad habit among young children of putting everything into the mouth may be responsible for pneumonia, abscess and gangrene of the lung, pyopneumothorax, actinomycosis, etc. Of 170 children who have died of tuberculosis of the respiratory tract, in the Kronprinz Rudolf Kinderspital in 15 years, 100 showed symptoms of tuberculous meningitis, 30 had phthitis, and only two died of pneumothorax, about 1%. Pneumothorax rarely follows emphysema, which is generally due to pertussis in childhood, but may also follow bronchiectasis. But the condition is exceedingly rare in children. [M. O.]

January 9, 1902 (XV Jahrgang, No. 2.)

1. The Treatment of Anal Fissure. GUSSENBAUER.
2. Soft Chancre and Syphilis. E. FINGER.
3. The Hemagglutinines of Normal Sera. KARL LANSTEINER and ADRIANO STURLI.
4. Myiasis Intestinalis. H. SCHLESINGER and A. WEICHSELBAUM.

1.—Superficial fissures of the anal mucous membrane are easily healed by the application of antiseptics with laxatives internally. In deeper cases, however, operation will become necessary. Gussenbauer prefers the Recamier method of dilating the rectal sphincter in these cases. This is performed under general anesthesia by inserting the two index fingers into the rectum and gradually using forcible dilatation. The results are excellent, as can be seen from the appended case histories of 23 men and 27 women treated in this manner. [M. O.]

2.—Some thirty years ago it was universally taught that gonorrhea, soft chancre and syphilis were identical. The discovery of the gonococcus 22 years ago confirmed Ricord's theory that in gonorrhea an excessive irritation was produced. Then it was claimed that hard and soft chancres were identical, and Ducrey's discovery of the bacillus of soft chancre in 1889 did not destroy this theory since soft chancre often happens in dilated forming the "mixed" chancre. Finger reports the histories of 7 patients in whom soft chancres were followed by induration and the symptoms of syphilis. He proves that when a soft chancre exists, it is always possible to

have syphilis appear later. Though 90% of the cases of soft chancre are not followed by enlarged lymphglands, yet, no matter how great the destruction caused by the Ducrey bacillus, the possibility of syphilis must never be forgotten. [M. O.]

3.—From a series of experiments with blood of horses upon that of the domestic animals, fowls, etc., it was seen that blood corpuscles, which had already been agglutinated, showed a reaction with the blood of still another species. Thus pigeon's blood which had already been agglutinated while not agglutinating rabbit's or goat's serum, reacted with horse's serum. By the addition of water, this agglutinating power seemed lessened in many cases. [M. O.]

4.—Schlesinger and Weichselbaum report in detail a case of myiasis intestinalis, that rare disease of the digestive tract caused by the presence of the larvae of flies, in a young man of 22. Early in 1900 he noticed blood in his bowel movements. In November he had a severe attack of dysentery. Rectal examination in December showed high grade enterocolitis and he went to bed. Bowel movements contained blood, pus, and bits of tissue. No bacteria were found. Nausea and tympany were present. In January, 1901, he was out of bed, well. In May dysentery recurred. Later seat worms were found in the bowel movements, hundreds of them being passed. In June he seemed to recover again. In July the presence of the larvæ of flies was first noted, following santonin. Some of these were kept and at maturity were pronounced *sarcophaga carnaria* by Professor Brauer. The patient grew constantly weaker and died of inanition October 15. The diagnosis was only possible after the discovery of the larvæ, three months before death. A full review of the rather meagre literature of the subject follows. The symptoms differ in the various cases reported, and the diagnosis is easy when once the larvæ are seen. In this case the autopsy showed three large ulcers in the colon. It seems possible that the larvæ of different diptera can live in the gastro-intestinal tract of man for a long time. While the disease generally disappears after the larvæ have been passed, the disease, as in this case, may become chronic and cause death eventually. The treatment will consist of attempts to rid the individual of the flies as quickly as possible. In some cases surgical interference may become necessary. Prophylactically no raw meat or eatables which have stood open to flies, should ever be eaten. Such chronic forms of the affection are very rare. A detailed description of the autopsy, the differential diagnosis of this affection from the other possible causes of the ulcers found, and an answer to the objections of Professor Gärtner who does not connect the finding of the larvæ in the stools with the disease in question, follow. The article is most interesting [M. O.]

Two Cases of Intestinal Occlusion.—Professor Frölich, of Nancy, reports two very interesting, rare cases of intestinal occlusion in the *Revue Medicale de l'Est*, (September 1, 1901, 28me, Année. No. 17). In the first case, a boy of three, fecal vomiting and absolute constipation had existed for 15 days. In spite of the child's condition, laparotomy was done. The entire mesentery was found twisted upon its own axis from left to right. The child died 36 hours after operation. The intestines lay in the right hypochondrium. The lumen of the transverse colon was completely closed by the pressure of the twisted mesentery. In the second case operation was performed on the third day, and the cecum and part of the ascending colon were found rotated upon their vertical axis. After the adhesions had been freed, the cecum was untwisted. He recovered rapidly. Such cases are seldom found. The diagnosis is very difficult, but the treatment is always immediate operation, with loosening of the adhesions and replacing of the twisted intestines. The literature of the subject is fully cited. [M. O.]

Society Reports.

NEW YORK OBSTETRICAL SOCIETY.

Meeting held March 11, Dr. Malcolm McLean in the chair.

Dr. H. J. Boldt reported a case of puerperal tubo-ovarian abscess resembling appendicitis. Three days after normal confinement the patient had fever, with pain and tenderness in the cecal region. Examination revealed a tumor extending to the median line and to the umbilicus. The diagnosis of appendicitis, with a large perityphlitic exudate, was made, and laparotomy performed. Part of the tumor was omentum, from which about 100 cc. of pus exuded. Investigation showed a tubo-ovarian abscess, the appendix being adherent to the tube posteriorly. Dr. S. Marx said the diagnosis between appendicitis and tubo-ovarian abscess was very difficult. Dr. B. H. Wells had recently seen a patient who shortly after delivery developed signs of appendicitis. He found a small ovarian cyst, its circulation cut off by a twist of the pedicle. There were numerous adhesions and in contact with the cyst at its upper border was a Meckel's diverticulum. The appendix was perfectly normal. Dr. A. P. Dudley spoke of a case in which the appendix was attached to the tip of the tube with a perforation in it, fecal matter discharging through the uterus.

Dr. Boldt presented a colloid tumor of the ovary, from a woman of 27, whose chief symptom was pain in the right lower half of the abdomen. A quart of pseudomucinous matter escaped into the peritoneal cavity during the removal, but recovery followed. Dr. Boldt also presented a large ovarian tumor which he had removed from a girl of 16, in whom menstruation had been irregular and profuse. She complained of pain in the right half of the abdomen, which rapidly increased in size. Upon examination a large nodular tumor was found and removed. Upon section it was a multilocular pseudomucin cystoma.

Dr. Brooks Wells reported a case of vaginal hysterectomy for hemorrhage, in a woman of 30. Profuse hemorrhages followed the removal of ovarian cysts. As the hemorrhage continued, the uterus was removed per vaginam, convalescence being interrupted. The uterus was normal. Dr. Boldt had presented a similar case some years ago in which hysterectomy was necessary. The endometrium in that case was atrophied. Dr. H. N. Vineberg believed that, in uncontrollable hemorrhages, there was an endarteritis localized to the terminal vessels of the uterine tissues. Dr. E. H. Grandin and Dr. Vineberg had seen similar cases. Dr. Malcolm McLean said that there were many cases of hemorrhage at the menopause without organic lesions.

Dr. Wells also reported a case operated upon twice for ectopic gestation within one year. The first time the tube and ovary on one side were normal and were not disturbed. Just a year later they were removed. Dr. A. Brothers reported a case of spontaneous expulsion of a cervical polyp in a young unmarried woman. Dr. Bandler pronounced this structure distinctly cervical. Dr. J. M. West had seen a large polyp spontaneously expelled by a girl of 15, who continued to expel polypi. A month later a large mass appeared in the vagina which proved to be sarcoma. This specimen was taken for a cervical polyp. Dr. Janvrin had curetted her, finding the disease too advanced for hysterectomy. She died of sarcoma three months later. Dr. Dudley considered the discharge of the polyp, from the vagina of a girl of 15, suspicious, requiring careful investigation.

Dr. G. T. Harrison read a paper on the pathogenesis and therapeutics of puerperal eclampsia. While the pathogenesis is still unsettled, it is true that all theories based upon renal disturbance as the primary cause are no longer tenable. In uræmia, an insufficiency exists in the kidneys only, while in puerperal eclampsia there is a similar condition in the liver, intestines, lungs and skin. The blood is more

toxic, when injected into rabbits, than normal blood. The blood of the newborn was also more toxic in many cases. The pregnant organism is laden with the final products of metabolism, yet the urine of the eclamptic, at the time of seizure, is less poisonous than normal urine. The liver is unable to render leukomains circulating in the blood innocuous, while the kidneys are impaired in their excretory power. Toxic products accumulate in the blood and irritate the central nervous system, causing convulsions. If the renal function is altered, an accumulation of toxic substances takes place, causing lesions of the kidneys. Pressure upon the ureters, traction by the ureters on the kidneys, leading to fatty degeneration of the kidney epithelium, and brain anemia due to vascular spasm, have been considered causes of eclampsia. Prophylaxis is important. The hot pack, milk diet, and cathartics are indicated. In the earlier months, if symptoms indicate renal disease, interruption of pregnancy is imperatively demanded, unless the morbid phenomena yield promptly to general treatment. In eclampsia, narcotics, delivery, veratrum viride, diaphoresis, and diuresis are indicated. Chloral should only be used with great caution, especially if the heart be weak. Chloroform should not be used for any great length of time. Venesection is needed, in a strong woman, only when edema of the lungs threatens. Forceps, versions or craniotomy may be necessary. The various methods of dilating the cervix Cesarean section, or deep cervical incisions may be employed. The patient should be profoundly anesthetized. Dr. Simon Marx said that not enough stress had been laid upon the diminution in the amount of urea excreted. Where no pathological evidence is found in the urine, one of two conditions is present, true toxemia of pregnancy, or mechanical pressure upon the ureters, urinemia. True urinary toxemia occurred in primiparæ with the early engagement of the head; in the other cases, the urea, or probably the nitrogen, is diminished. He advises the induction of premature labor in eclampsia. Cesarean section or venesection may be justifiable. Dr. L. Broadhead reiterated the great necessity of careful observation of the urine through pregnancy, noting the amount of albumin and urea excreted. Eclampsia has a mortality-rate which is very high, and the great value of prophylactic treatment is therefore apparent. When, in spite of treatment, the abdomen steadily increases in size, the excretion of urea decreasing and symptoms of toxemia being present, labor should be induced. Dr. Grandin said that the great difficulty is to decide just when eclampsia is impending. If there is no albuminuria and few casts, but the patient has urinary insufficiency with an absolute diminution in the amount of urea excreted, in spite of treatment, then the uterus should be emptied. The condition is not the result of albuminuria or uremia, but is a toxemia, partly from the liver, kidney and intestines, and partly from the fetus. Veratrum viride has been an absolute failure. To lower arterial tension venesection and nitroglycerine were of service. Opium is also contra-indicated because it locks up secretions. As a sedative, he preferred chloral and bromides. Dr. Ralph Waldo emphasized the necessity of inducing labor when eclampsia threatens. Dr. R. A. Murray thought that pregnant women did not drink enough water and that the condition was one of toxemia. He believed in rapid delivery, and thought the danger from Cesarean section less than the danger of sepsis from incision in the cervix.

Dyspepsia.—At a recent clinic, Professor Brissaud discussed dyspepsia. This may be intestinal, gastro-intestinal, or gastric. In dyspepsia there is difficult digestion. Hyperchlorhydria is often found. Dyspepsia may be sensory, motor, or secretory; as a rule all three are combined. Gout, rheumatism, migraine, tuberculosis, alcohol, etc., all predispose to dyspepsia. Commonly dyspepsia is benign. It may be flatulent, painful or grave. While dyspepsia is frequently only a symptom of a disease, it may constitute the entire illness itself. (*La Tribune Medicale*, August 21, 1901, No. 34).

Special Article.

THE HAINES CASE AND THE MEDICOLEGAL RELATIONS OF ARSENIC.

BY HENRY LEFFMANN, M. D.,

of Philadelphia.

Arsenious oxide, commonly known as white arsenic, has been a familiar poison for centuries. It was probably a frequent ingredient in the mixture used by professional poisoners of earlier days, and it is still much employed for criminal purposes. Its chemical character and tests have been studied with great care, and few substances can be identified with greater certainty and in smaller amount. The wide distribution of elementary arsenic necessitates great care in the examination of viscera, but this difficulty has been long known and can be met satisfactorily by modern methods. Of recent years a new source of uncertainty has appeared, namely, the use of embalming fluids containing arsenical compounds. This practice has grown up independently of official or professional supervision and it has frequently frustrated the efforts of the legal authorities. Undertakers use embalming fluids liberally and promptly, without accurate information as to the composition of the same, introducing the fluid into the abdominal cavity, by means of a penetrating trocar, which distributes it widely and irregularly among the viscera. The same syringe is often used for all fluids without intervening cleaning; hence, even when nominally arsenic-free fluids are used, a notable contamination of the viscera may be produced. The details of the recent trial of Mrs. Haines in New Jersey have brought these points vividly before professional and public notice, and, incidentally, given prominence to other questions which it will be opportune to consider.

Arsenious oxide is an irritant poison. While it usually produces a high degree of inflammation, ulceration is rare and perforation practically unobserved. In a few cases death, apparently due to arsenic, has not been attended with inflammatory conditions, but these cases are so few, and there is such danger of misinformation as to details, that it would be unsafe to make them the basis for a broad rule in medicolegal inquiries. In the Jennie Cramer case, tried in New Haven, the experts for the prosecution contended that the girl had been poisoned by an arsenical solution which had diffused so rapidly that no effect had been produced in the stomach. Analysis showed about two grains of arsenic in the body, but no signs of irritation of the stomach. The theory of the experts was suggestive only. It may have found support partly from the fact that for a long while it has been generally held that two grains of white arsenic can be a fatal dose in an adult. This statement has been repeated from one text-book to another, and offered as a point of departure in many trials, but it does not rest on secure basis. Dr. Witthaus has investigated the original reports of the two cases by

which this minimum has been fixed. In both cases the amount taken was uncertain; it was not accurately determined, but inferred. In one of the cases the condition of the patient was such as to render it probable that death was due to other cause than the arsenic, and even in the other case there is a reasonable doubt as to cause of death.

The close chemical analogy between arsenic and phosphorus leads to the supposition that the tissue changes produced by them may be similar. It has long been known that phosphorus produces fatty degeneration of various viscera, especially the liver. Investigations of recent years have shown that in cases of poisoning by arsenic similar fatty degenerations may occur, and hence we have available a means of determining the specific action apart from its local action on the stomach. Examinations of visceral tissue are matters for expert pathologists, and considerable experience in this special field will be needed before positive inferences can be made. Still it is evident that the scientific study of a case of supposed arsenical poisoning must go further than the mere inspection of the viscera and the application of the routine chemical tests.

In the case of Mrs. Haines, which has induced this review of the medicolegal relations of arsenic, the evidence did not prove death by that poison. We have nothing before us but newspaper reports, but these were fairly accurate as to the more important points. Several examinations of viscera were made, one of them at a considerable period after burial, so that the question of post-mortem imbibition has to be considered. Numerous experiments have shown this to be possible, and special experiments, made by the experts for the defence in this case, indicated that a limited transudation of arsenic will occur quickly. No distinct inflammation of the inner wall of the stomach of the deceased child was noted, nor was any undissolved arsenic found in the contents. The amount of arsenic in solution and in the tissues of different organs, principally abdominal, was large, about 17 grains having been actually isolated. If we could infer a proportional general distribution throughout the body, the total would be quite large, but it seems not at all improbable that the arsenic was introduced in the embalming. It was admitted that some fluid had been freely used, but it was claimed that it was nonarsenical. Without impugning the sincerity of any one, it will be allowable to assume that a mistake might have been made.

Through the testimony the public was given some information as to the composition of these liquids. Some of them, as noted above, are highly arsenical, and often contain also much zinc; others have only such small amounts of arsenic as may be present as impurities in the commercial chemicals employed. Formaldehyde, hydrogen dioxide and sulphites are largely employed in the so-called nonarsenical forms. Glycerine is used in nearly all and this usually contains an appreciable amount of arsenic.

Two important points in toxicological chemistry are to be noted in this connection. The frequent use of zinc compounds with arsenic in the preparation of these fluids will suggest a method of detecting the presence of the fluid. Such an opportunity did, in fact, occur in a case tried in the State of New York a few years ago. The chemist found both arsenic and zinc in the viscera. The embalming fluid which had been used also contained these elements, but the proportion of zinc to arsenic was much less in the viscera than in the original fluid, and the chemist inferred that some additional arsenic had been given. The prosecuting attorney would not allow the expert to mention the finding of zinc, for fear it would lead up to a knowledge of the use of the embalming agent, of which use the defence was ignorant. The prisoner was convicted, but got a new trial; in the interval the defence acquired a knowledge of all the facts and the second trial resulted in acquittal.

It seems reasonable to suggest that some official notice be taken of the modern customs of undertakers, and that the use of arsenical fluids be regulated. The choice of a particular embalming fluid is determined by certain sentimental considerations, that is, the appearance which it is desired to give the deceased. The question as to how far the fluid may interfere with medicolegal inquiry is not considered at all. It would probably be an advantage to have each type of fluid "keyed," that is, contain a small amount of some unusual substance which could be easily identified by simple tests. Compounds of lithium, nickel and cobalt would be available for the purpose. A statement that a particular solution was used could be verified by analysis.

Regarding this recent New Jersey case in the light of its own details and those of a few other cases, we may say that to prove death by arsenic some pathological condition characteristic of its action must be shown; and it cannot now be assumed that two grains of arsenous oxide will cause death in an adult, nor that the mere finding of arsenic in the abdominal viscera proves that the poison was introduced before death.

The Influence of Raw Beef Upon the Evolution of Experimental Tuberculosis.—In the *Gazette Médicale de Paris*, (August 31, No. 35) appears an address by Cornil and Chantemesse at the recent Congress on Tuberculosis in London. They fed separate groups of dogs upon cooked and uncooked beef in large quantities. These dogs were inoculated with equal amounts of virulent tubercle bacilli, in the vein of a paw. Those fed upon cooked meat all died in from one to five months, the autopsy showing general tuberculosis with marked fatty degeneration of the liver. The dogs fed upon raw beef, corresponding to the dogs which died, were then killed; they were found fat, with fewer tubercles and much less fatty degeneration of the liver. One of these dogs was killed after having lived upon raw beef for a year. The autopsy showed that his tuberculosis was well on the way to recovery. But a double chronic nephritis had persisted. From these experiments Cornil and Chantemesse conclude that the efficacy of raw beef in the treatment of tuberculosis rests not in overfeeding, but in a peculiar, antitubercular quality of the raw beef. [M. O.]

Original Articles.

PERINEAL PROSTATECTOMY.

By JOHN B. DEAVER, M. D.,
of Philadelphia,
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Prostatic hypertrophy, in spite of its frequent occurrence, until the last half dozen years has by some strange chance not received the attention from surgeons that it deserves. It is strange that a disease occurring in from twenty-two to thirty per cent. of men past middle life, according to the statistics of von Dittel and Sir Henry Thomson, and which is capable of producing the amount of suffering, with so high a mortality, has not been in the past the subject of more careful consideration.

It is not that the disease was not recognized, for ever since the days of Hippocrates have prostatics been described as suffering from the same chain of symptoms, and until the last few years, with practically no treatment except the catheter. In the last half dozen years the surgeons have awakened to the necessity of a better form of treatment, more compatible with modern surgical ideas, and which would promise the patient more than the average of four years, which the statistics of Harrison and Lydston show to be the average length of life of an individual after his prostate has occasioned enough obstruction to require catheterization.

Not only the treatment but also the etiology and pathology of the condition, we must admit, are not as well understood as they might be. Sir Henry Thomson called it an idioplastic tumor, which only begged the question and gave no definite view as to the pathology. Guyon considered it as the result of arteriosclerosis in the genito-urinary vessels. Reginald Harrison viewed the process as one of compensatory hypertrophy secondary to an atony of the bladder walls, while Velpeau and White regarded it as a fibromyoma analogous to the growths of that nature found in the uterus.

Histologically, the prostate consists of thirty or forty compound racemose glands imbedded in an abundant stroma of connective tissue and broad, short musclecells with ovoid nuclei. These muscular fibers in the greater part of the gland are not arranged in such a manner that their contraction can have any action either as a sphincter or as an accelerator urinæ. At the junction of the prostate and the bladder, however, there is a more or less well defined ring of circularly placed fibers which have not been demonstrated to possess any sphincteric action. In the hypertrophies of the gland with which we have to deal, the hypertrophy causing urethral obstruction in old men, the enlargement can be divided pathologically into five classes—fibroma, myoma, fibromyoma, glandular hypertrophy and a uniform simple hypertrophy of the whole organ. This last variety is the cause of serious obstruction very rarely, for, unless there is more or less asymmetry of the overgrowth, the urethra is not apt to be seriously impinged upon.

In the glandular form the obstruction is sometimes caused by retention cysts, but aside from these the growth consists of a simple nonmalignant proliferation of the normal prostatic glands.

The fibromata, myomata and fibromyomata both macroscopically and microscopically very closely resemble the same class of tumors met with in the uterus, and present all the vagaries of growth shown by this class of tumors. The growth may be either stony hard or very soft and friable. The nodules are commonly multiple, but may be single and affect with about equal frequency all parts of the gland. The tumor, instead of being nodular, may consist of general symmetrical, fibromatous or myomatous enlargement of the whole organ. These growths resemble fibromyomata of the uterus in the age at which they appear as well as in structure. Commonly beginning in the latter part of the sexual life, and, if not appearing at this time, it is very rare to have serious prostatic obstruction in extreme old age.

The so-called middle lobe is really a bridge of prostatic tissue connecting the two lateral lobes, although, from the anatomical appearance of this part of the gland, in its normal state, it is hardly worthy of being designated as a separate lobe, it is a very important part of the gland clinically, for a small nodule in this position will cause more serious symptoms than a much larger one in the lateral lobes. The obstructive symptoms in prostatic hypertrophy arise in many ways, perhaps oftenest by an encroachment upon the urethra by enlargement of the lateral lobes, or a nodule in the median lobe; the hypertrophy may extend the prostate into the bladder and then a growth from the roof or floor may block the urethra with a valve-like action, a collar around the urethra may be the cause of the obstruction or, finally, the bridge of tissue connecting the lobes, or the median lobe, causes obstruction without true hypertrophy, that is by its being raised and stretched tightly across the urethra by growths in one or both of the lateral lobes, forming a bar. In this median lobe are seen also in great part the obstructive results of retention cysts. For along the sides of this bridge and into the prostatic urieth empty the ducts of the prostatic glands.

Tuberculosis, sarcoma, adenoma, echinococcus cysts, abscesses and inflammatory swelling, all may produce enlargement of the prostate; but these lesions do not be within the province of this paper.

In cases of chronic prostatitis there is sometimes an inflammatory hyperplasia of the prostate that may cause the same obstructive symptoms as a true noninflammatory hypertrophy. This trouble, however, usually occurs earlier in life, subsides under proper treatment and can be easily distinguished under the microscope.

The prostate gland is a portion of the male sexual apparatus and has very little to do with micturition. It is a musculoglandular organ surrounding the prostatic portion of the urethra, or as some authorities call it, the neck of the bladder. It is normally about the size and shape of a horse-chestnut and, on the average, measures about one and a half inches

in breadth, an inch anteroposteriorly and somewhat less than an inch in thickness. While it surrounds the urethra, there is a greater proportion posteriorly than anteriorly. In the erect position the base of the cone is upward and upon it rests the bladder; below the apex the sheath of the gland blends with the deep layer of the triangular ligament with which it becomes continuous. On either side it is supported by the levator ani muscles which in a way form a sling, coming as they do from the pubes and being attached to the lateral aspect of the gland.



Plate 1.—Transverse section of the Prostate. (After Allen Thompson). u. Urethra. s. Sinus Pocularis. d. e. Common Ejaculatory Ducts. p. Glandular Substance. m. m. Muscular Tissue. The capsule showing the prostatic plexus is here shown.

The gland is enclosed in a fibrous sheath derived from the rectovesical portion of the pelvic fascia. Above, the rectovesical fascia is attached to the posterior surface of the pubes and also to the sides of the pelvis. From thence it descends to the vesicles from the pelvic cavity. The other layer passes downward and forms the sheath of the prostate. At the point of divergence of the two layers of the rectovesical fascia lies the prostatic plexus of veins. The posterior layer of the capsule of the prostate and the anterior wall of the rectum are separated by a very thin layer of fibrous fascia, especially so at the lower end of the apex of the prostate.

The arrangement of the rectovesical fascia forming as it does a fibrous sling for the support of the gland is so similar in principle to the broad ligament in the female that it has been called the broad ligament of the male.

The organ presents two lateral halves connected by an anterior and posterior commissure, the one behind the urethra being the larger of the two. It is the enlargement of this commissure which gives rise to the belief in a middle lobe. Enlargement of the posterior commissure in conjunction with general enlargement of the gland gives rise to vesical obstruction in two ways:

First—The normal curve of the prostatic urethra is convex backward and the length is about one and a quarter inches. If the posterior commissure be enlarged, pushing the urethra in advance of it, the normal posterior convexity is altered, so that the convexity becomes forward, thus greatly lengthening the posterior wall of the prostatic urethra. This, by purely mechanical means interferes with

Fig. 624.—Vasa Deferentia and Vesiculæ Seminales. (After Sappey.)

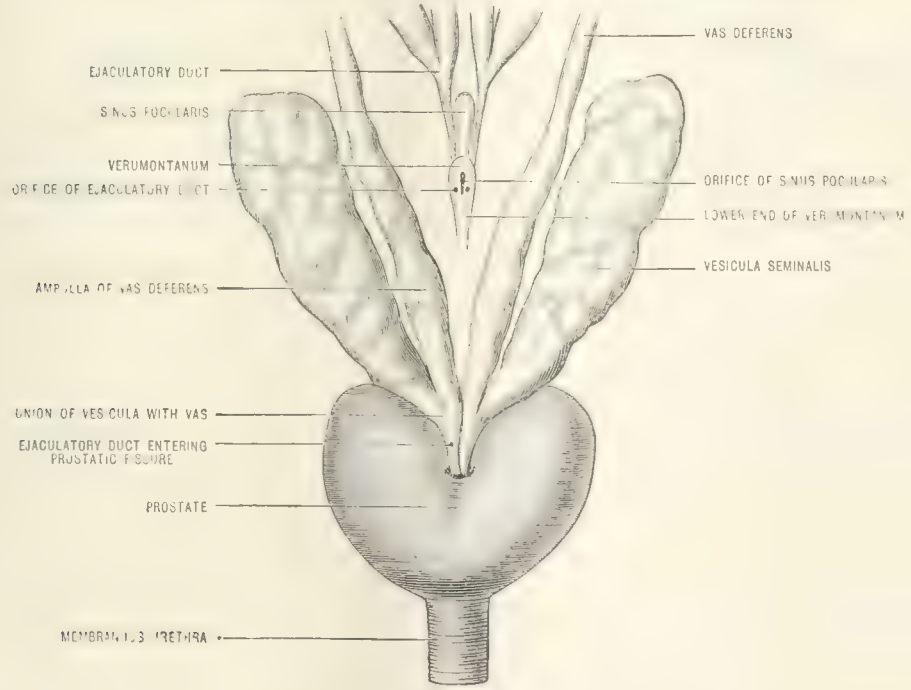


Plate 2.—From Morris Anatomy.

groove that marks the junction of the bladder and prostate, reaching behind, however, only to the posterior extremities of the seminal vesicles. Here it divides into two layers, one of which passes upward to be lost in the bladder wall, forming a partition which separates the prostate gland and the under-surface of the base of the bladder and seminal micturition and positively forbids the entire emptying of the bladder and gives rise to residual urine. The second reason becomes apparent when we study a cross-section of the prostate gland and urethra. We can see that the urethra is not distended or rounded as in the membranous or penile portion; the posterior wall being pushed forward by the

verumontanum giving the lumen a crescentic shape. If the posterior commissure be enlarged, it encroaches more and more upon the posterior wall of the urethra and interferes with the lumen of the canal, thus giving rise eventually to retention.

The prostate is tunnelled by the ejaculatory ducts, the ducts of the prostate and the urethra. On the floor of the prostatic urethra is the highly sensitive longitudinal elevation called the verumontanum. Upon either side of the verumontanum are the prostatic sinuses into which the fifteen or twenty orifices of the prostatic ducts empty. The ejaculatory ducts empty into the urethra at the lower extremity of the verumontanum. The muscular elements of the gland are arranged in a circular fashion, being more developed posteriorly and making a more distinct ring, which is the dividing line between the bladder and the prostatic urethra.

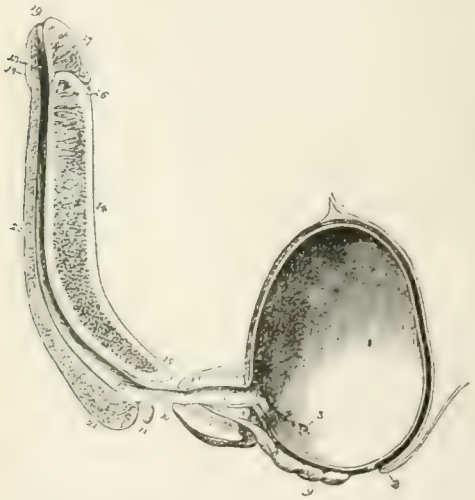


Plate 3.—Section of bladder, prostate, penis and urethra. (After Wilson.)

The blood-supply of the prostate is derived from the internal pudic, hemorrhoidal and vesical arteries and is full and rich. The veins are numerous and inosculate with those from the rectum and anus to form a very intricate plexus about the organ beween the fasciæ and the capsule. The hypogastric plexus and the sympathetic system of the rectum and anus furnish a rather meagre nerve supply to the prostate.

The means which have been devised for the relief of vesical obstruction or prostatic hypertrophy consist in, first, those measures which aim sufficiently to reduce the size of the prostate by lessening the inflammation and consequent cystitis. These may be called the drainage methods. First of these comes catheterization, which may be either at regular intervals which, by preventing accumulation of residual urine and washing out of the bladder with antiseptic solutions, attempts to cure the cystitis consequent upon retention; or, continuous catheterization may be carried out. Both of these methods are open to the objection that they do not promise any cure, but only a relief from the symptoms of cystitis.

If, as we have said, the growth occasioning the obstruction is a definite tumor formation, the catheterization methods do not promise any hope of cure, but, it is true, they may greatly lengthen life and make the condition of the patient more tolerable. With this class of treatment may be classed perineal and suprapubic drainage; this, however, affords no more permanent relief than does the mere catheterization and in many cases the tenesmus, which is the worst symptom from which these patients suffer, is not relieved. All the foregoing procedures have their place as a means of treatment of these cases in which a more radical operation is deemed unwise on account of the general condition of the patient.

Vasectomy or castration, theoretically and from the results of experiments upon animals, would seem to be very useful measures in the relief of this trouble, yet, from the experience of those who have done these operations the oftenest, in reality they very seldom give much relief and have in the last few years been practically abandoned by those who were formerly their most earnest advocates; however, these operations as well as the drainage methods are worth trying in cases seen too late and upon whom a more radical measure would be unjustifiable.

The next operation, devised for the relief of this condition, was suprapubic prostatectomy. One of the greatest objections to this operation is that the prostate gland lies entirely below the wall of the bladder and, in order to remove the prostate by this route, the destruction of a part of the base of the bladder or the entire prostatic urethra is necessitated. In many cases, in which the prostate has grown into the bladder, there is the greatest danger of injuring the ureters in this operation and at best a raw surface is left which by its contraction in healing may obstruct the urethra to as great an extent as did the prostate before operation, or obstruct the one or both ureteral orifices. In many patients with thick abdominal walls or with a thick-walled, contracted bladder it is almost impossible to bring the field of operation within sight of the eye and, therefore, the operator is forced to tear out, by means of biting forceps, parts of the base of the bladder without knowing how much damage he is doing to either the internal sphincter or the ureters. There is one class of cases, however, in which the posterior commissure of the gland is disproportionately enlarged and extends well up into the bladder, in which a rectal examination reveals a relatively slight enlargement and yet the urethra presents the characteristic change of curve from posterior convexity to anterior convexity with marked lengthening of the posterior walls of the prostatic urethra. In these cases, especially if associated with stone, suprapubic prostatectomy may be the operation of choice.

Bottini's operation in selected cases of obstruction caused by hypertrophy of the prostatic floor

may give the desired relief, yet Bottini's burning is an operation conducted in the dark, and we cannot be sure as to the depth or direction of the new channel or how much it will be ultimately interfered with by subsequent contraction. There is great danger as well of septic absorption from a wound made in a septic field in which drainage has not been provided for. The failures, 15%, partial failures 34% and death-rate over 7% in the hands of the men who rank as the most skilful operators in these cases are enough to show us that we must look otherwise for the ideal operation for the relief of prostatic hypertrophy.

All the foregoing operations have been performed many times by the author, in some cases with brilliant results, but in a great majority of cases with very little betterment and sometimes with the most untoward consequences. In spite of the occasionally brilliant successes from one of these operations, we have been, on the whole, dissatisfied with the measures devised for the cure of this condition, and are inclined to look forward for other measures founded on better surgical principles, and which would promise a better expectancy of success.

Perineal prostatectomy is an operation which seems to be founded upon sound principles. It is sound anatomically, because the posterior portion of the prostatic urethra is removed, thus allowing easy access to the new growths which are the cause of obstruction. The base of the bladder and the internal sphincter are not damaged; free drainage is secured; the capsule of the gland is left to which the supports of the bladder are in a great measure attached, and, above all, the entire seat of the trouble and all new growths are certainly and radically removed, assuring us that if the patient recovers from the operation he will have no further trouble from this disease. Septic cystitis, unless pre-existing, is extremely unlikely to follow, both because the base of the bladder is not injured and also on account of the immediate establishment of free drainage. Even the ever present danger of the sudden relief of a distended bladder may be obviated if we are careful not to encroach upon the internal sphincter.

Of course, this operation is a very extensive surgical procedure and in cases seen late the choice must be carefully made, as in many other surgical conditions, as to the choice between a radical and a palliative operation.

The removal of the prostate through the perineum is carried out in the following manner:

A sound, or Ferguson's prostatic depressor, one sufficing as well as the other, is introduced into the bladder and so held by the assistant that the convexity of the curve of the instrument presses the prostate to a degree to offer sufficient resistance to the operator's finger, which makes the enucleation easier by not allowing the gland to recede, which it will do after severance of the fascial capsule from the posterior layer of the triangular ligament. The incision is carried in the median line of the perineum, exposing the acceleratores urinæ where they cover the bulb. The dissection is then confined behind the bulb, exposing consecutively the anterior layer of the triangular ligament, membranous urethra, posterior layer of the triangular ligament, the fibers of the levator ani muscles in relation with the lateral lobes of the prostate and the prostate enveloped by its capsule. By careful dissection, chiefly with the fingers, the edges of the wound being well retracted, the fibers of the levator ani attached to the side of the prostate are displaced and in this wise the gland well exposed. Incisions are made through both capsules over each lateral lobe in a line parallel to the urethra and the lateral lobes enucleated through them. The median lobe can usually be enucleated through one or the other of these incisions, but a third incision between the first two may be necessary. It is important that these incisions through the capsules be parallel to the urethra and so parallel to the course of the bloodvessels, as hemorrhage is thus avoided. Either edges of the capsule being grasped with long hemostatic forceps and the enucleation made in the direction of behind forward from base to apex. First, removing the right lateral, then the left lateral lobe and finally the posterior commissure. The posterior commissure can often be best removed by biting forceps; the removal of the latter necessarily opens up the prostatic urethra, the dissection of the same being confined to the floor.

I universally make use of Murphy's hooks in enucleation. In some cases it is impossible to enucleate either the lateral or the posterior commissure *en masse* either the result of periprostatitis as after the Bottini operation, or where the union to the capsule is very dense. Under one or the other of the latter circumstances the portion of the gland that cannot be safely enucleated can be cut or torn away piecemeal by one of the forceps I show here. *Morcellement* of the gland is very readily done with the Thompson forceps. It is important to avoid tearing the base of the bladder and when this is not done, I have had no trouble in demonstrating, (as pointed out by Murphy in a recnt article in the *Journal of the American Medical Association*) the action of the internal vesical sphincter. Where I have torn mesially the floor of the bladder, before completing the operation, I have introduced two or three sutures.

The operation is completed by the introduction of a soft catheter into the bladder through the prostatic urethra, and if there be oozing to any degree the capsule is packed very lightly with sterile gauze. Having opened the prostatic urethra it is well to introduce the finger into the bladder and explore for the purpose of excluding stone, at the same time the operator is able to determine the condition of the pubic commissure of the gland and, if there is an overgrowth giving a shelving margin which would project into the bladder, this can be

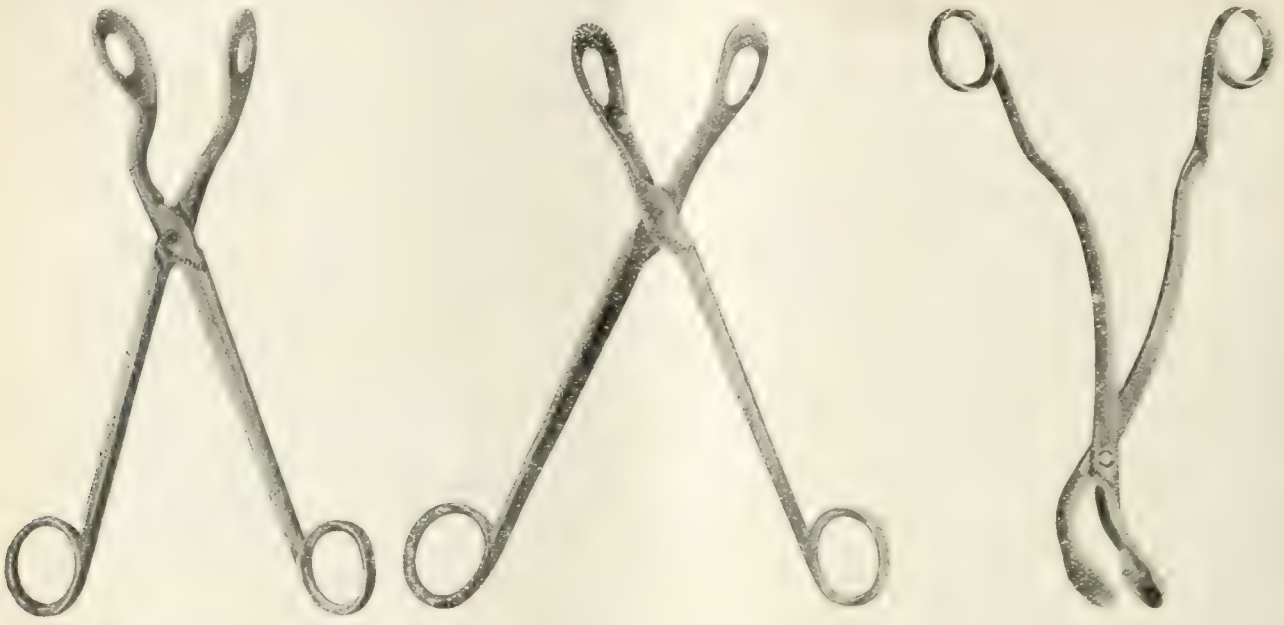


Plate 4.—Thompson's Forceps and a pair of Biting Forceps.

reduced by one or the other variety of forceps.

The subsequent treatment is practically that carried out after extensive perineal section for stricture of the urethra.

In my first two operations I used Sym's instrument, but lately have not, as I fear the continuous pressure against the vesical sphincter may damage it temporarily at least, if not permanently. This is a question, however, that has not been definitely settled, therefore the operator should always be in possession of the instrument in the event of the sound or depressor not being sufficient to accomplish the enucleation.

In arguing in favor of perineal prostatectomy I am not unmindful of the amount of work that has been done upon the surgery of this gland or of the comparative infancy of this operation. I am mindful, however, of my lack of satisfaction with all the other surgical procedures for the relief of prostatic hypertrophy and of the fact that in perineal prostatectomy we have the operation which seems to me to be founded upon better surgical and anatomical principles than any of the other operations.

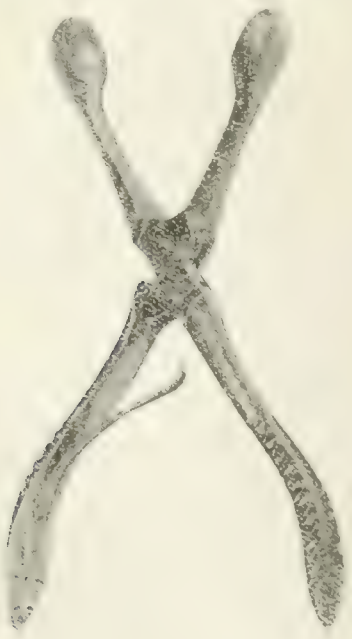


Plate V.—Biting Forceps.

CASE 1.—A. S., 57 years, married, German, butcher. Referred to me by my friend, Dr. Gallagher. Admitted January 22nd. Except a rheumatic tendency the family history is negative. Milder diseases in childhood. Gonorrhea when 22 years old. Has had rheumatism every winter for 20 years, usually involving the ankle, wrist or knee. Occasionally has vertigo. Bowels are regular as a rule. Digestion good. Fourteen years ago he began to have urinary difficulties, manifested chiefly by frequent urination and with the necessity to arise at night to urinate. This condition continued up to a few weeks ago without marked increase in symptoms. Since then he has been getting worse, urination is more frequent with considerable tenesmus at times—every hour during the day and five or six times at night. He has never had hematuria. There is no force to the stream, but no sudden stopping. On admission patient is a large man in good condition, slightly emphysematous and with evidences of sclerosis in arteries and iris. Some pretibial edema. Rectal examination reveals a large and firm prostate. Residual urine—150 cc. In estimating this, the introduction of the silver catheter caused retention of urine for 8 hours, with much tenesmus.

Heart shows accentuation of second aortic sound, with some systolic roughening.

Lungs are somewhat emphysematous.

Liver not enlarged.

Blood Hb. 90%.
Reds 4,500,000.
Leukocytes 16,800.

Urine gave an acid reaction, amber colored, 1020-1016 in S. G., about 0.1% of albumin, no sugar—and urea in amounts varying from 1.3% to 2%. Microscopic examination revealed a few hyaline and fine granular casts, pus, uric acid, mucus, epithelial cells and amorphous urates.

The quantity of urine varied from 860 to 1250 c.c. per 24 hours.

Temperature normal. *Pulse* 64 to 88.

Operation—January 31, 1902, 9 days after admission.

Ether anesthesia. The Syms instrument used to steady the prostate. Strychnine, digitalis and atropine were ad-

ministered for 12 hours after operation and bladder washed out 4 or 5 times. One dose of morphine 0.01 gm. was given. Patient was free from shock and pain. Eight hours after operation milk was given, patient not nauseated. Dressings were changed and there was very little bleeding found. The patient rapidly recovered from effects of the operation and passed from 450 to 800 cc. of urine each 24 hours through the tube, the rest escaped into the bed through the perineal wound. Bladder washed out every six hours. Five days after operation the gauze was removed and the wound found clean and granulating. Temperature normal on the eighth day. No cough, no pain.

Blood count, Hb. 58%.
Reds, 3,150,000.
Leukocytes 13,800.

February 18, 18 days after operation. Catheter removed from perineum, wound is clean and granulating, no uremic symptoms. Patient can walk and feels stronger.

March 12, 40 days after operation, patient walks about house and garden, has no pain at all. Sinus in perineum will barely admit a probe. There is very little bladder control, however, and the urine escapes about equally from urethra and perineal fistula.

CASE 2.—B. F., married, 57 years, U. S. A., leather manufacturer. Referred to me by my friend, Dr. I. Leopold. Admitted February 20. Family history is negative. Was never ill in his life. Does not use alcohol or tobacco. No venereal diseases. Fifteen years before began to have frequent urination, increasing in frequency slowly and without pain. A few years later he had an attack of retention and was catheterized. His urination became more frequent, with occasional tenesmus. Several years later he had a second attack of retention. He was now micturating 2 or 3 times a night. This condition dragged on for several years more, until 3 years ago he had a third attack of retention. One year ago he began to use the catheter, and during the year his residual urine averaged 450 cc. Bowels are fairly regular and digestion good.

Heart, second sound slightly accentuated. Very little sclerosis of the arteries. No arcus senilis.

Lungs clear. *Liver* not enlarged.

Urine shows a slight trace of albumin, S. G. 1010; no sugar. No casts and some pus in urine.

Rectal examination reveals a very large and hard prostate.

Operation, February 21, 1902. Ether anesthesia. The operation was precisely similar to that of Case 1. Patient was immediately given morphine 0.01 gm., and treated as Case 1. There was some oozing controlled by an ice bag to the perineum. Five days after operation temperature and pulse normal, gauze removed, wound clean and granulating.



Plate 6.—Prostate from Case II.

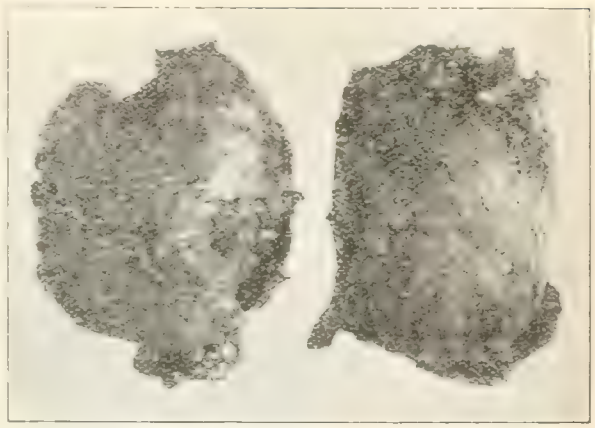


Plate 7.—Prostate from Case II.

Patient passing 700 to 1100 cc. urine through tube nine days after operation. Tube removed. Wound clean. Urine shows a few granular casts. Fourteen days after operation, wound very much smaller. No uremic symptoms. Appetite good. Rests well at night and was up in a chair for half an hour. Twenty days after operation, patient up in rolling chair daily. Sinus is closing. Wound clean and granulating. No urine through urethra.

CASE 3.—C. D., married, age 71, U. S. A., druggist. Referred to me by my friend, Dr. Geo. A. Cameron. Admitted December 19, 1901. Family history negative. Scarlet fever when 14 years old. Always in good health since then. Gonorrhea 25 years ago. Bowels are regular. Alcohol and tobacco very moderately. Suffers now from paralysis agitans. About 20 years ago he began to have loss of propulsive power to his urinary stream, followed in a few years by severe attacks of tenesmus with constant desire to urinate. He would first improve and then have exacerbations of this condition. Six years ago he was catheterized several times owing to retention and was taught to use the catheter himself. From then on he was never able to pass any urine through the urethra. He catheterized himself every 5 hours at first; but the interval between catheterization became less and the tenesmus became worse until he lived in great agony, requiring catheterization every half hour.

He was admitted to the hospital in this condition on December 19, suffering with marked tenesmus and with an alkaline urine containing much pus. The amount of urine has always averaged 1100 cc. and has never shown the presence of casts. Patient has a well marked arcus senilis and marked sclerosis of radials. Rectal examination reveals a very large and firm prostate which, however, is not tender to pressure. A catheter was tied in his urethra, the bladder washed out daily and tonic and diuretic medication given.

On February 1 his condition was very much improved. His attacks of tenesmus were less and his urine showed very little pus. The bladder irrigation was discontinued and Basham's mixture and urotropin given. This has been his treatment until operation, and while his general condition is much improved and his urine shows merely a trace of albumin, no casts and no pus and a normal amount of urea, yet when the catheter is removed from his urethra, he has a violent attack of tenesmus. Rectal examination reveals the prostate somewhat larger than when he was admitted. His heart and lungs are good and a blood count shows: Hb. 84%.
Reds 4,500,000.
Leukocytes 6000.

Operation.—March 8, 1901. Ether anesthesia. Operation precisely as in Case 1, morcellating the prostate with two modifications: Instead of the staff and Syms retractor, a combined staff and retractor was introduced into the urethra (Ferguson, *Journal of the American Medical Association*, February 22, 1902). Murphy's hooks were also used to bring the prostate forward. The subsequent procedures were as in Case 1, using one piece of iodoform packing lightly introduced. Patient stood ether well and left the table with pulse of 120. Some oozing during next few

hours. Strychnine and whiskey were administered every 2 hours, but patient's pulse weakened and 16 hours after operation 1800 cc. of normal saline solution were given intravenously. Atropine and digitalis were administered and food given by the mouth in form of broths, milk and liquid peptonoids. Patient was conscious. There was no bleeding. Thirty hours after operation temperature commenced to rise and pulse to weaken, saline enemata were given and not retained. Forty-eight hours after operation temperature was 106° and pulse 160. 1500 cc. of saline given intravenously. Patient died 54 hours after operation.

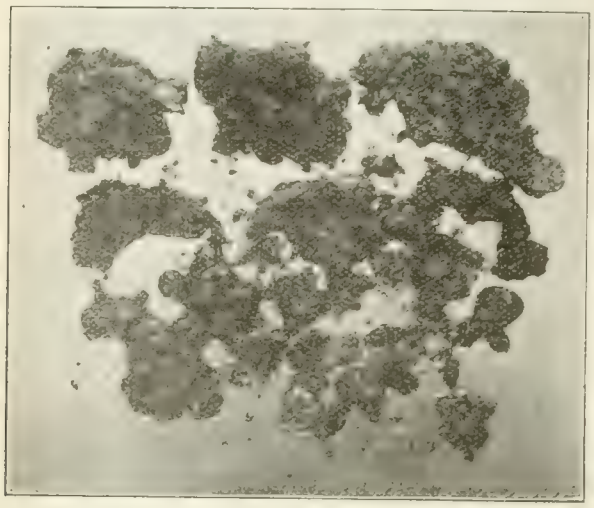


Plate 8.—Prostate from Case III.

CASE 4.—C. A. W., 60 years, born in Germany, clerk by occupation. Family history negative. Has always been a moderate beer drinker. Has had frequency of urination for 10 years, disturbed 2 or 3 times a night. Last July was suddenly taken with very frequent urination, accompanied by bearing down in the rectum and dribbling after each act.

August 30, 1901, after a week's unusual excitement and overwork he had had retention of urine, which occurred twice during the following two weeks. He urinated every hour, day and night, following these attacks. Urine was clear, contained very little pus. He was catheterized under thorough aseptic precautions. Each act of urination, during which very little urine was voided (10 cc. to 20 cc.) was accomplished by vesical spasm and bearing-down sensation in the rectum. He was very nervous and worn out. Examination found a large, hard, tender, irregular gland, the size of a small orange, elongated upward beyond the reach of the finger. Urethra was 10½ inches long, residual urine 30 cc. to 50 cc., the urine was clear, contained small amount of albumin. S. G. 1010, very few leukocytes and granular cysts being present. Daily amount 1500 to 2000 cc. Examined for stone with negative results. Daily catheterization was attempted, but discontinued after a few days, because it excited bleeding, and vesical spasm was produced as the last few drops of urine were drawn off and continued as long as the catheter was left in. A Bottini operation with perineal drainage was done on October 3. Patient did well for 4 days after operation, when there was suppression of urine for 36 hours; patient became delirious and septic. Made a slow recovery and had relief for 5 weeks. Was catheterized twice daily, the bladder being irrigated each time as the urine was filled with pus. Five weeks after operation urination became more frequent and painful. He lost his appetite and gradually lost weight and strength. His local condition gradually became worse and since February, 1902, has been urinating every 15 minutes, day and night. There was difficulty in starting the flow and he had pain at the end of and after each act. Was annoyed very much with priapism. He passed the normal quantity of urine, which was filled with pus.

March 1 and 2 had retention of urine several times and on March 3 a suprapubic cystotomy was performed to stop the spasms, to clear the urine and build up his general condition. He stood the operation well and had relief for 2 days, when he returned to his old condition, with the exception that the spasms were less frequent and painful. His condition, together with the presence of the tube, so annoyed him that he became very despondent and threatened suicide. A perineal prostatectomy was done on March 18. He was conscious 6 hours, when he developed a muttering delirium and had complete suppression of urine, which, together with the shock, was responsible for his death, 24 hours after the operation.

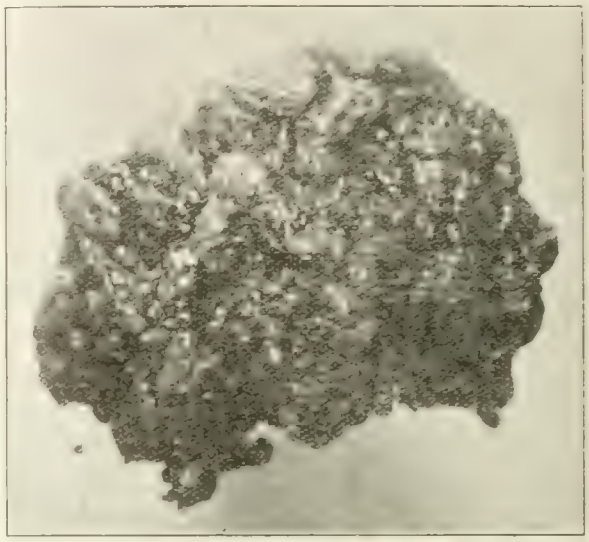


Plate 9.—Prostate from Case IV.

CASE 5.—F. S., 47 years, patient of the writer, admitted March 15. First noticed burning on urination about 8 years ago, followed in a short time by straining when making water. These symptoms continued for 2 years, when pain appeared in head of penis, accompanied by frequent urination. About 5 years ago, or one year after the occurrence of frequent urination, patient began to pass his water at night. Latterly, urination is accompanied by bearing down, having to bring the abdominal muscles into play to empty the bladder, with some pain in perineum. Never catheterized, never had retention, no residual urine. Examination shows an enlarged and hard prostate, bilaterally and about the size of a small hen's egg.

Operation, March 17, 1902. Operation exactly as de-

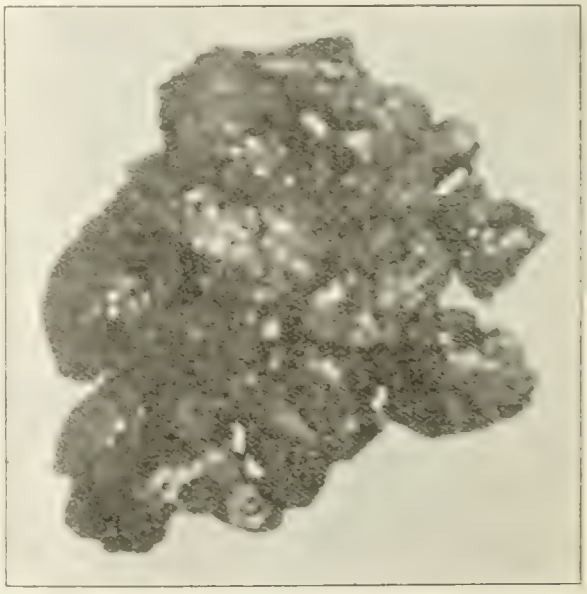


Plate 10.—Prostate from Case V.

scribed above in the text. In this case the absence of periprostatitis made the enucleation very easy. There was no hemorrhage. The gauze packing was removed on the seventh day. Urine was passed through the urethra on the eighth day. A No. 24 and 30 sound (French) was passed on the tenth day. In 15 days the perineal wound had entirely healed, the patient had perfect vesical control, was perfectly comfortable and slept undisturbed all night.

Of the five cases which I have reported, two died. The two deaths, however, in no way retract from the value of the operation but rather upon the suitableness of the patient for this operation. Both were operations done "in extremis" as a forlorn hope without any real ground for expectation of a favorable outcome. In one instance the patient was bedridden and physically broken with paralysis agitans, his life was rendered unbearable by constant vesical tenesmus, which none of the less radical procedures had been able to control.

The other case was also one of unbearable tenesmus with a septic cystitis which a perineal drainage, continuous catheterization, Bottini operation and suprapubic drainage had failed to relieve. In this case the cystospasm was not controlled and but little modified by any of the less radical operations, including both perineal and suprapubic drainage.

Thus in both of these cases any severe operative procedure was unlikely to be successful, but yet the operation was attempted as a last resort to save the patient, if possible, from the certain death which would have quickly followed nonoperative procedure.

I report these two deaths both because honesty demands it and also to serve as a text from which to argue for prostatectomy before septic cystitis and septic nephritis has rendered the operation unavailing.

I believe that this operation is more suitable for the earlier cases than those in which periprostatitis has made the operation difficult, and prolonged sepsis from cystitis and pyelitis has rendered the patient unfit for any major surgical procedure.

In this operation, as in vasectomy or prostatectomy, the procreative powers of the individual are necessarily lost and in some of the cases the sexual powers as well. This fact has great bearing upon the choice of operation in early life and must be carefully considered both by the patient and surgeon before operation is attempted.

THE PREVENTION OF NEURASTHENIA AFTER SURGICAL OPERATIONS.*

By CHARLES W. BURR, M. D.,
of Philadelphia,
Professor of Mental Diseases in the University of Pennsylvania.

Physicians are not very infrequently called upon to treat neurasthenia in women, more rarely in men, occurring after surgical operations. The operative treatment may have been entirely successful, all the symptoms caused directly by the surgical disease may have been relieved, but the patient has not reacted well. Instead of recovering general health and strength she remains or becomes persistently tired and weak, lacks power of mental effort, loses emotional control, shows poor circulation, indeed presents more or fewer of the host of symptoms grouped under the term neurasthenia. The condition may develop, or if previously present become more marked, after an operation of any kind, but is more frequently seen after surgical treatment of any of the chronic affections of the internal or external genitalia in women. It is a question of importance, and one which has aroused great interest, whether any of these cases of neurasthenia can be prevented or even ameliorated by general medical treatment and care previous to operation. To many the mere statement of the facts seems to be sufficient to compel an affirmative answer, but there are still a few surgeons who disregard the matter entirely and think it unimportant; think that the operative procedure is alone of consequence, and that the before- or after-treatment of the patient is a negligible matter.

Opinions vary widely as to the frequency of postoperative neurasthenia. Some surgeons hold that it is very rare, that the most important factor in treating surgical diseases is to remove the visible cause as soon as possible and that, after all, neurasthenia is a trifling matter best cured by wholesome neglect. Others agree with the majority of physicians that not a few persons could be saved from weeks or months of physical and mental misery by being put upon a course of treatment suited to build up the general health before undergoing operation. A man's opinion in such matters will tend to lean toward one or the other side, depending upon the kind of diseases and the character and temperament of the patients he sees most of. A surgeon whose work is largely with acute disease, who has little to do with diseases peculiar to women, and who sees little or nothing of his patients after operation, will not have the same opinion as one whose work is largely in chronic disease and who is in daily contact with nervous men and women. The matter is of practical importance only in chronic surgical affections. In severe acute diseases there is not time for preparation. In appendicitis the issue of life or death may depend on whether operation is done a few hours earlier or later. A woman with a ruptured extra-uterine pregnancy must be operated on at once. It is of interest, however, to remember that a true neurasthenia may follow acute surgical diseases. For example, a young man of fair family history, whose previous health had been good, but who belonged to a type too common in America—over-refined, over-cultivated, with nerves not wholesomely blunted, but altogether too fine-edged—was suddenly seized with appendicitis. He was very properly operated on at once. Surgically he did admirably. The wound healed quickly, there was no fever, but he remained weak and refused to gain strength. He was in bed many weeks on account of sheer physical weakness, and it was only after months of treatment that he regained his normal health. That man came into life endowed with potential energy sufficient to do a certain amount of work, but not enough to withstand any excess of stress. To have prevented break-down in him, it would have been necessary to have treated his ancestors. The same condition followed the crush of an arm in a man of an entirely different type—a lithemic, well poised ordinarily, muscular, but with

*Read at the meeting of the Neurological Section of the Medico-Chirurgical Faculty of Baltimore, January 10th, 1902.

much suppressed emotion. Cases like these are unavoidable. Prevention is impossible. All that can be done is to study the temperament and physical and mental make-up of the patient and institute such measures after operation as are best suited to hasten recovery.

It is a matter of some academic interest, but of little practical importance whether neurasthenia after acute diseases is caused by the disease or the shock of operation. It is of course well known that neurasthenia and also hysteria may follow and be caused by trauma. In hysteria the shock of the accident, the horrifying accompaniments, seem to be the cause rather than the physical injury. In neurasthenia both are factors. Every great railroad accident and steamship wreck leaves a trail of neurasthenics and hysterics. On the other hand, post-operative hysteria and neurasthenia is rare. The probable explanation is that the shock of operation is of course much less than that of accident. It is foreseen, provided for and braced against. Again more potential neurasthenics and hysterics travel than fall into the hands of surgeons. Neurasthenia is caused by so many things—inheritance, shock, auto-intoxication, worry, care, over-work—and its causes are so intermingled and so act and react on each other that it is often impossible to say in any given case this factor and this alone is the cause. When it follows acute surgical affections, it is probable both the disease and the operation are responsible for it, but as said before, the question is academic, not practical, operation is imperative and must be done at all hazard.

Certain chronic diseases are always accompanied by neurasthenia; for example varicocele. In it the neurasthenic symptoms are by far the most distressing to the patient.

The really important question is as to the propriety, or indeed rather the necessity, of preliminary treatment of women suffering from chronic, especially pelvic, diseases, more or less serious but not immediately dangerous to life, in order to shorten convalescence and hasten recovery of health. Many of these diseases produce neurasthenic symptoms which are increased by hasty operations done without preparation of the patient. The discussion as to the relation of pelvic disorders in women to neurasthenia and hysteria is an old one, well-nigh thread bare and yet not altogether settled. The epidemic insanity prevalent not many years ago, based on a fanciful pathology and presenting as its main symptom the delusion that nearly all functional diseases in women are caused by more or less hypothetical diseases of the ovaries or womb, has pretty well disappeared. Women now are credited with having possibly a few other organs and the pelvis is no longer thought to be the seat of the emotional centres. No longer, or very rarely, are ovaries which present no other sign of disease than the scars of old normal ovulation exhibited with pride at pathological societies. Reflex diseases are less frequent than formerly, and the removal of normal ovaries is no longer preached, and but rarely practiced as a means of restoring "broken nerves". The surgical pendulum has reached a normal equilibrium and few unnecessary operations are now done. The short period of excess was unavoidable.

But even now we occasionally see women who after a perfectly proper operation do not recover or do not regain as full measure of health as they ought as quickly as they should. Some of them would have been benefited by preliminary treatment. Given a woman of neurotic temperament, unable from birth to well withstand the wear and tear of life, let her have some chronic pelvic, or other disorder, not progressive, not dangerous to life, it is not always wise to treat surgically at once. It often is very unwise. She is tired and worn out, has a true anemia, or more frequently a pseudo-anemia with pallid face, a washed-out skin, muscles flabby or hard and board like, yet with a normal blood count. She has vague pains wandering here and there and queer indescribable sensations in the head. She is emotional, either continuously depressed or there is the irritability of exhaustion. She has lost appetite. The bowels are constipated. The tongue is coated. She is poor perhaps and must be on her feet when she ought to be in bed. She has as the only organic disease to account for all these symptoms some trouble in the genitalia. At first sight one would say remove the organic disease and all will be well. The opinion is sometimes too hasty. It often is better first to put the patient through a course of general treatment and to operate later. The best method of treatment is the commonly used and well known so-called rest cure. This has been so much discussed of recent years as to have become a common-place. It has been more talked about unfortunately than properly used. Rest cure does not mean to put a woman to bed and then let her meditate on her ills and fancied sins, nor to stuff her with milk and let her become constipated. It means ordering every detail of her life for every minute of the day. To conduct it successfully the doctor must be willing to attend to small things.

Finally, therefore, it is well in many cases of chronic surgical disease to put the patient to bed for several weeks before operation. Regulate her diet and overfeed her if she be, as is often the case, chronically starved. Sometimes milk alone is the best diet, more often a generous variety of plainly cooked food is needed. Give her exercise by proper massage, and faradic electricity. Under such a course she will gain some weight, some color will come in the face, she will be more cheerful, the shock of operation will be less, and recovery quicker in coming. Sometimes operation will be avoided entirely.

The Treatment of Congenital Inguinal Hernia.—In *L'Hebdomadaire Médicale*, (September 4, 1901, 7me Année, No. 36) Faure reports a case of double congenital hernia in a man of 29. The right hernia was much larger than that upon the left side. As in such hernia there is the constant danger of strangulation, Faure advises operation. One of two operations should be performed, the Bassini, or the Championnière. The main difference between these two methods is, that in the former the tissues form two layers, both above and below the spermatic cord; while in the latter, the tissues are all above the cord. Faure advises the Bassini operation whenever the hernial ring is large, when some of the abdominal wall must be reformed, or when a hernia has recurred; but in ordinary cases of congenital inguinal hernia he prefers the Championnière operation. [M. O.]

FOUR CASES OF ESTIVO-AUTUMNAL MALARIAL INFECTION AT WEST POINT, NEW YORK.

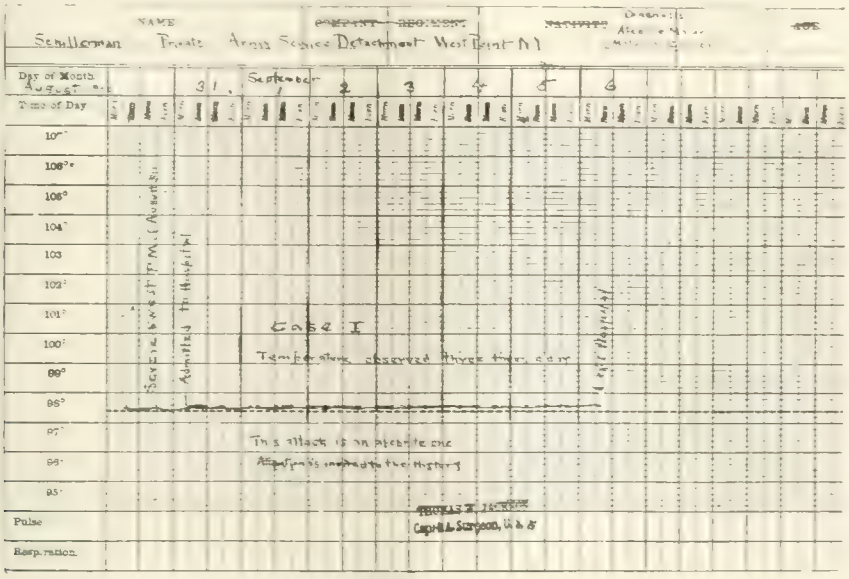
By THOMAS W. JACKSON M. D.,

Captain and Assistant Surgeon, U. S. Vol., Naic, Cavite Province, [illegible] P. I.

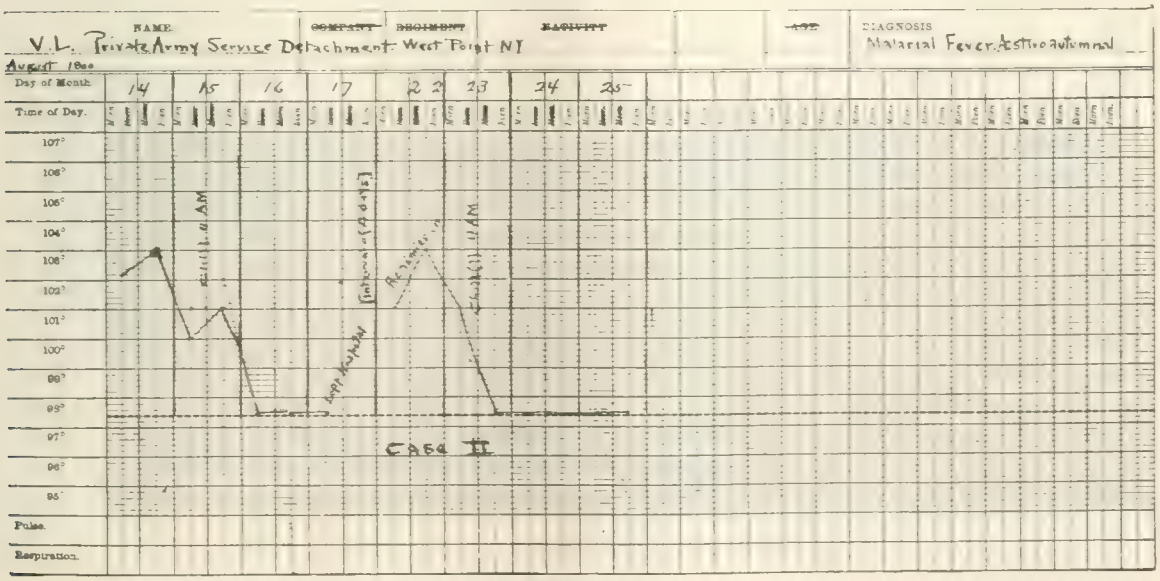
The four accompanying reports are of cases of estivo-autumnal malarial infection observed during August and September, 1900, at West Point, New York. This group does not by any means include all the cases which occurred there during the fall of 1900, but the cases illustrate phases of the disease least understood by the medical public. Apparently there is a greater prevalence of the estivo-autumnal parasite in this community than is ordinarily believed to exist in this latitude. Perhaps the most rational explanation of this prevalence is by the supposition that the tropical parasite has been locally introduced by soldiers returned from Cuba during the past two years and that the mosquito is responsible for its dissemination.

The difficulty of promptly and permanently curing such infections is illustrated by the persistence of the condition for over two years in Case I. I have personal knowledge of several cases, not included in this report, in which the parasites have undoubtedly existed in the blood for more than two years in spite of treatment, giving rise from time to time to outbreaks of fever, abortive paroxysms or afebrile manifestations, the blood at such times invariably showing the malarial parasites. In the present series of cases studies of both fresh and stained blood specimens were made. The fact that crescents were found in but two of the five cases strengthens my belief that their occurrence should not be depended upon solely in the diagnosis of this condition. I have already expressed this belief in a report made to the Surgeon-General, U. S. A., upon the Cuban malarial fevers. This report was based upon 1900 cases which were observed at Pinar del Rio, Cuba, between the dates of February 1, 1899, and February 1, 1900, and was published in the Annual Report of the Surgeon General for 1900.

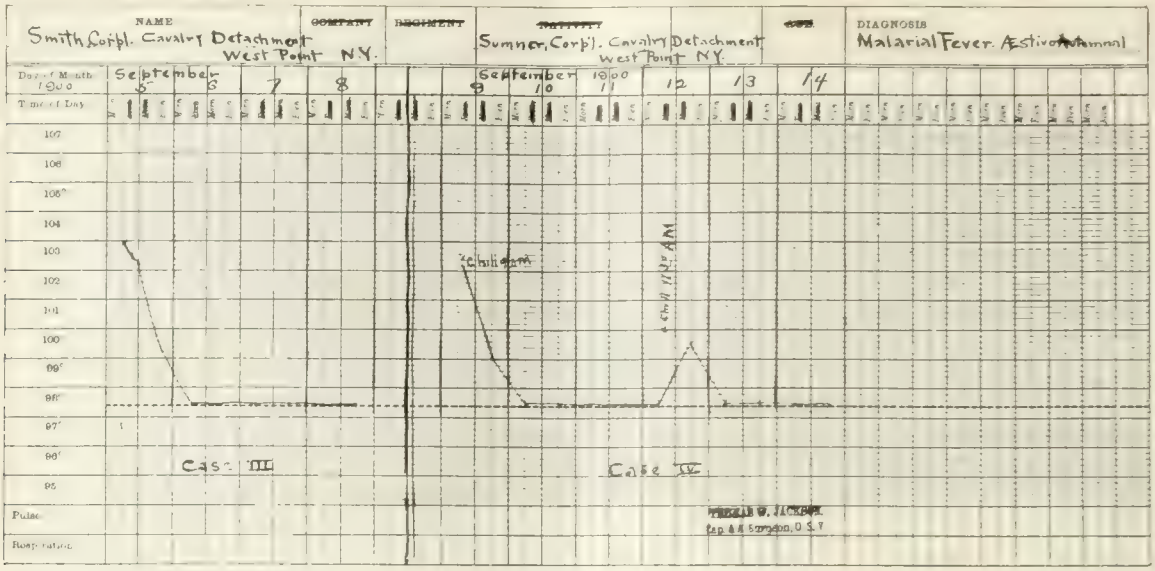
CASE I.—Pvt. Schillerman. Admitted to hospital, August



CASE 1.



CASE 2



CASE 1

31. Left hospital September 6. History. Served in Cuba in June, July and August, 1898. Malarial fever, Cuba, July 4-24, 1898. Malarial fever, Montauk Point, August 24 to September 5, 1898. Has since had frequent outbreaks in 1898, 1899 and 1900, sometimes with chills or fever and at other times without. Last febrile attack in April, 1900. Blood was never examined before present attack. Symptoms: Severe sweat afternoon preceding admission. Temperature during week in hospital normal. Observed three times a day. Headache, aching back, limbs and loins. Tongue swollen and shows indentations of teeth. Spleen is palpable and slightly tender. No fever. Blood Examinations: August 31. Small ring shaped parasites very slightly pigmented, "brassy colored" red cells, poikilocytes and pigment bearing leukocytes. No crescents observed. September 3. Same condition. No crescents. Reduced leukocytes.

Widal test for typhoid: Negative. Estivo-autumnal malarial parasite constantly present. No crescents observed. Much malarial pigment in leukocytes and free in plasma. Marked destruction of red cells. Relative decrease of leukocytes. Urine normal. Recovery complete.

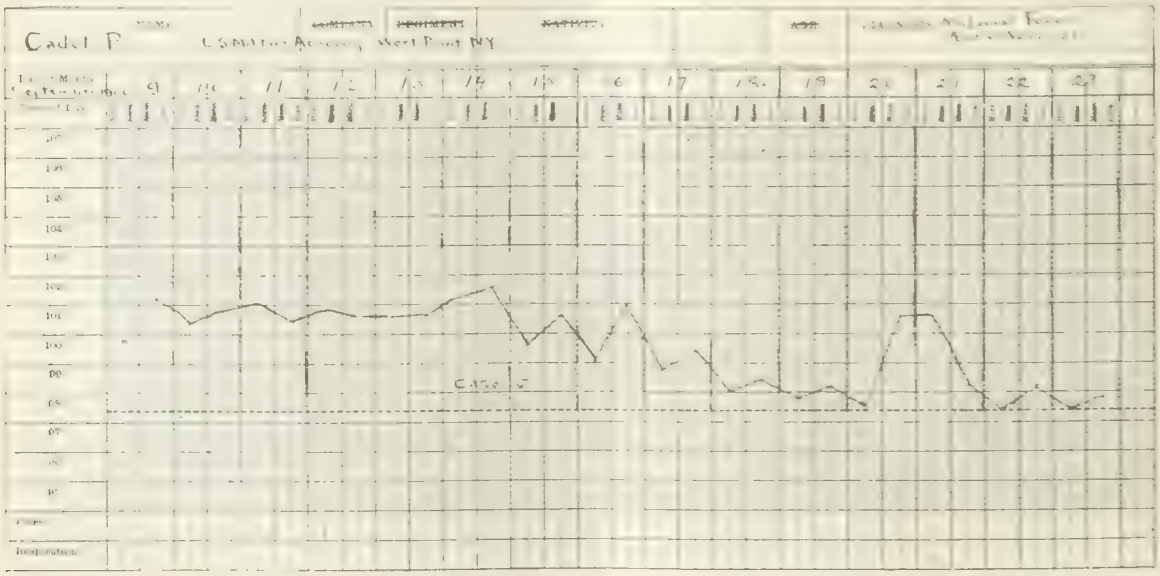
CASE 2.—Private V. L. Admitted to hospital, August 14, left hospital, August 17. Re-admitted to hospital August 22, left hospital, August 25. Symptoms: Fever, malaise, pain in loins and back. Spleen somewhat enlarged. Tongue swollen and shows marks of teeth upon its borders. Chills (not observed) patient's statement, at 11 A. M. on August 9, 11, 13, 17, 19, 21. Chills observed in hospital August 15 at 11 A. M. and August 23 very slight at 11 A. M. Patient stated that he had another chill at 3 P. M. September 3, after leaving hospital for second time. Blood examinations: (repeated) show considerable destruction of red corpuscles and the estivo-autumnal parasite. No crescents. This patient was never in Cuba, Porto Rico or the Philippines.

CASE 3.—Corporal Smith. This attack consisted of a chill and fever lasting about 24 hours. The patient has had similar recent attacks. The blood showed typical estivo-autumnal parasites.

CASE 4.—Corporal Sumner. Blood examination (one hour after chill) shows great destruction of red corpuscles and large numbers of half grown hyaline estivo-autumnal parasites. One crescent observed. Plasmodium free in the plasma and in the leukocytes. "Brassy colored" red corpuscles. Typical of tertian. This attack constituted an intercalated quartan infection. Patient has had similar attacks [illegible] months.

Cases 3 and 4 occupy the same sleeping quarters. Four other occupants of this room, (six in all) have already had chills and fever. Mosquitoes are present, but [illegible] mosquito curtains are not used.

Of the four cases here reported only one originated



CASE 5

in Cuba, none of the other patients having been in that island.

Case II conforms somewhat to the tertian type described by Italian observers and others, a type I rarely, if ever, observed in Cuba. This conformity is indeed less apparent from the temperature curve than from the patient's statement of chills occurring upon alternate days. In view of the popular belief that chills should occur at such intervals and in view of the somewhat indefinite ideas prevalent, as to what constitutes a chill, it is quite possible that this patient was honestly mistaken. It seems fair to take this view, inasmuch as these chills were not observed at the hospital.

Case IV simulated a quartant intermittent, but neither in Case II nor Case IV did the parasites resemble the tertian or quartan organism. It will be observed that the decline of fever in both cases, following the paroxysms, was less prompt than that which ususally occurs in benign infections and that a crescent was observed in Case IV.

Case I is very similar to many of the cases of continued malarial fever observed during my Cuban service.

The variety in the type of fever in these cases emphasizes the irregularity of the manifestations of the malignant parasite, and the necessity of correct diagnosis, based less upon the temperature curve than upon the microscopic finding, inasmuch as the treatment accorded the ordinary benign malarial fevers is inadequate in infections of the tropical parasite.

THE BACTERIOLOGY OF ERYSIPELAS.

By G. E. PFAHLER, M. D.,
of Philadelphia.
Assistant Chief Resident Physician to the Philadelphia Hospital.

The investigations forming the basis of this article were made upon ninety-eight cases of erysipelas occurring in the wards of the Philadelphia Hospital, under the care of Dr. Daniel E. Hughes, Chief Resident Physician, to whom I am indebted for the clinical observations and many suggestions.

As early as 1870, cocci were found in the skin and blood of erysipelas by Lukowsky, Tillmanns, Wild, Ostle and von Recklinghausen, but more positive results awaited the technique established by Koch.

In 1882, Fehleisen described the streptococcus as the specific cause of erysipelas, which was later investigated by Rosenbach,[1] Passet, Garis, Achalum, Lutinski, and others. On account of the likeness of the streptococcus of Fehleisen and the streptococcus pyogenes. Rosenbach questions the specific nature of the former organism. Through the investigations of Hajek, the lesions produced by inoculation with either the streptococcus of erysipelas or the streptococcus pyogenes were found not to be constant. Bonone and Bondini Uffreduzzi have studied two cases[2] in which staphylococci were found; one in which death resulted in a case of erysipelas of the face, the staphylococcus aureus was found in the vesicles of the skin, in the lymph chambers, in the blood and in internal organs in pure culture; and the nature of it was proved through culture and inoculation. In another case of phlegmonous erysipelas the staphylococcus citreus was found, together with a few streptococci, but the latter were not found in culture. As a result of these investigations they came to the conclusion that erysipelas is etiologically not a specific disease. As a rule it is due to the streptococcus pyogenes, but may also be caused by the staphylococcus pyogenes, and that the difference in the effects of the pyogenic organism is due to the difference in the locality and in the degree of virulence, as well as the number of micro-organisms.

Fehleisen, after describing the streptococcus,[3] states that in the progressing border there are also numerous diplococci present. The question now arises as to whether the streptococci or the diplococci were the cause of the erysipelas.

Without reviewing in detail the further investigations, it suffices to state that the streptococcus has been generally accepted as the cause of erysipelas. Dr. Roswell Park, in the last edition of his textbook, says: "It is now definitely established that the infecting organism is a streptococcus."

In a preliminary report published in the *Philadelphia Medical Journal*, January 13, 1900, I described an organism which I had found in pure culture in eight successive cases of erysipelas, and which I called a Diplococcus. I have now studied ninety-eight cases, with special reference to their etiology. The diagnosis in each case was confirmed by Dr. D. E. Hughes, Chief Resident Physician.

The result of my investigations may be stated briefly as follows:

1. Number of cases studied	98
2. Growth of bacteria obtained upon the artificial medium	88
3. Number in which a second inoculation was necessary to obtain growth	7
4. Number of cases in which diplococci were found	86
5. Diplococci were found in pure culture in	66
6. Mixed cultures were obtained in	20
7. In the mixed cultures streptococci were found in	19
8. " " " staphylococcus aureus in	7
9. " " " staphylococcus albus in	2
10. " " " bacilli in	2
11. The staphylococcus aureus occurred alone in	2

In nearly all of my cases some antiseptic application had been made previous to the bacteriological examination. This probably assisted in the elimination of foreign organisms from the surface of the skin.

The cultures were made as follows: The ointment or antiseptic was removed and the skin cleansed by repeated scrubbings with cotton saturated with ether. The inoculations for artificial culture were made from the vesicle by piercing with a sterile needle, then carrying a loopful of the serum into the culture medium. From the inflamed skin cultures were made by passing a needle through and beneath the skin about one-fourth inch from its progressing

1 Mikroorganismen bei den Wundinfectionskrankheiten des Menschen, 1884.

2 Beitrag zur Aetiologie des Erysipels, Giorn. della R. accad. di med. di Trennio, 18 6. Ref. in Centralblatt fuer Chirurgie, S. 134.

3 Die Aetiologie des Erysipels Deutsch Ztschr f Chir., XVI, 1882

border, then pressing serum and blood from the tissues, and inoculating by carrying one or more loopfuls of blood into the culture medium. In each case inoculations were made upon bloodserum, glycerine-agar and bouillon.

In a number of cases cover-glass preparations were made from the serum in the vesicles, which showed diplococci in ten cases. Streptococci were associated with the diplococci in three cases, but never found alone. Streptococci and bacilli were associated with the diplococcus in one case, and diplococci, streptococci and staphylococci in two.

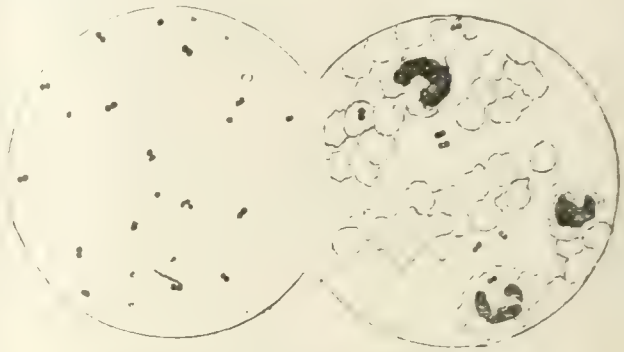
Cover-glass preparations were made in the majority of cases from the blood exuding from the puncture made in the skin. In twenty-eight cases diplococci, identical in appearance with those found in cultures, were found in the blood specimens, at times in considerable numbers, and again only one or two in a specimen. In some of the cases no organisms were found. Streptococci were found associated with the diplococci in two cases.

Case No. 7 ran a somewhat different course from the others. The first inoculation was made on the third day of the disease, which showed a pure culture of the diplococci. On the thirteenth day the scalp was enormously swollen and gave evidence of a collection of pus. Cover-glass preparations were now made from the blood of the scalp, posterior to the left ear, which showed streptococci and diplococci in large numbers. The organisms occurred both outside of and within the leukocytes. Cultures were made as before, which, in twenty-four hours, showed two distinct series of colonies on bloodserum. By inoculation from each of these series upon bouillon, I obtained from one a pure culture of diplococci, while from the other I obtained a pure culture of streptococci; therefore, I believe that the pus in this case was due to a secondary infection by the streptococcus pyogenes.

Case No. 4 developed a purulent ophthalmia in connection with the erysipelas. The pus from the eye showed numerous diplococci within the leukocytes, which presented an appearance almost identical with that of gonorrheal infection, but differing in that the diplococci stain by Gram's method. Cultures were made from this discharge which also showed the diplococcus. A pure bouillon culture was injected into and beneath the skin of a rabbit; a typical erysipelatous inflammation resulted. The organism was obtained again from the diseased tissue of the rabbit on the third day of the disease. The diplococcus was found in the diseased skin of this case.

Case No. 45 gave a pure culture of diplococci from the inflamed skin of the forehead. The eyelids gave evidence of pus, and cultures made from this region, as well as blood specimens, showed diplococci and streptococci. Cultures and cover-glass preparations made from the purulent discharge of the eye also showed diplococci and streptococci. Here again the streptococci seemed to be a secondary infection.

Case No. 3 gave a pure culture of diplococci from the inflamed skin. Inoculations made from a large pustule showed three distinct series of colonies, one consisting of diplococci, one of streptococci, and the third of the staple culture. Inoculation made from the healthy skin, about an inch from the inflamed area, with the same technique as before, showed no growth. Inoculations were made from the healthy skin in fifteen cases, but no growth developed. In two cases the staphylococcus albus was found from the healthy skin.



Bouillon culture as seen with Zeiss microscope, 1-12 oil immersion, No. 4 eye-piece.

Specimens of blood from inflamed surface stained with Loeffler's alkaline solution of methylene blue, 20 m. Zeiss microscope, 1-12 oil immersion, No. 4 eye-piece.

The Diplococci.

Morphology.—Spherical cocci, about the size of the pneumococcus, usually occurring in pairs, often singly, and very rarely a chain of four is seen, which is probably an accidental arrangement of two pairs. As observed in the contents of the pustules, in the blood of the inflamed part and in the blood from the rabbit, it has been seen only in pairs, and at times appears to be encapsulated. It is found both outside of and within the leukocytes. The diplococcus is stained readily by aniline gentian-violet, by carbol-fuchsin, and by Gram's method. It does not stain well with Löffler's alkaline solution of methylene blue, and less with a saturated aqueous solution of methylene blue or with Gabbett's solution of methylene blue.

Biological characters.—It grows in the presence of oxygen and at the room temperature, but better at 31° C. It is nonmotile. Cultures in bouillon show a cloudiness at the end of twelve hours, which increases from day to day, but which tends to clear after several weeks, leaving a sediment.

Glycerine-agar at the end of twenty-four hours shows minute opaque colonies, pin-point in size, whitish in color, and sharply defined in outline after from five to six days; these colonies become about 1 mm. in diameter and slightly raised from the surface. Bloodserum shows a more luxuriant growth, the colonies being three or four times the size of those upon glycerine-agar and proportionately raised above the surface. They are of a porcelain-white color, distinctly outlined, and under a low magnifying power appear smooth.

Stick cultures show a beaded growth all along the line of inoculation. Gelatine is not liquefied, and there is no evidence of the production of gas. In stick cultures growth occurs all along the line of inoculation; but apparently cease after from twen-

ty-four to forty-eight hours. There seem to be no radiations and no tendency for the surface growth to spread. A slight capping is seen at the top of the puncture, after forty-eight hours, *Litmus milk* shows no change in reaction after being in the incubator fifteen days. It does not grow upon potato.

Inoculation.—Twenty-four-hour bouillon cultures from twenty-one different cases were injected into and beneath the skin of the ears or legs of rabbits; the injections were usually made into the base of the ear. As a rule, after twenty-four hours, a perfect area of erysipelatous inflammation was seen encircling the entire base and extending one-third the distance towards the tip. After forty-eight hours there was a distinct progression towards the tip and a clear line of demarcation. On the third day the line of demarcation was scarcely visible, and there was slight fading of the red mass. At times small vesicles developed. Cultures and blood specimens were made on the third day of the disease, which showed diplococci identical in morphology with those described in the cultures from the human cases. In only one case did inoculation fail to produce the disease. Inoculations upon guinea-pigs and white rats showed no effect. Owing to the sad death of Dr. Kirkbride, our interested pathologist, the sections made from the diseased tissues of several cases in which death had resulted were not studied and were probably lost. Judging from the foregoing results, it seems that the diplococcus described is the most common cause of erysipelas, or of a disease which, in the light of our present knowledge, cannot be diagnosed from erysipelas. Koch's postulates have been demonstrated with reference to this organism, as follows:

1. It was found in the diseased tissues of eighty-six different cases of erysipelas.

2. It was grown upon artificial media in each case.

3. The disease was produced in twenty-four rabbits by subcutaneous inoculations.

4. The same organism was obtained from the diseased tissues of the inoculated animals. I wish to acknowledge the kind interest and assistance given by Dr. D. E. Hughes, the Chief Resident Physician and Dr. L. N. Boston, the Bacteriologist to the Philadelphia Hospital.

RATIONAL THERAPEUTICS.

By BRACE W. LOOMIS, M. D.,
of Syracuse, N. Y.

In a paper read before the Syracuse Academy of Medicine several months ago, it was contended that the business policy of manufacturing pharmacists had seriously helped to turn many prescribers from those principles of treatment that experience had proven to be sound and practicable.

It was charged that medical practice too often interfered with and upset the defence initiated by the organism for the relief and cure of diseased conditions. Again, that excessive zeal in combating symptoms sometimes did more harm than good. That in his desire to "meet the indications," as the expression runs, the prescriber frequently combated mere symptoms instead of the pathological changes that were the cause of such symptoms. Finally, that with the abundance of ready-made combinations at hand, he gave too much medicine, he gave it too often, and he gave too many kinds of medicines; and, as a corollary to these propositions, it was pointed out that the patient was made to suffer from new symptoms produced by the treatment, in addition to those legitimately resulting from disease.

It is worth while, perhaps, to pause a moment and take stock, as it were, of the numerous aims, tendencies and methods of therapeutics. It is worth while to rest from the not wholly satisfactory task of trying to verify the glittering claims made by their promoters for the multitude of new remedies sent forth from domestic and foreign laboratories. It is even worth while to desist from the breathless chase of the latest fashionable microbe, and consider leisurely a few truths, that have stood the test of time and experience, that have been sheet-anchors in hours of need, and that have been included among the fundamental articles of belief of the wisest in our profession, and that will survive in the future of medicine when half of the lauded specifics of recent reputation shall have been cast into the rubbish heap of therapeutic delusions. It ought to go without saying, that in this paper there is no attempt to belittle the work, nor ignore the remarkable achievements of the day that in any way help the cause of suffering humanity. The work has been wonderful, and the workers are entitled to due recognition. The outlook and promise of relief for many of the scourges of life is most encouraging; but all results are not in the line of progress, and while it is right to praise, it is not safe to forget the experiences—often mortifying—of periods that are past, and that have helped make up the history of the art of medicine.

That very wise old general practitioner—and his name must have been legion—who confessed from time to time, that in his early practice he used a hundred remedies for the cure of one disease, but as the years passed and he acquired knowledge, genuine knowledge, boiled down, crystalized and valuable, then he "cured a hundred diseases with one remedy"—that physician, if alive to day, would appreciate that now there are a thousand remedies for one disease, and the pity of it is, that the thousand are all in use. He would still be able to do more good and work more cures than many can with their hundreds of medicines, and he would do far less harm than the tyro whose right hand knoweth not what his left hand doeth.

The history of the art of medicine is eloquent with warning against too much medicine and too many medicines. Particularly in the management of acute diseases has it been demonstrated that too much and ill-judged interference has killed patients, where nature would have saved them if left alone. The chronicles of our art disclose the melancholy truth that the sick man may suffer more from his doctor than from his disease. To admit this, is not to argue that medicines should not be used freely

and energetically. But remedies should be selected and employed in such a manner as not to conflict with nature, so as not to offset the good that nature tries to bring about. The argument is in favor of the smallest number of active remedies and the smallest quantities of them that a given case requires. So well-known a therapeutist as Dr. Hobart Amory Hare says, "nature often produces her most rapid cures when left alone." Austin Flint says in his *Practice of Medicine*, "we should be content with doing nothing when ignorant how to do good." He emphasizes this and makes the meaning plainer when he says, "the severity of the disease, and the danger of the patient, be they ever so great, do not alone constitute grounds for active measures." And it will be found that great prescribers and clinicians famous for their skill, almost without exception exhort us to simplicity in the matter of treatment—simplicity coupled with careful study and accurate knowledge of conditions, and especially the tendencies of disease in each individual case. Too often, far too often, the individual case is studied just sufficiently to enable the medical adviser to give a name to the disease, and then follows the search for novelties listed in the text-books, or perhaps in the catalogue of the druggist, novelties that are expected to cure the corresponding disease—the name of the disease being the guide that determines the choice of remedies. The plan thus decided upon is further developed by adding special medicines for special symptoms, and finally supplemented by free concession to whatever fad happens to be popular. For example, in the older days quinine used to be exhibited as an antidote to malaria always assumed to be present, and some whiskey must be added to sustain the vital forces, Now, at the present time when "nutrition" has the floor, proprietary extracts and laboratory foods are fed the sufferer and with them he gets pepsin for his "stomach's sake," and other infirmities. His heart must be boosted with digitalis, and strychnine is thrown in to make the combination solid. This method is an example of what Lauder Brunton calls the "therapeutics of fancy as distinguished from the therapeutics of fact." It is an example of that blemish on medical practice known as "routine treatment." It is an exaggeration and distortion of the axiom, "meet the indications," which is supposed to mean, pay attention to every sign and symptom and do something for it. As a matter of fact the great clinicians who have been geniuses at treatment, often do very little. They study the individual who is sick quite as much as his disease, and when the *rationale* of the various symptoms—which, as H. C. Wood says, are only the "surface-play" of disease—has been made plain to them, they lay out a plan of treatment which is simple, not calling for many medicines, and which may ignore absolutely twenty out of twenty-five of the symptoms present. Prescribers of this quality understand well that some perversions of function, that help to make up the picture of disease, require to be combated, while others require to be favored, and many others should be let alone.

The triumphs of a sound therapy are found among those acute forms of illness that are not severe enough to be necessarily fatal, but which kill under multiple dosing. Some patients are the victims of too much zeal. The dictum of the philosopher Talleyrand applies to therapeutics as well as to morals. Perhaps sound therapy secures more obvious and positive triumphs in the management of those chronic cases that are not incurable, or if so, may be immensely relieved, and promptly, by skilfull treatment, as distinguished from that method that aims at every symptom with some form of therapeutic bullet which misses the complaint but hits the patient.

It will not be amiss before trying to make a sort of categorial statement of the articles of belief that enter into the Confession of Faith of the rational therapeutist, to call attention to specific damage sometimes found to come from the therapeutic bullet referred to in the preceding paragraph. This damage is various and may be easily serious. To begin with, ill-judged medication may produce fever, headache, delirium, sleeplessness, cough, dyspnea, loss of appetite and indigestion, great or fatal weakness of the heart, the typhoid condition, vomiting, purging, general prostration, sweating, delusions, hallucinations, vertigo, and so on. Every careful observer has seen these results, and much testimony to the evil possibilities of drugs could be furnished were it necessary.

Now, after this araignment of certain tendencies in practice, what shall be said of rational therapeutics? What are the principles of rational therapeutics? What is the foundation of such therapeutics? It would seem as though knowledge of the natural history of disease uninfluenced by active medication ought to be considered of first importance. It is not saying too much to assert that some never acquire much of this information.

It would appear rational not to prescribe so as to interfere with or antagonize the conservative efforts of the organism.

One should always bear in mind the self-limitation of a large number of diseases, and hence may sometimes wait and watch, to advantage. A policy of masterly inactivity has been deemed wise under certain circumstances. Colored water is sometimes the most useful medicine.

The problem of treatment must be kept as simple as possible, by the exhibition of few remedies well selected.

Study the patient just as much as the ailments he suffers from. (Some have advised to study his relatives even more.)

Try to remove the cause of symptoms, relieve pain and make the sufferer comfortable.

Avoid a large number of remedies for the reason that they are wasted; they neutralize one another even when they do not harm the patient.

Prescribe for conditions, rather than diseases.

Watch constantly for symptoms that may be the result of remedies prescribed for previous symptoms.

It is often rational therapeutics to withdraw all medicine for a time, instead administering placebos: systematic study of diseases treated in this manner

will afford a revelation to him who has never tried it.

Of course, an enumeration of all the principles of rational therapeutics might, and probably should, include much more; but it has not seemed best to attempt to cover more ground in a limited paper on this subject. The principles that govern the rational treatment of diseases by drugs are of great importance and these hints are at least pertinent. Notwithstanding the new paths that lead on to unknown fields which promise a rich harvest, it is not possible to forsake the old roads, roads that have been rough and where many have stumbled. This paper may be best finished by quoting from that eminently rational therapeutist, Dr. J. Milner Fothergill. He says: "There is much to be done, much to be learned, much to be investigated, before therapeutics shall have attained their ultimate evolution and their maximum of utility. But there are ardent minds, enthusiastic and undaunted workers, who form a guild which will in time, and with infinite patience, lay deep and firm the foundations of a rational therapeusis, and erect there upon a structure which will comprise and hold in intelligent array the facts gathered by a long-existing and industrious empiricism, as well as the information given by enterprising and well maintained physiological inquiry."

TWIN PREGNANCY IN A UTERUS BIPARTITUS.*

By CHARLES W. DOUGHTIE, M. D.,
of Lamberts Pt., Norfolk, Va.

The case which I desire to report is one which has impressed me as being quite unusual. I admit that I have not made a prolonged and careful search of medical records, but in looking through my library I have thus far been unable to find recorded a parallel case. Believing it the duty of every physician to record all interesting cases, I therefore present, as I saw it, a case which has recently occurred in my practice.

Mrs. W. L. W., age 32, began menstruating at 13 and regularly since that time. Married nine years. Five conceptions, the first of which took place fifteen months after marriage and ended at full term with an instrumental delivery. The second conception resulted in a miscarriage of twins at the fifth month. The third pregnancy ended at full term in a normal delivery. The fourth conception resulted in an abortion of twins at the second month, and was followed by a curettage. The fifth pregnancy ended at the latter part of the fifth month, after a number of efforts to abort, which were controlled by uterine sedations, rest in bed and unlimited precaution. An extremely bad laceration of the cervix rendered it impossible for her to go to term, so I used every effort to carry her to the fourth month, feeling that should I succeed, I would have accomplished all I could have hoped for.

I was called February 7th., at 5.30 P. M., to find her having considerable pain and some hemorrhage. She had followed my instructions, which had heretofore proved efficient, but which now had little effect. Examination revealed a very much enlarged uterus, indicating a pregnancy of seven, rather than five months. The enlargement was irregular, the fetus could not be outlined, but a mass could be felt on either side, each of which resembled a placenta. Upon vaginal examination, I found the os uteri very high up with very slight dilatation above the laceration.

In spite of my efforts again to prevent a miscarriage, labor began and progressed slowly, till 9.30 the following morning, when I was again called. I found the patient having the pains characteristic of labor in the second stage. Upon vaginal examination, I still found the os high up but dilatation was nearly completed. This, however, was the only evidence of progress. Within the cervical canal, and on the left side, pressed firmly against the wall opposite the laceration, I discovered what at this stage I thought might be the thinned edge of a placenta. I was able between pains to determine that it was not adherent to the lateral wall. However, it was firmly attached anteriorly and posteriorly. Being unable, at this time, to confirm or disprove my suspicions, and there being no urgent symptoms, I determined to await developments. I made another examination at 11.30 A. M., when I was called to attend a second case. I found the os fully dilated, the bag of waters bulging, and while pressing on the abdomen with my left hand, with my right I could feel a foot. I ruptured the bag of waters, a foot presented. I then carefully delivered the fetus as if it were at full term. Still making pressure with my left hand and re-introducing my right I found a second bulging bag of waters, while a more careful examination revealed that my supposed placenta had disappeared from its original position and was now to be found on the opposite side, supplying the right wall of the cervical canal during this delivery.

I then ruptured the second bag of waters, again a foot presented, this fetus I delivered as I did the first. I then delivered the placenta by Credé's method, suspecting only one after-birth with two cords but to my surprise one cord still remained, this I traced to the uterine cavity. Here, in the centre of the cervical canal, I found what I had heretofore suspected of being a placenta previa, but which was a distinct septum, which divided the uterus into two compartments. This I verified by inserting my index finger into the empty right cavity, and my middle finger into the left, which contained the other placenta and cord. I was thereby enabled to feel the septum between my fingers, while again making firm pressure from above.

I then set about to deliver the retained placenta, which was accomplished with comparative ease. I am informed by Dr. L. S. Shepherd, who was in attendance when she aborted about fifteen months previously, that he discovered the septum, while doing a curettage. He states that he had curetted one cavity, when upon attempting to reintroduce his curette it passed into the other cavity, where he also found the remains of an abortion. With his curette he was able to feel distinctly the entire septum. At this time Dr. Shepherd urged the importance of her having her lacerated cervix repaired, but she declined to do so.

From this report it is interesting to note, first, a uterus divided by a septum which extended as low as the os uteri, and which divided the uterus into two compartments, each of which contained a fetus, cord and placenta enveloped by its bag of waters: second, three twin pregnancies, each of which resulted in an abortion or miscarriage.

*Read before the Norfolk Medical Society.

A CASE OF MOIST GANGRENE; ITS TREATMENT.

By LUCIEN LOFTON, A. B., M. D.,
of Emporia, Va.
Ex-President Seaboard Medical Association of Va. and N. C.

Gangrene in any form will sometimes prove a difficult proposition. I wish to relate a recent case in which moist antiseptic dressings were used. The formula is one I have employed for many years; it is as follows: Phenol solution, thirty drops, euthymol one ounce; sulphate of morphine, five grains; chlorate of potash, two drams; and water, quantity sufficient to make eight ounces. This solution is applied by pouring it on the affected part as often as it is necessary to keep an ordinary antiseptic dressing moist, or often-

er provided there be any pain. I also used a preparation comprising by weight one-third each of phenol crystals, gum camphor and chloral hydrate, the same being reduced by trituration to a semi-liquid. The latter combination is used always directly on the diseased surfaces prior to any dressing. It might also be stated that it is an easy matter to cut in the dressing a little window in order to facilitate the first liquid reaching the affected parts.

The case in point was a colored man, aged 36, a sawyer for a lumber mill, of robust appearance and without specific history, or anything conducive to the condition for which he applied for treatment. He gave a history of having been pricked in the finger by a thistle, and from this source the hand became sore and edematous above the wrist joint, and gave him excruciating pain up to the forearm, and especially "under" the arm. When he applied to me for treatment—he had consulted other physicians, who advised immediate amputation above the wrist—the hand, and especially the index finger, was practically destitute of circulation and presented a blackened appearance, which, upon manipulation at this time, gave no pain. The odor was characteristic, while there was "moving" evidence of some indiscreet dipterans insect's recent visit. To put it plainly, maggots swarmed the premises and marched angrily 'neath the loosened epidermis upon the approach of the enemy. A 1 to 500 hot solution of permanganate of potash soon cleaned the gelatinous mass of its invaders, after which the solutions as indicated above were used in the order named, together with a bichloride gauze dressing. At the second toilet the palmar aspect of the hand had improved wonderfully, likewise the dorsal portion of the hand, and gave evidence of partially restored circulation, but the index finger still retained its "ebony yellow," and promised little, if any, hope of recovery. The edema had lessened very much, while the pain up the forearm and higher was practically nothing. I dressed the man's hand every 24 hours. The third dressing gave great hope of saving the hand, minus the first finger, but by using the first described solution as hot as could be borne, advising artificial heat whenever convenient, the injured digit responded magically to the treatment, with only a slight contraction of the flexor tendon, which I propose straightening by the aid of superheated air at a temperature of 400° F. in a hot air apparatus, and massage. Altogether fourteen toilets were made, using something like a half-gallon of the first antiseptic solution.

Strange to say, the man never at any time had a rise of temperature, nor did his appetite fail or become indifferent. The urine at repeated examinations was normal, in fact, no inconvenience was experienced other than pain in the incipient stage of the trouble.

You may say what you please about a negro from a medical or surgical standpoint, but he is to-day the most satisfactory human material on which we have to work. I speak advisedly.

Hot moist dressing in gangrene is, in the writers humble judgment, the treatment *par excellence*. The above is only one of many I have treated by the methods outlined, minus the maggots. After all I guess maggots do good. They are not fond of live flesh; decayed matter is a hobby which they all love to ride.

Considering this man's condition upon presentation, and the splendid result following the moist dressing treatment, I believe, if my medical confrères will give it an honest trial; they will reap the results obtained by the author. Should the formulas, as given, not be thoroughly understood, it will be a pleasure to send them to anyone upon request.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ending April 12th., 1902:

			Cases.	Deaths.
SMALLPOX—United States.				
CALIFORNIA:	San Francisco.	Mar. 22-29.	7	
COLORADO:	Denver.	Mar. 22-29.	4	
ILLINOIS:	Chicago.	Mar. 29-Apr. 5	9	
	Danville.	Mar. 29-Apr. 5	3	
	Peoria.	Mar. 1-31	17	
INDIANA:	Evansville.	Mar. 29-Apr. 5	4	
	Indianapolis.	Mar. 29-Apr. 5	18	
	Terre Haute.	Mar. 22-Apr. 5	1	
IOWA:	Ottumwa.	Mar. 1-29.	32	
KENTUCKY:	Covington.	Mar. 30-Apr. 6	18	
LOUISIANA:	Shreveport.	Mar. 29-Apr. 6	14	
MARYLAND:	Baltimore.	Mar. 29-Apr. 5	2	1
MASSACHUSETTS:	Boston.	Mar. 29-Apr. 5	23	
	Brockton.	Mar. 29-Apr. 5	2	
	Cambridge.	Mar. 29-Apr. 5	3	1
	Everett	Mar. 29-Apr. 5	5	
	Holyoke.	Mar. 15-Apr. 5	11	
	Melrose	Mar. 30-Apr. 5	2	1
	New Bedford.	Mar. 29-Apr. 5	1	
	Newton.	Mar. 29-Apr. 5	3	
	Quincy.	Mar. 29-Apr. 5	3	
	Somerville.	Mar. 29-Apr. 5	1	
MICHIGAN:	Detroit.	Mar. 29-Apr. 5	15	
	Ludington.	Mar. 29-Apr. 5	9	
NEBRASKA:	Omaha.	Mar. 29-Apr. 5	24	
NEW JERSEY:	Camden.	Mar. 29-Apr. 5	4	
	Elizabeth.	Mar. 22-29	1	
	Newark.	Mar. 29-Apr. 5	20	3
NEW YORK:	New York.	Mar. 29-Apr. 5	75	20
NTH CAROLINA:	Charlotte	Mar. 1-31	30	1
OHIO:	Cincinnati.	Mar. 30-Apr. 4	13	1
PENNSYLVANIA:	Altoona.	Mar. 29-Apr. 5	1	
	Johnstown	Mar. 29-Apr. 5	1	
	Philadelphia.	Mar. 29-Apr. 5	26	6
RHODE ISLAND:	Providence	Mar. 29-Apr. 5	2	
SOUTH DAKOTA:	Sioux Falls	Mar. 29-Apr. 5	1	
TENNESSEE:	Memphis.	Mar. 29-Apr. 5	15	
	Nashville.	Mar. 29-Apr. 5	1	
UTAH	Salt Lake City	Mar. 29-Apr. 5	1	
VIRGINIA:	Roanoke.	Mar. 1-31	32	1
WASHINGTON:	Tacoma	Mar. 29-30	5	
WEST VIRGINIA:	Wheeling	Mar. 29-Apr. 5	1	
WISCONSIN:	Green Bay	Mar. 29-Apr. 6	2	
SMALLPOX—Foreign.				
BELGIUM:	Antwerp.	Mar. 15-22.	11	6
BRAZIL:	Rio de Janeiro.	Feb. 16-Mar. 16		21
CANADA:	Winnipeg	Mar. 22-29.	1	
CHINA	Hongkong.	Feb. 16-Mar. 1	8	
COLOMBIA:	Cartagena.	Feb. 15-22.		1
FRANCE:	Paris	Mar. 15-22.		2
GREAT BRITAIN.	Glasgow.	Mar. 22-29.	10	6
	London.	Mar. 15-22.	449	53
	North Shields.	To Mar. 15	21	2
	South Shields.	Mar. 15.	8	
ITALY:	Palermo.	Mar. 8-29.	9	2
MEXICO:	Mexico	Mar. 30-29.	3	2
	Vera Cruz.	Mar. 1-31.	1	
RUSSIA	Moscow.	Mar. 8-29.	2	
	Odessa	Mar. 15-22.	3	1
URUGUAY:	Montevideo.	Feb. 22-28.	71	5
PORTO RICO:	Ponce	Mar. 15-22.	6	
YELLOW FEVER.				
SMALLPOX—Insular.				
BRAZIL:	Rio de Janeiro.	Feb. 16-Mar. 16		128
FRENCH GUIANA:	Cayenne.	Mar. 27, present	1	
MEXICO:	Vera Cruz.	Mar. 15-29.	6	3
CHOLERA.				
CHINA:	Shekloong	Mar. 31, sporadic.		
	Tung Kun	Mar. 27, sporadic.		
STRAITS SETTLEMENTS	Singapore.	Feb. 15-22.		2
PLAGUE.				
BRAZIL:	Pernambuco	Apr. 4, declared infected.		
	Rio de Janeiro.	Feb. 16-Mar. 16		1
CHINA.	Hongkong	Feb. 1-Mar. 1	1	1
	Tsang Shing	Mar. 29.		2
JAPAN	Nagasaki.	Mar. 12.	1 case	
		S. S. Tsushima Maru, from Formosa.		

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The War Against Tuberculosis.—The Tenth Annual Report of the Pennsylvania Society for the Prevention of Tuberculosis lies before us, and it is a great pleasure to say a word in behalf of the excellent work of the organization, the second oldest of its kind in existence. The Pennsylvania Society was founded April 10, 1892, and was the pioneer in America. Indeed, it is second only to "La Ligue contre la Tuberculose en France," which was founded in Bordeaux in 1891. This society and similar organizations should be supported cordially by the profession and the educated classes everywhere. We realize full well what a fearful scourge tuberculosis is to mankind and, fortunately, we have arrived at that point where we can lay down simple measures for its prevention, which, if carried out intelligently, will ultimately curtail the disease. The crusade must be waged by spreading broadcast the knowledge of the nature of the contagion and the details of the simple methods by which infection may be prevented. The Pennsylvania Society has adopted the system of circulating practical tracts, and we are informed in this report that over 30,000 copies have been distributed during the past year. The influence of tractarian movements in other fields than medicine has proven that there is no more practical method of arousing public interest and educating the public mind. We commend this report to our readers very earnestly. It sets forth briefly what a power for good the society has exercised, and should be the means of prevailing upon every medical reader to do more than he probably has done in behalf of this worthy cause. We agree with the Society in its regrets that compulsory registration of tuberculosis failed by the Mayor's veto from becoming a law in this city. To our minds no good reason can be adduced against making this one of the returnable diseases. Such registration had not in view the object of labeling every consumptive's door, or, as the Society's tract on this subject says, "tying a yellow ribbon on his coat that he may be branded and shunned like Cain." Such an enactment would have been vicious in the extreme. The objects to be obtained by the registration of tuberculosis include securing the proper disinfection of houses which consumptives have occupied, and thus guarding subsequent inmates from the possibility of infection. Perhaps a still more important feature would be gained in locating cases of tuberculosis for the purpose of relieving their wants as well as instructing them in the necessity of making themselves harmless to their relatives and friends.

Blackmail.—It is highly important that physicians should understand that there is a new species of blackmail coming into practice against them. This consists in bogus suits for malpractice. In New York the evil has grown to such an extent that physicians have felt impelled to organize, and to seek insurance against such villany just as they do against accident and death.

The game is being worked especially by certain disreputable members of our sister-profession, the law. The scheme is for the lawyer, or "ambulance chaser," to frequent the hospitals, to drum up some impecunious patient who thinks he or she has a grievance against some physician or surgeon, and to institute a suit for malpractice. But actual trial is the last thing that a shyster wants. Such a lawyer is almost as much afraid of a court room as a criminal is afraid of it. He is too well known in it, and too likely to come to grief before a righteous judge. What he wants is simply to scare the doctor into a "compromise," and a ridiculously small sum will often satisfy him. A suit that is based on a claim for $20,000 may sometimes be settled "out of court" for one or two hundred. The whole scheme is blackmail wearing the livery of the law courts.

The only thing for a physician to do under these rather exasperating circumstances, is to stand fight. He should under no circumstances back down and offer to pay hush money to a conspiracy of blackmailers. Let him reflect that if the suit ever comes to trial (as it never may) he can rely upon the support of his fellows and, in most cases, upon the justice of the bench. We regret to say,

however, that this latter prop has proved a broken one in some few cases.

The *New York Times* recently printed a most helpful and enlightening editorial on this whole subject. It says that in England the law provides that when a person attacks the reputation of a physician in court he shall file a bond for the costs, and if the suit fails he is liable to an action for libel. This would be a good law in America; but, in the absence of it, physicians should band together, by means of their county and other societies, to protect themselves from what is growing to be an outrageous system of blackmail.

Was Cecil Rhodes a Paranoiac?—Some men nowadays who rise above the common herd do not escape the imputation of being degenerate. One of the penalties of extraordinary success is to be considered a freak. Cecil Rhodes is passing through this process before he is well settled in his grave. Some of the newspapers are asking whether he was crazy. The South African multimillionaire has been written up by Mr. W. T. Stead; and from this account he seems to have had visionary and somewhat chaotic opinions about the future of the world and things in general.

The most extraordinary of these opinions was one relating to millionaires like himself. Rhodes wanted to see established a secret society of millionaires, organized like Loyola's Society of Jesuits, which should gradually buy up and control the whole earth. The mere statement of this scheme is sufficient to show it up. But when we come to analyze it (for which we have not space here) its utter preposterousness grows upon us more and more. Such a delusion has, indeed, something of an insane quality in it. The most charitable construction that can be put upon it is that Rhodes had been so much cut off from civilization by his sojourn in South Africa, and had become so convinced of the brutal power of mere money as he used it in the Dark Continent, that he had come to look upon the rest of the world as no better than a South African corral. His mental vision was distorted. He had hold of the wrong end of the telescope.

Rhodes' manner of disposing of his fortune had in it something that displayed the visionary and impractical nature of the man. He seems to have wanted to draw to England the best blood of other countries in order apparently that England should have the benefit of it. But we are not prepared to say that Rhodes was a paranoiac. He may have been of the stuff of which paranoiacs are made, but as he did not actually leave his vast fortune to found his Society of Jesuitical Millionaires, he cannot be accused of having really crossed the borderline of insanity.

Oxford as a Medical Center.—The will of Cecil Rhodes draws the attention of the world to Oxford University. The subject is of some interest to medical men from the fact that Mr. Rhodes expressed the opinion that Oxford should "try and extend its scope so as, if possible, to make its medical school at least as good as that of the University of Edinburgh." The *Lancet* and the *British Medical Journal* discuss this subject from opposite standpoints; and we confess that the *Lancet* seems to us to take the more rational view of it. It points out the fact that Oxford is not so favorably located as Edinburgh for the support of a great medical school, and it evidently is sceptical about the future of medical education in the ancient English university. Edinburgh, as a large center of population, with large hospitals, is a natural seat for a medical school. Oxford, in a small provincial city, is not such a seat. In the absence of large and varied clinical material, Oxford cannot become a leading center of medical knowledge. We do not believe for a moment that all of Mr. Rhodes' money could make it compete with Edinburgh, London, Berlin, Paris, Philadelphia or New York.

The same question has been raised in this country, where some of our leading universities, like Yale and Princeton, are located in small cities or towns. The best way for such a university to establish a medical school is to found it in some large neighboring city, just as Cornell has done in New York.

The *British Medical Journal*, on the other hand, apparently regards Mr. Rhodes' idea with favor, and says that the suggestion is a good one. It speaks very flatteringly of the recent progress of Oxford in medical education, and yet it does not meet (but even entirely ignores) the very weighty objections that are raised by the *Lancet*.

As Americans we are somewhat interested in this matter, because Mr. Rhodes provided for scholarships for American students in Oxford, and presumably some of these scholarships may be assigned to medical students. But with all due deference to the venerable university on the Isis, which has long been renowned for its Latin, Greek, English, mathematics and theology, we believe the day is far distant when American medical students of the better sort will be tempted to leave their native shores in order to study medical science in the University of Oxford.

The Stamping out of Yellow Fever in Cuba.—How thoroughly an autocratic government can do

its work, when it undertakes to do it, is shown in the report of Major Gorgas and Brigadier-General Wood, the military governor of Cuba. Major Gorgas had charge of the city of Havana and practically absolute power to do what he felt was necessary to render that city fit for habitation. Now it was the custom to look upon Havana as the sink of all hygienic horrors, but Major Gorgas' report shows that this was not actually the case, and that not so many years ago the number of deaths from yellow fever, although fairly large, was not by a great many as large as the number of deaths from typhoid fever in many of our northern cities. All the more creditable to Major Gorgas, then, is the result of his work. There may have been many abuses in Havana, or there may have been few. Major Gorgas has found them all. From April to December, 1901, there were 5 deaths from yellow fever; in January, 1902, which is the last month included in the report, there were no deaths from yellow fever. This is an improvement of exactly 7 over January, 1901, and enormously better than 1897, the worst year, in which 1385 deaths occurred from this disease. Gorgas has organized the work on strictly military principles and has a division for combating the mosquitoes which is divided into the Stegomyia Brigade for the purpose of stamping out yellow fever, and the Anopheles Brigade for the purpose of getting even with the carrier of malaria. These brigades are most industrious. The first inspected 17,323 houses, apparently in the course of one month, caused 365 wells to be made mosquito-proof, and found deposits of the larvæ of the mosquito 411 times. The Anopheles Brigade appears to have had less to do. Their chief work was cleaning and repairing ditches, the total area covered being 13,597 square yards.

The Negro Question in Cuba.—The negro question seems to be in a fair way to settle itself in Cuba without recourse to the aid of philanthropic societies or government regulations. Major Gorgas tells us in his report on the vital statistics of the cities of Havana and Guanabacoa that during the month of January in those cities the native whites showed an excess of 188 births over deaths, that is the figures were 457 and 269, whereas the native negroes showed an excess of 58 deaths over births, that is to say, the figures were 128 and 70. The figures for the year 1901 are even more significant. During the 12 months the native whites gained 1740, and the native negroes lost 513, making a total gain for the natives of 1227 inhabitants. The deaths of foreigners brought the difference down to exactly one, although it must be remembered that the number of foreigners dying indicates that the city is gaining rapidly in population by immigration. If this keeps up for a reasonable length of time there will soon be no negroes left in Cuba, and this, notwithstanding the fact that the difficulty of obtaining marriage licenses does not appear to have any deterrent effect upon the increase of the negro population, because of all births among negroes 57 were illegitimate and only 13 were legitimate. The most fatal disease from which the negroes suffer is apparently pulmonary tuberculosis. The ordinary infections seem to attack them neither more nor less virulently than they attack the whites, and the difference in population is considerable. The baneful effects of civilization in decreasing the birth-rate have not appeared very notably in the negro race elsewhere. Negroes are apparently more adaptable to civilization than other savage races, and although they have not yet entirely lost some of their aboriginal characteristics even after a residence of several generations in this country, they manage to hold their own very well with the whites. When they are brought in contact with a white population adapted to tropical life, and particularly to tropical city life, they rapidly deteriorate. It cannot be said that the improved hygienic condition of Havana has benefited them notably.

The Care of the Health of Match Makers.—In *Public Health Reports* under the date of December 16, 1901, Frank H. Mason, United States Consul-General at Berlin, transmitted to the State Department a synopsis of the special rules adopted in Great Britain, for lucifer match factories in which white or yellow phosphorus is used. The rules concern the ventilation of the rooms in which mixing, dipping, drying or boxing the matches is carried on as well as the air space, the lighting, and the character of the floor of these rooms. The rules provide that separate rooms shall be used for each of the processes referred to as well as for the process of boxing of double-dipped matches or matches not thoroughly dry. These rooms, it is required, shall not communicate with any other part of the factory unless there shall be a ventilated space intervening; nor shall they communicate with one another, except by means of doorways with closely fitting doors, which doors shall be kept shut, except when some person is passing through. Provision is made for the modification of the rules so as not to prevent the employment of mechanical arrangements for any of the above mentioned processes. The operator of the factory is required to appoint a duly qualified and registered dentist, who shall suspend from employment in any phosphorus process any person whom he finds to incur danger from phosphorus necrosis by reason of defective conditions of the teeth or exposure of the jaw. When the appointed

dentist has reason to believe that any person employed in the factory is suffering from necrosis of the jaw or is in such a state of health as to incur danger of phosphorus necrosis, he shall at once direct the attention of the certifying surgeon, who is appointed under the Factory and Workshop Acts, and the proprietor of the factory to the case. The rules also provide for the keeping of a Health Register, in which a complete list of all persons employed in phosphorus processes shall be kept. The certifying surgeon and the appointed dentist must also enter in this Health Register the dates and results of examinations of the employees, together with the results of their examination and the directions given. It is necessary for all employees to be examined at regular intervals by the surgeon and the dentist; every case of toothache must be reported, and no person can resume his occupation until the dentist furnishes him with a certificate of fitness for work. Every person employed in the factory must remove his overalls, and thoroughly wash in the lavatory before partaking of meals or leaving the premises. And furthermore, no person shall prepare food or drink in any room in which a phosphorus process is carried on, nor bring any food or drink into such a room. The foremen and the forewomen are required to report cases of neglect of the observance of these rules to the management of the factory. This series of requirements for the preservation of the health of workers in phosphorus is a distinct advance in preventive medicine, and is a tribute to the efforts of those who have worked so long and diligently for the betterment of persons working in this and in similar dangerous occupations.

The Infection of Oysters by Sewage.—In a paper read before the American Bacteriological Association, Professor Caleb A. Fuller, of Brown University, has done much to throw the accurate light of scientific investigation on this much discussed question. The lovers of oysters are almost as numerous as the human race, and a large majority of them take their bivalves at times on the half-shell. It will not conduce to their relish of the mollusks to know that these have sometimes been soaked in sewage. According to Fuller, as quoted in *Science*, the city of Providence discharges daily about 14,000,000 gallons of sewage through a large main into the upper part of Narragansett Bay. There are many oyster beds in this large bay, and this sewage, in order to reach the open sea, has to pass over some of them. Samples of oysters and water were taken from different parts of the bay, and tested for bacteria. The tests for sewage contamination were made by means of fermentation tubes, carbol broth, and litmus lactose agar. Water and oysters at a quarter of a mile's distance from the opening of the sewer contained three varieties of intestinal bacilli, and the same organisms were found at a point two miles below. Thirty per cent. of the oysters, from a bed located in a strong tidal current five miles from the sewer, contained the common colon bacillus, and the same was true of 40 per cent. of the oysters from a bed in sluggish water five and a quarter miles from the sewer. Oysters from a bed six and a half miles below the sewer contained no colon bacilli. Beds still further down the bay were entirely free from contamination.

So much for the city of Providence and the oysters in Narragansett Bay. The conditions there seem to be particularly favorable for infection of the oysters, as a large quantity of sewage is discharged into a land-locked bay, and has to flow over the oyster beds on its way to the sea. The current seaward is probably not very strong. The moral seems to be that oysters from Narragansett Bay should not be eaten raw.

The Tour of the American Climatological Association.—The national society of physicians interested in the influence of climate on health, has chosen for its meeting-place this year the beautiful town of Los Angeles in California. Nothing could have been happier than the suggestion of this plan. The American Climatological Association is about to give to its members and invited guests a grand object lesson. It has perfected the arrangements for a tour to California that will be unsurpassed as a demonstration of the finest aspects of our varied American climate. This tour will present to the climatologists a panorama of the continent, and for educational value will probably excel the most successful meetings which this very successful association of scientists has ever held.

The object of the trip, as announced in the prospectus, is to investigate at first hand the true conditions of a region for which so much is truthfully claimed in the way of healthful influences and climatic advantages. The Grand Canyon of Arizona, the glories of the Sierra Nevada and Rocky Mountains, and that matchless region of fruits and flowers, Southern and Central California, are among the incidental features of the long journey.

It is hardly necessary to urge upon the members of the Association and their invited guests the advantages and delights of this tour. The price for the round trip, which will be under the care of the Raymond and Whitcomb Company, has been fixed at a remarkably low figure, and the travelers will

have no care or trouble, but will simply take their seats in Pullman cars and enjoy themselves. The trip is a characteristically American enterprise. The American people own the best part of the American continent and intend to develop and possess it; and this is one of the ways that we can enjoy our own. At the same time the cause of science is to be advanced in a practical and healthful way.

Liebig and Pasteur.—It may not be generally known that Liebig for a long while refused to accept Pasteur's demonstration of the microbian nature of fermentation. The extreme conservatism (not to call it by a harsher name) of the eminent German chemist was shown toward Pasteur personally in a curious way. As early as 1845 Liebig had said: "As to the opinion which explains putrefaction of animal substances by the presence of microscopic animalculæ, it may be compared to that of a child who would explain the rapidity of the Rhine current by attributing it to the violent movement of the numerous mill-wheels of Mayence."

In 1870, just before the Franco-Prussian war, Pasteur, during a visit to Munich, desiring to convince Liebig of the accuracy of his work on fermentation, called upon the latter in his laboratory. The incident is related in the Life of Pasteur, recently issued. According to this account, the tall old man, in a long frock coat, received the French scientist with kindly courtesy; but when Pasteur tried to approach the delicate subject, Liebig, "without losing his amenity," refused all discussion on the score of indisposition. Pasteur met with constant and often bitter opposition in his revolutionizing progress, but this affable way in which he was "turned down" by one of the greatest, but mistaken, chemists of his time, is peculiarly instructive.

Cobra Venom as a Remedy.—Our Hindoo friends do well in calling our attention to the medical knowledge possessed by their ancestors. Hen Chandra Sen, in a recent number of the *India Medical Record*, (February 26, 1902) after a brief description of the chemical and physiological characteristics of cobra venom, has collected and translated formulæ containing this substance which were found in the old Sanscrit works. Most of these appear to be very good. They contain mercury, sulphur, lead, aconite and sometimes salts of other metals mixed with cobra venom and formed into pills. These pills for some inexplicable reason must be soaked in the bile of 5 different animals before they are ready for administration. Some of the formulæ have been used by Dr. Sen with advantage in various conditions. Additional measures recommended are often very sensible. Thus, in certain febrile conditions a diet of soft rice is mentioned; in other cases bathing is strictly enjoined. We do not think, however, that very much proof is offered of the therapeutic efficiency of cobra venom.

Current Comment.

CECIL RHODES AND THE UNIVERSITY OF OXFORD.

When, however, he recommends the University of Oxford to extend its scope, and implies that it has, or could obtain, the power to make its medical school "at least as good" as that of Edinburgh, he would appear to have overlooked the circumstances which contribute to make medical education at Edinburgh University what it is, circumstances which are quite unattainable at Oxford whatever efforts the University of Oxford may be stimulated to make. Edinburgh as the capital city of Scotland, and one of its largest centers of population, is a medical center in the natural course of affairs, such as Oxford can never become. Edinburgh in its world-famous Royal Infirmary combines in one institution to a singular degree all that is necessary for the most complete course of clinical study. The University of Oxford can do what lies in its power as a university for the education of its medical students, but it cannot possibly increase the Radcliffe Infirmary so as to make it a hospital comparable with the Royal Infirmary of Edinburgh.

—*The Lancet.*

A RIDICULOUS MEASURE.

One of the silliest of the many silly measures that from time to time are introduced in the various State legislatures of the country is the one recently proposed by a member of the New York legislature, whereby he would have enacted a law requiring that any operation upon a woman in that State shall be witnessed by three of her nearest relations, who are to remain with her until the completion of the operation. It has been the experience of all surgeons that the presence at an operation of friends or relations is decidedly poor policy, and very few operators will give their consent to having them about at such a time. What abuse this legislator is attempting to correct is hard to see, and the enactment of such a law can only lead to suffering. However, the legislature of New York, having shown such good sense in disposing of the osteopaths, can be relied upon to vote down this measure.

—*The Medical Age.*

MONKEYS AND VACCINATION.

Mr. Corrie Grant on Tuesday asked the President of the Local Government Board whether the lymph obtained by Dr. Copeman from the inoculation of smallpox on monkeys had been used in general practice for vaccination, and if so, to what extent; and whether the parents and medical men had been aware of its origin. Mr. Long, in reply, said that all lymph obtained in the manner referred to in the question was passed through calves and properly glycerinated before it was used for vaccination of human beings. He understood that the medical men using the lymph were made aware of the circumstances connected with it, but he could not say whether the parents knew. He was informed that the amount manufactured was small, and that whatever remained in store was destroyed nearly two years ago.

—*The British Medical Journal.*

PHYSICIANS AND BLACKMAIL.

For the frequency with which physicians are made defendants in suits for damages by patients alleging malpractice the leading members of the profession are largely to

blame. In compromising claims which are an insult to their professional skill and an impeachment of their honesty as practitioners of the healing art, they have given substantial encouragement to conspiracies of physicians without professional pride and lawyers without honor. And yet they have done so to an extent which has multiplied suits, or threats of suits, for damages based on allegations of mal practice, until corporate enterprise has undertaken their protection as a business, in consideration of annual premiums, and the County Medical Association of New York has been compelled to organize its members into a protective association, with a fund for court expenses and counsel retained by the year.

—*New York Times.*

ANOTHER ROYAL VISITOR.

This is a year of royal visits. We have welcomed Prince Henry, we may welcome the Prince of Wales, but he have now with us one greater than either, a prince of science by his own might, William Thomson, Lord Kelvin, mathematician, physicist, electrician, leader of thought in a century of marvels. There are few instruments used on land or sea that do not owe something or everything to his active brain.

He is loaded down with honorary degrees, medals and decorations that have been conferred upon him, even more than is the German Kaiser, and not the least among them is the Colquhoun sculls that he won on the river when a student at Cambridge, sixty years since. Lord Kelvin's presence does honor to the United States. We welcome him heartily.

—*New York Sun.*

Correspondence.

THE BLESSINGS OF A STATE QUARANTINE AGAINST TUBERCULOSIS IN COLORADO.

By J. G. HILLEARY, M. D., of Loveland, Colorado.

To the Editor of the **Philadelphia Medical Journal:**

I was especially interested in your special article on "Colorado and the Consumptives" in the **Philadelphia Medical Journal** of April 5, 1902.

Quarantine in the majority of cases would be a blessing, inasmuch as it would compel the tuberculous to stay at home, where they would stand a much better chance of recovery than here. There are 3 reasons why the consumptive does not succeed in getting his tuberculosis arrested when he comes to this climate: (1) Insufficient amount of money. (2) The disease too far advanced. (3) Bad advice.

No person with an active tuberculosis should be sent here unless he has sufficient means to support himself for not less than 3 years. The process toward recovery is extremely slow. The unfortunate individual who is compelled to earn his living is almost sure to be doomed to disappointment. Hundreds arrive here so weak and emaciated that they can scarcely walk, possibly without a cent or only enough money to last a few months.

How commonly you are told by some of these poor people that they worked in a factory in one of the large cities in the East until they were no longer able to work, and then were advised to come to Colorado. Their fellow employés raise enough money to buy a ticket to Denver. They arrive in a city where it is next to impossible for a healthy man to make a living much less a sick one. I know several patients in Denver who are living on two 15 cent meals a day. With the worry and lack of nourishment it is impossible for them to recover. With few exceptions no man can recover here unless he has an abundance of good food with perfect rest of both body and mind, therefore it is brutal to send anyone here unless he has money to procure both these. Little need be said in regard to the cases in which the disease is far advanced. Cases with large cavities, with extreme degrees of emaciation, should stay at home with their family and friends, as recovery is almost impossible anywhere. Incipient cases with high fever and prostation should receive 2 or 3 months of hospital treatment (*i. e.*, in bed with forced feeding) before being sent here. If the temperature does not return to normal and the weight does not increase, it is little use to send them anywhere. The advice a great many consumptives get on leaving home is something like this: Throw all your medicine away, stay away from doctors, live on a ranch, ride horse-back, take plenty of exercise, etc., etc. It would be hard to say which item of the advice is the most pernicious. This same advice is accompanied by a glowing account of the beauties of the country, how easy it is to make a living, how Jones or Brown was sent there on a stretcher and now weighs 250 pounds; until every hopeful "lunger" imagines he will be as well and as strong as Champion Jefferies after a stay of 6 to 10 days' breathing the "cold, crisp air (?). All this by physicians who know little of the real treatment of tuberculosis and less of the country, as 9 out of 10 were never west of the Allegheny Mountains. A consumptive should never be told to live on a ranch, as it is impossible to get good food there. The bill of fare on most ranches is bacon and biscuit (soggy) for all meals. All that is necessary when leaving home is the name of some good physician here. He will furnish all the advice needed.

Another menace to the consumptive is the horde of quacks and charlatans in this State: osteopaths, vitopaths, magnetic healers, Dowieites, Christian Scientists, etc., brought here by the laxity of the medical practice act. These human vultures prey on the consumptives, doing an infinite amount of harm. I knew a young man who was recovering as a result of rest, food, and fresh air, who was told (by one of the above) to run 2 miles a day. It is useless to say he is dead. Credulity being a constant accompaniment of the disease, it is no trouble for the quack to dupe the ignorant and intelligent alike.

The treatment of tuberculosis even in this arid country, with its fine climate, will be a failure until great semi-charitable sanatoria are established, for the reasons just pointed out.

Reviews.

Principles and Practice of Operative Dentistry. By John Sayre Marshall, M. D., (Syr. Univ.) Dental Surgeon United States Army; President Army Examining Board for Dental Surgeons. J. B. Lippincott Co., Philadelphia and London, 1901.

In many respects this is a good book, and as these features predominate, let us first review what they are. The work, as a treatise on operative dentistry, really begins with chapter V, page 83, which treats of the "Bacteriology of the Mouth," including a classification of parasites and mouth bacteria, with special reference to parasites which affect the integrity of the dental tissues, concluding with a brief reference to the technique of sterilization as applied to the hands of the operator, and mouth and teeth of the patient, as well as to the instruments employed. Here the reader will find much of practical value. The chapter is not voluminous but instead the author has succeeded in including in compact form about all the accumulated knowledge on the subject at present existing. Chapters VII, VIII and IX are devoted to "Dental Caries, constitutional and local predisposing causes of the same, caries as affecting the various hard tooth tissues, varieties, stages, symptoms, diagnosis, prognosis, etc." Not the least valuable portion of chapter VII is that which refers to the "results of the examination of ancient crania" in relation to the prevalence of dental caries, as well as those pages which record valuable statistics upon the subject. The author's work on "etiology of caries" is worthy of special commendation. Beginning with Hippocrates, "Humoral Theory" and the "Vital or Inflammatory Theory" of Galen, the subject is carefully and somewhat exhaustively treated through all the opinions existing from that time down to the present accepted belief, the "Germ Theory."

The most satisfactory part of the author's work begins with chapter XI and is carried through to and includes

chapter XXI, these pages being a most excellent dissertation on the treatment of dental caries as practised by medication, excision and obturation of filling. The management of hypersensitive dentine is taken up and very thoroughly discussed, including palliative treatment, treatment by the application of caloric by means of hot air and certain coagulants, and by cataphoresis.

Following this Dr. Marshall takes up the pathological changes to which dental caries are subjected, those resulting directly from deep-seated caries as well as those which are caused by mechanical irritation. The causes and effects of calcic deposits within the pulp chamber are treated in a most excellent manner, and perhaps better than in other works of a similar character. Through the stages of inflammation and suppuration of the pulp, the reader is carried in a manner both entertaining and profitable. Chapter XXV is devoted to "Exposure of the Dental Pulp and its Treatment." As to the conservative management of this complication, the author firmly adheres to the idea that devitalization should be practised only as a last resource. On page 417 he says, "The writer is aware that this teaching is in opposition to some very good authorities, who have frequently stated 'that when a tooth has been fully formed it has no further need of the pulp, and it may, therefore, be destroyed without damage to the integrity of the tooth; but he, nevertheless, desires in these pages to enter a protest against such teaching, and against the practice of destroying by wholesale dental pulps which he believes could with the same degree of care and skill exercised in their devitalization, have been preserved to fulfill their normal function for many years, or even for a lifetime." Devitalization and extirpation of the pulp is treated briefly, but perhaps at sufficient length to make the subject well understood. Chapter XXVI, "Pulpless Teeth and Filling Pulp Canals," is especially creditable on account of the excellent halftone plates, showing the internal anatomy of the teeth, a complete knowledge of which is essential to the successful accomplishment of the operations fairly well described under this heading. The chapters on replantation, transplantation and implantation are given about all the space this foolish practice deserves. Such pathological conditions as resorption of the roots, hypercementosis and necrosis are carefully, and it would seem, satisfactorily discussed. Twenty pages are devoted to pyhorrhea alveolaris and about all the literature upon the subject from Frauchard (1746) down to the present time has been drawn upon to make this one of the most valuable chapters in the book. The remaining chapters are devoted to diseases common to the alveolodental membrane and their treatment and show careful preparation. "Anesthetics, Local and General," are given due consideration, and the final chapter on "Extraction of Teeth," is good.

We very much depreciate including in a work of this character so much material that properly belongs to, and can be found much more completely in, special text-books, this referring to some 80 pages in the beginning of the book devoted to Dental Anatomy, Histology and Embryology

Some defects in the work may be enumerated. On page 3, the "*third* superior molars" are referred to. This would have been in better form had it said "superior third molars." We would much prefer naming the entire space within the tooth as the pulp cavity, subdividing this into the pulp chamber and pulp canal. While this adds somewhat to the nomenclature, it is such an addition as brings with it a simple mode of expression. It is a pity that the author has adopted the homely term "morsal" in preference to the commonly accepted term "occlusal" as applied to one of the tooth surfaces. In the description of the teeth, the incisors are spoken of as the "*lower* central" and the "*inferior* lateral," one term or the other should be adhered to. It is distasteful at the present day to hear the cuspid teeth referred to as *canines* or *eye* teeth." If the latter term is acceptable, the description of the lower cuspid is faulty, as no reference is made to it as the "*stomach*" tooth. Of the lower cuspid it is said, "the crown opposes the mesial surface of the superior cuspid and the distal surface of the superior lateral incisor." This is incorrect, as may be noted in figure 5, showing occlusion of the teeth. The author's idea of the origin of the second permanent molar, is, we believe, incorrect, as the reviewer and others have shown this to be derived directly from the Malpighian layer of the oral mucous membrane. In describing the method by which bone is formed, on page 53, the term "enchondral" is employed instead of "endochondral," to designate intracartilaginous bone development.

The typography is in keeping with the good reputation of the publishers, the J. B. Lippincott Company, Philadelphia. [I. N. B.]

International Clinics. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and Other Topics of Interest to Students and Practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A. M., M. D., Phila., U. S. A. Philadelphia. Vol. IV. Eleventh Series. 1902. J. B. Lippincott Company. Price, cloth, $2.00.

This volume of *International Clinics* contains a number of articles which are especially noteworthy. Dr. A. Jacobi contributes a paper on the employment of strychnine which outlines the field of usefulness of this drug and sounds a note of warning against its routine employment in cases of heart-disease. This article deals with the pharmacological action of the drug and from a careful study of this indicates its therapeutic field. H. C. Wood, Jr., describes the methods of investigating the action of drugs in the first of a series of articles. It is well illustrated with cuts of apparatus used and the explanation of the technique is satisfactory. The growth of the science of pharmacology and the need of emphasizing its importance makes a paper such as this of Dr. Wood's especially welcome. Climatology has been well treated in two papers; one on the Climate of Southern California by Dr. Norman Bridge, and another on the Climatology of Augusta, Georgia, by Dr. Thomas D. Coleman. L. Brocq discusses The Superiority of Small Doses of Solutions of Mercurial Salts in Treating Syphilis, and there are also a number of other papers of interest and value on therapeutic subjects. The department of Medicine contains an excellent clinical lecture on Certain Diathetic Conditions from the pen of Sir Dyce Duckworth, and Dr. J. Mitchell Bruce discusses the Prognosis in Chronic Valvular Disease of the Heart. These two papers, as well as one on the Pulse of Pneumonia in Children by Dr. H. O. Nicholson, are especially valuable contributions and in themselves are sufficient to urge us to commend the volume to our readers. The Department of Neurology contains five admirable articles, of which we may mention Professor Arnold Pick's lecture on Total Aphasia, which deals with its diagnostic significance for the determination of cerebral affections. The field of surgery is well represented, and we especially commend the paper on Splenectomy for Malarial Cachexia by Prof. Thomas Jonnesco. John B. Deaver, Nicholas Senn, and other well-known surgeons are also contributors to this volume. A well illustrated paper dealing with Deformities in Children treated from the standpoint of the general practitioner by Dr. John Madison Taylor, of this city, will be read with interest. The volume closes with a special article on Methods of Keeping Case-Records in Private Practice, in which 6 well-known medical men give their views upon the subject. [T. L. C.]

Ovarian Dystrophy.—According to Paul Dalché, ovarian dystrophy may show two distinct sets of symptoms, those of abortive exophthalmic goitre, or those of myxedema. (*Bulletin Médical*, November 16, 1901). In either case, ovarian opotherapy is indicated. Menstrual troubles are noted, tachycardia, slight protrusion of the eye-balls, some cutaneous pigmentation or vitiligo, nervous troubles, tremor, etc., with perhaps some thyroid enlargement; or the woman is chlorotic, and shows some edema, localized or general, a state of pseudo-myxedema. Several case-histories are given to illustrate the condition. Dalché believes that modifications of the ovarian secretion may be the cause of true exophthalmic goitre. [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Bryn Mawr Hospital. The Garrett memorial wing and the new children's ward will be formally opened April 26. The Garrett memorial wing, erected in memory of W. E. Garrett, Jr., who before his death gave to the hospital its operating room, contains 12 rooms designed for private patients. The children's ward in the old hospital building has been furnished by Mrs. S. B. Brown. The cost of the Garrett memorial wing was $10,000.

Pathological Society of Philadelphia.—At the last meeting, held April 24, the address of the evening upon the intercommunicability of human and bovine tuberculosis was delivered by Dr. Mazyck P. Ravenel. After the meeting a reception was given to Dr. Ravenel at the University Club.

Jefferson Medical College.—The following appointments have recently been made: Dr. Wm. C. Pickett, one of the examiners for the insane, Philadelphia Hospital, has been appointed instructor in psychiatry; Dr. Max Bochroch has been appointed demonstrator of nervous diseases; and Dr. Alfred Gordon has been appointed instructor of nervous diseases.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Tuesday evening, April 29, Neurological Society, and Thursday evening, May 1, Obstetrical Society.

The Health of Philadelphia.—The health report for the week ending April 19 shows a marked decrease in the number of cases of smallpox, 26 cases with but one death having been reported. Diphtheria has also decreased, but 28 cases with 8 deaths having occurred during the week. Typhoid fever shows but a slight decrease, there being 121 cases with 10 deaths reported. Scarlet fever alone shows an increase, and this is but slight, the report showing only 63 cases with 5 deaths. Five deaths were reported from whooping cough, which is prevalent among the children in the Northern and Northwestern sections of the city.

Presbyterian Hospital.—Dr. Arthur H. Cleveland and Dr. George C. Stout have been appointed in charge of the nose, throat and ear department, in the place of the late Dr. Charles H. Burnett. Each physician will be on duty for 6 months.

County Medical Society.—At the last meeting of the Philadelphia County Medical Society held April 16, the following resolutions, presented by Dr. E. E. Montgomery, were unanimously adopted: Resolved, that the Philadelphia County Medical Society heartily endorses the administration of the Municipal Hospital of Philadelphia during the smallpox epidemic. Resolved, that it commends Dr. William M. Welch and his able corps of assistants for the efficient and thorough manner in which every detail of the arduous and responsible work of that institution is, and has been, carried forward.

The Death of Dr. Wirgman.—Dr. Charles Wirgman died at his home in Philadelphia, April 19, after a long illness, aged 55 years. He was born in Baltimore in 1847, and was a graduate of the University of Pennsylvania, Philadelphia College of Pharmacy and Jefferson Medical College. He was a trustee of Jefferson Medical College, and was visiting physician at the Children's and Orthopedic Hospitals. He had also been attending physician at the Howard Hospital for many years, having resigned that position but a few months ago.

NEW YORK AND NEW JERSEY.

Plans for the Extermination of the Mosquito.—Professor John B. Smith, of Rutger's College, New Brunswick, N. J. has formed the following plans for exterminating the mosquito in New Jersey, in accordance with the bill passed by the New Jersey Legislature, which allowed $10,000 for experiments. He proposes to hunt the breeding places and the swamps where mosquitoes are thickest; to study the best method to be adopted for each locality; and to determine the quickest and surest means of exterminating the malarial mosquito. He expects to engage the services of a high-salaried physician, who will spend the summer in the swamps. Neither oil nor gold fish will be used, since both remedies are but temporary. Drainage, especially in seashore towns, will be of special assistance in getting rid of mosquitoes. If necessary, he is determined to have laws passed that will assist him in drainage, sanitation etc.

Mt. Sinai Hospital.—Dr. Joseph Brettauer has been appointed attending gynecologist at the Mt. Sinai Hospital, New York City, to succeed the late Dr. Paul F. Mundé.

Bellevue Hospital.—The medical dispensary of Bellevue Hospital, New York City, will be closed to the public on June 1st, since the room is needed for the treatment of patients in the hospital. This will leave New York City without a city dispensary, and it is probable that the dispensary of New York University or of Cornell University will take the place of the dispensary to be abandoned. The room will be used for the erection of new hospital dormitories.

Measles in Woodbury, N. J.—The epidemic of measles which broke out among the school children last week continues, with no sign of abatement.

Death of Dr. Clymer.—Dr. Meredith Clymer, a graduate of the University of Pennsylvania, died in New York, April 20, aged 85 years. Dr. Clymer, though born in London, was a native of Philadelphia, and after taking a course of study at Paris, Berlin and Vienna hospitals, practised his profession for 10 years, and became consulting physician to the Philadelphia Hospital. In 1849 he was chief physician at the Philadelphia Cholera Hospital, and was later professor of the practice of medicine at Hampden-Sidney College, Virginia, and then in the University of New York. In 1871 he was professor of mental and nervous diseases at the Albany Medical College. During the Civil War and afterward Dr. Clymer was chief medical director of the Department of the South. His works on "Physiology and Pathology of the Nervous System", "Palsy and Kindred Disorders," "Ecstasy and Other Dramatic Disorders of the Nervous System" and "The Influence of Epilepsy on Criminal Responsibility" are valuable.

WESTERN STATES.

American Climatological Association.—The 19th annual meeting of the American Climatological Association will be held at Los Angeles, Cal., June 9 to 11. Among the physicians who are expected to read papers according to the programme of the secretary, Dr. Guy Hinsdale, of Philadelphia, will be Dr. Harold Williams, of Boston; Dr. E. de Schweinitz, and Dr. W. F. R. Phillips, of Washington. Drs. S. A. Fisk, S. G. Bonney, Henry Sewall, H. B. Whitney and Charles Denison, of Denver; Drs. W. A. Campbell, S. E. Solles, C. F. Gardner, W. H. Swan, and B. P. Anderson, of Colorado Springs, and Drs. H. S. Anders, F. S. Pearce, J. C. Wilson, R. G. Curtin and Guy Hinsdale, of Philadelphia.

Osteopathy in Ohio.—A bill licensing the practice of osteopathy in Ohio was passed by the State Senate April 15. The new law provides for a special examination of osteopaths by the State Medical Board.

Death of Dr. Bard. Dr. Cephas L. Bard, who was born in Chambersburg, Pa., April 7, 1843, a graduate of Jefferson Medical College in 1866, died April 20, at the Ellis-Bard Memorial Hospital, Ventura, Cal., recently erected by Dr. Bard and his brother. Dr. Bard had the distinction of being the first American physician to practise in Ventura, where he has lived since 1869. He was also the first patient to die in the new hospital.

CANADA.

From our Special Correspondent.

The Medical Convocation Ceremonies at Queen's University took place April 8. The report of the Faculty, which was read by the secretary, Dr. Herald, showed that the attendance during the past session, 177, was the largest in the history of that Faculty in the University. The Medical Faculty will spend $6,000 on further equipment during the summer.

The Hotel Dieu Hospital, Montreal, has decided upon the erection of a large wing to be added to the present building. Provision will be made in the new wing for a fine operating room and two special rooms for an X-ray apparatus. The wing will be divided into private wards, as there has been a great demand for these recently. The addition to the hospital will greatly benefit the Laval medical students.

The Right of a Municipality to Compel Persons With Infectious Diseases to go to a Hospital has lately been ques-

tioned by the Hygienic Committee of Montreal, where some trouble has been experienced, several persons affected with the disease refusing to go to the smallpox hospital. The City Attorney has given as his opinion that, if a patient is residing in a hotel, boarding-house, or a tenement containing more than one family, a vessel, railway-car or carriage, the sanitary officials have the power to compel such a person to go into hospital quarters. If, however, he lives in his own house, they cannot then compel him so to do. Power will be sought by the Montreal Board of Health from the Provincial Board of Health at Quebec to compel this, so far as smallpox patients are concerned.

Montreal General Hospital.—The regular quarterly meeting of the Board of Governors of the Montreal General Hospital was held in April, when the resignation of Dr. H. L. Reddy was accepted. Dr. Reddy, a prominent member of the acting staff, was then appointed on the consulting staff of the hospital. Dr. W. Grant Stewart was appointed to the vacancy on the acting staff. The report of the secretary showed that during the first quarter of 1902 there were 131 cases treated, as compared with 102 last year. Of this number 43 were medical cases, 58 surgical, and 30 gynecological cases.

The Royal Victoria Hospital, Montreal, has published the annual report of the cases of typhoid fever treated in the institution in 1901. There were 160 cases admitted, with 9 deaths, making a mortality of 5.6% for the year. In 1900 there were 126 cases with 9 deaths, a mortality of 7.1%.

The Ontario Board of Health held its regular quarterly meeting in Toronto recently. A very interesting report was presented to the Board, by the secretary, Dr. P. H. Bryce, on the smallpox outbreak. In 1901 there were 1879 cases in Ontario. In January of the present year, 629; in February, 707; in March, 202. The total number of cases reported during the past 15 months amounted to 3,517.

Laval University, Quebec, at the jubilee celebration next June, is going to establish several new chairs. Toward this end, old students of the University are now contributing, and it is stated that $10,000 have already been subscribed.

Providing Help for Women Inebriates has engaged the attention of the Local Council of Women at Ottawa. The Dominion Government will be asked to aid in providing cottage homes for inebriate women. In Ottawa during the past 2 years intemperance among women and girl prisoners is said to have increased 75%. In many cases women at or about 20 years of age are incarcerated for drunkenness and crimes committed while under the influence of liquor. Brief imprisonment to check the evil has proved an utter failure, some women having spent at least 20 out of 40 years in prison.

The Question of Diseased Immigrants coming into Canada, destined for United States points, being rejected by the American officials, and then left to find a place in this country, came up in the Canadian House of Commons at a recent date. It had been stated that there were some 200 of these in the hospitals of Montreal, and that a number of them suffered from trachoma and favus. The Canadian immigration officials have discovered that the case has been greatly overstated. Replies from the superintendents of the Montreal hospitals show that Notre Dame Hospital had 2 cases in January, 2 in February, and 6 in March. The Royal Victoria Hospital has not had a case within 3 months. The Hotel Dieu Hospital has at the present time 7 cases. The question, however, is one that the Government will continue to watch with care.

Canadian Association for the Prevention of Tuberculosis.—The annual meeting was held at Ottawa, April 17 and 18, under the presidency of Sir James Grant, of Ottawa. Prominent medical men were present from almost every province in the Dominion. Dr. S. A. Knopf, of New York, delivered an important address. It was decided to establish a central organization in Ottawa with a competent, paid secretary to carry on an active educational campaign. It was also decided to ask the Central and Provincial Governments to grant financial aid to sanatoria and to prevent immigrants with tuberculosis from coming into Canada. Mr. W. C. Edwards, M. P., was elected president, and Dr. H. B. Small, of Ottawa, was reelected secretary.

An Honor.—Dr. H. W. Drummond, the "habitant" doctor-poet of Montreal, will have the degree of LL.D. conferred on him at the June Convocation of Toronto University.

An Appointment.—Dr. David Shirres, of McGill University, Montreal, has been appointed professor of nervous diseases at Vermont University.

MISCELLANY.

Cholera.—The Governor General of the Hedjaz and the Sanitary Board are endeavoring to discover whence the present outbreak in Arabia has come. Some authorities claim that it was imported by the Javanese pilgrims arriving at Camaran, October 22 last by the steamer *Anchises*, which left Java September 13, 1901, with 473 pilgrims. Cholera was then epidemic at Batavia. The ship was quarantined 10 days at Padang and reached Camaran with a clean bill of health. Nevertheless she was quarantined 5 days at Camaran, all the pilgrims having been thoroughly disinfected. During the voyage 6 pilgrims died of malaria, and, during the quarantine at Camaran, 6 more died. There was no question of cholera from November until March. Besides, the first cholera cases developed among Russian pilgrims, Cossacks as well as workmen and soldiers being affected. Among the Javanese, on the other hand, who remained in Mecca, no symptoms of cholera had appeared, while those Javanese who followed the Russian caravans, stopping at Rebouk with the latter, developed cholera, after the Cossacks and some pilgrims from Bukhara had presented the same symptoms. A searching inquiry has been ordered to find out when, how and whence the cholera came.—A despatch from the U. S. Consul at Canton, China, states that, while cholera has almost disappeared from Canton, it is now epidemic at Honan.—The cholera situation in the Philippine Islands shows no improvement. Up to April 20, 388 cases with 300 deaths have been reported in Manila, and 856 cases with 602 deaths in the provinces. The U. S. Transport *Buford*, which left Manila April 21 for San Francisco, after being detained in quarantine 5 days, has returned to Manila with a suspicious case of sickness on board. Should this prove to be cholera, the transport will be held.

Plague.—A recrudescence of the plague is reported at Port Elizabeth, Cape Colony. Ten cases have already occurred, 5 of which proved fatal.

Dengue.—An article has recently appeared by Dr. Harris Graham, professor of pathology in the American College, Beyrout, Syria, who reports that the disease is due to a protozoal parasite, and is conveyed by the ordinary culex mosquito. The United States Marine-Hospital Service has requested its health officers to furnish early information upon the appearance of epidemic dengue, in order that investigators may be immediately sent to study the disease.

Leprosy in Nicaragua.—A newspaper published in Managua has recently stated that leprosy has developed to such an alarming extent among the people of Western Nicaragua, particularly in Leon and Chinendega, as to cause a prominent newspaper of Leon to warn parents against permitting their children on the streets for fear of unknowingly coming into contact with lepers. About 15 years ago it was estimated that the number of leprous persons in Nicaragua was about 200. At present the number in and beyond the second stage of the disease is placed at from 1500 to 2000.

An Appointment.—Surgeon William C. Gorgas has been ordered by the War Department to remain at Havana and continue his yellow fever investigation after the withdrawal of the army.

Railway Accidents in the United States.—The Interstate Commerce Commission has issued a bulletin showing for the 3 months ended September 30, 1901, a grand total of 725 killed and 2622 injured in train accidents of all kinds in the United States. The total number of collisions was 1247 and derailments 1002, causing damages, aggregating $1,842,224 to cars, engines and roadways, exclusive of damage to merchandise.

The Eradication of the Plague in India.—The Rangoon community is soon to clean out the filthy part of the town. The Sadr Bazar, a serious source of danger to the public, is to be utterly demolished, with the approval of the Government. It is also proposed to clean Calcutta and thus root out the breeding places of the plague. Thus far the plague has been combated by the doctors, sanitary inspectors, and disinfectants, a costly paraphernalia which has had but little effect on the plague, so that it is time to move the inhabitants of the filthiest and most over-

crowded portion of India for extirpating the plague. In Calcutta the density of the population is very great. In the Coloottollah ward there are 281 persons to the acre, in Jorasanko and Jorabagan over 200, while in Barabazar there is but an average of 9 square yards per man. The ground in these localities is saturated with filth for some distance below the surface.

Infant Mortality.—Only 4½% of the babies born annually live to the end of their alloted three score years and ten. Yet of the other 95½%, nearly 20% die unnecessarily. The facts came out in a paper on "Unnatural Death," read at the recent meeting of the English Sanitary Institute. The author told his hearers that about one million babies were born annually in England. Thirty thousand of the million died violent deaths from accident, thirty thousand died unnecessarily from tuberculosis and 120,000 more from absolutely preventable causes, such as smallpox, measles and scarlet fever. Only forty-five thousand lived their natural lives, and nearly one in twenty died from wearing out. One-fourth of all the diseases which destroy life are absolutely preventable, and fifteen years would at once be added, if the practice of hygiene were placed on a level with its theory.—*Chicago Clinic.*

The Influence of Mosquitoes on Malaria.—The Japanese military authorities have been experimenting extensively in Formosa to determine the influence of mosquitoes on malaria. A battalion completely protected from mosquitoes for 161 days during the malarial season entirely escaped the disease, an unprotected battalion at the same place developed 259 cases of malaria.—*London Times*

The Germs on Fruit Skins.—In a recent address, E. H. Richards, of the Massachusetts Institute of Technicology, said that the open-air fruit stand should be abolished while the streets are kept as dirty as at present. An interesting experience was made recently. A pint of various fruits was picked at random from one stand, washed and the washings analyzed. From that pint of fruit, 140,000,000 germs were secured. All fruits that do not have perfectly smooth surfaces afford lodgings for microbes. Papers strewn about the streets are also dangerous disseminators of disease.

The Treatment of Tuberculosis in Cuba.—The chief sanitary officer at Havana, Major W. C. Gorgas, in a report to the War Department, states that the project for a public sanatorium for tuberculous patients is now being pushed, and that the proposed institution is to be divided into 2 sections, in different locations, one for the incurables and the other for the curable patients. The former is to be located in Havana and the buildings are now being equipped. The other is to be located 5 miles out of Havana, where negotiations are under way for the purchase of 100 acres of land. This sanatorium will be free to those unable to pay.

Death of Dr. Meacham.—Dr. Meacham, the assistant of Major Maus, the insular health commissioner, died at Manila, April 15, of heart failure caused by overwork occasioned by the large number of cholera cases. The death is also announced of Dr. Toller, professor of clinical medicine at Cairo.

Obituary.—Dr. Meacham, at Manila, April 15.—Dr. J. T. V. Blocksom, at Farnhurst, Del., April 15, aged 52 years.—Dr. D. A. Plank, at St. Clairsville, Pa., April 12.—Dr. M. H Detweiler, at Hopewell, Pa., April 15.—Dr. Nathaniel Marston Freeman, at New York City, April 18, aged 81 years.—Dr. Edward A. Maris, at Baltimore, Md., April 20, aged 82 years.—Dr. Harry P. Hinchliffe, at Elkton, Md., April 19, aged 31 years.—Dr. Meredith Clymer, at New York City, April 20, aged 85 years.—Dr. John Kennington Leaning, at Cooperstown, N. Y., April 4, aged 78 years.—Dr. William L. Williams, at Avon, Va., April 8, aged 83 years.—Dr. Thompson D. Fisher, at Leroy, Ill., April 6, aged 75 years. Dr. John L. Eddy, at Olean, N. Y., April 15, aged 73 years —Dr. J. W. H. Vest, at Montezuma, Iowa, April 5, aged 79 years.—Dr. J. Poe, at Carbon, Texas, April 6.—Dr. Francis M. Gunnell, at Washington, D. C., April 5, aged 74 years.—Dr. John H. Blau, at Covington, Ky., April 3, aged 69 years. —Dr. James T. Atcnison, at Lochland, Ky., April 6.—Dr. Charles N. Hayden, at Lansing, Mich., April 7, aged 70 years.—Dr. J. W. Onstott, at McKees Rock, Pa., April 4, aged 43 years.—Dr. William Wood, at Cairo, Ill., April 5, aged 80 years.—Dr. Henry Herbert Vinke, at St. Charles, Mo., April 9, aged 42 years.—Dr. Alexander McCoy, at Penn Ill April 2 aged 79 years. Dr William E. Lee at Montcalm, Lincoln parish, La., April 1.

GREAT BRITAIN, ETC.

The Plague in India.—Latest news from India show an increased total of plague mortality, up to 25,625 for one week chiefly occasioned by the intensity of the disease in the Punjab, where 15,090 deaths were reported in 7 days. Fresh outbreaks have occurred at Delhi and Lahore. A recrudescence is also noted in Calcutta and Bengal. The figures, however, for Bengal are much less this year than last. It is evident therefore, that some epidemic influence is inhibiting the development of the plague there. For the week ending March 14, 44,179 doses of vaccine for the inoculation of plague patients were sent out from the laboratory in Bombay. The famine also continues to increase.

Royal Infirmary, Edinburgh.—Dr. Theodore Shennan has been appointed pathologist, to succeed Professor Welsh, his place as assistant pathologist having been filled by the election of Dr. Beattie, Professor Greenfield's first assistant. Dr. Shennan is to continue his systematic course on pathology.

The Spread of Measles.—How easily infectious diseases spread is shown by the following incident: An Englishman, who was a passenger on the P. & O. steamship *China*, which reached Colombo from Sydney, February 25, states that a lady and child with measles were allowed to come aboard the *China* there. During the trip from Colombo to Marseilles 12 cases of measles occurred on the ship. The Englishman with his servant landed at Marseilles, intending to travel to London. On the journey the servant sickened and measles developed soon after reaching London. He wonders why the lady and child with measles were permitted to board the ship.

An Anniversary.—The celebration of the 75th birthday of Lord Lister, known throughout the civilized world as the father of antiseptic surgery, was held in London April 8.

Cecil Rhodes' Will.—In the will of the late Mr. Rhodes he suggests that the University of Oxford should so extend its scope as to make its medical school at least as good as that of Edinburgh, yet in the details of his will he does not indicate the bestowal of any scholarships, especially upon medical students.

For the Welfare and Protection of Children.—An international congress will be held in London in July for discussing the welfare and protections of dependent children. The congress will be divided into three sections legal, medical and educational. A large and influential gathering is expected.

Microbes in the Morning's Mail.—Many persons have their morning letters placed on the breakfast table. In 9 cases out of 10 the envelope bearing the letter is licked as is also the stamp by the sender. Infection may easily lurk there, especially, as by the time the letter reaches its destination the stamp and sealed cover are dry and any materia morbi present would be easily detached. Then there are the risks of infection to which the letter is exposed in transit. The sorter at the Post Office or the postman may not be bacteriologically as clean as desirable. The first on the road may [illegible] and expose germs or the letters may be dropped. Bacteriologically mail bags exhibits some well known pathogenic organisms. Letters are too frequently smeared with road dust. Among the microbes recognized in road sweepings are those of pneumonia, edema, tetanus, tuberculosis and septicemia. [illegible]

Notes.—The sum of $25,000 has been left to the University of Aberdeen by the late Surgeon-General Reuben Harvey, Director-General of the Indian Medical Service. At a public meeting at Nice, France, it has been decided to erect a cottage hospital in memory of the late Queen Victoria. Dr Walter C Swayne has been appointed lecturer on midwifery and Dr D C Rayner lecturer on practical midwifery at the University College, Bristol. It is announced that a new building is soon to be erected in the Medical College compound for the Imperial Bacteriological Laboratory, Calcutta. Mr Arthur O Crooke has bequeathed $100,000 in trust for hospitals and convalescent homes in London and Surrey to be chosen by the trustees of his will.—Japanese paper pocket handkerchiefs are now supplied to consumptive prisoners detained at Wormwood

Scrubs, England.—In memory of their royal mistress, 600 servants of the late Queen Victoria's household have endowed a bed in Clewer Convalescent Hospital.

Obituary.—Dr. Bonville B. Fox, a graduate of St. George's Hospital and of Oxford Medical School, younger brother of the late Dr. E. Long Fox, whose death was announced last week, died April 2, aged 49 years, at Brislington.—News has just arrived of the death of Captain George Ramsey, I. M. S., aged 33 years, at Bagdad, from heart failure. He was a graduate of King's Medical School, and entered the Indian Medical Service in 1894. He had just had a severe attack of fever.

CONTINENTAL EUROPE.

French Society for the Treatment of Tuberculosis.—An association has been formed in France, known as the polyclinical society for the treatment of tuberculosis and diseases of the respiratory organs. Notice of the work of this society has been made to the Academy of Sciences and communicated by that body to the Academy of Medicine. The practical aim of this society is to create 200 dispensaries, 5 of which are to be in Paris, where the best-known methods for the treatment of tuberculosis will be applied by physicians of high standing. The poor are to be treated gratuitously in these dispensaries, and the rich at a moderate price. The philanthropists who conceived the idea selected Roubaix, where consumption is very prevalent, and more than a year ago opened a dispensary there. In that establishment patients have been treated by the best physicians of Roubaix, different methods being practiced in order to secure the best results. Gustave Rouanet, member of the chamber of deputies, Paris, recently delivered a lecture on the subject, which was attended by the prime minister, Mr. Waldeck-Rousseau, Dr. Brouardel, ex-dean of the faculty of medicine, Professor Landouzy, and many other distinguished men of science. The Government will coöperate in the work of founding antituberculosis dispensaries.

A Russian Medical Society.—At the Eighth Congress of the Pirogoff Society, held recently, it was resolved to petition the authorities to abolish the corporal punishment of peasants; to abolish the restrictions governing the admission of women and Jews to the Russian Universities; to repeal the Medical Department's decision limiting the application of hypnotism; to establish an Institute of Public Hygiene in Moscow; to establish special courses for practising physicians; to establish a public kumyss sanatorium for the poor; to establish a permanent section upon bacteriology and parasitology; to investigate malaria in Russia; to introduce into the programme of the next Congress the question of the role of animals in spreading infectious diseases; to revise the laws regulating the supervision of the insane, and to introduce the clause that "insanity is a legal cause for divorce;" and to abolish the compulsory treatment of lepers, for the infectious nature of the disease has not been established. The section on medicine recommended that physicians should not raise the question of fees, being satisfied with whatever the patient is able to pay, and that no patient should be addressed other than "you," the pronoun "thou" usually being used in Russia among the lower classes.—*Russki Vratch.*

Human Serum for Diseased Animals.—The Academy of Science of Paris, has been apprised of a novel treatment of animals by means of human serum. Dr. Laveran states that animals in the colonies, subject to a disease known as magana, due to trypanosoma, a micro-organism, are relieved by injections of human serum. Man is refractory to magana, but, curiously enough, monkey's blood is not effective. This should please the opponents of the Darwinian theory.—*New York Herald.*

Strawberries and Gout.—Portes and Desmoulières have recently discovered that strawberries contain salicylic acid, which they have succeeded in obtaining in crystallized form. This explains the effect of strawberries in gout and rheumatism. Long ago Linnaeus found that strawberries cured sciatic rheumatism. In Germany, lately, lemon juice has been given in large quantities for rheumatism and gout, with excellent results.—*Médicine Moderne.*

Women Physicians in Russia.—According to an official report, just published by the Medical Society of Moscow, there are 642 women physicians in European Russia. During the year 1900, 869 students were studying at the St. Petersburg Medical Institute for Women, the majority of whom will pass their State examinations in April, largely increasing the number of women physicians. The Czar takes great interest in the matter and distributes prizes and medals among the best students every year.

The German Otological Association.—The next meeting of the German Otological Association will occur in Trier, May 16 and 17. Among the subjects to be discussed are: Acute otitis media, by Drs. Bezold and Körner; and Accidents to the Ear, by Dr. Röpke. The secretary of the meeting will be Dr. Hartmann, of Berlin.

Psychology of Ibsen.—In 11 of Ibsen's dramas, according to the diagnosis of a French physician, there are an unusual number of degenerates. There are 5 cases of mental degeneration with obsession, 5 cases of degeneration with hysteria, 5 cases of degeneration with debility, 2 cases of moral idiocy, 2 of maniacal excitement, 3 of melancholia, 7 of alcoholism, one of senile dementia, and one of chronic delirium. It would seem that this distinguished author has found the study of psychoses to be a profitable one for dramatic purposes.

The South German Congress of Laryngology.—The Ninth Congress of South German laryngologists will be held at Heidelberg, May 19.

A Memorial to the Empress.—It is reported that the emperor of Austria intends to buy the Hotel Beaurivage, at Geneva, where the Empress of Austria died after having been stabbed by the anarchist Luccheni. The hotel will probably be converted into a sanatorium, in which will be erected a statue and chapel to the memory of the late Empress.

For Incurable Cancer Patients.—The reigning Prince Johann Liechtenstein has given the sum of $20,000 for the purchase of a property to be devoted to patients with cancer. The institution, which is to be called Clementinum, is to be erected in Neulengbach, 20 minutes from Kirchstetten, Austria, and is to accommodate 30 patients.

University Notes.—Berne: Dr. Theodor Kocher, professor of surgery, celebrated the 30th. anniversary of his professorship on March 16.—**Breslau:** The new buildings for mechanical and orthopedic surgery were opened on March 29. The director of this new clinic is Professor von Mikulicz-Radecki.—**Ghent:** To replace the late Professor Bouqué, 2 professors have been appointed, Dr. Van Imschoot for general surgical pathology, and Dr. De Cock for special surgical pathology.—**Greifswald:** Dr. Moritz, of Munich, has been offered the position of director of the medical clinic.—**Paris:** The numbers of students registered January 15, 1902, in the medical schools in France were as follows: Paris, 1360; Lyons, 603; Bordeaux, 422; Montpellier, 307; Toulouse, 211; Nancy, 155, and Lille, 125.—**St. Petersburg:** Latest statistics show that the number of medical practitioners in Russia is 20,092, 642 of these being women. There are also 1824 dentists, and 3781 pharmacists. The proportion, therefore, of physicians to population is 1 to 6500.—**Vienna:** Dr. Adolph Hoffmann celebrated his 80th. birthday on March 28.—During the winter of 1901-1902, the number of medical students matriculated in the 8 universities of Austria was 3299, 66 of whom were women.—**Wuerzburg:** Dr. von Kölliker, professor of anatomy, the oldest of the German anatomists, celebrated, March 27, his 60th. anniversary as a physician.

Obituary.—Dr. Hans Buchner, the well-known bacteriologist, professor of hygiene, and president of the Hygienic Institute, died in Munich, April 5, aged 52 years.—Dr. Ivan Balinski, formerly professor of psychiatry in the military medical school, died recently in St. Petersburg.—The death is also announced of Dr. Henriot, formerly professor of the Reims Medical School, aged 73 years.

Hypertrophic Hepatic Cirrhosis with Splenomegaly.—Woirhaye describes a case of Hanot's hypertrophic cirrhosis of the liver with splenomegaly in a man of 20. Hematemesis occurred from time to time, and again during the 48 hours before death. The autopsy showed sclerotic liver and spleen, enlarged mesenteric glands, and no ulceration in the stomach or intestines. The hemorrhages were evidently due to the discharge of toxic products from the liver. (*Archives de Médecine et de Pharmacie Militaires*, December 1901.) [M. O.]

The Latest Literature.

BRITISH MEDICAL JOURNAL.

April 5, 1902. (No. 2153.)

1. The Causation of Death During the Administration of Chloroform. E. H. EMBLEY.
2. A Contribution to the Study of the Presence and Formation of Agglutinins in the Blood. M. ARMAND RUFFER and M. CRENDIROPOULO.
3. Progress Report Upon the Biological Test for Blood as Applied to Over 500 Bloods From Various Sources. Etc. GEORGE H. F. NUTTALL.
4. The Diagnostic Value of the Variations in the Leukocytes and other Blood Changes in Thyphoid and Malarial Intermittent Fevers Respectively. LEONARD ROGERS.
5. The Condition of the Blood in Filariasis. G. LOVELL GULLAND.
6. Observations on the State of the Vascular System After Death by Asphyxia and by Cardiac Failure. J. A. MACWILLIAM.

1.—Will be abstracted when finished.

2.—Ruffer and Crendiropoulo contribute a paper on the **formation of agglutinins in the blood.** From their study they conclude: (1) That cultures of a micro-organism, freed from that micro-organism by filtration, dialysis or centrifugalization, have a distinct though feeble agglutinating effect on that particular micro-organism. The age of the culture and the constitution of the medium are important factors in determining the quantity of agglutinins present in such cultures. (2) That the red corpuscles of nonimmunized and immunized animals contain no trace of agglutinins. (3) On the other hand, the polymorphonuclear agglutinating power greater than or, more rarely, equal to that of the serum. They may, therefore, be rightly considered as the producers, or at any rate the carriers, of the agglutinins. (4) In immunized animals the specific agglutinins appear in the polymorphonuclear leukocytes and are, therefore, probably formed in them. The quantity of agglutinins begins to increase 30 to 48 hours after the injection and goes on increasing up to the tenth day or thereabouts. They then pass into the serum, the agglutinating power of which increases correspondingly. (5) That the formation of specific agglutinins in polymorphonuclear leukocytes and in the serum is preceded and accompanied during the first 3 or 4 days after the inoculation of a given micro-organisms by an increase of agglutinins for other micro-organism. This latter increase is of short duration and stops suddenly, whereas the increase of the specific agglutinins persists for a much longer time. [J. M. S.]

3.—Nuttall has tested 46 bloods of apes and monkeys by means of **antihuman serum.** The bloods of *Simiidae* give a precipitum apparently equal in quantity to that of human blood; the bloods of *Cercopithecidae* give less precipitum; whilst the least precipitum is given by bloods of *Hapaldae* and *Cebidae.* **Antihorse serum** has been tested with negative results on 499 bloods, only the blood of the horse and donkey reacted. **Antidog serum** has given a precipitum with the bloods of 8 species of **Canidæ.** The paper also gives the results of the examination with a number of other antiserums. There is a description of a method for measuring the degree of reaction, for which the reader is referred to the original article. [J. M. S.]

4.—Rogers contributes a paper on the **diagnostic value of the variations in the leukocytes and other blood changes in typhoid fever and malarial remittent fevers.** He concludes: (1) That the percentage of the different forms of leukocytes counted in a stained blood film is of great diagnostic value in differentiating typhoid fever and malarial remittent fever, and is easily ascertainable. (2) That an increase of the lymphocytes to 40% or over, without any increase in the large mononuclears, points to typhoid as against malarial fever. (3) That an increase in the large mononuclears to about 12% and upward, especially during the remissions of the temperature, strongly indicates malaria as against typhoid fever. The change is of great value when parasites are absent from the blood. (4) That the presence of myelocytes in any number such as from 1 to 5 % points to malaria as against typhoid fever. (5) That a high degree of anemia, such as a reduction of the red corpuscles to below 3,000,000 per cmm., is much more frequently met with in malarial than in typhoid fever. (6) That a very great reduction in the total leukocyte count, such as to below 2,000 per cmm., is much more frequently met with in malarial than in typhoid fever, while the proportion of white to red corpuscles in malaria is not infrequently less than 1 to 2,000, which is rare in typhoid fever. (7) That leukocytosis can be detected by the presence of a great excess of white corpuscles, upward of 80% of which are polymorphonuclears, in a stained blood film, and is often of service in distinguishing malaria from intermittent fever due to liver abscess or other local inflammation. [J. M. S.]

5.—Gulland reports the case of an Eurasian student, who complained of a swelling of the left inguinal glands which caused considerable pain and discomfort. All the ordinary causes of bubo could be excluded and, as the swelling was increasing in size, the glands were removed. While the operation was being done, a quantity of chylous fluid escaped which, on examination, was found to contain no filariæ. The blood was examined in the evening, however, and numerous filariæ were found. A differential count of the **leukocytes** showed 63.5% of polymorphonuclears; 28.5% of lymphocytes and 8% of eosinophiles. This observation of eosinophilia brings **filariasis** into the same class with such parasitic infections as those due to the ascaris, the oxyuris, the ankylostoma, and the tenia. It would seem that the eosinophiles are concerned in protecting the body from the toxins of parasites whether these are absorbed from the intestines or are actually elaborated in the blood. [J. M. S.]

6.—When death occurs from asphyxia the whole heart stops, distended with blood. This is the case whether asphyxia has been caused by occluding the thorax during natural breathing, and then opening the thorax and examining the heart when death has occurred; or whether the thorax has first been opened, artificial inflation being performed, and then asphyxiation produced by stopping the inflation. Under the latter circumstances the **condition of the heart** may be watched during the whole process of **asphyxia.** It is then seen that in the earlier phase, when the great rise of arterial blood takes place, the left heart becomes greatly distended, in consequence of the inability of the left ventricle to empty itself against the enormously increased pheripheral resistance caused by the contracted state of the small arteries. Distention of the right heart rapidly follows, mainly dependent upon the backward pressure arising from the inability of the left heart to pump its blood efficiently. The whole organ thus becomes greatly distended in all its parts. [J. M. S.]

LANCET.

April 5, 1902.

1. The Lumleian Lectures on the Comprehensive Study of Thoracic Phthisis. F. T. ROBERTS.
2. The Milroy Lectures on the Etiology of Typhoid Fever and Its Prevention. W. H. CORFIELD.
3. Results of the Vaccination of 1,069 Adults. H. SINIGAR.
4. The Surgery of Nonmalignant Gastric Ulcer and Perforation. C. B. KEETLEY.
5. The Supposed Infectivity of Desquamation in Scarlet Fever. C. KILLICK MILLARD.
6. The Topical Application of Mucin in Certain Affections of the Nose, Throat and Ear. WILLIAM STUART-LOW.

1. The second lecture on the comprehensive study of thoracic phthisis delivered by Roberts before the Royal College of Physicians on March 18, 1902, deals with the morbid anatomy which may be met with in different cases of this disease. He mentions that the origin of pulmonary tuberculosis in the large majority of cases is usually pulmonary at its commencement and that the apex is the chosen site from which tuberculosis usually starts. The mischief may commence in the air passages, the larynx, the pleura, pericardium, and the mediastinal glands. Diseases of the bones or cartilages forming the chest wall and of the diaphragm may be the first manifestation of the infection. The remainder of the lecture is devoted to a detailed consideration of the morbid anatomy in relation to the follow-

ing structures: (a) Lungs; (b) main air passages; (c) pleura and the pleural cavity; (d) pericardium, heart and bloodvessels; (e) the mediastinal glands; and (f) thoracic walls and diaphragm. [F. J. K.]

2.—This abstract will appear when article is concluded.

3.—**The results of the vaccinations of 1060 adults** are reported by Sinigar. He points out that it is rare for the practitioner to have an opportunity to observe the entire clinical course of vaccinations in the individuals whom he vaccinates and he therefore thinks that his results are interesting, as he has been able to study his cases at the Metropolitan Asylum, Leavesden, throughout the entire course. His figures apply only to the female staff and female patients, varying between the ages of 16 and 95 years. Three forms of lymph were employed, taken from different sources. (1) Lymph from a source which proved to be almost inert; (2) lymph which was much better; and (3) lymph which gave excellent results and which was made the standard supply. He tabulates the results of vaccinations amongst the female staff. There were 105 individuals vaccinated, out of this number 101 of the vaccinations proved successful and 4 unsuccessful. All the female patients except one—that of a patient who had obviously only a few days to live—were vaccinated. It was found that vaccination produced no untoward effects in the weakly patients. Nine hundred and fifty-five patients were subjected to vaccination; out of this number 896 proved successful, 51 gave fair and doubtful results, and in 8 the vaccinations were unsuccessful. Adding the total of the staff and patients, the results show 91% of successful vaccinations, 4.8% of doubtful results, and 1.2% of failures. The author then discusses the various sequels and complications which he observed, but emphasizes that the large majority of cases ran perfectly typical courses. The complications and sequels were papules from irritation by dressing; acne or pustules spreading beyond the vaccinated area; boils; carbuncles; abscesses, the reappearance of old skin trouble; eczema, herpes, and erythema. In 5 cases auto-intoxication developed and in one patient general vaccinia occurred. In nearly all of the cases very slight disturbances of general health were noticeable and only in a few were there considerable constitutional disturbances—headache, lassitude, pyrexia and pains throughout the body. He contends that the so-called preventable septic complications of vaccination were numerous which he thinks were due to the filthy habits of the patients. He states that **the percentage of the successful vaccinations amongst those who had previously had smallpox was high, and he further emphasizes that this fact tends to show that vaccination is a better protection against smallpox than smallpox against vaccination.** The lymph which he employed contained a staphylococcus, but in spite of this contamination the majority of the arms inoculated showed only the inflammatory reaction of the vaccinia. The fact that useless lymph is on the market is a source of great danger to the reputation of vaccination and to public health. [F. J. K.]

4.—C. B. Keetley reports an interesting series of **22 cases illustrating gastric surgery.** An absolute diagnosis of gastric perforation is impossible, neither is it necessary. Two of the cases reported illustrate the fallacy of waiting until there is no doubt about the diagnosis. A few well-defined symptoms are sufficient to show that an exploratory operation is necessary. In cases of doubt it is better to explore. The medical man should always have a surgeon see these patients early and share the responsibility. Sudden and severe abdominal pain, accompanied by faintness with or without vomiting are suggestive symptoms and more than suggestive when the patient is anemic and gives a history of chronic indigestion. In doubtful cases absolutely no food should be given by the mouth. Where the Murphy button is employed in doing gastro-enterostomy, liquid food may be allowed by the mouth soon after operation, if the patient's condition is such as to demand immediate nourishment. It is Keetley's custom to stop the anesthetic the moment the stomach has been withdrawn from the abdomen. Opium is rarely employed, as it masks symptoms. Even where patients escape immediate danger after a perforating gastric ulcer, a subphrenic abscess develops which is apt to result in a long and dangerous period of chronic invalidism as is illustrated in 2 of Keetley's cases. In a number of cases presented there was no perforation but operation was done for severe hemorrhage, pyloric stenosis, etc. It is thought inadvisable to approximate closely the mucous membrane of the stomach by a separate close suture, as abscess formation between the layers may occur and drainage into the gastro-intestinal canal is impossible. Keetley is a strong advocate of the Murphy button and describes minutely the technique of its introduction. His article closes with a brief report of each case in the series. [J. H. G.]

5.—Millard discusses **the supposed infectivity of desquamation in scarlet fever.** The author suggests that the desquamation of scarlet fever is not infectious. By that he means that it is not infectious *per se*, but that the flakes of epithelium given off may act as fomites and carry the infection just as clothes do. When the patient has passed the infectious state, pieces of cuticle probably do not convey the infectious principle. The author has endeavored to secure evidence upon the following points from medical superintendents of principal fever hospitals: (1) Can you adduce any evidence, experimental, statistical, or clinical, tending to prove that desquamating epithelium is, *per se*, a source of infection? (2) Do you consider that too much importance has in the past been attached to desquamation as a source of infection? (3) Does your experience support the popular belief that desquamation after scarlet fever is necessarily an indication that a patient it still infectious? (4) Does your experience lead you to believe that a patient may continue to desquamate, especially on the feet, for some time after he has ceased to be infectious? (5) Does your experience lead you to believe that it is necessary in order to prevent the spread of infection, that patients, who, otherwise, are not quite ready to leave the hospital, should be detained until every visible trace of desquamating epithelium has disappeared? From the replies received he draws the following conclusions, which support the view that desquamating epithelium is not infectious: (1) The absence of evidence supporting it. It is difficult to believe that if the old supposition were correct, strong evidence of it would not, ere this, have been forthcoming, as is now the case with discharges from the nose and ears. (2) The fact that infectivity begins prior to the onset of desquamation and frequently continues long after desquamation has ceased. (3) The fact that scarlet fever wards, although abounding in desquamating epithelium, are not a danger to neighboring houses. (4) The fact that the proportion of "return cases" does not appear to be increased amongst patients sent out from hospital still desquamating. On the other hand, the principal argument in favor of the view that desquamation is infectious is the fact that patients still desquamating, but otherwise apparently free from infection, have frequently been known to convey the disease to others. The whole force of this argument disappears, however, when we consider that patients apparently quite free from infection and in whom desquamation has entirely ceased have also been known to convey the disease; moreover, patients still desquamating have frequently mixed freely with others without untoward results. [F. J. K.]

6.—Stuart-Low states that he has had excellent results with topical application of mucin in certain dry affections of the nose, throat and ear. When mucin is applied locally to the nose and pharynx, it has a soothing and emollient action; it softens incrustations; moistens the surface; it also prevents the reformation of crusts and obviates fetor. He also states that mucin restores the function of smell. The preparation which he employed consisted of 5 gr. of mucin, 5 gr. of sodium bicarbonate and 1 gr. of menthol. This is dissolved in 1 oz. of sterilized water and the solution used in the form of a spray or douche. [F. J. K.]

MEDICAL RECORD.

April 19, 1902

1 Instances of Spontaneous Cure in a Leper Family. DOUGLASS W. MONTGOMERY.

2 A Contribution to the Study of Peritonsillar Abscess. DONALD M. BARSTOW.

3 Mind and Body. J. ALLEN GILBERT.

4. On the Penetration of the Human Body by Ordinary Actinic Light.
WILLIAM S. GOTTHEIL and
MILTON W. FRANKLIN.
5. Suprapubic Cystoscopy. DONALD KENNEDY.
6. Asepsis in Dental Surgery. WILLIAM J. LEDERER.

1.—D. W. Montgomery reports **instances of spontaneous cure in a leper family.** He states that a short time ago leprosy in all its forms was looked upon as an incurable disease, but now a number of writers regard cure as the natural termination of the anesthetic form. Instances of cure are also reported even in tubercular leprosy in which slowly advancing but certain death is generally considered to be the almost invariable result. Montgomery presents an interesting series of observations, dealing with the progeny of a missionary and his wife of New England stock who settled in the Hawaiian Islands in 1837. The missionary himself was of decidedly neurotic taint, while the wife seems to have been perfectly healthy and lived to the age of 83. She bore her husband 8 children, of whom 4 were healthy females: one a healthy male: one died in infancy of a perforating ulcer of the wrist: while one male and one female both suffered from **masculo-anesthetic leprosy from which they recovered.** This male had two sickly, puny children that died in infancy and two healthy children, and one healthy grandchild. The female had 6 children, of whom 4 **developed leprosy and all recovered.** One child was healthy except for poliomyelitis. This last patient is married and has one healthy child. [T. L. C.]

2.—D. M. Barstow presents a contribution to the **study of peritonsillar abscess.** He draws attention to a plan of treatment used by him in 10 cases during the past 2 years The object of the treatment is to **open up the supratonsillar recess** so widely that it will drain itself freely, repair its diseased mucous membrane and cease to be a receptacle for detritus. This result is accomplished as follows: A 4% solution of cocaine is injected from a hypodermic syringe into the body of the tonsil and into the peritonsillar region, through several points in the anterior pillar. This gives a degree of anesthesia quite sufficient for the operation. Then, with a bistoury, a curved incision is made from above downward, dividing the plica triangularis at its base from the anterior pillar. Next, with a Myles' tonsil punch, the entire upper part of the tonsil is removed piecemeal, altogether with a part or the whole of the plica triangularis. If the instrument be sharp and in good order, the operation is entirely painless. A dull instrument, however, pulls like a dull pair of barber's scissors, and this is exquisitely painful. The earlier part of the operation is quite easy. Toward the end, however, it becomes necessary to burrow deeply between the pillars, and there is danger, on the one hand, of failure to accomplish the desired end: on the other hand, of wounding one of the pillars and causing hemorrhage. If, however, the tongue be smartly depressed, the patient, in gagging, turns the stump of the tonsil towards the operator, and the operation can be finished, step by step, under his eye.
[T. L. C.]

4.—W. S. Gottheil and M. W. Franklin discuss the **penetration of the human body by ordinary actinic light.** They state that light in a proper concentration from a source of sufficient actinic power can be made to penetrate the entire thickness of the human body, including both surfaces of the skin: hence all the internal organs are accessible to its influence since no portion of the interior of the body however can be more than half the thickness of the frame employed from a cutaneous surface, and much of it is much closer, the time required for efficient actinic penetration to any depth is only a fraction of that employed in their experiments (which was 10 20 and 30 seconds respectively): and, conversely, if the time employed is equal, the chemotaxic effect will be far greater. The proof of the penetration of actinic light to and through the internal organs apparently opens a field for its successful employment as a therapeutic agent in internal maladies, in view of its admitted efficacy in a number of external affections. [T. L. C.]

5.—Donald Kennedy reports a case of **suprapubic cystoscopy.** The patient was one suffering from **prostatic hypertrophy** in whom catheterization suddenly became impossible and the bladder was tapped with a **trocarendoscope** and completely emptied. The lamp was then attached to the tube and [illegible] view of the interior of the viscus was obtained. Kennedy was not able to learn as much of the size and contour as he had hoped. This failure, he believed, was due to the fact that with reflected light the distal end of the tube had to be almost in contact with the bladder wall in order to illuminate it, thus giving a very limited area of observation. He is now conducting experiments to determine what sized tubes can be used with safety. Kennedy insists upon the value of cystoscopic examination in prostatic cases demanding operation on account of the bearing such information might afford the surgeon in deciding upon what operation to select. [T. L. C.]

6.—W. J. Lederer, D. D. S., explains his method of conducting his operations in dental surgery with careful regard to **asepsis.** [T. L. C.]

MEDICAL NEWS.

[illegible] Vol. 89, No. 14.

1. Compulsory Vaccination Essential: The Example of Porto Rico. AZEL AMES.
2. Clinical Expression of Chronic Myocarditis.
J. H. MUSSER.
3. The Sanitary Condition of Street-Cars in New York.
GEORGE A. SOPER.
4. General Anesthesia in the Plethoric. M. L. MADURO.
5. The New Method of Approximately Estimating the Number of Bloodcorpuscles from Stained Specimens.
MAX EINHORN and GEORGE L. LAPORTE.

1.—A. Ames gives his experience with **vaccine lymph and its uses** as follows: (1) That vaccine lymph, especially when glycerinized and in tubes, will not retain its efficacy when exposed, even very briefly and without great variation of temperature, to the change from a temperate to a tropical climate. Though the reason does not appear, the fact is indisputable, and all countries in the tropical zone should produce their own virus if so fortunate as to start a "stock." (2) That, given virile initial lymph and good cattle, the very best of lymph can be produced by practically the same methods in the tropics as in colder countries, provided care is taken to protect it as soon as taken and until used from alterations of temperature. (3) That the glycerinized virus has nothing to recommend it for tropical use, if it has anywhere, and that glass tubes are worse than useless. (4) That a good carefully kept virus has in the tropics equal, if not greater, activity and efficacy to that in northern latitudes, though it ought not to be kept as long. That it is much better in the hot countries, especially, to confine the vaccination upon animals for virus to a definite number (say 20) abrasions on each side rather than to make linear incisions and secure thereby many lines of vesicles. In the first place, the specific fever created is too great and is most undesirable, with the ravages of the screw worm, if it effects a lodgment in such extensive incisions, are difficult to manage. (5) That in field work nothing is so good with which to vaccinate an animal as the ivory point, the tube being useless and nothing is so good to take virus with. Surely nothing is so serviceable or practicable for the vaccination of the people in a hot country. (7) That there is ample warrant for positively asserting that although syphilis, tuberculosis, elephantiasis and tetanus are common in Porto Rico, **in no case has it followed that any of them, or any other disease, bovine or human, was imparted to an individual by the process of vaccination.** With tetanus so common in the island that 818 cases occurred in 7 months of 1900-1901, a single case only (in an infant) occurred after vaccination in 860,000 vaccinations, and this, of course, would have occurred as readily with any abrasion. (8) That it is not advantageous to use cattle older than yearlings and that the sexes are of equal value. (9) That it is of importance, and well worth the little it will cost, to keep a good stock of vaccine lymph alive in any tropical country, especially if insular, even when little or no large demand exists. The frequently recurring demands for virus for infants and those who will be revaccinated, if [illegible] call for more or less lymph and emergencies [illegible] such a one. If a good stock is maintained, as it easily can be. [T. M. T.]

4.—M. L. Maduro advises the administration of narcotics as follows: Immediately after the patient's [illegible] a few [illegible] have elapsed, he gives [illegible] of [illegible] on an average of 10

minutes, continuing with ether graded with a small amount of air for the rest of the operation. No harm can come from the frequent change of narcotics. [T. M. T.]

5.—M. Einhorn and G. L. Laporte give a new method of approximately estimating the number of bloodcorpuscles from stained specimens and states the important points of the method: (1) The whole procedure is a very simple one. Neither pipettes nor diluting solutions are needed. Every physician can easily carry a few cover glasses in his pocket and thus always he has at hand all the utensils necessary for obtaining a specimen for counting. (2) The method is a very rapid one. If we wish to determine the number of leukocytes only, we can reach an accurate estimate in 5 or even 3 minutes after staining. If besides the white the red cells also have to be counted, which, of course, is a more tedious procedure, it will take from 10 to 15 minutes. Those who have had experience in bloodcounting will grant that an accurate count, either of red or white alone, according to the Thoma-Zeiss method, will with the necessary subsequent cleaning of the pipette take not less than half an hour, usually longer. This method of coverglass counting, furthermore, allows us to obtain simultaneously an idea about the condition of the blood as manifested in the stained specimen. It is easy, especially when counting the leukocytes alone, to combine a differential leukocyte count with it, which also tends to save time. Finally, by this method we are enabled by reason of its rapidity and simplicity to count more frequently, from hour to hour if necessary. No one will doubt that this may occasionally be of great diagnostic and prognostic value in cases of acute appendicitis or similar acute cases in which pus may be suspected and in which we have to deal with a persistent or progressive hyperleukocytosis. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

April 19, 1902. (Vol. LXXV, No. 16.)

1. Cholelithiasis, Cholecystitis and Cholangeitis. WILLIAM H. THOMSON.
2. Hematuria. WILLIAM K. OTIS.
3. Some Reasons Against the Public Registration or Notification of Cases of Phthisis Pulmonalis. E. L. SHURLY.
4. The Effect of Osteitis of the Knee on the Growth of the Limb. HENRY LING TAYLOR.
5. Gunshot Wounds on the Isthmus of Panama. RAYMOND SPEAR.

1.—W. H. Thomson recommends olive oil in gall stone, if properly administered. His dose is not more than one to 2 ounces. Its action produces a watery flow from the mucous membranes, and therefore helps to increase the flow of the normal duodenal secretions, namely the biliary, the pancreatic and the secretion of Brunner's glands. Quite good results have been reported. Indications for surgical interference are: (1) When there is continued fever not traced to other toxins; (2) complete occlusion of the cystic duct, usually by a single large calculus; (3) in cases of chronic obstructive jaundice from impaction by one or more calculi in the common duct. [T. M. T.]

2.—W.K. Otis gives a positive method for testing for blood in the urine. He takes urine that has settled and pours off until it has 2 or 3 drams of sediment, which is then carefully filtered. A small quantity of the sediment is then transferred on the point of a knife from the filter to a glass slide and allow to dry in the air. A little chloride of sodium is then rubbed with the point of a penknife to a very fine powder on the slide by the side of the dried sediment, and a few drops of glacial acetic acid are added. Over this a coverglass is laid, one edge of which is raised by a hair placed beneath it. The slide is then heated over a flame until the acid forms bubbles, when it is removed from the flame and glacial acetic acid added under the coverglass as long as it continues to evaporate. After cooling the microscope will demonstrate, if the blood is contained in the urine, brown crystals in the form of staves or rhombic discs, which represent hemin or chlorohemin. These crystals are often small and imperfectly developed, but are easily recognized with a higher objective. [T. M. T.]

4.—H. L. Taylor sums up his paper in the following manner: (1) Gonitis in childhood usually causes lengthening of the affected limb when approximately straight, and this may persist for 8 years or more; (2) this lengthening is mainly due to overgrowth of the femur, and may often be detected within 6 months of the onset. In adolescents and adults, after cessation of active disease begun in childhood, the femur and limb may be considerably shortened; (3) the tibiæ are usually equal in length in the early stages; afterward the affected tibia may be slightly longer for a time, but is more often shorter, even in the first 2 years; this shortening increases in the older cases, and after subsidence of inflammation; (4) with limbs of equal length and a duration of disease of several years, the femur of the affected side will be found longer, the tibia shorter than its mate; (5) the feet and patellæ show a difference in favor of the sound side after a year's duration and often before; (6) stimulation of growth at the lower end of the affected femur, and more rarely and in less degree at the upper end of the tibia, is usually accompanied by retarded growth in other parts of the limb; growth in the femur itself is finally retarded, and the final result, after many years, may be considerable shortening of the femur, tibia and limb. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

April 17, 1902.

1. Papers on the Diagnosis of Appendicitis. MAURICE H. RICHARDSON.
2. Vaginal Hysterectomy for Carcinoma of the Uterus. WILLIAM R. PRYOR.
3. Pathology and Pathological Diagnosis of Carcinoma of the Uterus. T. LEARY.
4. Abdominal Hysterectomy for Uterine Cancer. J. C. IRISH.
5. The Surgical Aspects of Carcinoma Uteri, Complicating Pregnancy, Labor and the Puerperium. CHARLES GREENE CUMSTON.
6. The Treatment of Cases of Carcinoma Uteri not Justifiably Treated by Radical Operation. ALBERT H. TUTTLE.

1.—Maurice H. Richardson presents an interesting paper on the diagnosis of appendicitis. He states that while it may seem apparently absurd to discriminate between acute thoracic and acute abdominal affections, yet it has been the experience of observers that it is not unusual to find an abdominal complication of intrathoracic disease or *vice versa* Seven cases are appended to show the aberrance of symptoms, and also illustrative of the fact that the diagnosis between acute thoracic and acute abdominal affections is quite easy, provided we are in possession of the characteristic signs of either. [M. R. D.]

2.—William R. Pryor, in considering vaginal hysterectomy for carcinoma of the uterus, calls attention to the manner in which an unchecked carcinoma of the uterus tends to extend, and that it is significant that the locations at which the growth naturally tends to invade and recur, correspond, that is parametrium and then vagina. He calls attention to the tendency of a cancer of the uterus to remain localized in the pelvis. He emphasizes that no injury or surgical interference should be inflicted upon the cancerous area during its removal, for fear of disseminating the carcinomatous elements. The author believes that, while there is a distinct indication for vaginal hysterectomy in carcinoma of the cervix, it is applicable in only a limited percentage of cases. He also believes that vaginal hysterectomy is the selective operation in all but a few cases of cancer of the body of the uterus. [M. R. D.]

3.—T. Leary contributes a paper on the pathology and pathological diagnosis of carcinoma of the uterus, and believes that the diagnosis depends upon the following, as far as growths of the cervix are concerned: If the growth is small, a piece from its edge, together with some of the neighboring normal tissue, should be cut out and sent in moist cloth to the pathologist. If the pathologist can not

be reached within a few hours, the piece of tissue should be dropped into 80% or 95% alcohol. Most of the failures readily to diagnosticate cervical growths arise from the fact that too small a piece of tissue is taken or because the tissue has macerated in 30 or 40% alcohol and will not stain. Curettings should be sent immediately upon a moist gauze sponge, or should be heaped upon a piece of blotting paper and dropped into 80% to 95% alcohol. Be sure to obtain enough material. The diagnosis depends, in most cases, not upon finding a thickened epithelial or gland layer, but rather upon invasion of the underlying muscle. [M. R. D.]

4.—J. C. Irish presents another phase of the subject, and discusses **abdominal hysterectomy** for uterine cancer, quoting a series of statistics which show among others, that, in 10 uncomplicated cases of carcinoma of the body of the uterus there was no return of the disease in 80% of the cases, and adding 5 cases complicated by fibroids, the percentage without recurrence would be reduced to 66. He states that, approximately, permanent cures were equivalent to about 75% in uncomplicated cases of carcinoma of the body of the uterus, that had been subjected to abdominal hysterectomy. The favorable comparison of these results to operations for cancer in other parts of the body is also explained by him as due to the anatomical relations of the uterus and also to the fact that the carcinomatous process attacks the endometrium, which structure is isolated by the thick uterine muscle, the only exception to this being when malignancy begins in an existing fibroid. He concludes by stating that an increased success in permanent cure of cancer of the uterus is to be looked for in earlier diagnosis and operative treatment rather than from any improvements in the surgical manipulations. [M. R. D.]

5.—Charles Greene Cumston discusses the **surgical aspects of carcinoma of the uterus**, complicating pregnancy, labor and the puerperium. His conclusions are as follows: If the carcinoma can be radically removed, the life of the mother alone is to be considered. Up to the beginning of the sixth month of pregnancy vaginal hysterectomy is the operation of choice, but after this period is passed, abdominal hysterectomy or Duhrssen's vaginal Cesarean section, followed by hysterectomy, are indicated. When the neoplasm is inoperable, the life of the child must be considered, but if the progress of the growth is such that the mother rapidly becomes cachectic, thus compromising the fetal vitality, pregnancy should be interrupted. Palliative treatment only should be instituted, because partial operations on the neoplasm usually produce miscarriage and the mother is not materially benefited by them. Cesarean section at term may be done, but when the uterus is left, there is danger of septicemia, and, consequently, Porro's operation is the one of choice if the peri-uterine tissues are not infiltrated to such an extent as to render this procedure dangerous. [M. R. D.]

6.—Albert H. Tuttle considers the treatment of those cases of **carcinoma of the uterus** which are not justifiably treated by radical operation. By means of surgical procedures and other local treatment, cauliflower growths can be controlled, painful granulations can be kept down, and putrid secretions can be purified, thus preventing auto-infection and preventing the irritation of adjacent structures. The prme object to be gained by local treatment is the maintenance, as far as possible, of a clean granulating condition of the ulcerated surfaces. The patient's strength permitting it, she should be etherized and curetted with a sharp curette, while the base of the lesion should be cauterized with a chemical cauterant such as carbolic acid, tincture of iodine or a saturated solution of chloride of zinc, repeated several times, the vaginal walls being protected by gauze and vaseline, while the medicaments should be applied by means of a pledget of cotton packed into the cavity of the ulceration. But little can be done for the bladder complications resulting from a vesico-uterine or vesicovaginal fistula. The distressing rectal complications should be treated by keeping the bowels open by saline cathartics. The author also believes that there is little hope for advance in the treatment of carcinoma of the uterus unless as far as it relates to the constiutional or local medical procedure. He believes that at the present time the operation of panhysterectomy is decidedly of value, if the cancer affects the body of the uterus, while this does not apply to the cervical variety. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

April 19, 1902.

1. The Etiology and Spread of Typhoid Fever. VICTOR C. VAUGHAN.
2. A Synopsis of the Sanitary Census of Manila. HARRY L. GILCHRIST.
3. Agreement between the History of Yellow Fever and its Transmission by the Culex Mosquito (Stegomyia fasciata Theobald.) CHARLES FINLAY.
4. The Diagnostic Value of Tuberculin. C. M. WOOD.
5. The Paraffine Injection Treatment of Gersuny, with a Report of Cases. RUPERT M. PARKER.
6. A New Coupler for Rapid Intestinal Anastomosis. EVAN O'NEILL KANE.
7. Diagnosis, Prevention and Treatment of Puerperal Infection. FREDERICK HOLME WIGGIN.

1.—Vaughan discusses **the etiology and spread of typhoid fever.** He first considers the relation of the typhoid bacillus to the disease and states that he has no hesitation in replying that the bacillus of Eberth is the specific cause of enteric fever, but contends that he has found no means of differentiating the colon from the typhoid groups of microorganisms and further that he has never found in any sample of drinking water the typical Eberth bacillus. He discusses the various ways by which the typhoid bacillus is eliminated from the body. He believes that the exhaled air from the typhoid patient is germ free except when pneumonia complicates enteric fever, under such circumstances expectorated matter may be a source of contagion. He thinks that there is no positive evidence showing that the perspiration of a typhoid subject contains the specific bacillus. The bacilli are contained in the urine and they may be present in the absence or presence of albumin. The important avenue of elimination from the body is through the bowel and he mentions that contaminated feces constitute the most important source of spread. He also discusses the longevity of the bacillus and points out that experimental and epidemiological evidences show that the bacillus may retain its vitality and remain a source of danger for weeks and months. He points out that enteric fever may be transmitted by man directly; he may carry the virus in his alimentary tract or in his clothing and in this way the germs may be carried hundreds and thousands of miles and be widely distributed. Dissemination through the air by means of dust, he thinks, has been clearly demonstrated. He states that the spread of the disease through drinking water constitutes a most important method of dissemination. The infectious agent is frequently carried on the hands and the clothing of nurses and attendants. He also considers the dissemination by flies and finally discusses some of the predisposing causes—season, age, sex, fatigue, cold and other diseases. [F. J. K.]

2.—Gilchrist gives a synopsis of the sanitary census of Manila. He points out that when the United States took possession of Manila the city was in the usual filthy state characteristic of most Spanish cities. At that time smallpox was epidemic in Manila. The United States Government immediately erected hospitals for the treatment of smallpox cases and established vaccine farms. Physicians were employed to attend the indigent poor; free dispensaries were organized throughout the city. A sanitary brigade was formed; public vaccinators were appointed and a system of street cleaning and street scavenger carts was organized. There were also appointed competent inspectors of markets, food, building, etc. The city was divided into districts, sections and blocks so as to facilitate the la-

bors of the various departments. He describes in detail the boundaries of the city of Manila, the various localities, customs of the people, etc. He mentions that the prevailing diseases of the city are malarial fever, tuberculosis of the lungs, convulsions, which are very fatal among children, dysentery, diarrhea, beri-beri, bubonic plague, and smallpox. He concludes that at the present time the sanitary situation of Manila is only fair and that until a sewerage system is established the sanitary condition of the city can not be improved, owing to the overcrowded state and modes of living. [F. J. K.]

3.—Finlay writes on the agreement between the history of yellow fever and its transmission by the culex mosquito. He submits the following conclusions as the outcome of the historical and etiological considerations mentioned in his article: (1) The endemic foci of yellow fever in America, from the pre-Columbian times to the beginning of the seventeenth century, were comprised within a zone between the twentieth and the eighth or ninth parallels of north latitude, reaching, toward the east, as far as the Leeward Islands and limited toward the west by the Atlantic coast of the American continent. During the seventeenth century that zone extended farther north up to the twenty-third parallel and southward to the parallels of Bahia and Pernambuco. Finally, in 1850, it reached Rio de Janeiro. (2) The transportation of the mosquitoes of the yellow fever species, in sailing vessels, appears to have been of frequent occurrence, ever since the early times of the discovery of America. To it probably is due the coincidence of the severe epidemic of the so-called "modorra pestilencial" in Santo Domingo in 1494, with another very fatal epidemic of the same name, in the Canary Islands, the same year. Apart from the conveyance of contaminated mosquitoes, healthy ones must have been frequently imported into subtropical countries, where they are found now to exist, having acclimated themselves to their new abodes. This is known to be the case in Italy, in the south of Spain and other coasts of the Mediterranean, as well as in the south of the United States and in other countries. The previous existence of the yellow fever mosquito must be considered, *per se*, to constitute a dangerous complication whenever a case of yellow fever happens to be introduced into a place usually free from that infection. (3) The range of the Andes, and its prolongation along the Isthums of Panama and Central America, appears to have stood as a barrier, protecting to some extent the western coast of America against the migration of contaminated mosquitoes. That obstacle, however, is about to disappear when the Panama or the Nicaragua canal comes to be opened; let us hope, therefore, that, by that time, through the joint efforts of all the nations interested, all the existing foci of the disease will have been extinguished and that the adoption of measures, similar to those which have proved so successful in the hands of our sanitary department, will henceforth provide reliable means for controlling the propagation of yellow fever. [F. J. K.]

4.—Wood discusses **the diagnostic value of tuberculin.** He thinks the profession at large too frequently neglects the use of diagnostic resources at our command. The article includes a table showing the results of tuberculin injections. He reaches the following conclusions: Tuberculin in doses of .005 gm. carefully increased, when necessary, to .010 gm., produced no bad effects in simple or complicated tuberculous or nontuberculous cases. The characteristic tuberculin reaction is shown by a rise of at least 2 degrees in temperature, reaching its height in from 6 to 36 hours after the injection, typically at the eighteenth hour, and accompanied by at least 2 of the following symptoms, chilliness, headache, nausea and muscular pains. The tuberculin test ranks in value with the Widal typhoid test, since in the former the technique is simpler; the materials are more readily obtainable and more permanent; the danger is not greater and the formation obtained is scarcely less reliable. [F. J. K.]

5.—Rupert M. Parker reports two interesting cases of **saddle nose** in which he has employed **paraffine injection** with very satisfactory results and presents photographs of the patients. Parker reviews the history of this method of repairing deformities first introduced by Gersuny. The paraffine is injected through a large hypodermic needle and should have a melting-point slightly above the normal temperature of the body. In his own cases he combined ordinary soft paraffine in lumps and oleum petrolati, the melting-point of the mixture being found to be 102° F. The mixture can be sterilized by heating it at the boiling-point for a few minutes. This sterilization is thorough, since its boiling-point is much higher than that of water. A hypodermic syringe constructed entirely of steel is better than the ordinary glass hypodermic with leather piston. The needle is introduced at some distance from the point at which the distribution of the paraffine is required and the mixture should be of such consistency as to flow from the needle as a wormlike semisolid coherent string. When the tissue is inelastic and dense, the injection of paraffine should be preceded by one of Schleich's solution which not only anesthetizes the parts but at the same time dilates the lymphspaces in anticipation of the paraffine. Parker considers the method perfectly safe notwithstanding the theoretical objections raised by certain writers. One of Gersuny's patients presents no diminution in the size of the prothesis after 2 years. The only possible danger would seem to be that of lung embolism, but even this is hard to imagine unless the paraffine is injected directly into a vein. [J. H. G.]

6.—E. O'N. Kane describes and illustrates an **intestinal coupler** which he has devised for the purpose of aiding intestinal anastomosis. The button he describes resembles very much in principle the Murphy button, but the author claims for it an easier application and larger caliber. He has employed it in 3 animals with good results and in one human being who unfortunately died the third day after operation from septic peritonitis which was the result not of operation but of pre-existing abscess. [J. H. G.]

7.—Wiggin gives a short review of the history of **antisepsis in puerperal infection,** beginning with the paper of Kirkland, in 1774, and following with the papers of Holmes, Simpson, Semmelweis, Trousseau, Lister and Pasteur. He follows with a consideration of the diagnosis of abnormal puerperal conditions, including infection by the streptococcus, the bacillus coli communis, the pneumococcus, and other germs. He describes the method of sepsis and antisepsis he employs, including the care of the nurse, the physician himself, and the patient and her clothing. He emphasizes the importance of a careful examination of the patient immediately after labor with the object of ascertaining the presence of laceration and other possible avenues for the entrance of germs. He remarks that Marmorek's antistreptococcus serum has not proved satisfactory in the treatment of puerperal sepsis. [W. A. N. D.]

AMERICAN MEDICINE.

April 19, 1902.

1. Dry Points versus Glycerinated Virus from a Bacteriological Standpoint. M. J. ROSENAU.
2. Ocular Affection Associated with Glycosuria, with Special Reference to Central Amblyopia. WALTER L. PYLE.
3. Sinus Thrombosis Depending Upon Middle Ear Diseases, with Report of a Case Following Acute Sore Throat. GEORGE F. COTT.
4. Tonsillar and Peritonsillar Suppuration. HENRY J. HARTZ.
5. A Fatal Case of Acute Primary Infectious Pharyngitis with Extreme Leukopenia. PHILIP KING BROWN.
6. Hemostasis in Disarticulation of the Hip Joint. JOHN GLENDON SHELDON.
7. Maxillary Antral Suppuration, with Report of a Case. LINN EMERSON.

1.—M. J. Rosenau, in association with Surgeons Grubbs,

Francis and Parker, all of the Marine-Hospital service, **have investigated, from a bacteriological standpoint, dry points versus glycerinized virus.** Of 41 dry points examined they found an average of 4,807 bacteria per point, of 51 glycerinized tubes and capsules they found an average of 2,865 bacteria in each. From their studies they have concluded that they should discredit glycerinized virus, the superiority of which is amply demonstrated, but they condemn the practices of manufacturers who place an unripe product on the market. Much of the vaccine sold must have a high initial contamination to contain an average of 2,865 bacteria per tube and it is evident that too great reliance is placed upon the glycerine. [T. L. C.]

2.—W. L. Pyle discusses **ocular affections associated with glycosuria with special reference to central amblyopia.** He concludes in part that **diabetes mellitus** or any other disturbance of the **carbohydrate metabolism** may affect any portion of the visual apparatus. The ocular affections may vary in intensity from a slight failure of accommodation to hemorrhagic retinitis and total optic nerve atrophy. Minor visual disturbances are often made worse by fatigue or increased cardiac action and may improve after prolonged rest or decrease of vascular tension. The intraocular disturbances may be exclusively unilateral and there is never seen inflammation of the optic nerve—important differences from the changes in albuminuria, syphilis, and other blood dyscrasias. It is not uncommon to find the association of albuminuric retinitis in patients who suffer from Bright's disease as well as glycosuria. Central Amblyopia may exist in glycosuria independent of the toxic influence of alcohol and tobacco, or in patients addicted to the habitual use of these substances this may be the prominent factor of causation. In chronic cases of glycosuria, with the exception of cataract, the ocular symptoms are often present when the constiutional and urinary symptoms are not marked and the ocular symptoms may be the first to lead the patient to seek medical advice. The prognostic significance of the ocular disturbances is not definitely established on account of the great difference in pathogenesis, severity, and ultimate issue of the numerous forms of glycosuria. [T. L. C.]

3.—G. F. Cott reports a case of **sinus thrombosis depending upon middle-ear disease.** This case he considers one of thrombosis following osteophlebitis which in turn was caused by some infection from the throat seting up an inflammation of the middle-ear. [T. L. C.]

4.—H. J. Hartz contributes a paper on **tonsillar and peritonsillar suppuration.** His summary is as follows: The obstruction of the orifice of the supratonsillar fossa and the orifices of the crypts of the tonsils predisposes to circumtonsillar suppuration directly, and any vulnerable part of the organism remotely. Early incision should be done at the point of origin, which is usually within the supratonsillar fossa or within the crypts of the tonsils. Chronic latent tonsillar abscesses may indicate an infection developing pneumonia, pleurisy, pyemia or septicemia. The coccus variety of germs may be temporarily encapsuled within a wall of connective tissue. Articular rheumatism, consecutive to tonsillitis, is a suppurative process produced by invasion of cocci through lymph or blood channels. Uricacidemia does not cause suppuration, but may predispose to it. [T. L. C.]

5.—P. K. Brown reports a fatal case of **acute primary infectious pharyngitis with extreme leukopenia.** In this case the leukocyte-count was below 500 per cmm. for at least 5 days. Both the **uric acid and purin bases were distinctly increased,** and it is reasonable to suppose that the excess was dependent on the destruction of the leukocytes. [T. L. C.]

ANNALS OF SURGERY.

November, 1901.

1. Genital Tuberculosis, With Special Reference to the Seminal Vesicles, Report of Two Cases of Spermatocystectomy. H. H. YOUNG.
2. Cervical Ribs. F. KAMMERER.
3. Skin-Grafting in the Treatment of Complete Stenosis of the Larynx. A. J. McCosh.
4. Anorectal Transplantation. J. D. RUTHMORE.
5. Acute Intestinal Obstruction Following Appendicitis. A Report of Three Cases Successfully Operated Upon. L. W. HOTCHKISS.
6. Foreign Bodies Accidentally Left in the Abdominal Cavity. With Report of One Hundred and Fifty-five Cases. A. SCHACHNER.

1.—See Critical Summary of Genito-Urinary Surgery for May.

2.—Kammerer reports a case of **cervical rib** occurring in a woman, aged 35 years. The supernumerary rib sprung from the seventh cervical vertebra on the left side and was attached anteriorly either to the sternum or to the costal cartilage of the first rib; the X-ray failed to demonstrate a similar condition on the right side. Eight years before coming under observation the patient suffered from pain and weakness in the left arm; two years before this there was partial loss of voice for about three weeks; both these conditions gradually subsided. During the two months preceding operation severe pain and marked weakness had developed in the left upper extremity. A hard tumor could be felt in the left supraclavicular region. About 1½ inches of the rib were excised near the posterior extremity, it being impossible to remove more then this, owing to the proximity of so many vital parts; the subclavian artery and brachial plexus which had been stretched over the supernumerary rib were allowed to drop back through the opening left by the excised portion. The pains gradually subsided and after 3½ months the function of the limb was almost normal. [F. T. S.]

3.—McCosh calls attention to the dissatisfaction and disappointment which follow the usual methods of treating **stenosis of the larynx or trachea** and reports a case following a laryngofissure for papillomata in which he operated by first dissecting out the cicatricial tissue which obstructed the air passages from the epiglottis to the second ring of the trachea, and at a second sitting applied a Thiersch skin graft to the raw surface. The patient can now breathe without a tube and the ultimate result promises a complete success. [F. T. S.]

4.—Rushmore reports a method of **anorectal transplantation** which he employed to restore continence in a case of complete paralysis of the sphincter and following a double laceration of that muscle consequent to the goring of a bull. The coccyx was removed, the lower two-thirds of the rectum freed, and the anal end of the rectum sutured to the skin just just below the sacrum. This left a rectal pouch, the bottom of which was about 3 inches below the transplanted anus, and the posterior wall of the rectum was folded back on itself and formed a thick valve just inside the anus. Two months after the operation the patient's bowels move twice in the morning and he is then comfortable for the rest of the day. [F. T. S.]

5.—Hotchkiss reports 3 cases of acute **intestinal obstruction** due to adhesions subsequent to operations for acute appendicitis. In one case the obstruction developed on the tenth day, in one on the fourteenth day, and the third on the sixteenth day. All were successfully operated upon. [F. T. S.]

6.—Schachner concludes his article on **foreign bodies in the abdominal cavity** as follows. So long as surgery continues as an art, so long will foreign substances continue to be left in the abdominal cavity. That the recorded cases are not representative of the true frequency of this accident. If the foreign body is of an aseptic character, nature endeavors to care for the same by encapsulating the foreign substance in a fibrous envelope impregnated with leukocytes, and secondarily enclosing it by the contraction of adhesions between the different abdominal viscera or the viscera and the abdominal wall. In the spontaneous expulsion of a foreign body from the abdominal cavity nature seeks exit through points of least re-

sistance, which are either the alimentary tract or an imperfectly united wound, or less frequently through the re-opening of an apparently well-organized cicatrix. A foreign substance may be quiescent for years in the abdominal cavity. The disturbance which a foreign body creates in the abdominal cavity depends upon its sterility, size, character, e. g., regularity of outline and presence of sharp or pointed surfaces; density, point of location, individual tolerance of the peritoneum, and behavior of the individual. The symptoms of a foreign body in the abdominal cavity may vary from *nil* to that of the most violent intra-abdominal disturbance. The symptoms not infrequently suggest a low and protracted form of sepsis or an ileus. Unexpected circumstances, unusual complications, and diverted attention explain many of these accidents. While the counting and recounting of sponges and pads before and after an operation by one or more individuals should and always will be an important feature in the prevention of the accident, yet the cases are numerous in which the accident occurred, notwithstanding this count by one and even two nurses or assistants. The plan of attaching tapes or threads to pads and instruments has received the recommendation of many operators, but the fallability of this is as clearly proven as the former. In restricting ourselves to the smallest number of pads, sponges, and instruments, we adopt a system of simplicity that must appeal to all as one of the most important elements in the avoidance of this accident. We can only hope to reduce these accidents by the observance of the highest degree of simplicity, system, and watchfulness. If the surgeon at the close of an operation asks for a count of the sponges, and this is made, and an assurance given that all sponges and pads are present, his responsibility upon this point ceases; for it is neither prudent nor fair that he should leave his, the most important, part, to do duty that justly belongs to the nurse. The real factors in the avoidance of these accidents are the recognition of system, simplicity, and watchfulness to the most exacting degree. At the bottom of most of these accidents we find a diverted attention, a defective system, or a dangerous degree of complexity. We are obliged to conclude that to a certain extent the surgeon is responsible for things about the operation, and after that the responsibility must rest elsewhere. No hard and fast rules can be made regulating the responsibility in every case, but each will be required to be decided upon its own merits, and the responsibility be fixed accordingly. There are risks that the patient must assume and that cannot rightfully be transferred to the operator. In other vocations it is reasonable to assume that, unless properly prepared, one should not act; but in surgery one is occasionally compelled to act, even though it is known that he is not prepared, and in these conditions to adopt any other course than that would be attended with the loss of more lives than if we did not make the best of the circumstances. [F. T. S.]

ZEITSCHRIFT FUER KLINISCHE MEDICIN.

Bd. XLIV., Hft. 3. u. 4.

1. The Irritability of the Region of the Cerebral Cortex Controlling the Movements after Cutting Various Cerebrospinal Tracts. MAX ROTHMANN.
2. Concerning the Analysis of Irregular Pulse. K. F. WENCKEBACH.
3. The Use of Methylene Blue in Testing the Function of the Kidneys. KARL ASSFALG.
4. Enlargement of the Hands and Feet of Neuritic Origin. HANS HIRSCHFELD.
5. The Micrococcus Catarrhalis (R. Pfeiffer) as a Cause of Disease. A. GHON. H. PFEIFFER and H. SEDERL.
6. Clinical Contributions to the Pathology and Treatment of So-Called Idiopathic Dilatation of the Esophagus (Sac-like Enlargement of the Esophagus without Anatomical Stenosis). H. STRAUSS.
7. Myelitis following Acute Disseminated Encephalomyelitis. L. HUISMANS.
8. Investigations concerning the Source and the Solubility in the Urine of the Excretory Oxalic Acid. G. KLEMPERER and F. TRITSCHLER.

1.—Rothmann conducted his experiments on dogs and apes, producing lesions of the medulla oblongata and of the spinal cord. **In dogs he found that the conduction of impulses from the cortex to the extremities is dependent upon the pyramidal tracts and upon the tract of Monakow.** After cutting the pyramidal tracts, somewhat stronger currents must be used to produce movements in the extremities. After cutting Monakow's tract, the irritability of the cortex is in no way influenced. Unilateral division of the pyramidal tracts and Monakow's tract together, in the medulla oblongata or in the upper part of the cervical cord, entirely prevents movements of the extremity through cerebral irritation. The anterior tracts have nothing to do with the electric irritability of the cortex. Division of the posterior lateral tracts in the lower dorsal region entirely interferes with the conduction of impulses, even when the anterior tracts are intact. The **results with apes** were that some weeks after bilateral destruction of the pyramidal tracts, irritation of the cortex affected only two small regions of the extremity, viz: those controlling the fingers and toes. The author considers that the fibers controlling the movements of the extremities normally pass through the pyramidal tract, and are scattered through the whole tract, and that cutting the lower half of the tract alone causes no disturbance of the irritability. Cutting the pyramidal tracts and Monakow's together on one side, practically cuts out the greater part of the cerebral irritability, even the finger and toe contractions; but some contraction was still observed, probably because some of the pyramidal fibers were not entirely cut. **In comparison with the dog, response to irritation of the cerebral cortex in the ape seems to be much more dependent upon the condition of the pyramidal tract than upon Monakow's.** After cutting of the pyramidal tracts and destruction of the cortex, irritability in the opposite extremity gradually appeared; while the irritation of the extremities on the same side, which was at first apparent, after a short time disappeared, excepting for very slight traces. Clonic convulsions also at times appeared in the extremity on the same side. This likewise gradually disappeared. At first, convulsive movements of the opposite extremity could not be produced; but subsequently it was possible to produce them, showing that they are not dependent upon the pyramidal tracts. The conduction of faradic irritability from the cortex always depends upon motor tracts, but motor impulses may be carried when faradic irritability has been entirely lost. [D. L. E.]

2.—Wenckebach **discusses pulsus alternans, and attributes it to a reduction in the contractility** of the heart muscle. He particularly refers to the work of F. B. Hoffmann, who, after experimentation, reached the conclusion that the contraction of the heart muscle in hypodynamic condition is more rapid than with a normal contractility, however the reduction of the contractility is produced; and with sudden increase of the frequency of irritation, he found an alternating action of the heart. This, Wenckebach thinks, is explainable as follows: If the heart is in hypodynamic condition, its contractile effort is the same in each interval, so long as there is no irregularity; but, with the slightest reason for arrhythmia—and everyone is subjected to slight arrhythmia from various causes—the contractility of the heart is disturbed and the pulsus alternans appears. For instance, if one stimulation to contraction comes a little too early, it will find the hypodynamic heart muscle somewhat more reduced in contractile strength than did the previous stimulus; hence, the next contraction will not only be smaller, but will occur somewhat more quickly. The next irritation, even though the interval between the stimuli was itself the same, will occur after a somewhat longer pause from contraction. The con-

tractility will, therefore, have increased a little, and the contraction will be stronger. This contraction will, however, be longer; hence, the pause before the next stimulus will be shorter. Consequently, the next contraction will be stronger. This, the author believes, explains the alternating pulse. [D. L. E.]

3.—Assfalg has made an elaborate study of the use of methylene blue in testing the function of the kidneys. The cases studied included 40, of various kinds. To these, in drawing his conclusions, he adds 6 previously investigated by Strauss. There were 12 instances of chronic interstitial nephritis, 5 in which a beginning disease of the kidneys was suspected because of lead intoxication, and 10 of chronic alcoholism, the remainder being of various kinds. The author gives a detailed discussion of the results in these various cases, and decides that **the hopes which were, in the beginning, based upon the use of methylene blue as a test of the function of the kidney, were too sanguine; but that the test has some actual value in connection with other clinical symptoms.** One certainly cannot make a diagnosis of the anatomical condition of the kidney from the use of the test. It may be compared to the determination of the HCl of the stomach contents, the variations in which do not always show the presence of any special disease, but only the existence of certain disturbances of function. Anatomical changes in the kidney do not always show the existence of a functional disturbance in that organ; and, on the other hand, the kidney function may be disturbed without any anatomical changes. Further, nervous disturbances may have an influence upon the excretion of methylene blue. **In many cases the subcutaneous use of methylene blue is extremely painful.** In 28 cases, in which notes of pain following the injection were made, it was found that in 13 instances there were burning pains at the point of injection. Only the subcutaneous use of methylene blue is of any real value; as, if the substance is ingested, gastrointestinal conditions largely influence the result. The pain following the injections may last as long as a day and a half. It is possible that this test may at times be sufficient to demonstrate the absence of interstitial nephritis, in spite of the presence of albuminuria; for instance, the author found in one case, in which there was decided albuminuria and some edema, that the excretion of methylene blue was over after 58 hours, which scarcely corresponded with the conditions in interstitial nephritis. The autopsy showed severe changes of the heart and aorta, without interstitial nephritis. In this relation the test would be of especial importance in determining the condition of the kidneys in cases of cardiac disease and in tuberculosis with albuminuria, without changes in the kidney. It was interesting to note that, **in 5 cases of traumatic neurosis, he observed in each instance an abnormal manner of excretion.** It was prolonged beyond the normal period and the appearance of the maximum coloration was also often delayed. The same has been observed by other investigators. The author also makes the interesting observation that the presence of hyperglycemia or glycosuria either interferes with the excretion of the methylene blue or decolorizes it. He likewise makes some remarks concerning the chemical condition in which the methylene blue is excreted. [D. L. E.]

4.—Hirschfeld reports three interesting cases. The first patient, a man of 53, had repeatedly suffered with rheumatism, had recently had signs of esophageal obstruction, and had for some weeks shown striking enlargement of the hands and feet. He had all the evidences of carcinoma of the esophagus; the other organs showed no changes. The second case was one of phthisis with evidences of an organic spinal lesion. The third also had a carcinoma of the esophagus. The latter patient in particular had frequent attacks of severe pain in the arms and legs. **With this pain there was usually edema of the hands and feet,** which vanished soon after the attacks of pain. In the second case post mortem examination of the spinal cord alone could be carried out. The cord did not show the changes characteristic of tabes, but there were scattered areas of degeneration. In the third case, post mortem examination showed marked thickening of the nerves of the extremities; the hypophysis showed no changes. There were some changes in the posterior columns of the cord, but they were scattered. Upon microscopic examination, the nerves showed an increase of nuclei, often a marked round-cell infiltration in the epineurium; but there was no degeneration. The epineuritis, however, involved even the smallest branches. The most striking point in the cases was the **symmetrical enlargement of the hands and feet,** which X-ray examination showed to involve the soft tissues. The bones seemed to be somewhat thickened at the joints, but this thickening was chiefly attributable to a thickening of the skin. There was also in two cases decided cyanosis, and evidence of vasomotor change; and the occasional appearance of edema was further evidence of vasomotor disease. The nails showed a striking thickening, and the terminal phalanges were especially thickened and clubbed. The condition bears most resemblance to pulmonary hypertrophic osteoarthropathy. In that condition, however, the thickening is mainly of the bones, and the soft tissues, if they thicken at all, do so but slightly; while in these cases the hypertrophy was purely of the skin and subcutaneous tissues. Hence, in Hirschfeld's opinion, the latter condition might better be termed **a dermatohypertrophia vasomotoria.** He believes that the disease in these cases is perhaps comparable to that described by some other authors as spinal edema, which is particularly seen in syringomyelia and poliomyelitis. [D. L. E.]

5.—The article is an extensive description of the micrococcus catarrhalis from the bacteriological standpoint, together with the report of a series of interesting cases, to which the micrococcus catarrhalis was, at least, very closely related. Ghon and Pfeiffer have, in all, **examined bacteriologically 144 cases,** making careful stained preparations and cultures from each. The details of this work are given at length. Bacteriologically the diagnosis of the micrococcus catarrhalis, they considered, is not difficult from a morphological standpoint. The organism most closely resembles the gonococcus and the meningococcus; besides, they all have the same behavior to the Gram stain, and many cultural and other similarities. In the diagnosis of the micrococcus catarrhalis, the following points should be noted: It has a form similar to the gonococcus, although it is usually somewhat larger; it decolorizes more rapidly and more completely with the Gram stain; it forms colonies showing large granulations of a yellowish-brown color, and having irregular edges that look as if they had been nibbled; a membrane forms on the bouillon culture; there is superficial growth in stroke cultures; the later generations grow more rapidly. The organism has but slight pathogenicity for the animals ordinarily used. As to its pathogenic importance for man, the micrococcus catarrhalis **cannot be considered to be a regular saprophyte of the respiratory passages.** In a series of 133 cases, it was found to be entirely absent in 71 per cent.; and in 13 cases where organisms of the morphology of this micrococcus were found, cultures showed that they were of some other variety. In one case, which resembled influenza and ended fatally, this micrococcus was alone found; and in this instance it seemed to be definitely shown that **the organism had caused the disease.** In 5 other cases it was found with other organisms, but was present in such large numbers particularly as compared with the other organisms—and showed such striking relation in its presence and numbers to the course of the disease, that it seemed to be definitely demonstrated that it had caused the chief symptoms. There were also six cases in which the testimony was almost although not quite, so definite, that the organism had produced the disease. These were mainly cases of bronchitis

or bronchopneumonia, and mostly in children. In a final group of cases, the micrococcus catarrhalis was present in such small numbers that it was thought that it was only an accidental infection, while the chief trouble was attributable to other organisms. Sederl finishes the article by giving a more extensive description of the clinical course of five interesting cases. He believes that the micrococcus catarrhalis is the cause of disease; and that, without the presence or aid of other organisms, it can produce either a simple bronchitis or a lobular pneumonia, and even what, clinically, may appear to be a lobar pneumonia. In addition to the local signs, the organism may produce severe general symptoms. The disease due to this organism has no definite characteristics; it is more similar to that caused by the influenza bacillus and the pneumococcus than to other conditions, and it is probable that it is frequently confused with these two infections, especially with the first. In cases of evident mixed infection with micrococcus catarrhalis and other organisms in the respiratory tract, the micrococcus catarrhalis is, in all probability, frequently the primary cause of the trouble, particularly of bronchitis. In other cases the micrococcus is probably merely a saprophyte. Of the cases that Sederl reports in detail the first was one which seemed to be a case of phthisis with exacerbations, and it was at first believed likely that it was influenza in a tuberculous subject. The patient had, however, practically recovered at the time of leaving the hospital. The second was one following the course of a typical lobar pneumonia, with a very indefinite and slow development of the physical signs. The third case also had signs of pneumonia, as did the fourth and fifth cases of that disease. [D. L. E.]

6.—Strauss first reports a case of so-called idiopathic dilation of the esophagus, which occurred in a man of thirty, who had had the usual symptoms of this condition. It is worth noting that the first swallowing sound was present, the second absent. The esophagus would readily hold 500 cc. of fluid, which would be entirely recovered. For some time it was difficult to pass a sound into the stomach. An attempt was made to use the gastrodiathane to light up the esophageal cavity, but this was found to be unsatisfactory. Under treatment, the patient very markedly improved. The disease had begun in childhood, and there were periods of latency followed by periods of exacerbation. Some interesting facts were: That the patient found it easier to swallow when he took fluids containing carbonic acid, such as Seltzer water; that when he felt worse he was unable to lie down on the left side or on his back, and had to maintain the sitting posture all the time, or lie on the right side; and that it was more readily possible to drive the food on into the stomach when the spinal column was straightened and the head was turned slightly toward the left. **A sound was introduced by the employment of a special measure:** the esophagus was inflated with air at the same time that the sound was introduced. This proved to be a valuable means for introducing the sound readily into the stomach. The use of the X-rays was also of value when combined with the coincident use of two sounds, the latter showing the contour of the cavity. Strauss also describes **a special diverticulum sound,** which he has had made for the purpose of attempting to pass through an opening situated laterally, one end of the instrument being somewhat bent. He then describes a case of carcinoma of the esophagus, with fistula into the lung, and gangrene of the lung. The perforation occurred into the right bronchus. Its existence was diagnosticated with comparative ease, especially by means of the candle test, a light being extinguished by driving air through a tube introduced into the esophagus while the light was held before the mouth. **The X-ray indicated the site of the perforation.** In this case it was readily possible to tell that there was a dilatation of the esophagus by introducing fluids of different kinds into the esophagus and into the stomach. Strauss describes a method which he used for determining the size of the dilatation; this consisted in the use of an esophageal tube with a soft rubber bag at the lower end, attached to which tube there was a tube leading to a double bulb, and one leading to an inverted cylinder filled with water. The tube and bag were introduced; the bag was inflated, and then withdrawn; as it passed the narrowest portion of the esophagus, it was completely emptied of air. The air was received in the inverted cylinder, and was there measured. The author then describes a case in which it was only with difficulty that he could determine whether the symptoms were chiefly due to dilatation of the esophagus or to gastric disease, the patient having a very marked acidity and absence of free HCl, so that the ordinary difference between the esophageal and the stomach contents was not apparent. The other symptoms were not distinctive. It was finally decided, however, that the symptoms were chiefly gastric, and an operation was performed. It was then found that there were adhesions about the stomach, the colon, the gall bladder, and the right kidney. These were broken up and the patient improved; but he died from general weakness. **In the treatment of dilatation of the esophagus** Strauss particularly recommends the use of rectal alimentation for a time, so that the esophagus may be relieved of irritation. The only other treatment that he found to be of much value, besides cleansing the esophagus, was the introduction of tannin in powder form; this was followed by the use of oils, in order to quiet the irritation. He also recommends the use of powders which will develop CO_2; he considers them useful in organic stenosis of the esophagus, also as an aid to the propulsion of the esophageal contents. He particularly directs attention to the possibility that these cases of **dilatation of the esophagus may be due to congenital abnormalities of the aorta,** causing the latter to lie directly across the vertebræ. He considers it possible that the aorta, when displaced, may exercise some pressure upon the esophagus, and thus gradually give rise to this so-called idiopathic dilatation. [D. L. E.]

7.—Huismans reports the case of a girl of twenty-four, who had had **measles in her fourth year of life,** subsequent to which time she had had an uncertain gait; seven years before examination there were no other notable changes. At the time of the report it was impossible for her to turn quickly without falling. She showed distinct ataxia when her eyes were closed, although this varied decidedly from day to day. The patellar reflexes were absent, as were the other tendon and the periosteal reflexes; the Babinsky reflex was present. Lancinating pains were not felt. The eyes did not react to light, and but slightly to accommodation; there was slight nystagmus and slight squint. Speech was undisturbed. There was no intention tremor. The patient seemed to be rather stupid. There were no atrophies, and no pain or other disturbances of sensation. Multiple neuritis, therefore, seemed to be out of the question, and so did tabes. The eye symptoms made it seem possible that the case was one of Friedreich's ataxia. Huismans believes that the condition is referable to the attack of measles; that, acting as an acute infection, the latter produced an acute disseminating encephalomyelitis; and that the symptoms now present are due to a chronic myelitis resulting from the earlier disease. He states that **every myelitis is produced by bacteria;** and that **chemical intoxications and the like**—viz: other factors than bacteria—**produced, of themselves, no myelitis.** They may, however, produce a predisposition to it, or increase one that is already present. The predisposition to myelitis may be either congenital or acquired, and is caused by any condition that favors thrombosis of the spinal vessels. Acute myelitis follows the type of embolism; the chronic, that of primary arterial thrombosis. In acute myelitis there is not necessarily any predisposition to the disease; but the author considers that chronic myelitis

does not appear unless there is a combination of a predisposition and an infection. The acute myelitis may heal entirely with unirritating sclerosis, or it may become chronically progressive; in many cases it is chronically progressive from the beginning. [D. L. E.]

8.—Klemperer and Tritschler first report their examinations of 16 kidney calculi, which were passed by the patient. They note that 3 of these contained calcium oxalate only, and that 1 other contained that substance with salts of other acids. The percentage of oxalate calculi is, therefore, extremely high and far beyond that found by other observers. They then comment on some observations concerning the source of the oxalic acid that is found in the urine. It is found that by eating foods containing oxalic acid or more particularly by giving oxalic acid itself with the food—it is possible to increase the oxalates of the urine to a slight extent, and to increase slightly the oxalates of the feces; but at least four-fifths of the amount of oxalic acid administered (from 0.3 to 0.5 grams) is not immediately precipitable. Much can be found, however, in the feces, if the latter are first treated with HCl; it is, therefore, practically certain that most of the oxalic acid passes the stomach unchanged and is, in the intestine, converted into calcium oxalate which is, of course, insoluble, and is not absorbed. Some of it, however, is apparently destroyed in the feces. The authors give the results of some experiments, consisting in the addition of oxalic acid to feces and to blood. They find that the greater part of the oxalic acid added to feces is rapidly destroyed. Blood destroys some oxalic acid; and, when uric acid is added to it, it produces oxalic acid from the uric acid. (The latter conclusion, however, was reached upon the basis of very small figures, and is doubtful.) Subcutaneous injections of oxalates seemed to demonstrate that some of the oxalates are destroyed in the body while some are excreted unchanged; sodium oxalate was much more completely destroyed than oxalic acid. The results just mentioned, however, were obtained in dogs; in man, it seems that practically all of the oxalate injected beneath the skin reappears in the urine. It has been thought that the oxalic acid is perhaps derived from uric acid or at any rate, from nucleins. The authors administered uric acid in large quantities, and found that there was no increase in the oxalates of the urine. After giving glycocoll, however, they found that in several instances there was a very decided increase in the oxalates. It is believed that it cannot be doubted that glycocoll causes an increase; and it is, therefore, highly probable that gelatines also cause an increase. The authors also investigated the effect of creatinin, and found that this produces a decided increase in the oxalates. Creatinin was investigated because it is substituted for glycocoll. They oppose the view previously expressed by Meissner and others that creatinin, when ingested, is excreted almost entirely as such. They found that most of it disappears, very little being found in the urine. Glycocholic acid was also investigated, but in a few it was found that it did not increase the excretion of oxalic acid. From these experiments, the authors decide that the oxalic acid of the urine comes chiefly from vegetable food, about one-tenth being absorbed and excreted as calcium oxalate. The remainder of the oxalates in the food is destroyed by the bacteria of the intestine. A part of the oxalic acid of the urine comes from meats—likely from the creatin and the glycocoll furnished by the meats, but the urine is never free from oxalic acid, even in starvation. A portion of the oxalic acid of the urine comes, perhaps, from reabsorbed portions of the bile since bile is not free from glycocoll and its derivatives. The authors then continue a study of the solubility of the oxalic acid in the urine under various circumstances, and reach some conclusions that are of interest from a therapeutic standpoint. The first points are these: That the solution of the oxalates in the urine depends, first, upon the quantity and relative amount of the oxalate that the urine can hold in it when there is an amount of water and of small salts present which makes at least 100 cc. of fluid to 1.5 mg. of oxalic acid, and that marked acid reaction of the urine increases the solubility as does a high amount of magnesium salts with a small amount of calcium salts. (The best proportion of these salts is 1 of calcium to 10 of magnesium, and the quantity of magnesium should be more than 20 mg. to 100 cc. of urine. These conditions are most closely approached in dieting when the food is chiefly meat, pastry, and leguminous vegetables, and much fluid is given, while milk, eggs and other than leguminous vegetables are excluded. The prolonged use of small doses of magnesium will increase the magnesium content of the urine, and will thereby apparently increase the solubility of the oxalates. [D. L. E.]

BERLINER KLINISCHE WOCHENSCHRIFT.

[illegible] Jahrgang. No. 1.

1. Organotherapy for the Fatty Stools of Diseases of the Pancreas. H. SALOMON.
2. The Means of Transmission of S[illegible]. W. FRIEDLÄNDER.
   Psoriasis and Glycosuria. WALTHER PICK.
   [illegible] for the Complete Cure of Tuberculous Patients. H. GEBHARD.
   A Simple Method for the Immediate Quantitative Estimation of Uric Acid in Urine. I. RUHEMANN.

1.—In the 20 odd cases of diabetes without jaundice, in which disturbance of the fat absorption was shown by the occurrence of fatty stools, the cause was found to be some disease of the pancreas. After reviewing the literature, Salomon reports the effects of fresh pancreas given to 2 patients with pancreatic glycosuria. Tables follow, showing the great increase in the fat found in the feces, while the patients were taking pancreas spread upon bread, thus showing an improved fat absorption during the treatment. After stopping this treatment, the fat excretion was again increased. Pankreon had the same result, but here, besides the amount of sugar in the urine decreased, as was also demonstrated by tables. [M. O.]

2.—Friedländer details the history of a family consisting of the parents aged 28 and 29 years and 2 children, aged 3 and 1 years. The father acquired syphilis when his wife was 7 months pregnant and was well treated. The first child was born perfectly healthy. The second conception occurred when the father was absolutely free from symptoms. The second child showed no signs of syphilis until 20 months old, when a mucous patch and rash appeared. It seems that the wife only became infected a year after the birth of her second child, when symptoms first appeared. As the first child later showed a rash, it is supposed that he was infected by kissing his father or mother, and that the primary sore passed unperceived. Friedländer concludes that it is not absolutely necessary for the children of a man with newly acquired syphilis to be born luetically syphilitic. [M. O.]

3.—[illegible] is said to be an intimate relation between psoriasis and glycosuria. The [illegible] giving grape sugar to patients with various skin diseases, showed the occurrence of alimentary glycosuria in [illegible] cases of psoriasis. [illegible] patients with normal skins [illegible] negative. He concludes that alimentary glycosuria is rare with psoriasis. [M. O.]

4.—[illegible] an extensive article upon the regulations necessary and the effect of the presence of the member of a family with tuberculosis upon the well members of the same family. He [illegible] states that after sending the patient to a sanatorium, care should be taken to clean and disinfect the dwelling. Besides the patient's room, should be situated as far away as possible from the apartments occupied by the rest of the family. [M. O.]

5.—[illegible] offers briefly comments the literature of the means of estimating the uric acid in urine, evidently his own method and previous method. For this he [illegible] with a solution of [illegible] 1.5 gm., [illegible] 1.5 gm., [illegible] 1.5 gm.,

of this sulphuric acid is placed, then the iodine solution is added, and the urine is dropped, one drop at a time, shaking after each addition, until the solution is pale pink. This, upon the last shaking, becomes milk-white. Detailed explanations of this reaction are given. The sides of the uricometer are marked, the level of the mixture showing the amount of uric acid in the urine. For this is needed for the complete reaction. [M. O.]

THE PRACTITIONER.

January, 1902.

1. Hypertrophy and Dilatation of the Heart. THOMAS CLIFFORD ALLBUTT.
2. The Treatment of Cardiac Dilatation and Asthenia. I. BURNEY YEO.
3. Cardiac Dilatation and Hypertrophy. RICHARD CATON.
4. Points in the Prognosis and Treatment of Hypertrophied and Dilated Heart. ARTHUR FOXWELL.
5. Prognosis and Treatment of Dilated Heart as the Result of Overstrain and Exercise. WILLIAM COLLIER.
6. Dilatation of the Heart in Children. EUSTACE SMITH.
7. On Hypertrophied and Dilated Hearts as Studied and Treated in Recent Times. E. A. SANSOM.

1.—T. C. Allbutt contributes an article on **hypertrophy and dilatation of the heart.** He states he is becoming convinced that, as no elevation of blood pressure conceivable as the result of bodily effort can injure a healthy artery in a man under forty or even approach the limits of its possibility (rupture of a healthy aortic valve in a man under middle age occurs occasionally), so the factor of safety in the muscle of the heart is probably far greater than any intraventricular pressure due to bodily effort can surpass. Of the fluctuations of arterial blood pressure in bodily exercise we know little. Many trials have been made to measure blood pressure continuously during exertion, but the difficulties are yet unsurmounted and the experiments which have been published are very imperfect. Allbutt states that it is the endowment of a good circulation to be able to promote the maximum blood displacement required with the minimum alteration of pressure. He has not been able to convince himself of the occurrence of an enlargement of the heart due only to physical exertion. He does not, however, deny its occurrence. In moderate degrees the state is one of difficult diagnosis. In the labors of the heart the **total blood mass** must be considered. There is no direct relation between blood pressure and blood mass, yet the more the bulk of the blood the more the heart has to hold and to lift. He believes that drinking copiously during the day's work is a deleterious thing to one who has physical work to do, the best time for drinking freely is at night from two to three hours after dinner. He refers to the **beer-drinker's heart.** The man engaged in muscular labor, who loads his body with beer, burdens his heart especially. The alcohol itself has the effect of injuring the heart muscle; the quick and frequent rises of arterial pressure on exertion, such as lifting sacks or barrels, puts extra stress on the heart, and the bulk of blood-increase by the beer adds to the mass the heart must contract upon at each beat. The left ventricle must therefore dilate and hypertrophy, or fail. Hence in these gross men we find big hearts. Often without valvular disease and often without more arterial disease than a few patches in the aorta. Death frequently occurs in these cases on account of a sub-inflammatory process of degeneration of the cardiac muscle due to the alcohol. The relatively healthy cardiac muscle is capable of far greater hypertrophy as is seen in the prodigious hearts of aortic regurgitation and of Bright's disease. The evidence then that a sound heart is liable to injury under the stress of muscular exertion is far from convincing and there is little evidence that a heart duly hypertrophied and dilated will degenerate, or be submitted, as in valvular disease, to stresses increasing beyond its possible resources. We know, indeed, that in certain morbid and strained conditions of the heart the skilful use of a carefully graduated system of muscular gymnastics may be a restorative of the heart even at such a disadvantage. Allbutt considers in this connection the value of the treatment of **Oertel**, and the cure of **Nauheim**. He considers also condition of **dilatation and hypertrophy of the heart without primary valvular defect** which results in middle aged and elderly persons from increased resistance in the periphery of the circulation or from disease of the arteries. He believes that the French school, which insists that arteriosclerosis with a big heart is cardio-arterial disease, is in error. Degenerative changes no doubt invade the heart and arteries as a system, but the increase of the heart is a conservative process, such as to enable the heart to contend against increased resistance in the vascular system. The power of the hypertrophied heart in many old and atheromatous bodies is often amazing. For some obscure reason arterial disease does not always involve a rise of blood pressure, cardiac enlargement, cerebral apoplexy, etc. It is one of the most remarkable teachings of the medical practice that many persons present **extreme degrees of arterial disease without any rise of arterial blood pressure.** The heritage of old age is a heritage of low arterial pressure. Allbutt separates the subjects of senile disease into the group which will be invaded by death as apoplexy or in the alternative as cardiac failure; and the group which is largely spared by the earlier death will drift into uneventful dotage, in the latter cases the heart is normal or atrophied. [T. L. C.]

2.—I. Burney Yeo devotes his paper to the **treatment of cardiac dilatation and asthenia. Physical rest** of the most complete kind is the surest of all cardiac tonics. In the early period when cardiac dilatation is commencing, physical rest in good air and with suitable food is the most essential remedy. **"Resisted exercises"** he believes are merely solemn trifling. In many such cases, when exercise becomes desirable and necessary, being driven through the open air is of real value. Some cardiac tonic will generally be advisable and will, indeed, be indispensable in these forms of cardiac dilatation and feebleness such as occasionally follow an attack of **acute febrile and septic maladies and also in anemic cases.** It will rarely be necessary, however, in mild cases to have a recourse to digitalis except when there is much dyspnea and troublesome palpitation; in these cases he recommends:

℞

Ferri et ammonii citratis	gr. lxxx
Tincturae digitalis	*m* xl
Spiritus ammoniae aromatici	3 ij
Infusi calumbae	ad ℥ viij

M. et fiat mistura.

S.: Two tablespoonfuls twice a day, an hour after meals.

In the less serious forms he prefers to employ some such formula as the following:

℞

Quininae sulphatis	gr. xvj
Tincturae nucis vomicae	3 ij
(Vel tincturae strophanthi	*m* xl)
Extracti cocae fluidi	3 iv
Spiritus chloroformi	*m* lxxx
Aquae	ad ℥ viij

M. et fiat mistura.

S.: Two tablespoonfuls twice a day, an hour before meals.

In purely anemic cases he regards the following as the most useful combination:

℞

Ferri sulphatis exsiccatae	gr. xxxvj
Saponis	gr. xviij
Pulveris nucis vomicae	gr. xxiv
Aloin	gr. iv

M. et divide in pilulae xxiv.

S.: One or two (as necessary) twice daily, after lunch and dinner. In cases of somewhat acute dilatation, however induced, the hypodermic injections of **strychnine** in doses of one-sixth to one-twentieth of a grain will often accomplish much. In those cases in which the ventricular muscle is in a state of advanced degeneration we must rely mainly upon absolute repose and careful attention to the general nutrition. [T. L. C.]

3.—Richard Caton discusses **cardiac dilatation and hypertrophy.** The muscular system enjoys an especial immunity from disease with the exception of the heart. There is a law in the animal economy which ordains that the process of repair of diseased conditions in any organ can with difficulty coexist with full functional activity, and it is probably in consequence of the unresting activity of the heart, which

never ceases its labor for more than a fraction of a second from early fetal life up to the moment of death, that the repair especially of rheumatic cardiac lesions if left to nature is so rare and difficult. Dilatation of the heart of a lasting kind is always a disease. Greater or less dilatation often occurs in the normal heart during violent exertion and then subsides. The causes of the more chronic form of the dilatation are many. Any condition occasioning muscular relaxation while blood pressure remains near its normal level may produce it in greater or less degree. The most formidable example of dilatation occurs in the later stages of valvular diseases, in chronic renal disease, in arteriofibrosis or in combination of these. In most cases chronic dilatation is accompanied and counterbalanced by hypertrophy. Caton remarks that the most fruitful sphere of effort in the way of treatment lies in the direction of **prevention**, and he insists upon **absolute and prolonged rest** with other details of treatment upon the first signs of endocarditis during acute rheumatism. In most of the cases of cardiac disorder which the physician sees there are the familiar symptoms of **incompetence** due to disease of the valves, the heart muscle and frequently associated with disease of the kidneys. In such cases Caton recommends rest, the use of **digitalis, or a mixture of strophanthus and caffeine.** If **ascites** is present, withdrawal of the fluid is indicated. A **cholagogue** at intervals is undoubtedly of value. Care of the diet is the most important. Diminution of the volume of the blood by restriction of the fluids, aided by the employment of **diaphoretics** and **diuretics** when necessary; and the **reduction of the proportion of carbohydrates and fats** in relation to the proteids in the diet. Change to a clear and bracing air often helps the patient, and, if it is impossible to secure this, **oxygen inhalations** are advised. When the patient is strong enough, **graduated exercise** carefully increased is of much service. **Massage** in a measure will take the place of exercise and should be supplemented by **bath treatment.** The temperature of the bath should be about 90 degrees and it may be either of fresh water or holding salts in solution. Friction of the skin with a flesh-brush is a valuable adjunct. A comparison of the **Oertel** and **Schott methods of treatment** is drawn and the applicability of each is discussed. [T. L. C.]

4.—Arthur Foxwell limits his paper to the consideration of the **prognosis and treatment of hypertrophy and dilated heart** in adults of thirty years and over when the period of development has come to an end. For accurate prognosis a knowledge of the cause of the condition is most important. Of large hearts produced by **rheumatic valvulitis** those suffering from **mitral regurgitation** have no doubt the best future. He places **aortic regurgitation next, then mitral stenosis, double mitral, double aortic, and worst,** so far as one has a right to judge, so rarely occurring a lesion, **uncompleted tricuspid disease. Edema,** gastric symptoms, large liver, and cyanosis are more serious indications in aortic than in other valve lesions. **Cyanosis** is always of very evil omen. Enlargements of the heart due to **lesions of the pericardium** are of far less hopeful outlook. It is probable that **pericarditis** never causes death through adhesions alone and in these conditions **myocarditis has chiefly to be considered.** In hearts in which the enlargement is not due to endocarditis arising from rheumatism or other acute disorders the prognosis is much less hopeful, for in these cases there is nearly always **degeneration of the myocardium.** These cases may be divided into two classes, one in which the myocardial disease is primary, and the second class in which it is secondary, and due to either arteriosclerosis or nephritis. The arteriosclerotic section has the best prognosis. In such patients the danger is more from cerebral hemorrhage and thrombosis than from cardiac failure, though they are especially liable to sclerosis of the coronary arteries. Such patients show thickened and often rigid vessels with large lumina, the impulse is strong, large, short and sudden, and often the vessel is more or less empty during diastole. The emptier the vessel and the shorter and more sudden the impulse, the worse the prognosis. In considering treatment we must remember first of all that sufferers from chronic heart disease are prone to be **introspective,** and it is a physician's duty, so far as is consistent with the patient's safety, to minimize the severity of the condition. Foxwell points out that one great reason why those who have survived a cardiac damage acquired in childhood bear it so well through adult life is because long before they reach the introspective age it had become part of themselves and therefore no longer a thing to ponder over. **Cheerfulness of disposition** must be encouraged to the utmost, and the patient must be taught to live down to the strength of his heart, but at the same time to live up to it. The work of life should be encouraged but it must be done guardedly and such patients should have regular periods of rest, and the dietetic regulations should be carefully laid down. **Daily massage** is of great benefit to assist the tissue circulation which the patients feeble locomotion is unable to maintain with sufficient energy. He expresses his disappointment in the **Schott method of treatment** and, while he admits that this method has a distinct therapeutic position in cardiac disease, he believes it is a small one. The revival of the **Swedish movements** (as modified in the **Schott treatment**) impresses what **Oertel** had already taught us, the value of **graduated locomotion.** The employment of **tepid saline baths** is a far more powerful therapeutic measure than resisted movements: there is no doubt that these baths can slow the heart and steady it, but they are not without danger in patients who have big hearts with small and feeble pulse, or to those the subject of vasomotor spasm and angina. Rapidity and irregularity due to organic valvular disease are greatly improved, irrespective of the lesion, by **digitalis** and **strophanthus,** but if there is no valvular disease, better results are obtained with strychnine and bromide. It is much more important to lessen the heart's work by lowering pressure than to stimulate the heart to renewed exertion. The larger the heart and especially if the condition of its muscle is doubtful, the more should this rule be insisted upon. [T. L. C.]

5.—William Collier discusses the **prognosis and treatment of dilated heart as the result of overstrain and exercise.** In the writer's experience as far as undergraduates are concerned the most common form of heart strain due to athletic competitions is **dilatation of the right side of the heart,** more particularly the **right ventricle.** The chief **symptoms being more than usual shortness of breath on exertion,** some palpitation and occasional irregularity of the pulse. The chief physical signs are epigastric pulsation and increased area of dulness to the right of the sternum and often a bruit along the left border of the sternum, systolic in time. The exact condition of the heart can only be obtained in many instances by causing the patient to exert himself. The prognosis in these cases is good. Treatment consists in giving up such muscular exercise as throws any considerable strain on the heart. If the athlete continues his efforts for too long a time he runs the risk of gradually inducing a **dilatation of the aorta** which will finally result in greater or less **incompetence of the aortic valves.** [T. L. C.]

6.—Eustace Smith considers **dilatation of the heart in children.** The dilatation may be found quite apart from valvular disease. It is due to **blood pressure** in a flabby, ill-nourished or degenerated heart, or may occur without there being any special bar to the passage of blood from the organ. **Anemic,** weakly boys who overtax their strength in violent games often show an appreciable degree of cardiac dilatation. This may also occur in children of both sexes who grow rapidly, who suffer from coldness of the extremities and poor blood. The condition may occur in **nephritis,** in the **infectious fevers,** and **septic states.** The most severe degree of cardiac dilatation occurs in **diphtheria, influenza and rheumatism.** The destruction of the muscular tissue of the heart is carried to a greater degree in diphtheria and influenza than in rheumatism. It is in cases of acute illness when the dilatation is rapid and may be extreme that we find physical signs and symptoms pointing to a very serious condition. Here the marked increase in the feebleness and diffusion of the apex beat, the softness of the first sounds at the apex and the weak, intermittent pulse show that the dilatation is [illegible] The second sound is accentuated at the aorta as well as the pulmonary orifice and [illegible] The dilatation affects the ventricles as well as the auricles and is due to a more or less grave degeneration of the heart tissue. The history of the case [illegible] The treat-

ment must depend largely upon rest and diet with strychnine and iron as valuable supportive measures; alcohol is also a most useful agent. [T. L. C.]

7.—E. A. Sansom presents a paper on **hypertrophied and dilated hearts as studied and treated in recent times.** Sansom outlines his method of examination of the case and suggests that the greatest care be used in proceeding slowly and without exciting the patient. He pays particular attention to the examination of the pulse and interprets conditions of **bradycardia, irregularity and abnormal acceleration.** He states that **inspection and examination of the hand** of the patient will offer evidence of high value. **Inspection of the face** will reveal conditions of anemia which in a young subject, especially if there is some elevation of temperature, suggests rheumatism. Erratic pigmentations across the forehead, the temporal fossae and the lower eyelids, with sparse sepia-spots on the cheeks and ears point to the probably of **osteo-arthritis.** The condition of the patient's nervous system may also be recognized in part by inspection. He discusses the conditions of hypertrophy and dilatation of the heart occurring in the infectious disorders and that class of cases in which there are no evidences of rheumatism or neurocardiac disorder, but in which there is hypertrophy or dilatation of the left ventricle in association with arterio-sclerosis or atheroma. The general measures of treatment are outlined, and especial importance is laid upon those measures which will sustain the patient's muscular structure and keep it at the highest point of usefulness without occasioning fatigue. [T. L. C.]

CENTRALBLATT FUER INNERE MEDICIN.

January 4, 1902.

A Contribution Concerning the Staining of Urinary Sediments with Sodium Alizarinsulfonate. R. KNAPP.

Some years ago, Gross stated that a 1 per cent. watery solution of sodium alizarinsulfonate stained urinary sediments in a way that made it possible to determine the portion of the urinary tract from which mucus and cells came. Knapp has **tested the value of this stain in a series of 62 cases.** He decides that the **conditions are complicated,** and that it is, as yet, at least, impossible from the use of this stain to draw any absolute conclusions concerning the disease that is present. He, however, calls attention to the fact that the mucus found in normal urine always takes a red stain, only a small portion, at most, showing an orange color or remaining unstained. The mucus from the bladder is in plate-like form, is homogeneous, and shows occasional folds. Some of it appears in more or less finely granulated masses. In the sediment from cases of disease of the kidney or of the pelvis of the kidney, the mucus has an entirely different appearance. It takes no stain, or only a faint yellow color, and shows fine striations and an irregular structure. When the ureter is dilated, and in hydronephrosis, the mucus may have a red appearance. Casts usually stain yellow; sometimes they take a faint violet color. As to the leukocytes, the author believes that in pyelitis they take a faint yellow color, or no stain, excepting when they have lost vitality, in which case they become distinctly yellow. It is possible that, when leukocytes at the height of the disease take no stain, and many of them subsequently take a distinct stain, this indicates that they are losing vitality; perhaps, also, it may be a sign that the disease is decreasing in intensity. [D. L. E.]

January 11, 1902.

1. A Contribution Concerning Congenital Alkaptonuria. A. E. GARROD.
2. Stukowenkow's Method for the Quantitative Determination of Mercury in the Urine. B. BARDACH.

1.—Garrod contributes an interesting series of observations concerning **family tendency to alkaptonuria.** In four families there were eleven cases of this affection; these include almost all the instances that have been reported from the British Isles. He examined six of the eleven cases himself. **The parents of one family, two children of which had alkaptonuria, were own cousins.** Dr. Pavy has also informed the author that in a family of 14 children, four of which were alkaptonuric, the parents were first cousins. Dr. Kirk told him that, in a family with three alkaptonuric children, the parents were also own cousins. In the latter instance, the mother died, the father married again, and the one child of this marriage was not alkaptonuric. In another family, in which two children were alkaptonuric, the parents were not related. The children of first cousins constitute so small a part of the total population and alkaptonuria is so very rare, that the [illegible] frequency of parental relationship in cases of alkaptonuria cannot be accidental. It is, however, **not the result of an increase of a family tendency through intermarriage,** for in none of the cases was alkaptonuria present in the preceding generation. The author believes that these cases are strong testimony against an infectious origin of alkaptonuria, and that the condition is rather a **chemical anomaly,** analogous to anatomical anomalies. As to the period at which alkaptonuria begins, it is known that it may come on in the first few days of life. Garrod describes a recently observed case [illegible] in an alkaptonuric family in which the occurrence of the pigmentation of the urine was watched for carefully from birth on. **The first discoloration of the urine was seen 53 hours after birth.** The mother's breasts contained some milk at this time, but were not full. The child had undoubtedly had milk from the breasts the night before. Hence, the beginning of the alkaptonuria **was dependent upon its taking nourishment into the digestive tract.** This is as one would expect, since tyrosin is undoubtedly the mother-substance of the homogentisic acid. [D. L. E.]

2.—The author has studied the method described, and concludes that it is, at best, a very rough one, and that it is not suited to the quantitative determination of mercury in the urine. [D. L. E.]

ZEITSCHRIFT FUER HEILKUNDE.

1901. (Volume 22, No. 12.)

1. The Disturbances of Micturition Due to Small Prostate Gland. JOSEF ENGLISCH.

1.—Englisch discusses the effects of a **small prostate gland,** in an interesting and thorough article. 199 small prostates were found in 1757 patients examined. The case-histories of 54 patients are given in detail. Just as hypertrophy of the prostate may be congenital, so a small prostate is often a congenital condition. Incorrectly this condition is frequently termed atrophy of the prostate. The gland is either small from an arrest of development, or from organic changes in a previously normal prostate. Between 16 and 20 years the prostate reaches its normal size; up to this time it must be very small to be considered a small prostate gland. Its consistency is normal, and its small size is not the result of disease. Clinically the smallness is due to its position, very frequently also tuberculosis. When the testicle is also small, there is possible weakness of the bladder musculature. Striped muscle fibers normally form a ring about the urethra; when the prostate is small, this ring is small, affording the prostate less support. When this ring contracts, it forms a valve in the urethra, which may be of mucous membrane alone, valvula mucosa; of mucous membrane and muscle fibers, valvula muscularis; or of glandular tissue, valvula musculoglandularis. In the very smallest form of prostates valvula mucosa is noted. The other valves are stronger, and a fourth kind may exist, strong enough to cause hypertrophy of the bladder wall. These are either congenital or they develop with the weak vesical muscles. They cause incontinence, retention, hypertrophy of the bladder walls, dilatation of the urethra, of the pelvis of the kidney, and hydronephrosis. The symptoms of this condition are enuresis at puberty and afterward; frequent inclination to urinate; retention, catarrhal cystitis; pain in the pubis, rectum and sacrum. By rectal examination the small prostate can be felt. The prognosis is as unfavorable as in prostatic hypertrophy. The treatment may be palliative, with catheterization, or radical, with incision and removal of the valve. **True atrophy of the prostate** may be senile; cachectic, with tuberculosis, etc.; functional, after castration, etc.; inflammatory, after abscess, etc.; or from compression by cysts, polypoi, etc. The symptoms resemble those of small prostate. The prognosis is more favorable when the diagnosis is [illegible]. The treatment consists of removal of the cause with palliative treatment of the symptoms. [M. O.]

NEUROLOGISCHE CENTRALBLATT.

December 1, 1901.

1. A Case of Bilateral Symmetrical Areas of Softening in the Frontal Region, With Optic Neuritis. ZACHER.
2. The Origin of Tabes. C. PANDY.
3. Cerebral Symptoms of Carcinomatosis. A. SAENGER.

1.—Zacher reports a remarkable case. A man of 54 who suffered from diabetes, while away seeking health, developed a state of apathy, refused to leave his bed, to eat, or talk, he took no interest in his correspondence, nor in external affairs. He lost flesh, his memory was impaired, he did not know where he was. An examination of the eyes showed numerous hemorrhages into the retina and prominence of the pupils. He seemed unable to hold himself erect, alothough there were no pareses, and the head always seemed to fall backward. The pupils were dilated, the left abducens paretic, the reflexes were lost, taste, smell and sight were lost, but hearing appeared to be normal. There were evidences of atheroma. Mentally he showed a fair degree of intelligence, but soon became fatigued in talking. His condition in this respect, however, varied greatly. Sometimes he was irritable, but gradually he improved until his mind appeared to act normally, with the exception that he showed a tendency to make jokes, puns and sarcastic remarks. A peculiar observation was made upon the pupils, that although they did not react to light and accommodation they contracted whenever the attention of the patient was fixed. He developed symptoms of apoplexy and died. Two **areas of softening** were found **in the frontal region,** both areas showing old and recent changes. In the eye there were numerous hemorrhages into the retina, and the central artery showed considerable atheroma. The case teaches that bilateral disturbance of the anterior portions of the frontal lobes does not produce motor or sensory disturbances. There was, however, in the early stages of the disease, extreme weakness of the muscles of the trunk and neck. The mental symptoms, on the other hand, were quite interesting. The patient lost the faculty of attention, and therefore to a large extent the memory for recent events, although the memory for remote events was excellent. At the same time the patient took little interest in his surroundings, never appeared to notice that he had become blind, either at the time or subsequently, and appeared not to know that he was sick. The symptom repeatedly ascribed to lesion of the frontal lobe—a tendency to joke—was also present. It is, however, to be noted that this patient had a tendency to be jocose before he was taken sick. On the other hand, he did not show any loss of the moral sense, or any of the other changes in character which have been ascribed to lesions in this region. There appears to be no reason at present, to ascribe the retinal changes to the lesion in the brain. [J. S.]

2.—Pandy has performed a series of experiments upon animals using various forms of chronic poisons, and failed to find degeneration in the posterior columns. However, in investigating the spinal cords of a number of persons dying with pronounced arteriosclerotic changes, he found degeneration in the posterior columns, and this with observations of other cords showed that the zona intermedia lis of the spinal cord is the most sensitive to disturbing influences. Furthermore, as studies have shown that in severe cases of peripheral nerve degeneration the posterior columns may remain intact, he concludes that in **tabes dorsalis** the degeneration of the roots is secondary and not primary, and that the disease is really an endogenic pseudosystemic degeneration, probably resulting from chronic luetic poisoning of the posterior columns. [J. S.]

3.—Saenger reports some cases of **carcinomatosis.** The first, a woman of 46, had headache, diplopia, loss of hearing, frequent vomiting, loss of coordination and secondary carcinomatous infiltration of the lymph glands from a recurrent growth in the breast. The brain showed no gross lesion, but there was some perivascular cellular infiltration, and the pia of the bases showed infiltration with cancer cells. There was, therefore, a microscopic metastasis to the brain. In 112 cases, of which he has studied the records, he failed to find any signs of focal brain disease, although in some of them various nervous conditions were present, such as loss of the patellar reflexes, tingling in the extremities, etc. He reports an additional case of a man, 35 years of age, who developed diplopia as a result of paresis of the right abducens, and then gradual loss of vision in the right eye. At the autopsy a carcinoma of the mediastinum was found, and carcinomatosis of the dura mater. He also reports several cases in which metastasis to the brain took place. He concludes that the cerebral symptoms in carcinomatosis may either be of general character, such as coma, apathy, etc., or focalized, with or without macroscopic changes. [J. S.]

WIENER KLINISCHE WOCHENSCHRIFT.

January 17, 1902. (XV Jahrgang, No. 3.)

1. The Etiology of Acute Hemorrhagic Encephalitis. ERNST STR[illegible]ER.
2. Experiments with the Jez Antityphoid Extract. GOTLIEB MARKL.
3. A New Trephinelike Craniotome. OSCAR FRANKL.

1.—Sträussler reports two cases of **acute hemorrhagic encephalitis due to intestinal autointoxication.** The first case, a boy of 16, became ill with malaise, insomnia, fever, headache, and pain in the abdomen. He refused nourishment and showed great weakness, delirium, tremor, ataxia, etc. Feces and urine were passed involuntarily, the tongue was deeply coated, and the urine showed traces of albumin and much acetone. He died two months after the appearance of the first symptoms. The autopsy showed cortical capillary hemorrhages in the right temporal region, parenchymatous degeneration of the liver and kidneys, catarrhal pneumonia, intestinal autointoxication and coprostasis. The second case, a woman of 45, suddenly had convulsions. Two months afterward she began to show symptoms of insanity, and later cutaneous hemorrhages all over the body. Paralysis and death followed. The autopsy showed multiple hemorrhages of the skin, mucous membranes, dura mater, retina, etc., brain atrophy, and numerous areas of softening, due to intestinal intoxication. The literature is fully cited. In six cases of mania, coprostasis existed, with the symptoms due to hyperemia of the brain and meninges. Sträussler concludes that coprostasis causes this cerebral hyperemia. In the second case the hemorrhagic diathesis and the encephalitis probably were due to intestinal autointoxication. He believes that disturbances of the gastrointestinal tract are common in encephalitis as the result of intestinal autointoxication. [M. O.]

2.—In 1899 Jez prepared his **antityphoid extract** in rabbits. Markl has undertaken a series of experiments upon animals with this extract, which he describes in detail. He concludes that the extracts of organs of rabbits, prepared by the Jez method, and the original Jez antityphoid extract contain substances which protect against typhoid bacilli, but to a less degree than the corresponding immune serums; that these substances are specific bodies which cannot be found in the organs of normal rabbits; and that the effect of these protects is antitoxic, not antibacterial. [M. O.]

3.—Frankl has devised a **new instrument for perforating the fetal skull,** like a trephine in its arrangement. It is extremely [illegible] is fully described and well illustrated by diagrams. It perforates the skull of the fetus from within outward, an absolutely new procedure. [M. O.]

JOURNAL DES PRATICIENS.

January 25, 1902. (16me. Année, No. 4.)

1. Gonorrheal Arthritis. CHAUFFARD.
2. Latent Syphilitic Aortitis With Visceral Neuralgia. LOUIS RENON.
3. The Treatment of Psoriasis. HENRY BERNARD.

1.—Chauffard presented two men with **gonorrheal arthritis,** in both of whom the knee-joint was severely affected. As no improvement followed rest, ice, and tapping, they were transferred to the surgical service. In the first case 3 months had passed and 2 weeks in the second. In the first patient there was polyarthritis; in the second, mono-arthritis. In both there were muscular atrophy and great effusion. No germs were found in the liquid removed by puncture in either case. In the treatment the salicylates internally and externally are indicated, yet have but little effect. Rest, puncture, and in some cases a plaster cast or arthrotomy are indicated. Finally massage and electricity will be of service. [M. O.]

2.—Renon reports the case of a **latent syphilitic aortitis** in a man of 40, with severe pains resembling renal and hepatic colic and intercostal neuralgia. No treatment had any effect. A double aortic murmur was audible. But there were no signs of aortic stenosis or aneurysm. Therefore the diagnosis of probable syphilitic aortitis was made, and mixed treatment given. In one month the patient had completely recovered, the pains disappearing after 10 days on mercury and potassium iodide. [M. O.]

3.—**Psoriasis** needs both local and general treatment. Locally Bernard advises oil of tar, salicylic acid, chrysarobin, etc., in glycerole of starch or collodion. Internally he gives arsenic except in acute psoriasis, when it is absolutely contraindicated. Iodide of potassium, diet and hygiene are also recommended. [M. O.]

REVUE DE CHIRURGIE.

January, 1902. (22me. Année, No. 1.)

1. The Radical Cure of Interstitial Inguinal Hernia. PAUL BERGER.
2. Cicatricial Stenosis of the Pylorus Following the Ingestion of Caustics. E. QUENU and J. PETIT.
3. Cholesteatoma of the Breast. L. DOR.
4. A Case of Serous Meningitis of Otitic Origin Cured by Bilateral Trephining. P. LECENE.
5. Early Intervention in Injuries of the Liver. SALVA MERCADE.

1.—Berger, in a thorough article, reviews the subject of **interstitial inguinal hernia,** reporting 6 of his cases and 8 others from the literature, and describes in detail the technique of his new operation for radical cure. An interstitial inguinal hernia is a congenital inguinal hernia complicated with displacement of the testicle, the hernia spreading out between the musculo-aponeurotic layers of the abdominal wall. This may be only intraparietal or intraparietal and scrotal. The intraparietal hernia is like a congenital sac, while the scrotal prolongation is too narrow to admit viscera. The external ring may remain closed, but is generally permeable. The internal ring is above and outside of its normal position. The testicle may be in the abdominal cavity, in the inguinal canal, or in the scrotum. It is generally atrophied, showing marked arrest of development, the spermatic cord being very short. In some cases the testicle is in a separate sac, and holds its normal position in the scrotum. The condition is also noted in women, extending into the labia. Operation is always indicated, even in old individuals, through an oblique incision. The testicle should only be left in young people, or when it is found normal. The technique of his operation, should the Bassini operation fail, follows in detail. [M. O].

3.—After discussing the histology of **cholesteatoma,** Dor reports a case of cholesteatoma of the breast, removed from a woman of 48, with a histological description of the tumor. He concludes that the tumor possessed the peculiarities of a cholesteatoma; that two kinds of cholesteatoma exist, the massive and the pearly, both cholestearic endotheliomata, formed by the proliferation of endothelial cells of the floor of the subarachnoid spaces; that this is the first reported case of cholesteatoma of the breast, probably a purely teratological phenomenon. [M. O.]

4.—Lecène reports a case of **serous meningitis** in a man of 18, following an attack of typhoid fever with double otitis media. He had typical Jacksonian convulsions, embracing both sides of the body. The mastoid was opened on both sides, without anesthesia, and large pieces of the temporal bones were removed. On incising the dura, the brain welled up, showing the edematous pia. A trocar permitted the escape of about 20 gm. of clear cerebrospinal fluid on either side. Both openings were tamponed with gauze and the convulsions ceased at once. He recovered slowly, without another convulsion. Six somewhat similar cases are reported from the literature. All were in young people, and all recovered after removal of the edematous fluid. Lecène believes that this serous meningitis occurs in acute otitis, with severe and diffuse symptoms, and that the condition is cured by removing the pressure due to cerebral hypertension, by withdrawing the liquid. Operation is always advised as the only means of saving life. [M. O.]

5.—Early operation is indicated for **traumatism of the liver.** Mercadé reports 2 cases, one of a stab-wound of the liver, the other of rupture of the liver. Laparotomy with sutures in the liver was performed, followed by recovery in both cases, which occurred in Dr. Richelot's service. A brief review of the literature follows. Mercadé advises immediate operation, with rapid suturing of the liver, packing with gauze, and drainage. [M. O.]

LA PRESSE MEDICALE.

January 25, 1902. (No. 8.)

1. The Topography of Lobar Pneumonia. PAUL CARNOT.
2. Chromodiagnosis of the Cerebrospinal Fluid. A. SICARD.

1.—Acute lobar pneumonia involves whole segments of the lungs, and is better called **segmentary pneumonia,** according to Carnot. Clinical examination and autopsy do not always agree upon the extent of the pneumonic process, for the physical signs may not be outspoken. But a well defined area of homogeneous dulness is generally found, usually metamerically arranged. Anatomically this segment may take in more than one lobe. The pneumococcus probably arrives by the lymph-channels, and the most susceptible segment is attacked. This may depend upon some reaction from the segmentary nervous centres, either due to the direct action of the toxin, or to indirect or reflex action following the excitation of the terminal nerve filaments in the lung affected. Thus pneumonia may be the expression of a reflex bulbomedullary reaction to a pulmonary infection, which explains the metameric topography of the disease. The pain, red cheek, dilated pupil, herpes, etc. all support this view. Congestion and edema of the lung are also metamerically distributed. Carnot concludes that in pneumonia there exists, besides the local effects of the toxin, a peculiar nervous reaction, probably reflex, metameric in type. This remains, however, a hypothesis, since there are no means of proving it. [M. O.]

2.—By **chromodiagnosis** of the cerebrospinal fluid Sicard means the diagnosis from its color of a condition, in which this liquid has become colored. When subdural hemorrhage occurs, whether cerebral, medullary, or meningeal, the cerebrospinal fluid varies from red to yellow. This yellow pink color is also noted in acute cerebrospinal meningitis, tuberculous and bacterial. In chronic jaundice the fluid is greenish yellow. When no hemorrhage occurs, this is noted at once; when there is hemorrhage, the red corpuscles are easily removed by centrifugalization. When a second puncture is made, a yellow color may be the result of hemorrhage following the former puncture. As a rule this can be seen from the third to sixth day after an injury. The pigment is probably that normally found in serum, luteine. Some lymphocytosis exists generally with this coloration. [M. O.]

Special Article.

A CORRESPONDENCE BETWEEN DR. REGIS AND DR. SPITZKA.

REPLY TO THE ARTICLE BY DR. E. C. SPITZKA, ENTITLED, "REGENTICIDES NOT ABNORMAL AS A CLASS," WHICH APPEARED IN THE "PHILADELPHIA MEDICAL JOURNAL," FEB. 8, 1902.

BY DR. E. REGIS,

Professor of Psychiatry in the University of Bordeaux, France.

Translated from the original French.

To the Editor of the "Philadelphia Medical Journal:'

Dr. E. C. Spitzka published a long criticism of a summary upon my article, "Les Régicides," which appeared in the *Journal of Mental Pathology*, November, 1901, by Louise Robinovitch. It is very natural that Dr. Spitzka should not share my opinion upon this question or upon any other, and that he should say so. What seems less natural is that my honorable and distinguished colleague, toward whom I have never shown any lack of consideration, so far as I know, should use toward me a tone in which I no longer recognize the usual courtesy of our excellent confrères in America, with whom I have so many sympathies. Taking this simple quotation: "That Régis may, with crude notions of American customs, such as prevail 'outre-mer,' picture an entr'acte of 'tarring and feathering' as among the extras to which an American regicide might be treated; we are not supposed to deal seriously with. Likewise, were it too much expected from a Frenchman to familiarize himself with the fact that in 1820, when Sand was executed, the torture no longer existed in Baden. Of Staps' case we, however, had a right to expect him to have more authentic information; as his act belongs as much to French as to Austrian history. But that Régis should be so imperfectly acquainted, as he shows, with the history of his own countrywoman, the brave Charlotte, is indeed surprising." To a criticism so formulated, I shall not answer, easy though it be.

Dr. Spitzka will permit me to tell him, however, that to teach a lesson in the history of his own country to a foreign colleague, in this manner, he must be very sure of himself, must know thoroughly what he criticises. But that is not the case with Dr. Spitzka, who seems to ignore —and that is very surprising in so learned a man—that the article so eagerly torn to pieces by him, is but a résumé of several works which I have published in the last fourteen years upon the question of the regenticides, particularly of one book which appeared in 1890, in the the Bibliothèque de Criminologie (1), the second edition of which, with many additions, is soon to be published.

I regret to have to add, since Dr. Spitzka obliges me to, that it is not my custom to do my work in a hurry, and that in preparing none of my books have I pursued researches so long, so thoroughly, and so carefully as for "Les Régicides." For many years I have been collecting documents upon this subject; I have searched the historical archives of many libraries; have bought portraits, or had reproductions of very rare portraits made; have obtained works almost unattainable, such as "l'Essai sur le Régicides," by August Bonjour (2), or "la Biographie de Staps," by his father (3), which Dr. Spitzka presumes I do not know. I have collected pamphlets, journals, different publications, unedited notes, such as those gathered by my friend, Dr. Alder Blumer, upon each celebrated fanatic; in fact I have not hesitated to put myself out, as last year I hastened from Bordeaux to Geneva to study, with my distinguished colleague and friend, Professor Ladame, with the special authorization of the Swiss Government, Lucheni, the assassin of Empress Elizabeth (1), in regard to which subject Dr. Spitzka accuses me of being ignorant of the fact that the crime was committed intentionally at Geneva, where the death-penalty has been abolished, while, in truth, Dr. Spitzka is but repeating an error which was spread by the newspapers.

Under these conditions, it is to be supposed that I am well conversant with my subject; that I know perfectly—without displeasing Dr. Spitzka, who seems to have played upon the meaning of the French words, "tortures" and "supplices"—what was the sort of death of each of the celebrated regenticides; and that if I have declared that there were but few women among them, it was because that was the truth, unless, to the true regenticides, that is to say the murderers of high political personages from political or religious fanaticism, whom I have alone had in view, are added either those who were affiliated to sects, or women who have killed, or tried to kill, private persons, such as Léona Léon or Vera Gelo, quoted by Dr. Spitzka, no one knows how or why.

Besides, the works of which I speak in "Les Régicides" have long been known to those intimate with the question, not only in France, but elsewhere; so well known that the late Hack Tuke asked me, even in 1892, to write the article on "regicides" for his psychological dictionary; also that Professor Silvio Venturi (2), of Italy and Professor Nina Rodrigues (3), of Brazil, have frequently quoted me in their works; and finally that, when King Humbert was assassinated, in July, 1900, two American news agencies, the "Associated News," of New York, and the "Gilliams' Press Syndicate and Bureau, of Associated News," of Philadelphia, should both have asked me—without, naturally, my having replied to these extramedical solicitations—for special articles destined to be reproduced in the principal journals of the United States.

All this simply to show that Dr. Spitzka, who charges me with a superficial knowledge of the history of regenticides, knows but very imperfectly my works upon the subject, which, however, are easily within his reach.

Dr. Spitzka would, I believe, perform an act worthy of his character and of himself in recognizing that he was too quick and too strong in his criticism, and that one might form an opinion different from his opinion upon the question of the regenticides and Czolgosz—I am glad to find myself here in the good company of Drs. Talbot, Channing, Christison, Blumer, etc.,—without being an ignoramus.

However that may be, his attack, so unjustified and so excessive, has not changed either my sentiments or my attitude of perfect courtesy toward a foreign colleague, whose interesting works I have always appreciated, for, although a Frenchman, I know enough, not only of the history of psychiatry in my own country, but also of that of America, to realize the deserving position held by Dr. Spitzka.

REJOINDER TO DR. REGIS' REMONSTRANCE.

By EDWARD C. SPITZKA, M. D., of New York.

Dr. Régis is right in assuming my willingness to admit and correct any injustice I may commit in criticising others; and it needed not the complimentary reference so handsomely concluding his remonstrance, to secure my disclaiming an intent to injure his feelings, as his appear to have been. Nor am I blind, as that writer hints to the fallibility of the critic: my readiness to admit this is exceeded only by a selfish anxiety to anticipate the critic's discovery of mistakes committed in that capacity by detecting, avowing and correcting them myself, if possible.*

(1) a. E. Regis: "Les Regicides dans l' Histoire et dans le Present, Bibliotheque de Criminologie". A Storck, Lyons, and G. Masson, Paris, 1890.
b. Article on "Regicides," Dictionary of Psychological Medicine, Hack Tuke, London, 1892.
c. E. Regis: A Practical Manual of Mental Medicine, second edition, translated by H. M. Bannister, Utica, N. Y., 1894.
d. E. Regis: "Le Regicide Caserio". Archives de l' Anthropologie Criminelle, January, 1895.
E. Regis: "Les Faux Regicides et les Vrais Regicides," La Presse Medicale, August 1, 1896, etc., etc.

(2). "Essai sur les Regicides," by Auguste Bonjour, Paris, 1857.

(3). "Friedrich Staps, Eine Biographie aus den hinterlassenen Papieren seines Vaters." M. F. G. Staps, Berlin, 1843.

(1) E. Regis: "Lucheni et Jean Jacques Rousseau," Journal de Medecine de Bordeaux, 1901.

(2) Prof. Silvio Venturi: "Regicidi ed Anarchici," Catanzaro, 1897.

(3) Prof. Nina Rodrigues: "O Regicida Marcellino Bispo," Bahia, 1899.

*"Through ambiguous reading in one case, and over-confidence in my memory in another, I have given Cook's [illegible] paternal ancestor by one generation removed instead of [illegible] remote by several generations to Octavius Cesar Augustus and converted uncle and nephew into brothers in the case of the assassin couple Marcomichaelis.

What would render the pleasure of gratifying Régis by withdrawing my strictures, a justifiable duty, is however lacking, namely his meeting of any issue I have raised or the demonstrative contradiction of a single fact I have advanced. For example, his severest arraignment is of my statement anent his representing Guiteau, Staps, Sand, and Corday as having been tortured. He does not deny this, he does not advance a single fact conflicting with my correction, he does not cite a single document or writer, nay, not even guess or rumor in rehabilitation. Instead, he hints that he could do so if he cared.

Now, while Dr. Régis may feel justified in punishing my alleged discourtesy, tit for tat, by first rendering me thirsty for his knowledge, then to leave the thirst thus provoked unquenched, I see no reason for his involving that large and innocent circle—the readers of the **Philadelphia Medical Journal**—in a retribution merited by the single offender alone. Dr. Régis merely reproduces my strictures to this audience, next states that he can show them to be fallacious—he even adds that he "could do so easily," and last—abruptly refuses to do so.

From my, perhaps, unconventional point of view, which discovers the essence of true politeness in actions rather than in phrases, and which with crudity inseparable from one struggling in vain against an innate tendency to bluntness, regards the conventional as a mere surface varnish which for once that it embellishes the solid, thrice hides the hollow and flawed, Dr. Régis has here committed a far graver infraction of courtesy than that for which he takes me to task. What he accuses me of is a mere breach of manners, not a wrong in the matter; a fault in form, not an offense in spirit. His procedure, on the other hand, strikingly resembles an invitation to the readers to attend an exhibition, allowing the audience to accumulate at the portals of his museum, holding forth to them announcements calculated to rouse their curiosity to the highest point and—that point of suspense having been reached—abruptly bolting the door in their faces.

If Dr. Régis will kindly estimate the aggregate of disappointments he has thus inflicted upon thousands guilty of no other offense than having seen an article criticizing his, he may conclude that the most delicately turned compliments and polish of language may fail to make amends for a procedure which I shall leave it to himself to define—doubtless better qualified as he seems to be—for the task of calling spades by other names, than I am.

I do not claim to be a French scholar—far from it—hence, I could not have ventured to, as Dr. Régis suggests, play (joue) upon the meanings of such words as "tortures" and "supplice" or to make their finical interpretation a basis of criticism. I leave playing on words to masters of the art, such as for example the distinguished author of the Calembourg, with which Régis introduces the propositions I have criticized.*

As one aiming to be a serious thinker I cannot suppress impatience at such procedures as the following. I stated that Régis was wrong in claiming Staps to have been tortured—or if Régis prefers—of having been given any opportunity to manifest "the resisting power to torture" which he claims was shown by Staps in common with other regicides. That writer complains of this and replies to my strictures: That Staps was tortured? No. Or admits that he was wrong? Twice no. He points to the fact that he possesses Staps' father's book! A triumphant answer indeed. Again he objects to my citation of several murderers of prominent political personages, stating that they are not true "regicides," because they were not "single" actors. Now, as he cited Bresci, Orsini, Staps, Sand and Clement as typical regicides in his article, and as I had distinctly pointed out that they had partners in knowledge, the two former in the very act, the three latter before the act, one has reason to demand of Dr. Régis either to prove that I did so wrongly, or if I did so rightly, to withdraw his own cases from his own category, or failing to do either, to modify his definition of "true regicides." To evade these alternatives and merely emphasize a declaration in face of such fatal objections is nothing less than meaningless reiteration and as such an insult to the intelligence of his readers, who may regard his discourtesy in matter as a more serious one than any discourtesy in form of which I may be guilty in so stigmatizing it.

When I enumerate facts militating against other specific allegations, I am answered that Régis has made researches in remote libraries and hidden archives: that he has not shirked the trouble of going to Switzerland* to see Lucheni, nor grudged the expense of having the portraits of all regicides extant and accessible copied for his collections. In what way this affects my arguments, or answers my questions, or solves any problem under the sun, I fail to discern. Dr. Régis will pardon me if this, though not intended as a personal reflection, appears as discourteous as other of my misdeeds—it is he who justifies by his evasion of every real issue my referring to the fact that collectors of curios are not necessarily masters of science. It were as just to claim this as it were to imply, as Régis seems to imply, that no one who has not gone on the same hunt for monstrosities can possibly discuss the subject. All his curios, his picture-gallery, his adventure to Switzerland, his correspondence with Italian and American writers, do not seem to have been of anything but detriment to him. At all events, without either a picture-gallery, without curios, without having had an interview with Lucheni, nay, without having had the eminent honor of being invited by a newspaper syndicate to write on the topic, I am able to discover Bresci's accessories to whose existence Régis' armamentarium renders him (wilfully?) blind even after they have been thrust under his view. It is equally strange that Régis should eloquently expatiate on his arduous enterprise of interviewing Lucheni in Switzerland, and not a word of explanation to offer for not accepting my suggestion to visit a much less remote locality—a mere jump across the Pyrenees—to have learned, what we have been able to discern at the greater distance of 3,000 miles, that the magnicide of Barcelona was so far from being a "solitaire" that when they came to count "him" he numbered exactly six anarchists—at least, six such were executed for the crime of this "solitaire."

Régis has not a word to say about his other "solitaire," Orsini; this "solitaire" was also executed in the plural, and sentenced in the quadruple number; and the name of this "solitaire"—I beg Régis seriously to incline his ear—was Monsieur Orsini-Rudio-Pierri-Bernard-Gomez.

The following is an interesting comment on Régis' attitude in face of the most important issues raised. I must first recall that I had reminded Régis that Bresci had an accessory who was sentenced to prison, and that it was thus officially established that he was not a "solitaire" in Régis' sense. Dr. Régis disdainfully passes this by. While not ambitious of receiving his acknowledgements for information so pertinent to his studies, I did expect him to withdraw Bresci from the list of solitaires.

Perhaps he will incorporate the following in his col-

*Regis article opens as follows:—

"Il parait, comme l' a dit un spirituel chroniqueur, que, par une sorte de predestination de nom, je suis forcement voue a l' etude des Regicides."

Translation:—

"As a witty writer has expressed it, it seems as if by a kind of predestination through my name, I were imperatively pledged to the study of Regicides."

I would have reproduced these lines with the original criticism, but for misgivings, lest the reader condemn the implacability with which the critic treated an article opening with so appealing a display of innocuous amiability.

*Where his opportunities for studying the cantonal laws were of so exceptional a character that they enable him to contradict my statement anent the abolition of the death-penalty there. Since making this statement I learn that I have been all the while in the excellent company of Dr. Nacke, of Hubertusburg, who also struggles with an impression to the same effect, and whose error Dr. Regis is the solitary discoverer of, and, I surmise—seems destined to remain the solitary believer in. If he is right, however, then indeed journals, reports of court-proceedings and cyclopedias are linked in a conspiracy against him.

Possibly Regis intends not to question my statement as to the law being so, but my assigning this law as determining Lucheni's choice. In questioning this, Nacke sides with him. However, as the original interpellation was not directed to Regis' particular address, I do not feel justified in taking up the space required for giving the reasons, convincing to me, that Lucheni is a treacherous and hypocritical affector of altruism, and absolutely untrustworthy as to his disclaimer of egotistic motives. It happens, singularly enough, that as I am writing, an accessory of Lucheni's has been arrested at Duesseldorf at this very day; further developments may hence supersede any hypothetical or speculative surmises.

lection, or the original from which it is here extracted. But, one way or the other, "Bresci must go" from the "solitaire" column, as must other of his "false solitaires."

In the early part of February, 1902, the police of New York City revealed in detail the plot which resulted in the assassination of King Humbert. The report contains the direct assertion that the crime was planned in that city, and the names of the conspirators are freely given. The assassination was planned four months before its execution, at a meeting called and presided over by Enrico Malatesta. Among those present were Gaetano Bresci, Guido Canovo, the Grazzini brothers and the Blatto brothers, who are now fugitives. At the close of the meeting Bresci volunteered his services, saying he was ready to make the sacrifice. For this he was loudly applauded, and Malatesta promised to return to Europe to watch the situation and send word when the time was ripe for the blow. Anarchists in Paterson and New York collected funds, and Bresci, Antonio Larner, S. Pallavicini, Granati, Salvatore Quintavalle and others started for Italy.

Just before their purpose was accomplished, the assassination was foretold on this side of the Atlantic by Luigi Raffazzi, Vito Sovieri, La Bianca, Papini, Luigi Granati, and S. Pallavicini, who was to have assisted at the assassination, if necessary, but who got no further than Paris, where he died (suicide or murdered?). Granati was in Monza when the assassination took place, and he was at the side of the murderer; he escaped. Larner and Quintavalle were arrested after the deed.

These are the facts detailed in the police report which was sent to Baron Fava and Consul Branchi soon after the crime.

I was prepared for the evasion of some issues by the counter-allegation that my cases were not true regicides from the Régis point of view, and this because his definition is as inapplicable to his own cases as a definition can well be; and it were hence too much to expect its adaptibility to anything else. While this is advantageous to him as a mere debater by its leaving numerous lines of retreat open to him, over an oscillating platform of an expansible and contractible basis, it is only misleading in scientific discussions. And even the most expert equilibrist may come to grief on a thus selected dialectic arena, especially when he fails to look behind him. In objecting to my cases as not true regicides because they were not such of single actors or "solitaires," he has not alone forgotten that he sweeps away a full two-thirds of his own corporal's guard, together with only half a dozen or so more out of my array of several hundred, but that he practically thereby excludes the insane magnicides as a body.

He does so in this wise. His definition makes it a condition that the assassins have intrinsically altruistic aims and carry them out in a spirit of fanatical devotion and self-immolation. Now mark! The insane are essentially egoists, even the elaborate dissimulator of insanity usually fails at this very point, and consequently we find an altruistic motive genuinely and *bona fide* such, so rare with the typical lunatic that in insane regicides it does not occur oftener than one may conceive allowable in the Chapter of Accident.

I challenge Régis to deny that the prime motor in the case of Prendergast and Guiteau was the disappointment of insane office-seekers; that Bellingham and Domenique Miller had any other than alleged financial wrongs to avenge; that McNaughton, Hadfield, Sefeloge, Schildwächter and Passanante had any other than egoistic fears or projects.

Long will Régis search the list of truly insane regicides before he encounters a Ravaillac or an Yseult Dudley, two of the purest instances of approximately altruistic insane political assassins or regicides I can discover.

Dr. Régis here finds himself in a worse position than the one I ventured to express in my former paper where I said that Régis' facts are mostly not so, and the few that are so, proved the exact opposite of what he intends; for his definition and his twisting of it to adapt itself to this case favoring his prejudices and to exclude that other case opposing them would not only fail to establish any positive truth, and disprove all that Régis ever claimed, but it would also overthrow all our hitherto established knowledge on the subject.

And now a parting word as to something more important than courteous phraseology and meaningless compliment, namely, fairness in argument, and correctness in citation of others. When I enumerate a series of cases proving that Régis has failed to incorporate a number of magnicides which would more than double his number as claimed, he may feel justified in excluding as not meeting his requirements this or that one which appears to him a doubtful one. But to do this and in the same moment pass by in ignoring silence the unobjectionable cases, I say "unobjectionable from a Régis point of view—of Vera Sassulitch and Yseult Dudley is self-condemnatory. If he can not deny their properly being so placed, let him admit them. If he can deny it, let him do so; but mere silence is not going to argue a fact out of existence.

It had indeed been a dangerous admission for Régis view, that case of Vera Sussulitch. The difference between her and the Peroskaya is a little greater than that which might be conceived as distinguishing twins; to have admitted the one and excluded the other, because one had accessories and the other did not, would have revealed the full extent of the absurdity which makes the solitariness of a criminal a criterion of his insanity or of any other status. Even enthusiasm, carrying an investigator to extremes, can scarcely explain the raison d'être of such a claim.

Régis struggles with an impression that I questioned his knowledge of Staps' biography by his father. I mentioned neither biography nor parent. I mentioned Staps, however, and that Régis was wrong in asserting his torture, nor do I believe that the fact that Régis has acquired a desirable literary treasure in the shape of the rare work he mentions controverts my correction. I congratulate Régis on his acquisition, but condole with the reader, to whom certain suggestive contents of the work or rather well known statements of the father might have been imparted by its possessor in epitomized form. Must we surmise that his failure to do so was because it would have shown my correctness in every particular?

I shall supply the omission, for Dr. Régis is not the possessor of the sole sources of information regarding Staps and his deed. From Staps' father Régis could have learned, first, that his son was not insane; second, that an attempt was made to suborn him to admitting his son's insanity; third, that he received considerable sums of money from an anonymous sender through an officer high in the French service; fourth, that he knew nothing of his son's fate for a long time; fifth, that his son, so far from complying with Régis' condition of never having confidants, had made two such confidants, and seeing that they did not take to his project, and apprehending a friendly-meant betrayal, travestied his declaration and pretended it to have been in jest; sixth, that Staps was executed by shooting, pursuant to sentence of a court-martial, and tortured *in no way*.

In making good Régis' omission to supply these facts I do so in an entirely unselfish spirit, and shall be pleased to learn that that distinguished alienist can therefrom derive adequate consolation for his neglect.

I need not dilate on the injustice of Régis' accusation of unfamiliarity with his conception of real magni- or regicides. He makes singleness of the actor an invariable condition as the reader sees; yet in the article I ventured to criticize he enumerates Orsini's as a typical case. Now, as Orsini had three other active partners simultaneously performing exactly the same act as prearranged and as that Régis certainly falls under the charge of unfamiliarity with the conception he is so proud of and on which he insists so arbitrarily. And he is thus unfamiliar far more than he can show me to have been. The reader will find that my real offence is not ignorance but refusal to accept Régis' artificial demarcation. No better justification do I require than the one furnished by Régis' inability to cope with the unnatural and problematical bounds he has tried to establish. When his ideas on this subject shall have crystalized into something tangible, it will be time for him to examine me as to my familiarity with the French literature on this subject. For the present his reference to it is altogether out of place. As I do not feel affected by it in any way, I limit myself to assuring him that with one of his papers I familiarized myself completely before ven-

turing to criticize it, the one in question. So far am I from conceit implied by him as characterizing one who dares to correct him on the history of his own native land, that I claim to have done no more than any tolerably well-read man would have felt called upon to do, anent errors so glaring that the writer committing them hides his inability to explain them away under the unwarranted assumption of offended feelings.

I shall not ask Dr. Régis by what right he wanders out of his way and from the subject as well, to discuss a subject so utterly beyond his ken or his province as the one just referred to of my familiarity or ignorance with the French literature of the subject. I shall gladly compound with him, granting a release from this otherwise obligation, if he will first answer the many questions which he has left unanswered and which are germane to the subject. For I do not seek a personal quarrel nor any quarrel of any kind; I have raised questions, and assailed propositions which I hold to be far more vulnerable since reading Dr. Régis' letter than I pronounced them before, and from this position no side-issue shall tempt me.

The Bilious Hemoglobinuric Form of Malaria.—In the *Archives de Médecine et de Pharmacie Militaires*, for September, 1901, J. Pailloz reports in full the histories of six cases of malarial hemoglobinuria, treated at Tonkin. All but one patient had already had attacks of malaria; all but two recovered. The temperature charts accompany the case-histories. Detailed examination of blood and urine was impossible, from lack of the necessary instrument. While the colored race seems more resistant to malaria than the whites, bilious hemoglobinuric fever occurs among them also. This form of malaria is most frequent in the tropics, and in those regions in which the other forms of pernicious malaria occur. It is mainly seen in those who have had frequent attacks of malaria. The majority of the cases are seen in the fall of the year. In three cases liver and spleen were enlarged; in three others there was enlargement of the spleen only. In one case this enlargement was noted upon the second day, in another, it was colossal. When the hemoglobinuria occurred, the pulse was slow and dicrotic, the temperature remaining high and irregular. The hemoglobinuria appeared as a rule after the chill, and disappeared gradually 18 or 20 hours afterward. It occurred but once in each of five cases, and twice in the remaining case. The emaciation was marked. Jaundice appeared with or after the hemoglobinuria. The fecal matter examined contained bile salts. Albuminuria occurs, and anuria may follow. The prognosis is unfavorable. Pailloz believes that not hemoglobinuria, but hematuria is caused by quinine. For quinine will cause the disappearance and failure of recurrence of the hemoglobinuria. In another case, not yet published, the effect of the quinine was striking, undoubtedly resulting in recovery from a condition of coma in malarial hemoglobinuria. Repeated hypodermic injections of one or 2 gm. of quinine are indicated. The absence of the hematozoa and pigment from the blood does not prove that bilious hemoglobinuria is not malarial. It is possible that the theory of mixed infection may better explain the occurence of the hemoglobinuria. [M. O.]

Facial Paralysis a Frigore.—Francois Galdi reports a case of facial paralysis in a man of 57, following exposure to cold, the fresh air blowing directly upon his right cheek. Complete facial paralysis resulted, there being hardly any reaction to electrical stimulation. Counterirritation was at once applied, followed later by steam baths, a blister on the mastoid process, electricity and massage. In three weeks the condition was cured. No internal treatment was given. After a review of the pathology and therapeutics of facial paralysis, Galdi repeats the facts that no internal treatment is needed; that counterirritation will do good for about a week; and that after a week, electricity and massage will cure the condition. (*La Independance Medicale*, August 21, 1901, No. 34). [M. O.]

Original Articles.

THE DANGER TO THE PUBLIC FROM THE AMBULANT CONSUMPTIVE.

By J. O. COBB, M. D.,
of Portland, Oregon.
Passed-Assistant Surgeon, U. S. Marine-Hospital Service.

In the fight against the most terrible foe of mankind the phthisiologist strives to learn all the avenues by which the infection is introduced. We want to know how long the bacillus survives after ejection from the human body to its new environment of ground, floor or walls; whether the sputum in the chronic case still maintains viable bacilli; and if so, the extent of danger in such cases. And, furthermore, we must insist on knowing whether the patient uses any or no precautions, and whether he has been properly instructed as to the danger he is to his own immediate family and to the public in general. Such a case must be constantly under observation and kept keyed up to the great importance of absolute faith on his part in carrying out his obligation to the general public. Even after the consumptive has learned to prevent infection, it will require constant nagging to keep him in active sympathy with us in the fight.

The importance of this phase of the question has been uppermost in my mind for several years, in fact since 1885, when I became acquainted with a family in which a member had had the disease for nearly 40 years. I have watched this family ever since with increasing interest for signs of the disease, but so far only one other member has contracted the disease and the history of the case is not clear. This family is scrupulously cleanly and have been aware of the danger to them for many years. It is well to say that this patient is now over 80 years old, and still goes about and has been an active woman all this time. Can one picture to himself the danger this patient has been or think deep enough in figures to even in a measure comprehend the number of bacilli this woman has bred and cast off into the world?

Consumption does not kill quickly in all cases, and therein lies the chiefest danger to the public and the greatest problem to the phthisiologist. It is in no flippant manner and with the hope to be properly understood that I say it would be a blessing to mankind if the consumptive's life terminated rapidly in all cases. I speak broadly, of course, for my friends know that Fate has been kind to me in preserving the life of a member of my own family from this terrible and dreaded disease.

How many cases of tuberculosis the practitioner can point out that are going their daily rounds spraying the sputum while coughing in street cars, in offices, in theatres, in their own homes! Many patients will tell you that they do not expectorate at random, but always into handkerchiefs, or the fire or the spittoon. Yes, possibly so, and still to the thinking mind there are so many sources of possible infection from such cases that it gives one the horrors to think about it in minor detail. I am not an alarmist, but just think of such cases from all sides of their environment; and also think

of the thousand and one ways this infection may be introduced. The epidemiologist looks at the etiological factors of such diseases from every standpoint, and it is not exaggeration to say that the remote factors, especially in tuberculosis, are the hardest to deal with, because they are so insidious. See the danger to the laundry employé; and to the one who sorts out the soiled clothing to send to the laundry; and the danger from dried sputum in the clothes basket, which is shaken out on the floor to be sent into a whirlwind of dust raised by sweeping. The patient who expectorates into a handkerchief will carry the same handkerchief in the pocket, and any one knows that sooner or later it is soaked with sputum, finally saturating the pocket. By and by this suit of clothes finds its way to the cleaner or to the second hand dealer, or possibly to the pawnshop. The dusting and cleaning is liable, and most probably does, infect the premises of the cleaner. A great hue and cry is raised against woman's long skirts sweeping up the sputum, which is later dusted off and dried. There is no reasonable doubt that the disease is spread in this manner, but let us hope that women will not have to give up what is so becoming to them for the sake of filthy man with his detestable spitting habit. These are but a few of the methods of infection, and will serve as illustrations. There is also an esthetic side to the question. I have yet to see a consumptive lady expectorate on the ground, then why should a man especially a gentleman, be so filthy. One of our nicest towns in the west (El Paso) is dangerous from the spitting nuisance, which I would rather call the spitting crime. These western towns will have to enact vigorous laws against the spitting crime and enforce them rigidly or they will be compelled from purely a matter of self-preservation to exercise their constitutional right and prohibit the consumptive from sojourning among them.

There is quite another side to this question. We get up in medical meetings, denounce the spitting habit and shout about the dangers from the consumptive and that the sputum must be sterilized, and yet what has the medical man really done in a practical way for the consumptive to help him to prevent the spread of the sputum at large? In institutions there are spittoons, spit cups and pocket bottles. That is true, but the man or woman who is working and living at home, or traveling for his or her health, what has been done for these? How are they to care for the sputum? Given a case of tuberculosis and send him to El Paso, say, and even though you tell him what to do, there is no way for such a person conveniently or practically to follow out your instructions. If he has a Knopf bottle, how and where will he sterilize it? Empty it into a water closet in a hotel or train? Try it and see what a mess you will make trying to get the sputum out. Then after it has been poured into the closet, how and where is the bottle to be cleansed? Of course, the sputum and flask are not sterilized by such a case. Did you ever try to cleanse a sputum cup or sputum bottle by washing? Then let me challenge you to the deed before you prescribe for your patient, for I know that nothing could ever induce you to try it again. Now picture your patient living at a hotel or boarding house. He will not, nor would you, go about the streets with a cup in his hands. That is ridiculous. If you try to have him use paper napkins, it is easy to point out that that is also absurd and dangerous. He will use them for a time, until he gets disgusted with having his pockets bulged out with the soiled napkins, and this same patient will use the napkin and throw it away. What else could one expect? A sick friend, a physician, too, and a bright one, acknowledged with shame that he was not altogether successful in entirely disposing of the sputum, because he could not always carry a cup or paper napkin, and he did not use a flask, because he could not disinfect it. Then, too, let us go in imagination to the sleeping room of one of these ambulant cases. He usually has others sleeping in the same room with him, and it is quite probable he has one or more spells of coughing during the night. Suppose that he has a sputum cup at his bedside, is it reasonable to believe that the average patient will take any care in preventing spraying of the sputum while coughing? Von Leyden has called attention to the fact that while coughing particles of sputum containing virulent bacilli fly several feet away. I have seen patients going about with their sputum cups and following the directions given to the letter by expectorating into the cup at all times, though no precautions were taken to prevent the small particles from flying off into the air. To my mind, these small particles sprayed into the air are far more dangerous than would be the ejection of large tenacious masses onto the ground or floor. It is problematical as to whether or not these cases spread the disease to any great extent in restaurants, hotels and their homes by forks, spoons, cups and glasses, which come in contact with the mouth while eating and drinking. However, it does not make one any too comfortable to sit in a public dining room and eat with a fork or spoon which has in all reasonable probability recently been used by a consumptive, especially so, since we know that waiters take these articles to the pantry and swish them around in warm water, wiping and returning them to use without further cleansing. Of course, to make a repetition, it is only problematical that the disease is communicated in this manner, and yet Lartigau found bacilli on a spoon immediately after it had been used by a consumptive. The saliva, tobacco spit and the ordinary hawking and clearing of the throat must be cared for as scrupulously as sputum, for I have and others have found bacilli in these fluids.

For a number of years I have made a point to bring out in questioning cases of old standing how long they thought they had had the disease, how long they have expectorated, the method of disposing of the sputum and the kind of instruction, if any, they have received from physicians. Roughly speaking, most of the cases had had the disease two and a half years, and the average life of such cases is four and a half years. (Figures not accurate, only approximate.) There have been 168 cases admitted to this station, June, 1901, and about 50 per cent. of them give histories of chronic cough and

expectoration for two or more years standing. They have spent their time in and out of service hospitals; at sea on long or short voyages, huddled with other men like so many animals; or occasionally ashore in the sailors' boarding houses, which are, to play on a word, literally alive with bacilli from such cases. In these cases no precautions were ever taken and none were expected. Instructions to these men away from the discipline of our stations is a waste of time. Aside from bringing the sailor here to cure him, this is one reason why it has been necessary for the Government to remove the consumptive sailor to the arid west to get him well away from his shipping surroundings, to a place where he can no longer spread infection.

The next step in consideration of this question is the one of properly controlling the ambulant consumptive. As a rule, they are unable to give up their vocation, or in the cases of women to leave their families. It is impossible for poor people with small salaries to leave and go away into the country or in any way change their surroundings; therefore, the initial case goes on infecting others in his own home and abroad in an endless chain, but ever on the increase. The poor tailor working away in the squalor of sweat shops; the tired and limp seamstress going from home to home everywhere spreading infection; the clerk bending over his accounts in stuffy offices, spraying the sputum from constant coughing; the sick, hectic, weary mother with four to six children; or the consumptive child, these we have ever with us and among us as ghosts warning us of that which we leave undone. These are the people we must help, if not from a feeling of philanthropy, then from a sense of self-preservation. These cases in the working class are very dangerous and spread the disease here and there, far and wide and in places little dreamed of, so far do the ramifications of the different social strata extend into our lives. For the rich must have the poor with them, among them, as help, and one has only to reach out a little in imagination to see the step from the sweat shop to the wealthiest homes. The poor consumptive is not the only one blamable, for do you know one wealthy person who properly cares for the sputum under all circumstances? Of course, the assumption is that expectoration into the handkerchief is wrong; that expectoration into the fire is wrong, besides being disgusting; that expectoration into spittoons, or on the ground, or in street cars, is equally offensive, besides being dangerous.

Now the principal point of this paper is to show that to the present date much if not all the blame for the ignorance and noncompliance with proper precautions is to be laid at the door of the physician. Few doctors really know how to deal with the consumptive from this point of view; and it is not the fault of the patient that he uses little or no precaution. We have given them spit cups, filthy things, sputum bottles that attract attention to their misfortunes, spittoons that are dangerous, and disinfectants that do not disinfect. The patient cannot go about with a spit cup in his hand, and few will carry the bottle in public, because it is sure to attract attention. The consumptive at home in the midst of his family objects to the cup, and it is disgusting to others to have it around. I have seen a patient get up and move away from another who had a spit cup in his hand. In summer, when the flies are bad, spit cups are positively dangerous and spittoons a nuisance.

I ask any reader of this article if he has ever seen on street cars or in any public place, a person using a sputum cup or sputum flask? I never have, and why have we not? There must be some reason for this, for all consumptives are not heartless and filthy and regardless of the feelings of others. At the present date the Knopf improvement of the Dettweiler flask is the most convenient sputum receptacle to be procured. It is neat and attractive, made of aluminum, and is light for the pocket. There are several drawbacks to this flask, and Dr. Knopf has been trying to improve it. He has now simplified it very much, and it will continue to be a useful flask in an institution, where it can be sterilized



Cup of Knopf Flask

by steam or boiling. Ambulant patients will not use the Knopf flasks extensively, because they do not know how to sterilize them and trying to get the sputum out of one without first boiling or sterilizing by steam under pressure is a disgusting job. It is dangerous in more ways than one to handle the sputum in this manner. The first flask made by Dettweiler was a mere toy, and Knopf improved it in many ways, but it is still in that sense imperfect. There were too many delicate springs which were constantly getting out of order, especially if the sterilization was by steam or boiling. He has now done away with the springs and has a top which fastens with lugs and slits. It is a good flask



New Form of Knopf Flask

for an institution, but one can see from cut No. 5 that a patient would have to use both hands, thus attracting attention. Another great objection is that a flask of this shape is top heavy and invariably stands on its head in the pocket, and sooner or later will in some way work loose and spill in the pocket. This flask, being made round with tapering ends, slides out of the vest pocket if the patient stoops.

The most useful bottle is the one shown in the



Fig. 8

cut No. 8, designed by Mr. J. R. Thomas, the architect in charge of the construction going on here. We have experimented with the flask from every seemingly possible point of view—he as an intelligent and, I might say, expert consumptive, and I from the phthisiologist standpoint. The Kny-Scheerer Company have kindly aided us in our experiments. One of the advantages claimed for this bottle is that it is indestructible in all its parts. By placing a hand-



Fig. 14.
Showing patient coughing or expectorating into flask.

kerchief around it, as shown in cut No. 14 a patient can place the bottle directly over the mouth while coughing, thus preventing the spraying of sputum and then expectorate into the bottle without even attracting attention. (Of course, the handkerchief must always be boiled before sending it to the laundry.) There is no mechanism to get out of order, and the cup is drawn from the pocket and used easily with one hand. If it is turned upside down and falls over, it will not spill, for the theory on which it is constructed is that the major diameter of the flask shall bear such a relation to the minor diameter that the surface of the liquid will not rise above the mouth of the tube in any position the flask may assume. It is an old idea set to a new and useful purpose.

It is the bottle for the rich, poor, ambulant and hospital case. It is cheap and will last forever. It can be sterilized by steam, or placing in water and boiling. This sterilization can be performed in the poorest home by boiling the bottle in an old can. It can be done by the itinerant camper in the same way, or by means of the alcohol lamp or retaining can, as shown in cut No. 17.

A pocket sputum flask to meet all the esthetic and scientific requirements must be absolutely concealed by the handkerchief, as shown in cut No. 14: the patient must be able to use it with one hand and in such a way that no one will know that anything more than a handkerchief is being used; it must not have a top to get out of order and necessitate the use of two hands; must not leak a drop; must be simple and indestructible in all its parts; easily cleaned without getting the sputum over one's hands and disgusting the patient; must fit the pocket snugly; and last of all and most important, must be easy of thorough, quick and effective sterilization. We believe that the flask, shown in cuts No. 8-15-16 designed by Mr. Thomas and named the Marine-Hospital Service pattern, meets all the requirements of the most painstaking and exacting physician, the easy going, lazy and careless patient or the needs of the most highly esthetic and sensitive man or woman.



Fig. 17. Sterilizing can for flask [illegible]

Accompanying the article are cuts of the different sputum flasks on the market. One can easily see



Fig. [illegible] Dettweiler flask.

the objections to the Dettweiler (No. [illegible]) and the flasks shown in cuts Nos. 2, 3, 6, 7. The latest



Fig. [illegible] Fig. [illegible] Fig. [illegible] Fig. [illegible]

pattern of the Knopf flask, cut No. 5, is far ahead of any of the others mentioned, but it will not meet

the requirements from the point of view of the esthetic ambulant. It cannot be successfully concealed by the handkerchief, as Knopf recommends. Neither of the Knopf patterns can be successfully

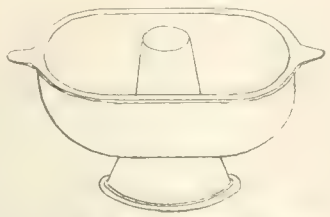


Fig. 15. Upper half of flask.

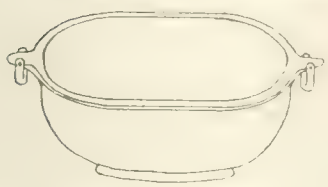


Fig. 16. Lower half of flask.

concealed by the handkerchief. In cuts No. 15 and 16 our flask is shown taken apart. It will be seen that there is no place which cannot be easily reached and cleaned, and there are no parts which can become worn out or destroyed by its use. It is indestructible in all its parts.

In the beginning we were worried over the joints, fearing the sputum would leak through. After rough usage for weeks there was never the sign of leakage. We had great trouble in sterilizing the sputum in the bottle, for sputum will increase several times in volume when heated or boiled, unless it is under pressure. If there is only a little pressure it will prevent this expansion, and after a short time the sputum becomes liquid and will not then bubble. If the flask is placed in boiling water the joints are tight enough to hold the sputum until it is liquefied, though we found that if we placed the flame directly under the flask, so much heat was quickly generated that sputum was driven out through the joints and all over everything. This made it necessary to have a retaining can, and this is better for the reason that the heat reaches a degree slightly higher than the boiling point. The exact degree of heat which is generated in the bottle from a large alcohol flame is now being determined by the Kny-Scheerer Company, but we have already determined that it will never generate enough pressure to split the retaining can. The exact pressure generated by the alcohol flame is being worked out also, and the retaining can will be made strong enough to resist this pressure under the conditions named.

Most flasks have been made too large and bulky. Our flask will hold all the 24-hour sputum of the average consumptive. This has been carefully determined. We have tried to make the flask meet the requirements of any consumptive. If he is traveling and living in hotels and boarding houses, it is best for him to buy the complete outfit with the retaining can and alcohol lamp attachments. This outfit is, of course, the neatest, but will cost more than the flask, which is sold separately. If the patient is at home, he need only have the flask, and it can be thoroughly sterilized by boiling in a can. In institutions this flask is sterilized in the same manner as others by steam under pressure.

If the patient carefully folds the handkerchief about the bottle, retaining it with a rubber band around the neck, as shown in the cuts, he can use

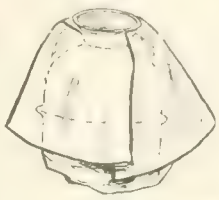


Fig. 9.

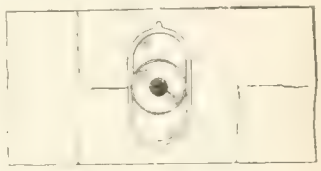


Fig. 10.

Showing flask concealed in handkerchief. Lines show folds in handkerchief.

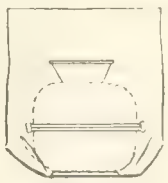


Fig. 11.



Fig. 12.



Fig. 13.

Flask placed in handkerchief as in cut 11, rubber band placed around neck.

it without any one ever detecting it. I have seen Mr. Thomas use it in this manner at parties and in the presence of others, and I could never tell whether he was using the handkerchief alone or with the bottle; nor did any one else detect its use.

By using the flask in this way the patient has much of his self-respect restored and it removes a greater part of his morbid sensitiveness. The flask has the further and, to my mind the greatest, advantage, that if once used, even by the most careless patient, it will be continued in use, simply because any patient will find it easier and more convenient to use it. If that is true, and I believe it is, then we have gone far towards solving the knotty problem of interesting the patient in caring for the sputum.

Patients when coughing should place the bottle over the mouth to prevent spraying. The handkerchief used around the bottle must of necessity become more or less contaminated on the inside folds with small particles of sputum. After the sputum has been sterilized the handkerchief must also be sterilized for the same length of time. In removing the handkerchief from the bottle the patient should remember to be careful and keep it folded *in* to prevent the shaking out of small particles into the air, which would happen if he turned the folds outward.

In giving instructions to patients it is well for physicians to bear in mind that any method of sterilization of sputum except by incineration, steam or boiling is unsafe and dangerous. All sorts of disinfectants are recommended, but none, positively none, are safe. With the exception of bichloride of mercury, which forms another salt in the presence of sputum, and carbolic acid, which will penetrate sputum if allowed to remain long enough, pyroligenous acid and strong formalin, there is no disinfectant worthy of trial. Laboratory experiments with sputum and disinfectants are not altogether reliable, and experimenters must remember that in-

hibiting a growth with some chemical substance can be no proof that said substance kills the bacillus. One's common sense will show him by mere observation that large masses of sputum ejected into the spittoon containing a liquid disinfectant is not penetrated for hours. The mass will float on top of the liquid for hours and hours, and it is not reasonable to expect that the disinfectant will penetrate it before the time comes around for the hospital attendant or charwoman to empty and wash the receptacle. Of course this is not taking into consideration the sputum which has adhered to the hopper of the spittoon, or the particles which have missed the spittoon altogether and gone on the floor.

The expediency of the question from a public and municipal standpoint must present itself to any one, for the sputum must be gathered and disinfected; the spraying of the sputum by coughing is to be prohibited, and finally the patient must be watched and given help and kindly instruction. Every physician should be able to procure from the Board of Health for his patient plain, simple instructions printed in different languages, so he can give them out as he finds cases. If his patient is poor, it is plain common sense to furnish him with a sputum bottle, and instruct him how to sterilize and cleanse it. It should also be the duty (aside from the very apparent advantage) of municipal boards to examine sputum for physicians. There is a common belief that it is easy to demonstrate tubercle bacilli in sputum. There never was a more serious fallacy, and one that is directly the cause of a great deal of infection by ambulant cases. Hundreds of cases go about with cough and expectoration which has been pronounced acute or chronic bronchitis, simply because too much faith has been put in ordinary staining methods. There are few general practitioners, who can or do take the time to hunt for the bacillus when the organism is hard to stain. In the haste of office consultations such cases are improperly diagnosticated, and they go about spreading the sputum far and wide until sooner or later they become so ill that the disease is made out merely by looking at them. Unfortunately, this is more common than uncommon. The bacillus in the acute case and an acute exacerbation of an old cavity will nearly always furnish bacilli which will stain readily with one method or another. Certain mixed infections with cavities produce purulent sputum, in which I have often found it impossible to stain the bacilli, and yet there was never doubt of the diagnosis.

I cannot close this paper without a special plea for consideration and kindness to the patient for the consumptive of all cases needs kindly guidance. He needs cheering help from his physician, but under no circumstances must the medical man fail to tell his patient wholly and absolutely the truth. If he is a bad case tell him so; if he is a good case tell him that also, but guardedly, for so-called good cases often go like wild fire. The ambulant consumptive is a "walking epidemic," and yet we can do more good for him and for the public by kindliness than by abusing him for filthy habits, for which we, the medical profession, are almost wholly to blame.

There are three kinds of consumptives, which we must reach: The intelligent and conscientious, who are anxious to help us in preventing the spread of the disease to others; the careless and well meaning, willing to do right if it is not too much trouble; the ignorant, stupid, selfish, utterly regardless of his own and others' welfare.

If we can make our conditions reasonable, the intelligent patient will respond heartily to our demands. He is sensitive about his disease being known to others, and to have him carry out our ideas in regard to caring for the sputum, we must be able to meet his esthetic feeling. That is reasonable. Treat the patient badly and scold him for carelessness is to lose a valuable though silent assistant in our fight. This case can be argued into compliance with our requests, though, every time in a while we must go over our grounds again and insist on the rules being followed. Even the most intelligent case needs constant watching. The gentleman, who has helped me so much in my experiments with the flask, is an example of this very point. I have talked to him a great deal about the many ways by which the consumptive may spread the disease, and while working at his drawing table and talking to me, he was constantly putting his pencil and other things into his mouth, changing first one thing for another. I mentioned this as one of the dangers, but he insisted that he never did that. I did not press the point then, but a few days later in my presence he caught himself in the act and was much surprised. I usually apologize to my intelligent patients at the start, and say that I am going to make myself disagreeable by constantly nagging them about the care of the sputum and the prevention of infection to others. With the ignorant and careless, we have a harder fight, but even here it is surprising how much we can do. If this patient has no trouble, or practically none, in handling the sputum, then by constantly watching we may be able to in a measure cause the destruction of his sputum.

To bring the subject back to the practical, one will naturally ask if I advocate the discontinuance of spittoons, either on floors or elevated in closed boxes. I certainly do. A brother physician in El Paso asked me to give him data to help them fight the spitting habit, which is such a calamity to that little city. I began the work on the old plan for spittoons in elevated boxes, marked for the purpose, and thought out a plan for having these collected by city employes and taken to centrally located sterilizers, run through, and clean ones put in their places. I thought how these boxes could be placed in the parks and on street corners. And my mind, of course, ran out to the elevated stations in New York and Chicago, to their ferries and passenger stations, hotels, saloons and theatres.* The plan seemed possible, but the more and more I thought about it, the more convinced I was that there would be mighty little sputum ever collected

*Since writing the above I have been to Europe for the first time and have seen many of the great cities of the world, including several of the larger cities of the United States. The changes brought about in the spitting habit in New York in the last three years is surprising and especially is this noticeable on the Staten Island ferries. The health authorities in New York have reason to feel proud of the work they have accomplished. Portland, Me., December 8th, 1901.

in this manner. The patient whose sensitive feelings were so dulled that he would go publicly and proclaim his disease by spitting in the elevated boxes or spittoons, would not have regard enough ground. [illegible] carefully at the concealed spittoon



Fig. [illegible]

in cut No. 18, and then tell me honestly if you, a physician, would use it. Can you think of a delicate, modest, retiring woman stopping on a street corner and using one of these disgusting things, with the sticky, nasty stuff adhering to the sides? At a well-known sanatorium, the house physician was showing me around, and when he reached the dining room, he stepped to one side of the door as you go in and said that patients were not allowed to cough and expectorate in the dining room, and that if they must expectorate they came outside to this little panel door, and with that he pulled it open. Fastened to a bracket on the panel door was a neat glass cuspidor, partly filled with some clear fluid, and floating in this were masses of sputum, and a large mass was stuck on the incline and gradually stringing out into the fluid below. I was so taken by surprise by the disgusting sight that I nearly vomited. It is positively disgusting to think about it even yet, though one gets used to anything, and I presume these patients had gotten used to this. Then look again at cut No. 18, and ask yourself truly if you believe that this measure will be effective in collecting sputum in public places. Discontinue spittoons! Why not, for they are certainly not necessary? In this sanatorium there are nearly a hundred patients, most of whom are ordinary seamen, and I am happy to say there is no such thing as a spittoon or other sputum receptacle than the Knopf flask and the common sputum cup for bed cases. These men chew tobacco and are not an easy class to control in their spitting, and yet they do not cough or expectorate in the dining room, and it is seldom that one is reported for breach of discipline for spitting on the ground. Giving them the pocket flasks seems to have raised their self-respect, for I have seen and others outside have reported that our patients are careful to use the bottle when off the reservation ten or twelve miles away.

Cities, towns and states are becoming aroused to the fearful spread of tuberculosis. All kinds of suggestions are being made as to the best and safest method of collecting sputum in public places. We have sand and sawdust-boxes; spittoons on the floor and elevated in concealed boxes; and in a few work shops there is the wall bucket for sputum. Unless we think of all the details in connection with these articles we are liable to be misled into believing them the most effective method of collecting sputum. If one stops to think what becomes of the spittal thus collected, it will not be reassuring. If we follow the sand- or sawdust-box to the back yard, we will find that it goes on the dump pile or into the garbage or ash barrel. The spittoons are invariably lined up on the sidewalk or in the court yard, and the cleaner turns on the garden hose, washing the contents out all over the walk or ground. We don't want this, do we. There seems to be no use to collect it if it is to be disposed of in this manner. This is mockery and conscience killing. It is done only by the attendants to help keep the floors clean—it has no other serious advantage. The elevated spittoons will not be used, as every one knows.

The spitting nuisance is a crime, and we should not attempt to suppress it with half-way measures. Any man that will deliberately spit on the ground or floor deserves no consideration, and the law should reach out a firm hand and compel him to stop it. Now so long as we have spittoons or spit-boxes, the nuisance will continue. So long as there are receptacles to spit into or spit *at*, then so long may we expect men to continue the habit. Half way measures are not even a help. If we could prohibit by law the use of spittoons or spit-boxes in public places, it would bring strongly to view the frightful danger there is. We might then be able to enforce the law and all of us would be more ready to report to the police any person breaking the law.

We have societies for the prevention of crime; societies for the prevention of cruelty to children, and other societies of similar aim. In several cities we have societies for the prevention of the spread of tuberculosis. I advocate the adoption of a rule in these societies that each and every member bind himself or herself by oath to report to the police any person caught spitting in a public place. If this were done it would not take long to put a stop to it. The spitting habit does not belong to women, but to men, and this species of animal should be dealt with severely, if he will persist in the face of all decency to be such a disgusting creature.

The consumptive needs our kindly help, and after this has been given to him, he should be compelled to obey the law.

With the Marine-Hospital Service sputum flask I believe the patient will not have any excuse or inclination to disobey, and that once he uses the flask, he will continue to use it without urging.

It is to be made plain to all cases that their saliva, tobacco spittal and the hawking from their throats may and often do contain bacilli. All such spittal must go into the flask. All receptacles must be done away with which stand as inducements to one to spit in them, or at them, which is most often the case. If there must be spitting, let it be on the ground or floor where every person can see it, and see it with disgust.

Spitting on the ground or floor is a crime, and the guilty should be severely punished.

We should unite in having guilty persons arrested.

All spittal receptacles in public places should be prohibited by law. Saloons come under this head.

Beer halls and other places of this kind should not be allowed to cover the floors with sawdust, which seems to invite the careless to spit on the floor.

We must strive to educate the public against the habit, and we should try and reach the public by tracts and timely articles in the daily press, which will reach and appeal to the intelligent.

No law can be enforced or made entirely effective without the aid of the intelligent public.

We must make the intelligent gentleman smoker see the harm he does by setting a bad example. Let us try and reach the gentleman smoker by beginning with the gentleman *doctor* smoker, for I have noticed that the average doctor is an inveterate smoker. A gentleman will sit in his own house all evening and smoke and does not spit; but away from home he invariably moves over to the spittoon.

Tobacco chewers deserve no consideration.

I believe we have met the requirements of the patient in the matter of giving him a practical, easy and efficient way to handle the sputum.

A BRANCHIAL CYST, THE WALL OF WHICH CONTAINED A SMALL HEMANGIOMA.

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CLINICAL HISTORY.

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It is not our purpose to discuss the pathology of branchial cysts as this has been dealt with in an article by one of us[1] elsewhere. We desire to place on record what appears to be an unique case of which the following are the essential facts: –

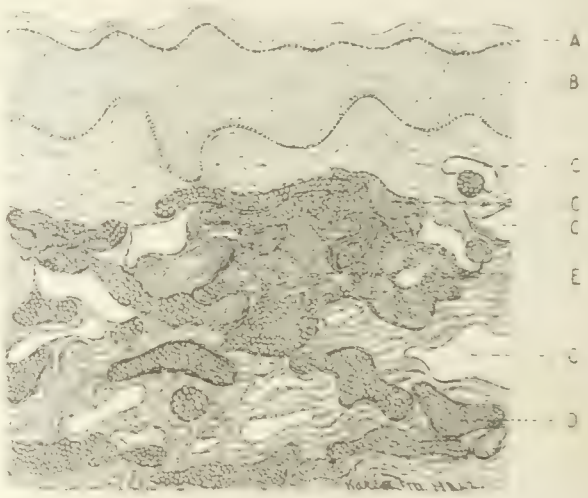
Clinical history.—J. P., a lad of 17, with a negative family history, came to the Jefferson Hospital for treatment. He stated that, when he was 20 months old, a pimple was first noticed in the region above the pomum Adami, which would close at times and then collect and discharge a mucopurulent material. This condition continued until he was about 15, when the swelling was lanced. A partial improvement resulted, but the previous condition returned in an aggravated form. About this time or two years ago, he stated that it was cauterized, and subsequently entirely healed. A sense of fullness soon after developed at the site of operation; when pressure was made upon this point something would flow into his throat, and after a severe coughing spell would be expectorated. The material resembled that formerly discharged anteriorly.

Examination showed a firm cicatrix in the mid-line between the hyoid bone and the thyroid cartilage, somewhat bulging, with a slight fluctuation. Pharyngeal examination was negative. A diagnosis of branchial cyst was made and he was admitted for operation. A general anesthetic was given, and a longitudinal incision made through the scar tissue. About 2 cc. of mucus was evacuated, and a probe led only to the hyoid bone. The sinus was dissected out and freed from its hyoid attachment, the probe could now be passed upward toward the floor of the mouth, but did not penetrate the oral mucous membrane. The sinus was entirely removed and careful search instituted for a communication with the pharynx, but none could be found. The wound healed nicely, but, about a week later, a small amount of mucus was again discharged, which was repeated in smaller quantity at intervals of 3 or 4 days.

At the last visit no discharge had taken place for a week, and since the last operation there has been no flow into the pharynx. Repeated examinations have failed to show any opening into the mouth or pharynx.

Pathological Report.—Specimen consists of a small piece of tissue 0.8 cm. in length and 0.4 cm. in width; weight 0.4 gm. It is rather firm in consistency and pinkish red in color. One surface is wrinkled, the other is rough and studded by shreds of tissue; this surface has evidently been dissected from other structures. The specimen was fixed in Heidenhain's solution, embedded in paraffin, sectioned and the sections stained with hematoxylin, eosin, picric acid and by Van Gieson's method for connective tissue.

Histology.—As may be judged by the size of the gross specimen, sections made at right angles to the long axis are small and fragmentary, rarely exceeding 0.4 cm. in the longest diameter. One surface possesses an epithelial investment consisting of stratified epithelium of the squamous type; from 6 to 10 cell layers can be recognized. These show a more or less perfect separation into at least three distinct strata, which occasionally blend. The most superficial layer corresponds to and possesses the general histologic characters of the corneous layer of the skin. On section the superficial stratum is composed of thin irregular strands, presumably the sides of flattened squamous cells entering into the formation of this layer. The surface is rarely smooth, being both papillated and roughened by projecting cells or strands, the free ends of the latter hanging from the attached layer. The stratum yields the usual microchemical reactions of elements rich in keratin. It joins



A [illegible] stratum.
B Malpighian stratum.
[illegible] blood [illegible] which [illegible] spaces [illegible]
D Cysts containing blood [illegible]
[illegible] which hemorrhage has occurred [illegible]

rather sharply with the underlying cellular stratum, a layer possessing the cellular elements normally present in the rete Malpighii of the skin. The outer layer is formed of cells that on section are spindle-shaped, the long axis of the spindle being parallel to the surface. This stratum stains indifferently, contains a few intra- and intercellular granules and shows the microchemical changes commonly present at this point. Immediately beneath the cells just described are larger and more fully formed, morphologically perfect cells of the squamous variety resembling those of the deeper part of the normal rete Malpighii. Cells with protoplasmic bridges (prickle cells) occur but are not abundant. Just beneath this layer is an irregular rather poorly outlined and indifferently staining genetic layer, the cells of which do not assume the columnar type usually observed. They are polygonal, cuboidal and, though rarely, of the taller columnar type.

The epithelial layers just described rest upon a thin connective tissue stratum that merits no further description than that indicated by noting its strong resemblance to the corium. It possesses the usual papillary projections and corres-

1. Coplin. Proc. Path. Soc. of Philadelphia, n. s. Vol. IV, p. 109, 1901; also Phila. Med. Jour., Vol. 7, No 4, p. 178, Jan. 26, 1901.

ponding depressions accurately fitted to the overlying epithelium. The vascular loops in the papillæ are sometimes surrounded by lymphoid cells but on the whole the layer is quite free from cells. It is usually coarsely fibrillated but at many points it is homogeneous—hyaline. It rests loosely upon the adjacent connective tissue which contains numerous bloodvessels, usually thick walled; an occasional hair follicle is present in this layer. At one end of the section situated just under the corium, which is not invaded, is the most interesting feature of the specimen, namely a somewhat imperfectly formed but still clearly outlined angioma of the cavernous type. The bloodspaces are filled with erythrocytes and the enclosing walls formed by hyaline almost homogeneous fibrous tissue. At first glance this mass of blood was mistaken for an area of ecchymosis, but close inspection showed that while at many points the blood is free in the connective tissue, in still other areas distinct walls and uniform caverns can be made out. On the wall of some of the caverns a distinct endothelial lining can be recognized. The angiomatous area is rather clearly outlined, but not encapsulated. The vessels of the subcutaneous tissue adjacent to the angioma are larger than normal, but not conspicuously so.

Diagnosis and remarks:—The cyst is clearly of branchial or thyroglossal origin, and possesses the histological elements in its wall already mentioned to justify its being designated a *branchial dermoid*; the only unique feature is the presence of an angioma in its wall. Both processes are of congenital origin and constitute developmental defects. Neither is uncommon, but so far as we have been able to find the coincidence of angioma and branchial cyst is here recorded for the first time.

A CASE OF ADIPOSIS DOLOROSA.

By JOHN B. ROBERTS, M. D.,

of Philadelphia.

About a year ago I saw in consultation with Dr. Norman Roberts a case of adiposis dolorosa which may be worth recording, though the notes are not very complete.

The patient, a French woman, 60 years of age and a widow, had the following history: In youth she was slight in figure, weighing only 97 pounds, when she was married at the age of 20 years. She never menstruated until after she was married. Six weeks after her marriage, her husband, who was an army officer, was called away by duty and was subsequently wounded and died. She never saw him after he left her, and was menstruating at the time she heard of his injury. Her menstrual flow stopped at once as a result of the shock of the unhappy news. Twelve years later she menstruated once again, but at this time the news of the sudden death of her mother caused a cessation of the flow. She has never menstruated since. She has never been pregnant.

Her health has always been good and she has never had any sickness except suppurative quinsy, which for a considerable period of time has been occurring about every two years. Since her widowhood she has always been stout and comes from a family in which there is a tendency to the accumulation of fat.

On April 4, 1893, she stumbled and fell, striking her left leg against the curb stone, breaking the fibula in the middle portion of the leg. She walked about a square after the injury. She was attended by a physician who put the leg in a fracture box. Both legs were then of normal size, but pretty large. The injured leg swelled gradually and, according to her statement, has never been of the normal size since. For four years after the fracture of the fibula she was unable to walk, but sat in a chair when not in bed. She then walked on crutches for two years. Both legs and thighs and the regions about the knees gradually became extraordinarily enlarged by deposits of irregular nodular masses of adipose tissue. Constant pain was felt in the left leg from the time of the injury. During the eight years until I saw her she had pain practically all the time in the left leg, but not in the right.

On examination I found both legs greatly enlarged. The left was much larger than the right and the accumulation of fat occupied the thighs as well as the legs proper. The woman was healthy and had no unusual masses of fat about the head, arms, shoulders and trunk. The buttocks were enormous, and, perhaps, contained similar masses of fat, though I did not examine her uncovered in this region. I did not make any definite measurements, but the extraordinary size of the limbs and her pain were such marked symptoms that the unusual nature of the case was evident. The patient has a large bust, but perhaps it is not greater than would be expected in a woman of her general build. The disorder of nutrition causing the great deposit of fat seemed to be limited to the lower extremities. She said that she never had pain anywhere except in the left leg. She had used a cane in walking for about eight years and therefore did not take much exercise. Her bowels have been normal; her appetite good; she scarcely ever has headache. There has been no epistaxis or other bleeding to take the place of the menstruation which stopped so many years ago. The patient is exceedingly bright intellectually, and carries on the arduous task of running a large lodging house.

Dr. Norman Roberts has given me this note: "When I first saw her, her principal complaint was 'rheumatism,' which annoyed her in the daytime and kept her awake at night, unless she lay in one certain position. The swelling hung down in a fold over the shin and calf, and required support, which she supplied by a home-made knit arrangement. The swelling showed no marked signs of edema and she told me that one of my predecessors had vainly tried to reduce it by blistering. I therefore put her on potassium iodide, in ascending doses, and gave her mercury and belladonna ointment and a massage roller for local use. This treatment relieved the 'rheumatism,' and enabled her to sleep in an agreeable variety of positions and move more freely about the house. But the swelling was only slightly reduced, if at all, and the iodide upset her stomach and gave her a coryza. I then substituted for the potassium iodide a separate solution formula of potassium iodide and tartaric acid to be mixed just before taking, thus forming hydriodic acid. This was less irritating, but less efficient; but by occasionally giving KI, it kept the acute symptoms down. I then gave her thyroids, and brought her in to see you. She would probably have consented at least to come to the hospital for observation, but was dissuaded at home. Soon afterwards I lost sight of her until within a few days."

Through the courtesy of Dr. J. R. Levan, her present physician, I recently saw her. The legs are considerably diminished in size, which she attributed to the treatment given her by Dr. Levan, who has, I understand, been administering thyroid extract and potassium iodide. She has not been out of the house for a number of months, but she says that she stays in because of the fear of catching cold and being troubled with an attack of quinsy, from which she has been a constant sufferer. She has no cough, but on going up and downstairs she gets out of breath easily and therefore avoids such exercise.

Examination of the heart and lungs is negative. The masses of fat are still large in both legs and particularly in the left leg. She says there has been no pain since last October, when Dr. Levan took charge of her and instituted treatment. She says that the left leg has diminished in girth seven inches. When I first saw her I suggested excision of some of the redundant fat if she was not relieved by medication.

Some years ago I saw a somewhat similar case. In July, 1896, Dr. W. Murray Weidman sent to me for examination an elderly widow, apparently of German extraction, who lived in Reading and suffered from dyspnea, seemingly due to an enlargement in the thyroid region. The patient was stout and had a short neck, and was very nervous lest she should choke to death because of the feeling of pressure at the front of the neck.

There was moderate hypertrophy of the thyroid gland, and I found that she had a congenital cleft of the palate.

She talked, however, without any very marked defect in articulation; because the cleft was confined to the posterior region of the palate, and because she could bring the greatly hypertrophied tissues back of the fauces together, so as to shut off the nasal chambers from the cavity of the mouth. The kidneys and thoracic organs showed no cause for the dsypnea.

During my investigation of the case I discovered that her arms were the seat of a vast number of fatty growths, the skin overlying which was somewhat bluish from venous capillary dilatation. These growths did not seem like numerous isolated fatty tumors so much as like a generalized nodular increase in the subcutaneous fat. They were not painful. My recollection is not very distinct as to whether there were similar growths in the body and legs, but I think that the legs at least were involved.

She had not come to me for treatment of this curious condition, but it interested me very much, and I read with care Dr. Dercum's description of his first case of adiposis dolorosa. I finally concluded at that time that the case was not an instance of that disease because of the absence of pain and tenderness.

As the visible enlargement of the thyroid gland was not very great, I considered that the symptoms of dyspnea were due to enlargement of the gland behind the sternum, to pressure of a fatty growth in that region, similar to the innumerable ones in the arms, or to nervousness due to neurasthenia.

Further acquaintance with adiposis dolorosa has led me to think that this woman may have presented a form of the disease, which was unattended by pain.

DISEASES OF THE LACHRYMAL APPARATUS.

LECTURE DELIVERED AT THE POLYCLINIC HOSPITAL, PHILADELPHIA,

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of Philadelphia.

Professor of Ophthalmology in the Polyclinic Hospital and School for Graduates in Medicine.

Diseases of the lachrymal apparatus form a very considerable proportion of the cases which the ophthalmologist is called upon to treat, and there is no other class, probably, which occasions him more trouble and brings him so little credit, for the treatment of diseases of the lachrymal system is always prolonged, generally painful and often unproductive of results. The explanation of the frequency of lachrymal disease and the failure in many cases to effect cure of it, will, I think, be apparent if you will review for a moment the anatomy and physiology of the lachrymal apparatus. You will remember that the tears are drained from the conjunctival cul-de-sac into the lachrymal sac by two small canals which have their opening on the margin of both lids at the inner canthus, and that in order that the tears may enter these tubes it is essential that these openings, the puncta lachrymalia, as they are called, be in close apposition with the globe. If, for any reason, this condition does not obtain, no matter how slight the degree of eversion, there is a break in the system of canalization, the tears do not enter the canals, and the eye weeps. The sac, moreover, which receives the tears from the canaliculi, though situated in a rather protected position, offers all the conditions favorable to the development of an abscess, the moment any impediment is offered to its readily emptying itself, as is frequently occasioned by an obstruction in its avenue of exit.

The lachrymal duct, into which the contents of the sac are discharged, is a little less than ¾ of an inch in length and about ⅛ to 3-16 of an inch in diameter. It lies in a bony canal and is composed of an internal layer of ciliated epithelium, an outer fibrinous periosteal layer, a lamellated pavement epithelium and many racemose glands, while between the periosteum and the mucous membrane there is a dense venous plexus. This membrane is thrown into folds in three places, and acts like a valve at these points. Owing to the high vascularity, and the loose texture of the tissues, composing the sac and the duct, anything that causes a congestion of them occasions a stoppage in the canal due to its unyielding bony and fibrous walls.

With these brief introductory remarks to indicate the ease with which lachrymal disorders may arise and the difficulties which are to be encountered in their treatment, I will pass at once to a systematic description of the different forms of disease of this apparatus.

Diseases of the lachrymal apparatus include those of the secretory apparatus, the lachrymal gland and its ducts, and those of the excretory apparatus, the puncta, canaliculi, lachrymal sac and nasal duct.

Diseases of the Secretory Apparatus.—Affections of this apparatus are extremely rare, inflammation of the lachrymal gland, dacryo-adenitis, occurring but seldom, either in the acute or chronic form. In the acute form there is swelling and edema of the upper lid attended by pain and tenderness on palpation of the gland and the adjacent supra-orbital ridge. There may be proptosis and limitation in the movements of the eye. When the inflammation assumes a purulent form, the clinical picture differs but little from a purulent conjunctivitis, and may go on to rapid suppuration, an abscess forming and pointing either upon the conjunctiva or skin surface of the lid.

Acute dacryo-adenitis occurs usually in childhood, and may assume an epidemic character, especially in connection with mumps. Rheumatism, colds, syphilis and septicemia have all been ascribed as causes in various cases, while the spread of the inflammation from the conjunctiva and cornea has been noted in a number of instances.

Treatment.—Local applications of heat should be made in the early stage, followed by free incision over the sac as soon as pus has formed. When the inflammation does not assume such an acute form satisfactory results may sometimes be obtained from the use of quinine, leeches and mercurial inunctions to the brow.

Chronic dacryo-adenitis.—This is even of more rare occurrence than the acute variety. It is readily recognized, the characteristic enlargement of the gland being evident upon simple inspection, and upon eversion of the lid the enlarged gland will appear as a red tongue-shaped nodular mass. There may be little or no pain upon palpation, and the eyeball is displaced only in those cases in which the swelling of the gland is excessive, or when there is accompanying involvement of the surrounding tissues. One or both glands may be affected. The ac-



companying photograph is an excellent example of bilateral involvement of the lachrymal glands in a colored child. This case has been under my observation at the Howard Hospital for three to four years past, having first consulted me on account of an extensive phlyctenular ulceration in the left eye. The enlargement of the glands in this case seemed to consist of a simple hypertrophy, as there were no signs of acute inflammation in the glands themselves, or the surrounding tissues. There was no apparent involvement of the glandular system elsewhere in the body. The child was kept upon high doses of potassium iodide for at least a year without any change in the size of the glands being noticed. After an interval of 18 months, however, during which time all treatment was discontinued, she returned to the clinic, in company with another patient, when I had an opportunity of ascertaining that the swelling had entirely disappeared, and that the parts had resumed their natural appearance.

The treatment of chronic dacryo-adenitis consists in the local application of absorptive ointments, such as the mercurial and the compound iodine, conjoined with the administration of alteratives. If the hypertrophy of the gland be so great that the integrity of the eyeball is endangered, extirpation of the gland should be performed.

Tumors.—Neoplasms, such as sarcoma and adenoma are of rare occurrence, and are frequently the result of previous trauma. As their growth is slow, vision is usually unaffected until the tumor has attained such dimensions that the globe is pushed far out of its natural position. Treatment consists in the complete extirpation of the growth. This is accomplished either by making an incision in the skin over the gland, or into the conjunctiva after exposure of the cul-de-sac by division of the external canthus. The latter is the better procedure, as the ptosis which follows the skin incision due to injury of the levator, is avoided, and the resultant scar is much less conspicuous.

Atrophy of the lachrymal gland is of very rare occurrence being usually associated with xeroma of the conjunctiva. It may be noted in this connection that paralysis of the trigeminus may entail abolition of the functional activity of the gland.

Dacryops is the name given to a rare condition in which one or more of the efferent ducts of the gland become blocked, and cystic degeneration follows. Eversion of the lid will disclose a bluish-pink, translucent elastic tumor in the position of the gland

Treatment.—This should aim at reestablishing a permanent opening between the cyst and the conjunctival sac, this being best accomplished by passing a silk thread through the wall of the cyst, tying it in a loop and permitting it to cut its way out.

Lachrymal fistula may be the result of trauma or dacryo-adenitis, or it may be congenital in origin. The affection is a very troublesome one, as there is a constant discharge of tears from the fistula; it may, however, be cured by the procedure of Bowman.

Dislocation of the gland has been met with in a few instances either as a result of trauma or of spontaneous origin; it may also be congenital.

Diseases of the Excretory Apparatus.—In contradistinction to diseases of the secretory portion of the lachrymal apparatus, diseases of the excretory portion are of very frequent occurrence and are all characterized by the annoying symptom of tears flowing over the cheek. Most of the disorders of the drainage apparatus are very intractable to treatment, and nearly all occasion some secondary disturbance in the conjunctiva and lids. Heredity exerts a strong influence upon the development of diseases of this class, by reason of the transmission from parent to offspring of certain anatomical peculiarities in the skull. Thus, individuals with a scaphoid type of face, in which the orbits are shallow and the epicanthal folds are well developed, are frequent subjects of lachrymal disease; others with narrow faces and prominent noses are also subject to it.

Anomalies of the puncta lachrymalia and of the canaliculi.—Complete obliteration or atresia, and double puncta of congenital origin have been described. The puncta and canaliculi may also be absent, the canals being represented by narrow grooves along the edges of the lid.

Acquired anomalies are usually the result of some chronic inflammation or accident to the lid and conjunctiva, which has destroyed the normal relationship existing between the puncta and the globe. Thus eversion of the punctum arises frequently after burns, granular conjunctivitis and blepharitis, and may follow the cicatrization of a smallpox pustule or chancre of the lid. Senility and paralysis of the seventh nerve may occasion the same condition. Rarely, the canal may be blocked by a cilium, polyp or by leptothrix.

Treatment.—The simple dilation of the punctum or the conversion of the canaliculi into an open drain by slitting it up is usually sufficient to effect a cure,

with the cooperation of an astringent wash of zinc and boracic acid.

Anomalies of the lachrymal sac and nasal duct.—Dacryocystitis, or inflammation of the lachrymal sac, may be either acute or chronic.

Etiology.—This condition is usually secondary to disease of the lachrymonasal duct and in many cases may be traced to nasal disease. It usually occurs in adults and is rare in children being, as a rule, significant of inherited syphilis when it occurs under ten years of age. Dacryocystitis is rarely secondary to any ocular disease, the mucous membrane of the sac seeming to possess a remarkable immunity from being involved in inflammation of the conjunctiva of even the most intense character.

Symptoms.—As would be expected from its origin, the disease begins usually as a chronic inflammation, manifesting itself by a slight swelling and redness at the inner canthus, and by persistent and troublesome lachrymation, or by the discharge of a mucopurulent secretion from the inner canthus of the eye. After a time a small tumor forms at the site of the sac (lachrymal tumor or mucocele) the contents of which may be pressed either into the conjunctival cul-de-sac or into the nose. If the disease has an acute onset, there is rapid swelling and redness in the region of the sac, with intense pain and some constitutional symptoms. Pressure over the sac excites great pain and must often be quite forcible before the thick creamy pus can be expressed into the conjunctiva. If permitted to take its own course, the skin over the sac ulcerates, breaks down, and the contents of the abscess are evacuated. Occasionally the opening in the sac heals, but usually a permanent fistula remains beneath the tendon of the orbicularis muscle, occasioning necrosis of the neighboring parts by the burrowing of the pus which drains from it, into the deeper tissues.

Treatment.—As inflammation of the lachrymal sac is dependent in most cases upon disease of the lachrymal duct, it is necessary to relieve any obstruction existing there in the manner presently to be described. Should the case come under treatment in the acute stage, heat should be applied and direct incision made into the sac as soon as pus is suspected. The incision should be made below the internal palpebral ligament and should have the direction from above and toward the nose downward and outward. After the acute inflammation in the sac has subsided, the lower canaliculus should be slit up and an attempt made to reestablish the normal relationship of the parts by passing probes through the canaliculus and the sac into the nose. Frequently, however, the opening remains open and a lachrymal fistula becomes established requiring cauterization with the galvanocautery to effect its disappearance.

Stricture of the lachrymal duct.— Etiology.—As just mentioned, the great majority of cases of lachrymal obstruction are secondary to acute or chronic disease of the nose; especially is this true of nasal disease of syphilitic origin. The most favorable site for the development of stricture is at the nasal end of the duct, the next being at the lower extremity of the sac.

Treatment may be either palliative or curative. The former consists in repeatedly expressing the contents of the lachrymal sac by the finger, and by the employment of astringent eye washes, and by gently syringing the sac and duct with a weak astringent solution by means of an Anel's Syringe. The nasal cavities should be sprayed with a saline solution and any local irritation existing about the nasal opening of the duct controlled with local applications. If the obstruction be due to swelling of the mucous membrane merely, a cure may often be effected, but if the stricture be of bony origin, further measures are necessary, and some form of surgical treatment must be resorted to. These have been conveniently classed by Theobald under four heads: 1. Those which aim to restore the natural passages. 2. Those which have for their object the formation of a new passage into the nose for the tears. 3. Those which aim at the obliteration of the natural passages—the lachrymal sac and duct. 4. The removal of the lachrymal gland for the purpose of arresting the secretion of tears.

The first step toward the restoration of the natural passages should be the performance of the operation of Bowman, which consists in slitting up the lower canaliculus throughout its entire length. This is accomplished by entering a fine canaliculus knife into the inferior punctum, and by slowly pushing it along the floor of the canaliculus, until it abuts against the inner wall of the sac as it rests against the lachrymal bone. The handle of the knife should now be swept upward, while an upward and slightly backward inclination is given to the blade of the knife. A ready entrance into the sac being gained by the successful accomplishment of this act, attempt should be made to engage the stricture, and to dilate its caliber by means of probes. I generally first make the attempt with a very small Bowman probe, and then gradually increase the size by passing slightly higher numbers every second or third day. I am satisfied after a probe with a caliber of three millimeters can be passed into the nose without difficulty. Larger probes are not employed, as they are apt to injure the mucous membrane and periosteum, and in some cases lead to necrosis. Weber, Cooper, and Theobald, however, think sounds of a size less than 4 mm. quite inadequate and have devised and constantly employ probes of this caliber. As stated above, I am satisfied with a dilatation of three millimeters, and alternate the passage of probes by careful syringing of the duct with a weak solution of zinc and boric acid. In passing the probe it should be carried horizontally into the sac, and as soon as its point has touched the lachrymal bone, it should be brought to the perpendicular and an attempt made to pass it into the duct. This is best accomplished by pressing gently but firmly in a downward, outward and backward direction, following the axis of the duct. The probes should be permitted to remain in the duct about 15 minutes, and should be passed about every third day until satisfactory dilation is accomplished, when longer intervals may be adopted.

The treatment should extend, however, for over a period of a year and perhaps longer. If carious bone be encountered in probing it is better to desist from mechanical measures, to keep the canal clear by syringing and by administering potassium iodide internally. For purposes of syringing, solutions of chloride of sodium, boracic acid, bichloride of mercury, sulphate of zinc, peroxide of hydrogen and dilute glycerole of tannin may be employed.

In infants operative procedure should be postponed until palliative measures have been thoroughly tried, although in obstinate cases this may be successfully accomplished under a general anesthetic.

To prevent closure of the duct after it has been made patulous, a number of operators insert a leaden style, leaving this in position for several weeks or months. This is of especial value when the patients live at a distance, and cannot submit to the frequent and continued probing which is necessary to attain the best results.

Other surgeons prefer rapid dilatation, and insert probes of the largest size into the duct at the first sitting, this being usually performed under ether.

In intractable cases as, for example, when the stricture is bony—two procedures have been practiced; the removal of the lachrymal gland and the obliteration of the lachrymal sac. The former of these has been modified by de Wecker, who excises the little lobules and the emissary ducts from both the subsidiary and main lachrymal glands.

Obliteration of the sac is but little practiced at present, but is best accomplished by means of the galvanocautery. If a fistula remain after abscess of the lachrymal sac, it may be healed by applying the galvanocautery to its freshened edges.

Apart from the annoyance and inconvenience which the persistent lachrymation occasions the patient, the regurgitation of the contents of the sac into the conjunctiva has a most deleterious influence upon many inflammations of the eye. This is especially the case when there is any break in the continuity of the corneal epithelium, such as occurs in ulceration of that membrane, or in accidents, or after section of it as part of an operation, as, for example, cataract and iridectomy. It has been discovered bacteriologically that micrococci find the retained contents of the distended sac a most excellent place to grow in, this being especially true of the staphylococcus pyogenes aureus and it is evidently due to the infection set up by these germs that the damage to the cornea is wrought.

REPORT OF SEVERAL CASES OF CORNEAL COMPLICATIONS IN CONJUNCTIVITIS DUE TO THE KOCH-WEEKS BACILLUS.*

By EDWARD A. SHUMWAY, M. D.,
of Philadelphia.

In addition to the isolated cases of acute catarrhal conjunctivitis, which are seen throughout the year at the hospital clinics, our attention during the past two months has been called to a number of cases at the Howard Hospital, occurring in the form of an epidemic, which have been of an unusually severe form and have presented peculiar features. The history in each was that of a typical acute conjunctivitis, beginning in one eye, with redness of the conjunctiva, gluing of the lids in the morning, photophobia, and a mucopurulent discharge, which involved the opposite eye in the course of two days. Examination has shown marked thickening of the conjunctiva, quite profuse discharge, and the formation, either at first or while under observation, of phlyctenules at the corneal margin. In one case (case 3) there was an infiltration of the cornea which began at the limbus and soon extended throughout its entire extent. Nearly all gave a clear history of infection from other cases in the neighborhood, and the similarity in type induced me to make a microscopical examination of the discharge. In the three cases in which this was still present in sufficient amount I was able to demontrate the presence of the Koch-Weeks bacillus of acute contagious conjunctivitis. In his paper, in 1886, Weeks states that he had seen one case with phlyctenules, which he considered to be due to a separate process, engrafted on the conjunctivitis, but that he had no corneal ulceration. Morax[2] reported six cases which showed corneal ulceration, one of which developed hypopyon, and he speaks of the occasional occurrence of phlyctenules. Kartulis,[3] in 1887, said corneal complication was very rare. Müller and Weichselbaum[4] found no corneal lesions and saw only one case in which phlyctenules appeared—in a child who had corneal scars from previous phlyctenular keratitis. These conflicting statements make it seem worth while to report these cases in detail. The histories are as follows:

CASE 1.—A. R., aged 7 years, was brought by her parents, December 21, 1901, with a history of inflammation beginning in the left eye, four days before, and involvement of the right eye two days later. In the right eye the conjunctiva of both eyelids and eyeball was much thickened and velvety in appearance, and showed a uniform deep red injection; above the cornea were several subconjunctival ecchymoses, and the cul-de-sac contained thick, yellowish mucopurulent discharge, which had accumulated especially at the inner canthus. In the left eye there was a similar condition of the conjunctiva, but less discharge was present. Both corneas were clear. A solution of boric acid was prescribed, and applications of a 2 per cent. solution of nitrate of silver were made to the lids.

Two days later the discharge had decreased somewhat, but around the margin of the cornea, on the right side, there was increased thickening of the conjunctiva, so that it projected above the surface of the cornea, and several small nodules, yellowish-red in color, could be made out, presenting the appearance of typical phlyctenules. The picture differed essentially, however, from that found in phlyctenular conjunctivitis, in the presence of the general injection and thickening of the conjunctiva, and of the mucopurulent discharge. There was, moreover, a history of infection from a case in the same house, which was under treatment at the clinic at the same time (case 4). Microscopical examination of the discharge revealed the presence of large numbers of a very fine, rod-shaped organism, situated both between, and in the protoplasm of, the pus cells, which was negative to the Gram stain. I was not able to make cultures at the time, but the appearance of the organism, on the coverglass smears, was sufficiently characteristic to identify it with the well-known Koch-Weeks' bacillus. Under treatment, the discharge rapidly lessened, and, as is commonly the case, the patient disappeared, perhaps to swell the list of some other clinic.

CASE 2.—M. N., aged 11 years, came on December 17, 1901, with a history of inflammation of the eyes, of two

*Read before the Section on Ophthalmology of the College of Physicians of Philadelphia, January 21, 1902.

days standing, as the result of infection from her baby brother (Case 5). There were still other cases in the same house, which we did not see. The conjunctiva of both eyes was deeply injected and quite thickened, and there was thick, mucopurulent discharge in the lower cul-de-sac. The corneas were clear, but the right one showed the Koch-Weeks bacillus, associated with a larger, club shaped organism, which stained irregularly in segments. Under the same treatment the eyes improved rapidly, and in two weeks, at the time of the last visit, the discharge had practically ceased, leaving still considerable thickening of the conjunctiva. The corneas remained clear.

CASE 3.—A. L., colored, aged 8 years, was first seen December 17, 1901. There was no previous history of eye inflammation. The eyes had been sore two days, and no history of infection could be elicited. The right eye showed an intense injection and thickening of the conjunctiva, with two phlyctenules at the outer border of the cornea. The left eye was less inflamed, but presented several phlyctenules down and in. Both corneas were clear and the usual treatment was prescribed. The discharge contained the Koch-Weeks bacilli in large numbers.

Two days later the right cornea showed beginning infiltration, in the form of several small grayish points, beneath the surface, near the limbus, in the upper, inner quadrant, but there was no superficial ulceration. Five days later this infiltration had extended, additional small points appearing at the margin, and coalescing with the first ones. These gradually spread until the whole cornea was involved by the infiltrate, which remained in the parenchyma and caused no loss of tissue on its surface. On the upper and lower borders a thick network of vessels extended inward from the conjunctiva, forming a reddish border, two millimeters broad; the condition was accompanied by considerable photophobia, but apparently did not cause much pain. The iris could not be seen because of the corneal opacity. During the next few days the left eye improved very much, the cornea remaining perfectly clear, but the right eye was evidently receiving very little attention at home, so the patient was admitted to the hospital wards. Here the treatment consisted of hot compresses, boric acid cleansing and atropine locally, with three grains of quinine internally, three times a day. The improvement was almost immediate. In three days the discharge had ceased, the thickening and injection of the conjunctiva had very much decreased and the interstitial infiltration of the cornea was being rapidly absorbed. To-day, one week after her admission, the discharge has ceased, the injection and photophobia are nearly gone, and the cornea has cleared, with the exception of four or five points of infiltration in the centre. Under further treatment these opacities should disappear completely. This was the only case in which any ulceration or opacity was seen. The child is well nourished, but has badly neglected teeth (which, however, are not syphilitic in type), and shows other signs of a strumous taint, so that the cornea was a point of weakened resistance and was more readily involved by the inflammatory process. The interstitial infiltration was alone present, in three of Morax's cases, while the other three showed, in addition, superficial ulceration.

Besides these three cases, there were two other children, a brother of case 2, and a sister of case 1, both of whom presented the same characteristic thickening of the conjunctiva, and the phlyctenules, in whom, however, the discharge was not examined microscopically. It would probably have shown the same organism. I have the records, further, of three isolated cases, occurring in adults, during the past six months, in which I found the Koch-Weeks bacillus and in which the symptoms were equally severe, except that the phlycetenules were absent, making in all six cases. I consider this of considerable importance, as previous to this my experience had corresponded with that of de Schweinitz and Veasey,[5] who reported a series of 64 cases, three years ago, in which they found the pneumococcus by far the most frequent cause of acute contagious conjunctivitis in Philadelphia.* Dr. D. H. Bergey, first assistant in the Laboratory of Hygiene at the University of Pennsylvania, has, moreover, given me the records of 13 cases in which he found the same organism. These occurred in an epidemic at St. John's Orphan Asylum in West Philadelphia, during the summer and fall of 1900. In all, there were 300 cases of a quite severe type, many exhibiting phlyctenules, and Dr. Bergey, who examined them at the request of the attending physician, Dr. J. F. Prendergast, found the Koch-Weeks bacillus in the thirteen examined, and was able to cultivate it, not, however, without considerable difficulty. Drs. Prendergast and Bergey will shortly report this epidemic in more detail, but have kindly allowed me to refer to it briefly in this communication. So that the organism has been found to my personal knowledge in 19 cases during the past year and a half. Why it has not been found previously is difficult to say. Dr. Weeks, I know, is inclined to think that the organism is overlooked by observers in Philadelphia because of its minute size, and this is probably to some extent true, but my training at the New York Eye and Ear Infirmary had prejudiced me rather in favor of, than against, it, and has kept me constantly on the watch for it. I am inclined to think that the cases which have been examined have not occurred in real epidemics, but have been isolated ones, caused by the distinctly less contagious pneumococcus. Those we have seen this year have been very severe in type, quite different from the apparently mild form described by Müller and Weichselbaum, who do not admit the possibility of corneal lesions. That the same organism can thus produce epidemics of varying severity must, I think, be admitted and a consideration of the existence of this variability in virulence, well-known in the case of other pathogenic organisms, might have induced these observers to be less severe in their criticisms of the clinical and pathological observations of Weeks, Kartulis and Morax.

Conclusions.

1. The Koch-Weeks bacillus conjunctivitis is apparently becoming more common in Philadelphia than has been hitherto observed.

2. It may present itself in a particularly severe form, and be complicated by phlyctenules and even by corneal ulceration.

3. These cases are especially contagious, and extra precautions should be taken to prevent their spreading, particularly among the school children.

4. As a rule, they are controlled by the use of mild astringent lotions, and applications of 2 per cent. solutions of nitrate of silver. We have not tried protargol, but equally good results have been obtained by other observers, when the solutions used have been of sufficient strength, viz., 10 to 20 per cent.

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4. Mueller and Weichselbaum. Archiv f. Ophthalmologie, XLVII-1, p. 195.
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*Gifford's results were the same in Omaha.

A CASE OF DIAPHRAGMATIC HERNIA.

By W. MOSER, M. D.,
of Brooklyn, N. Y.
Physician to the German Hospital, Brooklyn.

Herniæ of the diaphragm are a little varied in character owing to differences of site and origin.

I find the literature of diaphragmatic hernia rather sparse, and believe this case worthy of record. A review of the literature will show that the large majority of cases of diaphragmatic hernia are due to traumatism and are generally fatal.

In another class of cases the hernia is congenital and associated with malformation or malposition of different organs.

In congenital as in traumatic cases the heart is not infrequently found in the right thoracic cavity.

In a case reported by Dr. I. Abt (Pediatrics, February 15, 1902,) the small intestine and the larger part of the stomach occupied the left thoracic cavity.



A Case of Diaphragmatic Hernia.

The left lung was rudimentary and occupied a small corner of the left thorax.

Microscopical examination of the lung tissue showed it to be atelectatic.

The case about to be reported shows a protruded mass in the epigastric region (see photograph).

The man had this hernia for a number of years and when asked how he got it, answered that he "did not know."

It appears from his statement to have occurred simultaneously with a double inguinal hernia (not seen on the photograph).

He cannot then recall any severe injury in the region of the diaphragm to account for his diaphragmatic hernia.

It did not exist in childhood (according to him) but he only noticed it during the last few years.

The patient could easily replace the protruded mass which probably contained a portion of the stomach and intestinal masses.

That this case is one of diaphragmatic hernia (in contradistinction to a purely epigastric one) was proven by the fact that upon replacing the protruded mass several fingers could be easily passed through a large opening in the diaphragm and a portion (apex) of the heart could be easily grasped with the fingers.

Dr. Geo. H. Reichers, who was my house physician at the time, more than once felt the patients' heart through the opening in the diaphragm.

In the hands of an experienced experimenter a case of this kind might be of value in the solution of some points in cardiac physiology.

The heart in this cases did not appear to be much, if at all, pushed to the right.

It appears from this case that not all cases of diaphragmatic hernia of acquired character are due to severe injury affecting that muscle nor are they necessarily fatal.

I am inclined to believe that cases of this character might be due to a slight traumatism or heavy lifting and that a congenital, easily dilatable opening or malformation preexists.

The origin of the mass is not easily explained, but that it was there no one can question.

Albuminuria in Life Insurance.—Dr. Stokvis of Amsterdam believes that albuminuria is always pathological, never physiological. Intermittent albuminuria is generally extrarenal. In the cases of external albuminuria there are no casts, while leukocytes, erythrocytes, epithelium, mucus, etc., occur. The great majority of the so-called physiological albuminurias is extrarenal. Specimens of night and morning urine should always be examined. The predominance of nucleo-albumin generally means extrarenal albuminuria. Renal albuminura may be due to organic disease, nephritis, pneumonia, heart disease, apoplexy, and tuberculosis, or to functional disturbances, cardiac, or cyclical albuminuria. Stokvis concludes that many cases of albuminuria are to be insured; that this depends not upon the permanent or transitory character of the albuminuria, but upon the morbid symptoms associated with it; that the risk of organic albuminuria is not yet acceptable to life insurance companies; and that microscopic examinations of the urine of each case are necessary, in order that extrarenal albuminuria be not mistaken for true renal albuminuria. (*Journal des Praticiens*, 1901, No. 40). [M. O.]

Urogenital Tuberculosis in a Girl of Eleven.—Camelot was called to see a girl of 11, with incontinence of urine. She was markedly cachectic, and had a vesicovaginal fistula, through which the urine passed. This probably followed tubercular ulceration of the bladder wall. A few days later she died with uremic symptoms. Both kidneys were caseous and sclerotic, the bladder wall was thickened and covered with ulcers, the Fallopian tubes were caseous, and the broad ligaments were thickened. In the lungs some old tubercles were found. Tuberculous peritonitis had already begun. Tubercular kidneys are not rare in childhood; nephrectomy should be performed early, when only one kidney is affected. The cystitis is a complication of renal tuberculosis, and the vesicovaginal fistula complicated that. Tubal tuberculosis is very rare before puberty. In this case Camelot believes that the right kidney was affected from phthisis, and that the tuberculous process descended to the bladder, and then ascended to the left kidney. The tubes were probably affected by the lymphatics. (*Journal des Sciences Medicale de Lille*, August 24, 1901, No. 34). [M. O.]

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*Epigastric herniae are usually small, and for this reason frequently overlooked. (Tillmann's.) They may, however, be large like this one containing stomach, intestines, etc. But they do not communicate with the thoracic cavity as in this case.

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague, have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ending April 19, 1902:

SMALLPOX—United States.

			Cases.	Deaths.
CALIFORNIA:	Los Angeles.	Mar. 29-Apr. 5.	9	
	San Francisco.	Mar. 30-Apr. 6	9	
COLORADO:	Denver.	Mar. 29-Apr. 4	8	
ILLINOIS:	Chicago.	Apr. 5-12.	14	
	Freeport.	Apr. 5-12.	1	
INDIANA:	Evansville.	Apr. 5-12.	2	
	Indianapolis.	Apr. 5-12.	13	
	Terre Haute.	Apr. 5-12.	2	
KANSAS:	Wichita.	Mar. 29-Apr. 12	9	
		One case imported from Oklahoma.		
KENTUCKY:	Covington.	Apr. 6-13.	7	
LOUISIANA:	New Orleans.	Apr. 5-12.	One case imported from Mississippi.	
	Shreveport.	Apr. 5-12.	7	
MAINE:	Portland.	Apr. 5-12.	9	1
MARYLAND:	Baltimore.	Apr. 5-12.	1	
MASSACHUSETTS:	Boston.	Apr. 5-12.	13	3
	Brockton.	Apr. 5-12.	2	
	Cambridge.	Apr. 5-12.	2	
	Everett.	Apr. 5-12.	1	
	Lawrence.	Apr. 5-12.		1
	Lowell.	Apr. 5-12.	2	
	Malden.	Apr. 5-12.	1	
	New Bedford.	Apr. 5-12.	1	
	Quincy.	Apr. 5-12.		2
	Somerville.	Apr. 5-12.	3	
MICHIGAN:	Detroit.	Apr. 5-12.	18	
	Ludington.	Apr. 5-12.	19	
MINNESOTA:	Winona.	Apr. 5-12.	2	
MISSOURI:	St. Louis.	Mar. 30-Apr. 6	30	
MONTANA:	Butte.	Mar. 30-Apr. 13	7	
NEBRASKA:	Omaha.	Apr. 5-12.	24	
NEW JERSEY:	Camden.	Apr. 5-12.	4	
	Hudson County inclusive.			
	Jersey City.	Mar. 30-Apr. 6	30	9
	Jersey City.	Mar. 30-Apr. 6	21	
	Newark.	Apr. 5-12.	42	10
NEW YORK:	New York.	Apr. 5-12.	66	12
OHIO:	Cincinnati.	Apr. 4-11.	16	
	Dayton.	Apr. 5-12.	1	
	Hamilton	Mar. 29-Apr. 5	5	
	Toledo.	Apr. 5-12.	2	
	Youngstown.	Apr. 5-12.	1	
PENNSYLVANIA:	Altoona.	Apr. 5-12.	2	
	Johnstown.	Apr. 5-12.	1	
	Philadelphia.	Apr. 5-12.	35	4
	Pittsburg.	Mar. 29-Apr. 12	10	
	York.	Mar. 5-Apr. 5	7	3
RHODE ISLAND:	Providence.	Apr. 5-12.	5	
SOUTH CAROLINA	Greenville.	Mar. 29-Apr. 5.	4	
SOUTH DAKOTA:	Sioux Falls.	Apr. 5-12.	3	
TENNESSEE:	Memphis.	Apr. 5-12.	8	
UTAH:	Ogden.	Mar. 1-31.	4	
	Salt Lake City.	Apr. 5-12.	1	
WASHINGTON:	Tacoma.	Mar. 30-Apr. 6	5	
WISCONSIN:	Green Bay.	Apr. 5-12.	7	
	Milwaukee.	Mar. 29-Apr. 5	1	

SMALLPOX—Insular.

PORTO RICO:	Arecibo.	Mar. 1-22.	61	
	Ciales.	Mar. 1-22.	6	
	Fajardo.	Mar. 1-22.	1	
	Humacao.	Mar. 1-22.	1	
	Ponce.	Mar. 1-22.	12	
	San Juan.	Mar. 1-22.	6	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	Mar. 15-29.	13	
BARBADOS:		Mar. 30.	10	
BELGIUM:	Antwerp.	Mar. 22-29.	10	4
BRAZIL:	Pernambuco.	Feb. 14-28.		27
CANADA:	Halifax.	Mar. 31-Apr. 7	1	
	Quebec.	Mar. 28-Apr. 12	48	1
FRANCE:	Paris.	Mar. 22-29.		1
	Rheims.	Mar. 16-30.	51	4
GREAT BRITAIN:	Birmingham.	Mar. 22-29.	1	
	Croydon.	Mar. 22-29.	1	
	Gateshead.	Mar. 28-Apr. 4	13	
	London.	Mar. 22-29.	2	
	Liverpool.	Mar. 22-29.	4	
	London.	Mar. 22-29.	389	62
	North Shields.	Mar. 15-22.	7	
	Sheffield.	Mar. 15-22.	1	
	South Shields.	Mar. 22-29.	2	
INDIA:	Bombay.	Mar. 4-18.		37
	Calcutta.	Mar. 1-15.		14
	Karachi.	Mar. 2-16.	8	6
	Madras.	Mar. 8-14.		4
ITALY:	Caserta.	Mar. 24.	Many cases.	
	Milan.	Feb. 1-28.	5	3
	Naples.	Mar. 15-22.	7	1
	Palermo.	Mar. 15-29.	37	4
	Santa Maria Capuavetere	Mar. 24.	Many cases.	
MEXICO.	Mexico.	Mar. 23-29.	2	3
NETHERLANDS:	Rotterdam.	Mar. 22-29.	2	
RUSSIA:	Moscow.	Mar. 15-22.	18	3
	Odessa.	Mar. 23-29.	2	1
	St. Petersburg.	Mar. 15-29.	14	
SWITZERLAND:	Geneva.	Mar. 8-15.	1	

YELLOW FEVER.

DUTCH GUIANA:	Paramaribo.	Feb. 1-28.	7	
FRENCH GUIANA.	Maroni.	Mar. 31.	Infected.	
	St. Jean.	Mar. 31.	Infected.	
	St. Laurent.	Mar. 31,	Infected.	

CHOLERA.

CHINA:	Honan.	Apr. 10,	Epidemic.	
	Hongkong.	Mar. 4.	1	
INDIA:	Bombay.	Mar. 4-18.	41	
	Calcutta.	Mar. 1-15.	285	
TURKEY IN ASIA	Djiddah.	To Mar. 27.	38	
	Mecca.	To Mar. 27.	788	
	Medina.	To Mar. 27.	381	
	Rebuk.	To Mar. 27.	1	

PLAGUE—Insular.

PHILIPPINE ISLANDS.	Manila.	Feb. 1-22.	2	2

PLAGUE—Foreign.

CHINA:	Shantung.	Feb. 10.	300	
	Yeung Kong.	Feb. 10.	Prevalent.	
INDIA	Bombay.	Mar. 2-8.	1625	
	Calcutta.	Mar. 1-15.	962	
	Karachi.	Mar. 8-14.	1	
	Madras.	Mar. 2-16.	167	147

CENTRALBLATT FUER ALLGEMEINE PATHOLOGIE UND PATHOLOGISCHE ANATOMIE.

January 8, 1902. No. 1.

1. The Absorption of Fat in the Intestines and Its Transportation to Other Organs. A Preliminary Communication From the Pathological Institute at the University of Freiburg i. B. D. P. KISCHENSKY.
2. The Pathological Significance of Ferments.

MARTIN JACOBY.

1.—The author's experiments were conducted upon young cats that had been fed partly with milk and partly with a watery emulsion of oleic acid. For the purpose of identifying the fat within the sections that were made from the various organs of the animals, the author principally employed the scarlet stain (Scharlach R.), instead of osmic acid. He claims that by the means of this stain more fat can be recognized and smaller quantities of the same, than by the ordinary method. He thus succeeded in demonstrating in several young cats the presence of the fat (oleic acid) within the cuticular seam of the intestinal villi, the fat manifesting itself in the shape of the minutest spheres. The intestinal contents of the animals experimented upon showed very little of the emulsion upon microscopical examination, which led to the presumption that droplets of fat had penetrated through the cuticular seam. In the case of cats that are not very young, the nutritive fat in any form passes through the cuticular seam into the epithelial cells, from here into the primary lacteals and into the adenoid tissue of the villi. In newly born cats, on the other hand, the fat is not only absorbed through the epithelial cells, but also to a certain degree between the epithelial cells. Fat can also be demonstrated in the epithelium of the gastric glands, in the glands of Lieberkühn and Brunner, as well as in the epithelium of the interlobular biliary passages, and also in the epithelium of the pancreatic duct. In addition to the cells containing fat there are also found in the gastrointestinal canals of young cats numerous eosinophiles (mucinophiles), which do not contain any fat but only a very few of these cells are leukocytes that contain fatty granules in their protoplasm. At the same time eosinophiles can be found in great quantities in the mesenteric glands, in the spleen and in the lungs. The number of these cells decreases to a considerable degree during hunger. [M. R. D.]

2. A resume of the literature on the subject. [M. R. D.]

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See Advertising Page 8.

VOL. IX, NO. 18 MAY 3, 1902 $5.00 PER ANNUM

Sanitation and Smallpox.—Dr. Martin Friedrich, Health Officer of Cleveland, Ohio, has some reason to be congratulated upon the successful results of the crusade against smallpox which was inaugurated by him. We are informed that in one month after he entered upon his duties, in July last, not a fresh case appeared. Smallpox has been epidemic in Cleveland since 1898; in 1900 there were 933 cases, and from January 1st to July 1, 1901, the number amounted to 1223. The means employed by Dr. Friedrich to combat the disease was a thorough house disinfection with formaldehyde, in every instance in which a case was recognized or suspected. Vaccination had not proven at all satisfactory in Dr. Friedrich's hands, and with the Mayor's permission he dispensed with the measure.

It is furthest from our object to belittle this achievement in any way and it may well be argued that results after all are the final criterion. There are, however, features of this question which are sufficiently important to demand inquiry. There has been a tendency, which we regard as unfortunate, to see in the Cleveland results a state of affairs which has been described as "Vaccination *versus* Sanitation," and we think this is quite deplorable. There is no "versus" about it. The two measures have a common end, both are regarded as indispensable by students of preventive medicine in combating smallpox, and one should merely supplement the other. The consensus of professional opinion dissents from Dr. Friedrich's views of the untoward and unsatisfactory results of vaccination. His results show beyond peradventure that the lymph used was of inferior quality. We are not inclined to regard his conclusions as to the efficiency of vaccination, based on his written statements, as any more logical from the premises than if by a similar reasoning, having secured no results from disinfection with formaldehyde, he had reached the conclusion that such disinfection was worthless, without carefully determining the quality of the disinfectant with which he was supplied. We cannot forego giving voice to the belief that the majority of physicians in Cleveland would not be willing to subscribe to Dr. Friedrich's condemnation of vaccination and that, on the contrary, they were probably recommending and practising vaccination with commendable persistence.

The query naturally arises whether, after all, vaccination did not do a very great deal in Cleveland to bring about the state of affairs which was most satisfactory to Dr. Friedrich's administration. A word as to the plan of disinfection which was followed; statements were secured from the patients giving the names and addresses of all those persons with whom they had been in contact, whether at place of business, school, church, or public meeting for the previous two weeks. This information obtained, the health officials called at the indicated addresses, found out the absentees during the last month from shop, church or school, and then visited the home of every one of them. Disinfection was practised in every case in which there was the slightest suspicion of exposure to smallpox. We hold that the securing of the names and addresses of every person coming in contact with the patient for two weeks before the appearance of the disease is absolutely impossible of accomplishment. Were this information obtainable, granting the possession of an ideal memory on the part of every patient, it would still leave open the vast possibilities of infection having occurred in public conveyances, places of amusement, etc. Dr. Friedrich's results are surprising. They are unique in the epidemiology of smallpox. They have not, however, convinced us that sanitation can be made as far-reaching as it appears to have been made, and vaccination has too much to be said on its side for us to accept Dr. Friedrich's view of the matter.

Cholera and Religion.—That cholera is raging in Arabia is only too evident. Dr. Zavitziano, the United States Sanitary Commissioner at Constantinople, reported to the Surgeon-General of the Marine-Hospital Service that 1129 deaths had occurred in the Hedjaz in March, of which number 381 had occurred in Medina and 788 in the holy city of

Mecca. (*Sic*) Later reports have swelled these numbers very considerably. As Zavitziano says, the great danger arises when these fanatical pilgrims start to return to their various countries. It can readily be imagined what gross ignorance, what filthy habits, what lack of precautions, this motley throng of pilgrims may be guilty of. The civilized world has one of its greatest sanitary problems in the effort to control this Moslem pilgrimage, for 250,000 of these devotees may be loose in Arabia at one time. Religious fanaticism has always been the most dangerous and potent obstacle to science, and religious fanaticism is never more intense than in the followers of the Prophet. When we consider the defects of the Turkish Government, and the untrammeled zeal of the Mohammedan pilgrims, along with the bad water supplies and the squalid habits of these off-scourings of the Orient, we can almost despair of modern civilization combating successfully this scourge.

Reports from Manila also are not encouraging; and the disease has secured a firm footing in China. Of course, it prevails as usual in India, more than a thousand deaths having occurred in Calcutta during the winter. The religious prejudices and customs of the Hindoos are quite as dangerous as those of the Moslems.

But our attention should be centered, not exclusively, but largely, upon the Moslem world. Mecca has always been the ditsributing depot for cholera. The geography of disease is at present supplying interesting and momentous problems to the student.

The State of the Reflexes in Total Transverse Lesions of the Spinal Cord.—In an interesting discussion on this subject, held recently before the New York Neurological Society, the great variety of views and facts was examplified. Dr. William Aldren Turner, of London, read the paper of the evening. He related the results of his experiments on monkeys, in which he had performed total transverse section. Contrary to what usually happens in man in cases of total transverse lesions, it was observed that in most monkeys the knee-jerks remained brisk. In one case, however, the knee-jerks were not obtained after the first quarter of an hour. In nearly all these cases the monkeys died in a few days. Dr. Turner claimed that a weakening or temporary abolition of the knee-jerks was more common after high than after low transections, but in no instance was complete absence observed.

We desire to point out the very important fact that there was little if any shock in these cases. A monkey that receives a transection of its spinal cord under an anesthetic, is in a very different state of nervous system from the human subject who meets with an accident severe enough to cause a total transverse lesion of the spinal cord. Clinical observations have proved more than once that lesions which are even not totally transverse, but which are attended with great shock, may cause total abolition of the knee-jerks. One such case at least has been observed in the Philadelphia Hospital and reported from that clinic within the last few years. It is the element of shock (whatever that is) that counts.

This element was not sufficiently emphasized in the discussion of Dr. Turner's paper. The variations obtained in experiments in the laboratory, as well as the variations observed in traumatic cases in the human subject, may possibly be explained by variation in the amount of shock. These variations are so great that it seems impossible as yet to formulate a general law that will cover all cases. The question whether the centers for the reflexes are located in the spinal cord or in the cerebellum or in both regions, is, therefore, one that is not fully answered in the present state of our knowledge, but the fact that in most of Dr. Turner's monkeys the knee jerks were not abolished, seems to prove that the centers for those reflexes at least are in the spinal cord.

The Etiology of Appendicitis.—Despite the numerous clinical observations and the many opportunities for exhaustive investigations afforded by operations and autopsies, we are still in the dark concerning the etiology of appendicitis. As is the case in other diseases of obscure origin, various theories have been advanced from time to time, only to be abandoned when found wanting in evidence. The grape seed, fecal concretions, and even the street car and golf have been, each in turn, held up as the causative agent. It is needless to say that the disease attacks equally the one who carefully rejects the seeds and the one who swallows them indiscriminately; nor are fecal concretions and other foreign bodies found with sufficient frequency to account for all cases of appendicitis. It is sufficient to reflect on the frequency with which foreign bodies, large and small, pass through the alimentary canal without lodging in the appendix, to reject the foreign-body theory as explaining fully the causation of appendicitis. We must admit at the same time that in some cases a small foreign body, such as a pin, may lodge in the appendix and set up an irritation. Recently, Metchnikoff advanced the theory, supported by a considerable number of clinical observations, that the intestinal parasites form the most frequent etiological factor in appendicitis. According to this theory, the parasites enter the ap-

pendix and, by their presence or their eggs, injure the walls and establish a *locus minoris resistantiae*, which is then attacked by pathogenic organisms. This theory is certainly a plausible one. Here we deal not with a foreign body which is propelled along a smooth mucous membrane, but an active parasite possessing independent motion, a parasite which is fully capable of setting up severe irritation. But here, again, the parasite only serves as a predisposing factor, the main cause residing in the pathogenic organism which attacks the injured appendix. As a matter of fact, it seems unnecessary to invoke the aid of a foreign body in every case of appendicitis. An organ so rudimentary as the appendix is certain to lack in vital resistance and may under certain conditions become a prey to pathogenic organisms which are ever present at this particular location. In short, appendicitis is often an infectious disease, having its primary seat in the appendix, and as its direct cause any of the several pathogenic micro-organisms, such as the virulent bacillus coli communis, staphylococcus, streptococcus, etc. This disease is in a measure analogous to diphtheria, on the one hand, and to typhoid enteritis, on the other, the analogy to the latter being made still closer by the fact that in the appendix, like in the ileum, the lymphoid tissue is primarily involved and there is the same tendency to necrosis and perforation. Whether the disease becomes a septicemia, a toxemia or terminates in local suppuration, depends entirely on the nature of the offending micro-organism.

A Short Homily.—While no man of strong moral impulse could willingly be party to a lie, the propriety of abstract truth-telling may deserve his sincere consideration. Shall the truth be voluntarily told in all cases? Shall we confess those faults in ourselves and point out those defects in others that may be followed by ignominy or contempt? Shall the defects of our systems, the errors of our judgments, the accidents of our operations, be truthfully volunteered or shall diplomacy throw the cloak over them in charitable protection? These are questions of interest to every man; of absorbing interest to every scientific man.

Shall the surgeon for diplomacy's sake lead his patients to the operating theater in total ignorance of the dangers of anesthetization, or the accidents of the operation or the probability of infection? Shall he leave him in ignorance of the pain to be endured and have him awake from his narcosis weak and suffering, the victim of unknown misfortune?

It must, indeed, be a skilful diplomacy that can, under such conditions, redound to the credit of the surgeon.

Can the influence of the health authorities of a city, who by diplomacy conceal the fact that an epidemic exists among them, promote the welfare of that city? Can the denial of the facts, the withholding of information from the newspapers, the suppression of the truth, the systematic deception of the people into believing what they doubt, best promote the general good? Will as many persons submit to vaccination if they believe the danger from smallpox to be little as if they believe it to be great? Will they as carefully seek to avoid infection and contagion if they are taught not to fear it?

Does not the withholding of the actual facts tend to throw down the very barriers that we should seek to erect rather than help to build them?

But this matter of universal truth-telling is much beset with difficulties and productive of great unhappiness. Your friend with the wart on his nose is the ugliest fellow of your acquaintance. You know that he is ugly; it is true, and no one denies it, but shall you on that account, the next time you meet him, instead of your customary cordial greeting, remark, "My dear fellow, I never saw you look so ugly in your life"? This is a brutality that even the most pronounced purist could not tolerate.

"The less said the better" is probably the best way of disposing of the trivial matters, but when any matter bids fair to have a far-reaching influence and to affect the health and happiness of some individual or community, the more completely the matter is investigated and the more widely it is known, the better it will be.

Anon there occur in medical science—the least exact and most speculative of all sciences—accidents which reflect more or less odium upon some individual, institution, corporation or recognized procedure, and concerning which the question of policy arises. Shall the truth be told and the individual ruined, the institution disgraced, the corporation prosecuted or the procedure abandoned?

Is deception the best policy, or is it most expedient for thorough investigation to be made and the carefully determined truth to be published in order that similar misfortunes may be avoided, or for the matter to be hushed up and the danger scouted?

In all such cases two factors are to be considered: first, the individual, institution or corporation through whom the misfortune occurs; second, the public and profession who are injured.

Except where there is criminal guilt or negligence, the cases of the first group must be treated with Christian forbearance. We are all human and the

exposure of human limitations is unnecessary. The safety of the public and the dignity of the profession are, however, different matters, and whatever directly bears upon them should be probed and laid bare in order that danger-signals may be erected for future protection. There can be no advantage in disguise or misrepresentation.

The Surgery of the Heart.—Three times during the past winter we have invited the attention of our readers to the subject of the Surgery of the Heart and it is with pleasure that we refer to another interesting and instructive communication on this subject by Dr. H. L. Nietert, which appears in this issue of **The Journal.** The writer has already reported two cases of penetrating wounds of the heart in which he has operated, and now presents his views upon the general subject of heart injuries after a careful study of the question. Nietert's experience has been unusual and places him in a position to speak with authority regarding penetrating wounds of the heart, and what he has to say must prove of the greatest interest to those who may be called upon to meet such emergencies. Although the pericardium has for some time been within the legitimate field of surgery, the heart itself has not until recently been an organ which the surgeon dared to approach; hence, the cases recently reportd by Nietert and others bear a peculiar interest.

Obscureness in Science.—Professor Jacques Loeb concludes his recent paper (*Popular Science Monthly*, May, 1902) in these words: "Any disturbance in the right proportion of monovalent ions and ions of higher valency must lead to more or less pronounced modifications of the life phenomena." We should be pleased if some one would explain to us the exact meaning of these words.

Having read carefully this paper by Professor Loeb, and having naturally a desire to know the real value of his opinions, we have ventured upon the following interpretation: Electrically charged "ions" are the moving springs of life; every movement of a muscle, every impulse of a nerve, every physiological act, is caused by these electrically charged bodies. As nearly as we can understand Loeb's language, this interpretation is fair.

But what does it signify? What are ions? Has any man seen them? Are they different from atoms, monads or molecules? Is it possible to measure the electrical charge of one of them, or tell what it is capable of doing? Is not Loeb's speculation only another way of saying (what used to be said rather often) that electricity is life and life is electricity? What is gained by reasserting these old worn-out opinions in slightly more obscure language?

We cannot deny (and have no desire to deny) that some of Professor Loeb's observations, especially on artificial parthenogenesis, are of extreme interest and value; but we confess frankly our inability to grasp the import of the pseudoscientific terminology in which he has tried to explain them. The term "ion," in the sense in which Loeb uses it, is defined in the Century Dictionary as "one of the elements in an electrolyte, or compound body undergoing electrolyzation." How does it explain the phenomena of life to appeal to "ions?"

Practising Medicine by Telephone.—We heard a doctor complain recently that one of his patients, in order presumably to save his time, sometimes called him up on the telephone when she wanted him to give advice about the baby. The good dame would sit at the other end of the wire, pencil in hand, and ask the unfortunate doctor to dictate his instructions while she took them down. This continued until one day she asked him to dictate his prescription. At this he rebelled. He was willing to take the baby's temperature and pulse by telephone, and even to inspect the character of the dejections; he was even willing to tell all he knew about babies in general and about that baby in particular; he did not even object for a while to give the lady the full benefit of a professional call and charge it as an office visit; but his conscience smote him when it came to dictating a Latin prescription by telephone and having a thrifty-minded housewife sign his name to it before her own initials.

Some physician should write a chapter on the medical ethics of the telephone. We would do it ourselves if we felt capable. There are two sides to the question. The patient sometimes gets the better of the doctor, and saves a fee—but the doctor sometimes gets the better of the patient and saves himself a lot of trouble. It is obvious that in either case the patient should pay for it. But the question arises, what should he pay? Is it an office visit, or a house visit? The advice is given in the office, but it is received in the house. This is somewhat of a metaphysical quandary. Should a doctor charge an office fee for giving advice that goes straight to the patient's bedside? On the other hand, should a patient be obliged to pay a house fee for advice which a doctor gives sitting comfortably in his office? The problem is full of difficulties. Perhaps

it would be best to call it half-and-half, and charge accordingly.

Our statesmen in Washington who are so anxious to exclude undesirable immigrants in the case of the Chinese, might attend to the same class of immigrants who are coming from Europe this year in great numbers. According to the *Review of Reviews*, the large majority of these immigrants are from Southern Europe and from Syria and Armenia.

Licenses to sell alcoholic drinks have been greatly curtailed in Ontario. Tavern licenses have been reduced from 4.793 to 2.621, and wholesale licenses and those to shops and vessels have been reduced even more. But whether the drinking in the remaining shops and taverns is to decrease, is still a question for time to determine.

Current Comment.

TOBACCO AND STERILITY.

Dr. Le Juge de Segrais, however, refers to a communication presented by Dr. Georges Petit, General Secretary of the French Anti-Tobacco Society, to the Congress of Scientific Societies in 1901 on changes in the organs of generation produced under the influence of tobacco. He made experiments on a number of animals—dogs, cocks, guinea-pigs, rabbits (male and female)—which were exposed to the action of tobacco smoke, fed with tobacco leaves, and treated with enemata of nicotine solution. In some cases acute intoxication was produced, and the testicles were found congested, the tubuli seminiferi being the seat of cell proliferation and epithelial desquamation. In other animals in which chronic intoxication had been produced the testes were the seat of a true atrophic sclerosis approximating to the cirrhotic type, the vesiculæ seminales were, as it were, withered, and no separmatozoa could be discovered. In the female rabbits the ovaries were shrunken and atrophied. These facts may, perhaps, help us to regard the war of the tobacco trusts with satisfaction as likely to result in a diminished consumption of tobacco.

—*The British Medical Journal.*

LETTERS ON THE BREAKFAST TABLE.

It is the custom of many households to have the morning's post placed upon the breakfast table.

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The plan is convenient, but from a sanitary point of view it is appalling. It is undeniably a dirty practice. In nine cases out of ten the envelope containing a letter is licked, as is also the stamp, by the sender. Infection, therefore, may easily lurk here, especially as by the time the letter reaches its destination the stamp and sealed cover are dry. Any materies morbi present would be easily detached. Then there are the risks of infection to which a letter is exposed in transit. The sorter at the post-office or the postman may not be as bacteriologically clean as is desirable. The dust of the road may adhere to any exposed gum or the letters may be dropped, and the bacteriology of road dust exhibits some well-known pathogenic organisms. Letters are frequently smeared with road mud. Amongst the microbes recognized in road-sweepings are the microbes of pus, malignant edema, tetanus, tubercle, and septicemia. The post probably is a very wide distributing agency of all sorts and conditions of organisms and this would be difficult to prevent. But surely care might be taken to keep from association the plate upon which food is partaken and the letter or newspaper packet. It follows that from a hygienic point of view letters should never be opened or read during a meal. Good manners, moreover, would dictate the same thing and thus be in accordance with strict hygienic observance.

—*The Lancet.*

A DEAD MAN'S VIEW.

But whether Mr. Rhodes was a potential paranoiac or not, he certainly was a sentimentalist to no small degree. Otherwise, he would not have left directions to have himself buried in a place where there is an extensive prospect. A "View of the World" is of no appreciable value to a dead man.

—*The New York Times.*

STAMPING OUT CHOLERA WITH TEA.

When one comes to consider the awful death-rate among the Indian poor from such diseases as cholera, bowel-complaints and malignant fevers, all of which owe their origin to the drinking of impure and unboiled water, one is struck with the life-saving prospect of a scheme such as that of popularizing the drinking of tea, since tea-making entails water-boiling, and this kills all germs that produce disease. To our mind the encouragement of tea-drinking gives a brighter prospect of life-saving than almost any sanitary problem yet solved for the good of the health of India's millions, and we therefore cordially wish the promoters of this great venture the biggest success possible to their enterprise.

—*Indian Medical Record.*

Correspondence.

AN EXTRAORDINARY CASE OF TRAUMA IN A PREGNANT WOMAN.

By MARTIN J. SCHUH, M. D., of New York.

To the Editor of the **Philadelphia Medical Journal:**

I hereby wish to report a case of a young woman who fell five stories out of a window, November 4, 1901, was 4 months pregnant, sustained a laceration of the kidney, and, later, gave birth to a full term child. Sophia D., aged 29 years, born in New York, while hanging out clothes, suddenly lost her grip on the line and tumbled five stories to the pavement. When picked up she was found in a sitting posture. She was in a comatose condition following the shock, and was conveyed to the St. Mark Hospital, where I treated her.

The symptoms she gave were first shock, from which she recovered in less than twenty-four hours. She then complained of pain on the left side in the region of the left kidney, with slight swelling and tenderness in the above region. The urine was found to contain very large quantities of blood. Her temperature was 90° and her pulse was 130. I examined her bladder carefully, as I also did her uterus, and found both organs in good condition. I therefore surmised that I was dealing with a lacerated kidney. I kept her under observation for another 24 hours, when her pulse was about 100.

I intended doing an exploratory laparotomy if her pulse did not improve, but I refrained from doing so on account of her pulse and general condition improving. The blood in her urine had meanwhile also lessened and the bleeding had entirely stopped on the fourth day of her admission. Her pulse on the fourth day was 86.

I treated her with ice bags in the region of the left kidney and supported her loins with broad adhesive plaster strips (the same we employ in fractured ribs). My internal medication consisted of strychnine sulph. g. 1-60 g. 4 hrs.

I also gave her suprarenal extract, gr. 1, every 4 hours, which I continued for 10 days.

I discharged her as cured on the 17th. of November.

On April 13, 1902, Dr. Hathaway, of St. Mark Hospital, delivered her at her dwelling, where she gave birth to a girl. They are both to-day in good condition, and none the worse for their experience.

Reviews.

Modern Obstetrics: General and Operative. W. A. Newman Dorland, A. M., M. D., Assistant Demonstrator of Obstetrics, University of Pennsylvania; Associate in Gynecology, Philadelphia Polyclinic. Second Edition, Rewritten and greatly enlarged. Handsome octavo, 797 pages, with 201 illustrations. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, $4.00 net.

The first edition of Dr. Dorland's work, a "Manual of Obstetrics," appeared in 1896, the object being to present to the public a systematic and rational presentation of the subject of obstetrics as recognized by the leading doctors of the day. In the volume we have before us, the second edition, the author presents to the public a complete text book, "Modern Obstetrics." The first edition has been rewritten and greatly enlarged upon. After looking over the work carefully we are impressed with the clearness of the text and the care with which it has been prepared. Its teaching is conservative and thoroughly up to date. As was the first edition, so do we predict for the second a great success.

Part I, Physiological Obstetrics, contains chapters on the anatomy of the pelvic organs, menstruation, ovulation, the physiology of pregnancy and eutocia. Each chapter covers as much as is necessary to a proper understanding of the subject, and fills the first 220 pages. In the use of ergot, Dr. Dorland takes a position we commend. He says, "The routine administration of ergot after the birth of the child is not to be recommended. No remedy should be administered in any condition unless there is a direct indication for its use."

The use of ergot during pregnancy is fraught with so much danger to the child's life, and its use after labor so slow and uncertain that with better methods of treatment at our command it would seem best to discard altogether that time-honored drug.

Part II, Pathological Obstetrics, contains chapters on the diseases of the ovum and fetal appendages, The Pathology of Pregnancy, Dystocia and the Pathology of the Puerperium. An able section is on the role of the liver in the production of eclampsia. The author states after mentioning the reaction in the profession generally against the old established theory of attributing all cases of puerperal eclampsia to a renal inadequacy, that "the tendency to-day is rather to ascribe the convulsive seizures and albuminuria to one and the same cause, namely, the presence in the blood of a certain toxin, or it may be certain toxins of unknown constitution and undetermined origin. The great constancy of hepatic lesions, necrotic and hemorrhagic, that have been noted in autopsies on eclamptic women and the accompanying urinary changes indicative of imperfect kalabolism have inclined the consensus of opinion toward the view of auto-intoxication in eclampsia with the greatest interest centering in the liver as a probable laboratory whence the poison or poisons are engendered." Further, he states, "The liver, therefore, it will be noted, is called upon to assume a triple role: to collect certain toxic principles in order to turn them gradually into the blood, or to excrete them with the bile; to transform other foreign poisons in a similar manner; and, through the antiseptic properties of the bile, to moderate the intensity of the intestinal fermentation. Pregnancy, either by directly increasing the production of the toxic principles, or by favoring organic insufficiency, predisposes to an auto-intoxication." Too much stress cannot be laid upon the importance of assisting nature during pregnancy in eliminating these poisons by favoring diuresis, diaphoresis and free purgation. He says: "It becomes evident then that it is not so much the amount of albumin that is present in the urine of a given patient that will act as the index to her liability to eclampsia as the daily quantity of urine excreated, and the relative proportion of solids contained in this total amount. The frequent cases of eclampsia usually show not even a trace of albumin, but a diminished excretion of the urinary solids."

Chapter V, on the Pathology of the Puerperium contains an excellent article on puerperal sepsis, with a new section on serum-theraphy. After reviewing the researches of Mormorek in the Pasteur Institute, who bases his work on the assumption that all cases of puerperal sepsis have as a causative factor the streptococcus pyogenes, and therefore recommends the antistreptococcic serum—he gives a report by Mormorek of 15 cases of infection in whom serum was employed. In 7 cases there was a pure streptococcus infection, with no mortality; in 3 cases the streptococci and coli communis were present; and all the patients died; in 5 cases of pathogenic streptococci there were 2 deaths. "Other observers quickly fell into line and during the past 5 years numerous reports have been published which, however, are by no means satisfactory, the mortality ranging from 25% to 35%. An explanation for this disappointing result can be readily found."

Unlike diphtheria, puerperal sepsis is not a distinct pathological entity, but is in reality a group of infective conditions due to various organisms. It becomes evident then that in septic cases due to the pressure of the gonococcus (Kronig), the bacillus coli communis (Mormorek) the Talaman-Fränkel coccus, and the staphylococcus, the administration of Mormorek's serum cannot be followed by beneficial results.

Serum-therapy, to be effectual, he says, requires, first, the accurate recognition of the form of infection with the early employment of the appropriate antitoxin; secondly, the dilution of the poisoned blood by the active introduction into the system of a normal salt solution, either hypodermoclysis, by rectal clysmata, or by direct intravenous transmission; and thirdly, the restoration of the blood to its normal condition by measures that will increase leukocytosis or that will produce hyperleukocytosis, as from the administration of the nuclein preparations.

Chapter VI, on Pathology of the New-born, also contains a new and valuable section on infant mortality. Dr. Dorland is to be congratulated on the success which has so soon made necessary a second edition. The illustrations are good and the general make up of the book a credit to W. B. Saunders and Company, the publishers. [G. M. B.]

The Practice of Obstetrics by American Authors.—Edited by Charles Jewett, M. D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, New York. Second edition, revised and enlarged. Illustrated with 445 engravings, 78 of which are in colors, and 36 colored plates. Lea Bros. & Co., New York and Philadelphia.

The second edition of this excellent treatise comes to us extensively revised, and with important alterations. A number of original additions have been made to the already excellent illustrative features of the work. The names of the authors of the different chapters raise an expectation of excellent work, nor is this lacking in fulfilment. The plan recognizes the fact that men will write particularly well on certain subdivisions of their own specialties and that by a combination better results can be obtained than in a book written by the same hand throughout. To a large extent the evils of repetition and inconsistency have been avoided. The lack of clearness, definiteness of statement and condensation in the comparatively simple matter of pelvimetry is noted, but it is shared with many similar works. Under "external pelvimetry" a plain statement of the average range of external conjugate and intercristal diameters should be given. The intercristal is not given at all here, and the statements about the external conjugate are obscure. One reads page 222, "It may be safely assumed ....that the pelvis is ample when the external conjugate exceeds 21 cm." Three lines below it says, "probably, though by no means surely, ample when the

external conjugate is above 18 cm." One must look to page 170 for the average conjugate 20.3 cm. or the average intercristal diameter 28 cm. One page 423, the normal ranges are stated somewhat differently.

The chapter on the Induction of Abortion and Premature Labor is rather more complete in actual detail than is usual. Though the necessity may arise for the legitimate termination of pregnancy, the usual caution of older writers in discussing this subject is undoubtedly wise. Ventrofixation and vaginofixation of the uterus are considered to be causes of malposition. In the management of abortion the use of the sharp is preferred to the dull curette by Dr. Vineberg. Primary repair of the lacerated cervix is considered to be but rarely indicated. A brief but useful chapter is that on Malformation, Injuries and Diseases of the New-born Child. In another place the ordinary management is given, including a discussion of the use of laboratory milk. This chapter abounds in definite statements of practical points of infant-feeding, as affected by modern conditions of milk supply in large cities. The incubator is well described.

In ectopic gestation, the happy results are noted which have followed vaginal treatment of the suppurating cases which have been walled off from the peritoneal cavity, but the following excellent advice is given: "Beware of treating a recent intraperitoneal or subperitoneal rupture by vaginal incision and drainage, before sufficient time has elapsed to make it reasonably certain that the vessels are occluded," on account of the danger of previous hemorrhage.

One of the best articles is by J. Whittrige Williams, on Puerperal Infection—a subject of the greatest importance, and one on which much labor has yet to be expended befor all its problems are solved. He sums up a discussion on hysterectomy as follows: "The question....seems to depend altogether on our ability to make a correct diagnosis and to forestall the cause of the disease. This is a matter of great difficulty, and until more accurate means of diagnosis are at our disposal, we do not believe that the operation will be very generally accepted."

An excellent index concludes a work which reflects credit upon its distinguished author and his collaborators. [G.E.S.]

Acquired Aortic Stenosis and Chronic Aortitis in Childhood.—Ernest Barié recently discussed this question before the Medical Society of the Paris Hospitals. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, July 18, 1901. No. 25.) He says that while congenital cardiac affections are comparatively frequent in childhood, acquired aortic lesions are very rare. After reviewing those cases of aortic stenosis already reported, Barié describes a case which he observed in a boy of 15, who had had scarlet fever at 8 years of age. For two years he noticed dyspnea upon exertion. A systolic murmur was heard, most intense over the aortic area, transmitted to the vessels of the neck. There was also a systolic thrill with hypertrophy and dilatation of the left ventricle. The pulse was regular, small, hard and slow. This lesion rarely follows acute rheumatism, being most frequently associated with chronic aortitis. The aorta may be dilated, also, when a diastolic murmur becomes audible. Finally aneurysm of the aorta may develop. Barié concludes that true aortic stenosis is very rare in children; and that, when found, it seems to follow chronic aortitis. Even more rare is subaortic stenosis in childhood. [M. O.]

Polyneuritis following Pertussis.—Guinon reports a case of multiple neuritis following whooping-cough in a girl of 5. The muscles of her legs, neck, body, right internal rectus of both eyes, and the muscles of respiration, except the diaphragm, were paralyzed. There were partial reactions of degeneration in the legs, but not in the arms. Guinon quotes in full two other similar cases from the literature. Yet polyneuritis is rare after pertussis. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, July 18. 1901. No. 25.) [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

A Doctors' Trust.—The physicians of Chester, Pa., established a protective organization three years ago, for the collection of old bills. It is now estimated that fully 3500 people owe doctors' bills, and the same methods are about to be pursued again. Some patients owe as many as 8 different physicians. Statistically, this shows that 10% of Chester's population owe doctors' bills.

Society Meetings Next Week.—The following societies will meet next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Monday evening, May 5, Academy of Surgery; Wednesday evening, May 7, College of Physicians, and Thursday evening, May 8, Pathological Society.

The Health of Philadelphia.—Statistics for the past week show a slight increase in smallpox, typhoid fever, diphtheria and scarlet fever over the preceding week. The number of deaths from typhoid fever reached 22, out of 127 cases reported. There were 83 cases of scarlet fever, 47 of diphtheria and 31 of smallpox reported during the week, with 6 deaths from each. Scarlet fever has become epidemic in the suburbs of Philadelphia, especially in Clifton, where there are 19 cases, 4 of which have resulted fatally.

Northwest Medical Society, Philadelphia.—The next meeting, to be held May 6, is to be an obstetrical and gynecological symposium. Two papers will be read, by Dr. W. H. Wells on the toxemia of pregnancy, and by Dr. J. Gurney Williams on suppurative tubal and ovarian disease. Among those expected to take part in the discussion are Drs. J. and M. Price, C. P. Noble, Wilmer Krusen, W. A. N. Dorland, and E. P. Davis.

Whitehaven Sanatorium for Poor Consumptives.—Henry Phipps, of Pittsburg,. has presented the institution with $2500, after having visited the sanatorium. This will provide 10 additional beds for a year, bringing the number of patients in the hospital up to 50 men. Three new cottages for women are soon to be erected.

NEW YORK.

New York State Medical Association.—The Fifth District Branch meets May 6, at Hosack Hall, New York City. Three papers will be read and discussed: "The Value of X-rays in Medical and Surgical Diagnosis, by W. A. H. Brickner; "Diseases of the Air Passages from the Standpoint of General Medicine," by D. B. Delavan; and "Affections of the Skin with Stereopticon Exhibits," by W. S. Gottheil.

American Congress on Tuberculosis.—The third annual session will be held at the Hotel Majestic, New York City, May 14, 15 and 16. There will be 2 sessions each day, morning and afternoon, the only evening for which a session has been arranged being May 15, when the banquet is to be given. The meeting of the Medico-Legal Society will be held conjointly. Three vice-presidents have been appointed from each State, country or province, with an honorary vice-president from each. Not only will medical men be well represented, but several Governors of states and other high public officials will be present. Aside from the many papers to be read, there will be 4 symposiums upon preventive legislature, embracing the social, municipal and state aspects of tuberculosis; tuberculosis in its pathological and bacteriological aspect; the medical and surgical aspects of tuberculosis; and the veterinary aspects of tuberculosis. The president of the Medico-Legal Society states that no such momentous question in forensic medicine has ever been presented to the judgment and verdict of the professions of law and medicine as the question of legislation for the prevention and spread of tuberculosis. Among the delegates will be Drs. C. J. Fagan, secretary of the Provincial Board of Health, British Columbia; Captain H. D. Snyder, Asst. Surgeon, U. S. A.; 14 delegates from Kentucky, 17 from Kansas, 12 from Virginia and South Carolina, and 17 from Pennsylvania, including Drs. Benjamin Lee, W. B. Atkinson, L. F. Flick, J. C. Wilson and Judson Daland.

Beardless Milkmen.—The Milk Commission of New York has ordered that smoothfaced men only shall be employed for milking cows and delivering milk to the various depots

throughout the State. They claim that the dust from the stable is liable to infect the beard, which will collect and hold microbes that may readily impregnate the milk.

A Woman Ambulance Surgeon.—For the first time in the history of New York City a woman, Dr. Emily Dunning, has become an ambulance surgeon, having been appointed at Gouverneur Hospital. She is a graduate of Cornell, where she took her degree with honor.

Fire at St. Vincent's Hospital.—Fire threatened the new wing of St. Vincent's Hospital, New York City, April 26, early in the morning, when an explosion of gas occurred in the carpenter shop. The attendants at the hospital extinguished the flames before the firemen arrived. None of the 150 patients in that portion of the hospital knew of the fire.

Death of Dr. Walser.—Dr. Theodore Walser, for over 50 years physician in Staten Island, died April 23, at his home at New Brighton, after an illness of three weeks. Born in Gottlieben, Switzerland, 77 years ago, he soon came to this country. He was a graduate of Jefferson Medical College, Philadelphia, and in 1851 moved to New Brighton, where he was Health Officer for many years. He always paid great attention to epidemics and plagues, having treated both smallpox and cholera patients. He became paralyzed in March, 1897, since which time he never regained his former health. He was one of the founders of the S. R. Smith Infirmary, of New Brighton.

NEW ENGLAND.

Harvard Medical School.—Harvard University has taken formal possession of the site of its new medical school on Huntington avenue. The price paid for the land was $606,008. The land which comprises the site of the new Medical School was formerly part of the Ebenezer Francis estate, Charles U. Cotting and others, trustees, and was conveyed to the Trustees representing the college in August, 1900. It is a very large tract, comprising 1,128,824 square feet of land, being bounded by Francis and Vila streets and Huntington and Longwood avenues.—Dr. James C. White, for 30 years professor of dermatology, has recently resigned. His first lectures were given in 1861. Harvard University has appointed him professor emeritus.

The Health of Boston.—For the week ending April 26, the death-rate for the city of Boston has fallen to 18.8. Out of 134 cases of measles reported, there were but 2 deaths; of 51 cases of smallpox reported, three deaths; 46 cases of diphtheria, 4 deaths; 14 cases of tuberculosis and 25 deaths; 10 cases of scarlet fever with one death, and 8 cases of typhoid fever with one death. There were also 27 deaths from pneumonia. The total number of deaths was 207, 33 of whom were children under one year. Forty-nine of the deaths occurred in children under 5, and 46 in people over 60 years of age.

An Anophthalmus.—A living girl infant, without eyes, fully developed in all other respects and weighing 10 pounds at birth, was recently reported in Bridgeport, Conn. In place of the eyes are 2 slightly sunken spaces covered with eyelids, but under the lids there is no trace of an eyeball. The parents have three other children, all of whom are normally developed.

Smallpox in New Haven.—A case of smallpox was found in the New Haven dispensary near the Yale Medical School, April 25, in a tramp who had visited several saloons and lodging houses during the week before his illness had been diagnosed. A number of the Yale medical students examined the case.

WESTERN STATES.

Society Meetings Next Week.—The Nebraska State Medical Society will hold its next annual meeting at Omaha, May 6, 7 and 8, and the Kansas State Medical Society will meet at Lawrence May 7, 8 and 9.

University of Iowa.—At a special meeting of the board of regents of the University of Iowa, held at Iowa City on April 25, it was decided to purchase additional land for a new medical building, to cost $200,000. Plans have already been prepared for the construction of what will probably prove to be the finest medical school building in the West. The building will be fireproof and up-to-date in all particulars.

Spotted Fever in Montana.—An outbreak of spotted fever has been reported in the Bitter Root Valley, Montana, April 27. Eight persons died inside of a week, and many patients are dangerously ill with the disease.

Cincinnati Obstetrical Society.—Dr. Julia Carpenter has been elected president of the Obstetrical Society of Cincinnati, Ohio, for 1902. This society is composed of the leading gynecologists and surgeons of Cincinnati. There are in nearly all our large cities similar societies, many of which do not admit women to membership, much less to office.

A Case of Hemophilia is reported from Mishawaka, Indiana, April 21, in a boy of 18, ending fatally. While playing ball he was hurt, but only a slight abrasion of the skin could be found; yet the young man bled to death. It is rare that a person subject to hemophilia reaches 18 years of age.

Ohio State Pediatric Society.—At the next annual meeting, to be held at Toledo May 27 and 28, a special address at the evening session will be delivered by Dr. F. X. Dercum, of Philadelphia, on the mental disorders of children. A number of good papers will also be presented.

The Offspring of Deaf Mutes.—From Battle Creek, Mich., comes the news that a child, aged 4 years, the daughter of deaf mutes, both talks and hears like other children. When speaking to her parents she uses the sign language. This is an interesting exception to the laws of heredity.

SOUTHERN STATES.

Franklin Square Hospital, Baltimore.—Mrs. J. C. Linthicum has furnished a room in the Franklin Square Hospital, in memory of her mother, the late Mrs. Harriet Perry.

Delaware State Hospital for the Insane.—On April 27, 17 virulent cases of smallpox were reported among the inmates of the Delaware State Hospital for the Insane at Farnhurst. There are also 6 suspected cases among the inmates and 3 attendants have the disease. Three deaths have already occurred. As there are 300 inmates, a special ward has been secured in the County Emergency Hospital nearby, where all the patients will be removed. Suspected cases will be treated in a large tent soon to be erected in the rear of the hospital.

An Anniversary.—Dr. James H. Jarrett, of Towson, Md., recently celebrated the completion of his 50th. year in active practice. Among the many congratulations received was one from the Baltimore County Medical Association.

A Foreign Body in the Lung.—Thirty-one years ago, while living in Tennessee, a resident of Granger, Texas, who had been holding the spring of a clothes-pin between his teeth, accidentally sucked it into his trachea, whence it passed into the right lung. During all these years it caused symptoms much resembling phthisis. He died, however, after a stroke of paralysis. The autopsy revealed the spring, consisting of 6 coils 3/4 of an inch long and 1/8 of an inch thick, imbedded in the right lung which was about 1/3 its normal size.

A Memorial Hospital.—Mr. and Mrs. H. G. Davis, of Elkins, W. Va., have given $50,000 for the erection of a hospital in memory of their son, Henry G. Davis, Jr., who was drowned while cruising near South Africa.

MISCELLANY.

Yellow Fever in Costa Rica.—A despatch to the United States Marine Hospital Service reports 3 cases of yellow fever, at Port Limon, Costa Rica, April 17th.

The Plague in Ludhiana.—Dr. Anna M. Fullerton, formerly clinical professor of gynecology in the Women's College, Philadelphia, who is now in Lahore, has recently sent some interesting pamphlets to Dr. J. B. Roberts. Several of these are in Hindoo script, while one describes bubonic plague and its prevention, written by the officiating deputy commissioner at Lahore. Seventy thousand of these, in English, have been distributed gratis among the people in the plague-stricken districts in the Punjab. Dr. Fullerton says that she is inoculating natives against the plague every day with the prophylactic serum, supplied by the Government. She states that a whole village came from about 18 miles distant for inoculation.

Remedies for Rheumatism.—The latest computation of the number of distinct rheumatism cures puts it at 1,457. It is one of the peculiarities of rheumatism that the cures prescribed are more numerous even than the varieties of the ailment itself. A brief enumeration of reme-

dies includes horsechestnuts, wintergreen tablets, electric rings, magnetic watch charms, red flannel bandages, (white flannel is considered of no efficacy) goats' milk, calisaya, horse hair poultices, raw onions carried in coat pockets, and ice cream soda. These are only a few of the best-known remedies, and do not include several which owe their fame to combinations of sundry ingredients. One old-fashioned cure is made up of a pint of old ale and a small measure of grated horse-radish put in a jar or demijohn and allowed to stand over night, after which a glass is drunk before each meal.—*New York Sun.*

Carbon in the Breath.—The volume of carbonic acid exhaled by a healthy person in 24 hours is about 15,000 cubic inches, containing about 6 ounces of solid carbon. This is at the rate of 1.37 pounds per annum; and taking the population of the world at 1,000,000,000, this means that the human race breathes out every year 61,000,000 tons of solid carbon, a quantity of coal twice as much as the total annual export from Great Britain.

Bubonic Plague.—The American Consul at Canton, April 24, announced that the bubonic plague had broken out in malignant form.—Two deaths from the plague are reported in Montevideo, Uruguay. The health authorities have ordered the slaughter of rats.—No additional cases of plague have been reported at Buenos Ayres during the past week.—Bacteriological examination of several dead rats at San Pablo, Brazil, showed the presence of plague microbes.

Cholera in Manila.—Under date of April 27, the cholera situation in the islands does not show any improvement. Cholera cases are reported among the American soldiers in the Camarines Provinces of Southern Luzon and elsewhere, but so far few Americans have been attacked, and the disease is mainly confined to natives and Chinamen. In Manila there have been 555 cases and 449 deaths from cholera, while the provinces report 1599 cases and 1169 deaths.

Obituary.—Dr. Henry H. Arnold, at Baltimore, Md., April 21, aged 55 years.—Dr. F. Antes Canfield, at Necedah, Wis., April 22, aged 71 years.—Dr. Theodore Walser, at New Brighton, N. Y., April 23, aged 77 years.—Dr. Matthew H. Molloy, at Boston, Mass., April 23, aged 62 years.—Dr. Joseph P. Turner, at Trenton, N. J., April 26, aged 79 years.—Dr. Samuel S. Wiest, at Shoeneck, Pa., April 27, aged 74 years.—Dr. Horace Tupper, at Bay City, Mich., April 16, aged 71 years.—Dr. Eugene C. Hoge, at Wheeling, W. V., April 10, aged 54 years.—Dr. T. H. Sharpneck, at Khedive, Pa., April 12, aged 58 years.—Dr. Braxton D. Cox, at Jackson, Ky., April 13.—Dr. Theodore W. Nellis, at Albany, N. Y., April 14.—Dr. Matthew Campbell, at Parkersburg, W. Va., April 12, aged 84 years.—Dr. John H. McIntyre, at St. Louis, Mo., April 10, aged 69 years.—Dr. Charles H. Carter, at Pasadena, Cal., April 5, aged 49 years.—Dr. Luther B. Grandy, at Batangas, Luzon, recently, aged 42 years.—Dr. William L. Bain, at Chicago, Ill., April 13.—Dr. Charles E. Bartlett, at Battle Creek, Mich., April 14, aged 82 years.—Dr. Marcellus M. White, at Fannin County, Texas, April 13, aged 39 years.—Dr. Alvin A. Moore, at Kenton, Ohio, April 14, aged 41 years.—Dr. Andrew G. Toven, at Hartford, Conn., April 11, aged 55 years.—Dr. William F. Shepard, at Bangor, Me., April 12, aged 57 years.—Dr. Edward P. Gordon, at San Francisco, Cal., recently.—Dr. Joseph H. Gallagher, at Brooklyn, N. Y., April 9, aged 26 years.—Dr. Charles B. Robertson, at Towelsville, N. Y., April 4, aged 49 years.—Dr. John Dixon, at Talladega, Ala., April 15—Dr. Jonathan Faust, at Zieglersville, Pa., April 14, aged 60 years.—Dr. George A. M. Cooke, at Washington, La., April 10, aged 47 years.—Dr. James T. McKillop, at Wardsville, Ont., April 9, aged 41 years.—Dr. George S. Smith, at Pinckneyville, Ill., April 2, aged 85 years.

GREAT BRITAIN, ETC.

British Medico-Legal Society.—The new Medico-Legal Society was formally organized April 10, in London, when Dr. W. J. Collins was elected president. The object of the new society is the furtherance of medico-legal knowledge throughout Great Britain.

A Smallpox Cure.—The following primitive "cure" for smallpox has been discovered by the Leytonstone Guardians in one of their registers for the year 1700: "Take 30 to 40 live toads and burn them to cinders in a new pot; then crush into a fine black powder. Dose for smallpox, 3 oz."

Medical Institute, Belfast.—The foundation stone of the new medical institute, for erecting which $25,000 were given by Professor Whitla, president of the Ulster Medical Society, was laid April 12, by Professor Redfern.

Ear Disease in School Children.—In the report presented to the Otological Society of London, April 14, it was noted that out of 1000 school children attending the Hanwell District School, both ears were approximately normal, hearing a whisper at a distance of 18 feet, in 43%. In 50% there was otitis media, causing deafness. In 5.5% were nonsuppurative, 6.5% being associated with enlarged tonsils and adenoids, 7.5% with adenoids alone, while the nasopharynx and throat were free in 2.5%. In 9% chronic purulent otitis media was present; in 2% with adenoids and enlarged tonsils, in 5% with adenoids alone, and in 2% with nasopharynx and throat free. 24.5% of cases presented postsuppurative middle ear trouble. This was associated with enlarged tonsils and adenoids in 5.5%, with adenoids alone in 11.5%, without adenoids or enlarged tonsils in 7%. Thus 1/3 of all children examined showed some middle ear disease. Seventy-one children had adenoids.

Spectacles will be allowed henceforth in the British army, as the War Office has issued orders permitting officers and soldiers to wear glasses on and off duty.

Smallpox in London.—The epidemic of smallpox has at last begun to show signs of abatement. While 449 cases were admitted during the week ending March 22, and 1568 cases were under treatment, during the week ending April 12th., there were only 274 admitted with 1437 cases under treatment. In Essex, however, the epidemic shows no sign of diminishing.

The Westminster Hospital, facing the entrance to the Abbey, claims to have the best site in London from which to view the Coronation procession, and as a stand to accommodate 2000 people is to be erected, and as 25 guineas a seat have already been offered by some applicants, the hospital coffers will soon be filled to overflowing.

The Scotch Kilt for Stomachic Troubles.—The rumor that the kilt was to be abolished in the Highland regiments caused much excitement in the House of Commons April 10. Several Scotchmen stated that the Highlanders suffered much less from stomach trouble than other soldiers, on account of their national garb.

CONTINENTAL EUROPE.

The Famine in Russia.—Scurvy and typhoid fever are devastating the peasantry throughout the whole of the Altai region (highlands of Siberia), formerly the chief granary of Siberia. The starving people have consumed the last remnants of their seed grain, and no spring crops have been sown. The last wheat sold in Altai fetched 2¼ roubles per pood, against the normal price of 16 to 20 kopecks per pood. In some places the scarcity of fodder is so great that half the houses have been unthatched to save the lives of the cattle and horses. The gravity of the situation is evidenced by the latest statistics. At Menzelisk, there have been upward of 4000 cases of typhoid; at Belibeisky 682 cases have been reported, and at Akmollinsk over 1900 cases have occurred. Similar reports come from Veronej, Kasan and Saratoff.

German Congress on Internal Medicine, Wiesbaden.—At the opening of the Congress, April 16, Dr. von Leyden's assistant, Dr. Feinberg, reported the discovery of small, peculiar vesicle-like formations in cancer tissue which, staining in a particular manner, were sharply differentiated from the surrounding tissue. They were present only in typical cancer. Dr. Feinberg believed these bodies to be sporulation forms of the cancer germs. A long discussion followed, which will be reported in full later.

Obituary.—Dr. Joseph Schöbl, professor of ophthalmology in the Bohemian University of Prague, died April 6, aged 65 years.—The death is announced of Dr. Robert, formerly professor of pathology in the University of Barcelona.—The death is also announced of Dr. Giuseppi Inzani, formerly professor of pathological anatomy in Parma.—Dr. Hans von Hebra, professor of dermatology in the University of Vienna, the son of the renowned Dr. Hebra, formerly professor of skin diseases in Vienna, and brother-in-law of the late Dr. Moritz Kaposi, died in Vienna, April 12, aged 55 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

April 12, 1902. (No. 2174.)

1. Observations on a Series of Cases of Fracture of the Semilunar Cartilages of the Knee, together with other Cases of Operation for Loose Cartilage. A. W. MAYO ROBSON.
2. The Composition and Nutritive Value of Biltong. W. D. HALLIBURTON.
3. Four Cases of Rodent Ulcer Treated by X-rays. JOHN W. PUGH.
4. Five Cases of Moniliform Hair Associated with Alopecia Areata. DAVID WALSH.
5. Case of Complete Baldness from Alopecia Areata. BALMANNO SQUIRE.
6. The Causation of Death During the Administration of Chloroform. E. H. EMBLEY.

1.—Robson reports 7 operations, 2 of which were for **fractured semilunar cartilages**, 4 for **loose semilunar cartilages**, and 1 for loose bodies in the knee joint. In 7 of the cases there was no history of injury and all of these except one loose cartilage were cases of detached bodies in the joint. Robson shows that a large proportion of the so called internal derangements of the knee are in truth cases of fractured or ruptured semilunar cartilages and that, although in a large majority of the cases there is a history of a strain or some other accident, in many instances the injury may follow simple extension of the joint after flexion in a cramped position. In recent cases he advises reposition of the cartilage and fixation for a month or 6 weeks, treating the patient as if a bone had been fractured. If after this course of treatment there is any tendency to weakness of the knee or any recurrence of the displacement, operation should unhesitatingly be advised. In cases of recurring displacement in which a thorough course of treatment has not been carried out, operation is also strongly urged. An oblique incision is made from the lower and inner border of the patella downward and backward, opening the joint without dividing the ligamentum patellæ or internal lateral ligament of the knee. The knee is flexed and the cartilages brought into view. If the cartilage has been ruptured, the loose portion is cut away with scissors; if it has been loosened, it is firmly sutured to the internal lateral ligament or to the head of the tibia. It is both unnecessary and inadvisable to insert the finger into the joint or to irrigate. No inconvenience follows the excision of a cartilage and the function of the knee is as perfect after recovery from the operation as it was previous to the accident which caused the disability. [F. T. S.]

2.—**Biltong** is a variety of sun-dried and cured meat made from the flesh of spring boks. Halliburton has found this substance to be composed of water, 19.410%; solids, 80.590%. Of the solids 6.592% were inorganic and 73.998% were organic. Of the organic solids, proteids constituted 65.866%; fat, 5.140%; glycogen, 0.133%; sugar, 0.090%; and extractives, 2.769%. Chemically, therefore, the substance is a valuable food; the loss of water by rapid drying rendering it both portable and concentrated. The large percentage of proteid points especially to its high nutritive value and experience has shown that it is not prone to undergo decomposition. The Boers and, to some extent, the English troops in South Africa, use biltong as their staple meat food, and it has been found that it presents no marked disadvantages as an article of diet. Biltong is readily digestable in both varieties of artificial juice and it can be said to be a valuable and nutritious food. [J. M. S.]

3.—Pugh reports **4 cases of rodent ulcer that were successfully treated by the X-rays.** The treatment is so successful that, if applied at an early stage, it ought to prevent the ravages of the disease almost completely. The danger of dermatitis is almost absent if the treatment is carried out under proper supervision. The author advises that the sittings should not last longer than 15 minutes. [J. M. S.]

4.—Walsh reports **5 cases of moniliform hair associated with alopecia areata.** [J. M. S.]

5.—Squire reports a case of **complete baldness from alopecia areata.** In the treatment of the patient he used an ointment composed of red iodide of mercury, 30 gm.; yellow vaseline, one ounce. The scalp was divided into 8 imaginary regions and the ointment was rubbed into one of these regions daily, so that in 8 days the entire scalp had received an application of the ointment. The ointment produced a sensation of heat with redness of the skin, followed by desquamation. The first hair appeared 6 months after the beginning of the treatment which has already lasted 9 months. [J. M. S.]

6.—Will be abstracted when concluded.

LANCET.

April 12, 1902.

1. A Lecture on Abiotrophy. W. R. GOWERS.
2. Goulstonian Lectures on Some Abnormal Psychical Conditions in Children. GEORGE F. STILL.
3. The Milroy Lectures on the Etiology of Typhoid Fever and its Prevention. (Lecture II). W. H. [illegible]
4. The Surgical Treatment of Obstruction in the Common Bile Duct by Concretions, with especial reference to the Operation of Choledochotomy as modified by the [illegible]. Illustrated by [illegible]. A. W. MAYO ROBSON.
5. On a Case of Pneumococcic Gastritis and General Infection, with some remarks on the Infection of Mucous Membranes by Diplococcus Pneumonia. ALEXANDER G. R. FOULERTON.
6. The Treatment of Gonorrhea with special reference to Bladder Irrigation. F. SWINFORD EDWARDS.
7. An Analysis of a Series of Operations for the Extraction of Cataract. R. H. ELLIOT.

1.—**Gowers** delivered a lecture on **abiotrophy** at the National Hospital for the Paralyzed and Epileptic, Queens square, Bloomsbury, on February 21, 1902. The author suggests the term "abiotrophy" as meaning a degeneration or decay in consequence of defect of vital endurance. A number of illustrations of abiotrophy are cited, such as failure of the hair follicles of the scalp as an essential cause of baldness, various **forms of idiopathic muscular atrophy**, [illegible] mental changes, etc. In conclusion he remarks that somatic [illegible] we must endeavor to postpone as long as may be. The other aspect of abiotrophy [illegible] to us what we call disease. It does not of necessity involve the termination of general life, but it is [illegible] we may call "abiotic," the recognition of the symptoms, the course, and the conditions which indicate them is of extreme importance. It may save many errors, may prevent many mistakes both in forecast and treatment. We must endeavor to check their progress, for we seldom know [illegible] but the discernment of the nature of these maladies will often help us. It will enable us better to perceive why treatment fails and it may save from useless prolongation of attempts to gain that which cannot be, and it may sometimes save from waste of money that can ill be spared and from the waste of hope which means bitter disappointment. [F. J. K.]

2.—Still delivered a lecture **on some abnormal psychical conditions in children** before the Royal College of Physicians of London. He discusses at some length the moral control in the normal child and the defect of moral con-

trol associated with general impairment of intellect. He also cites a number of cases which illustrate abnormal psychical conditions in children. From his considerations he sums up as follows: That a morbid failure of moral control is not uncommon in children with general impairment of intellect—there is, in fact, a congenital limitation of the capacity for the development of moral control associated with a similar limitation of the general intellectual capacity; that except in the lower grades of idiocy and imbecility, in which the cognitive relation to environment is absent or extremely defective, there is not necessarily any direct proportion between the moral limitation and the general intellectual limitation; that no particular type of idiocy or imbecility can be specially associated with moral defect; nor is there any evidence so far as can be judged from a clinical study of these cases that any particular gross lesion of the brain is requisite to the limitation of moral control. [F. J. K.]

3.—Corfield concludes the second lecture **on the etiology of typhoid fever and its prevention.** In this lecture he gives an account of many outbreaks of enteric fever which have been definitely traced to pollution of streams and rivers supplying drinking water. [F. J. K.]

4.—A. W. Mayo Robson, in discussing the **treatment of obstruction of the common bile duct** by gall stones, pays particular attention to the operation of choledochotomy and refers briefly to 60 cases in which he has performed this operation. In an experience of several hundred cases of cholelithiasis Robson has found the common bile duct to be involved in one out of every 5 or 6 cases. In 10 instances he was able to manipulate concretion back into the gall bladder and then extract it with a scoop: this, however, can only be done when the cystic duct is dilated. It is thought inadvisable to attempt to force a stone from the common duct into the duodenum, because it may become lodged in the diverticulum of Vater. In patients, too old or too ill to bear choledochotomy, cholecystotomy may be performed which relieves the jaundice and renders possible the use of solvent injections. The stones in the common duct have been crushed by the pressure of the finger and thumb in some 30 instances by the author, but it is thought that fragments are apt to be left behind which may give rise to further trouble and the method is only advisable in soft concretions. Cholecystenterostomy or short-circuiting the obstruction is not advised for gall stones as it does not remove the cause of the trouble and the opening formed is apt to contract and lead to a speedy recurrence of the trouble. Robson has abandoned this operation entirely in these cases. A union between the gall bladder and the colon is an easier operation, when the patient is very ill, and gives quite as satisfactory results as that of uniting the gall bladder to the duodenum. It is only applicable, however, when the gall bladder is distended which is rare in gall stones. Robson has 3 times united a dilated duct to the intestine or drained it on to the surface, with success in each case. The plan of reaching the common duct through an opening in the duodenum, which was suggested by McBurney he has performed a number of times, but has lately abandoned the method because of the danger of sepsis and because he himself has devised what he considers a simpler and safer method of removing the stone. He has performed the McBurney operation 11 times with 3 fatalities. The operation of choledochotomy is considered the ideal operation for removing stones from the common duct. This conclusion has been reached after its employment in 60 cases. The author's method consists in placing a firm sandbag under the back opposite the liver, which not only pushes the spine and common duct forward, but also causes the falling away of the other viscera. A vertical incision is then made over the middle of the right rectus, the fibers of which are divided by the finger. This incison affords an excellent exposure of the gall-bladder and bile ducts. When it is necessary to open the common duct on the deeper part of the cystic duct, the incision should be carried upwards into the interval between the ensiform cartilage and the right costal margin as high as possible; this exposes the upper portion of the liver. The liver is then pushed upwards and the duct is brought into ready access. It is important to have the abdominal cavity well walled off with gauze to prevent infection from the accumulated bile. A small drain is placed over the seat of the opening in the duct after this has been closed. Robson claims for this method that it enables the whole of the bile passages to be dealt with as a straight tube close to the surface. Robson is a strong advocate of the use of calcium chloride in cholemic cases as a preventive of postoperative hemorrhage. He calls attention to the large mortality from this postoperative complication and asserts that large doses of the remedy are necessary in order to control the oozing; for several days before the operation 30 grains administered by the mouth, and after the operation 60 grains by the rectum 3 times a day. As a local application to control bleeding in these jaundiced cases there is nothing more efficient than gauze packing together with an application of a solution of suprarenal extract. The greatest care should be taken during the operation, and immediately after it, to prevent and combat shock. In Robson's 60 cases of choledochotomy the mortality was 16.6%, but of those operated upon prior to 1900 the mortality rate was 23.8%, whereas those done since January 1st., 1900, shows a mortality of only 7.1%. [J. H. G.]

5.—Foulerton reports **a case of pneumococcic gastritis and general infection** which occurred in a man, 26 years of age, who was admitted into the wards of the Middlesex hospital, on December 27th. Two weeks previous to admission he had an attack of quinsy and the day previous to his entrance he vomited a quantity of dark colored material which had a very disagreeable odor. On admission there were seen a number of petechial hemorrhages on the cheeks and coagulated blood was present in the nostrils and on the gums around the teeth. The pulse-rate was rapid. On December 29th., the respiration-rate was hurried and the patient was restless. The patient died on the 30th. of December with signs of urgent dyspnea. While under observation, there were no indications which suggested gastric disturbances. The post mortem examination showed that the stomach was normal in size. It contained dark colored fluid matter and the viscus was lined with a roughish exudation membrane. Numerous petechial hemorrhages were present in the stomach wall. Petechial hemorrhages existed in many other tissues. The diplococcus pneumoniæ was isolated from the lung, from the blood of the femoral vein, from the skin hemorrhages, and from the exudation membrane of the stomach. The author contends that the manifestations of pneumococcic infection in mucous membranes generally show that the pathogenic action of the coccus is the same as when it induces a lobar pneumonia. The same fibrinous exudation destruction of surface structure and the same tendency of extravasations of the blood occur. [F. J. K.]

6.—F. Swinford Edwards, in discussing the **treatment of gonorrhea** with special **reference to bladder irrigation,** shows a marked preference for this form of treatment. He believes that it is right to attempt to abort a case if seen early before the acute symptoms have set in. After the acute symptoms have set in he does not advocate the use of local remedies. With the subsidence of the acute symptoms the irrigation treatment such as recommended by Janet and Valentine is strongly advised. In old chronic cases the greatest care should be exercised definitely to locate the seat of the trouble and apply treatment directly to it. A case should not be considered cured until a month has elapsed after all treatment has ceased during which time the patient has returned to his ordinary life and no sign of discharge is present and no sealing of the meatus or debris in the urine. [J. H. G.]

MEDICAL RECORD.

April 26, 1902.

1. Abdominal Echinococcus Cysts. FRANK HARTLEY.
2. Treatment of Pneumonia. STEPHEN SMITH BURT.
3. Questions of Priority in the Surgical Treatment of Chronic Bright's Disease. GEORGE M. EDEBOHLS.
4. The Modification of Breast Milk by Maternal Diet and Hygiene. THOMAS S. SOUTHWORTH.

1. Frank Hartley reports 4 cases of **abdominal echinococcus cysts.** In 3 of these cases the liver was involved and one was situated in the **rectovesical cul de sac.** Owing to the fact that the cysts occupied various organs or tissues, no single method was pursued in the treatment of these cases, since the varying conditions demanded different methods of operation. This paper contains a careful résumé of the various operations suggested for the treatment of echinococcus cysts and is accompanied by an excellent bibliography. [T. L. C.]

2.—S. S. Burt concludes a paper on the **treatment of pneumonia** by stating that pneumonia primarily owes its shortness and selflimitation to the perishability of its micropar asites; the type of the disease depends upon the condition of the individual; pneumonia simply as pneumonia requires no interference; diplococci thrive best at the normal human temperature; fever inhibits the growth of the parasite and is, therefore, beneficial; **high fever** indicates extensive infection, meantime varying degrees of reactive ability; **low fever** either inability to react or else moderate infection; **specific medication** is unnecessary in pneumonia, if not pernicious; it is imperative to disinfect dejecta and expectoration; **aconite** and its congeners are injurious; **bleeding** is seldom required; **opium,** checking renal activity, in large doses is contraindicated; in old persons opium is exceedingly dangerous. **oxygen** is useful but not indispensable; **alcohol** is valuable as food, and it conserves energy; **strychine, ammonia, alcohol and nitroglycerine in large doses, as stimulants, should be reserved for emergencies; subcutaneous infusion of a physiological saline solution is invaluable for renal elimination of poisonous accumulations;** last, though not least, specific remedies at best are but makeshifts, prevention of infection is the best desideratum. [T. L. C.]

3.—G. M. Edebohls defends his claim for priority in relation to the **surgical treatment of chronic Bright's disease** in the following proposition: (1) He was the first to observe and to publish the curative effects of nephropexy upon kidney affected with chronic Bright's disease. (2) He was the first to undertake an operation upon the kidneys with the deliberate object in view of bringing about a cure of a previously diagnosticated chronic Bright's disease. (3) He was the first to propose to treat chronic Bright's disease as such by the operation upon the kidneys. (4) He was the first to propose, the first to perform, and the first to report renal decapsulation for chronic Bright's disease. (5) He was the first to publish a large number of operations upon kidneys undertaken for the purpose or bringing about a cure of chronic Bright's disease. These statements he defends in a detailed reference to the recent literature on the subject. [T. L. C.]

4.—T. S. Southworth emphasizes the value of securing the **modification of breast milk by maternal diet and hygiene.** Every effort should be made to keep the child at mother's breast and not to depend upon bottle feeding. The mother must be willing to sacrifice social dissipations and unsuitable food for the sake of her child. She must be willing to take rational exercise, abjure tea and be content to lead a placid, unruffled existence, eating such plain food and drinking such fluids as is suggested for her without reference to her special preferences. But it is not necessary that life should be made burdensome by monotony and confinement; this can be relieved by judicious management on the part of the physician and the use of one or more bottle-feedings daily of properly adapted cow's [illegible] to allow for longer absences [illegible] exercise and simple recreation. [T. L. C.]

MEDICAL NEWS.

April 26, 1902. (Vol. xcv, No. 17)

1. Prostatectomy. C. H. MAYO.
2. The Diagnosis and Operative Treatment of Prostatic Hypertrophy with Remarks on the Complications Before and After Operation. RAMON GUITERAS.
3. The Indications for and Limitations of the Bottini Operation. LOUIS E. SCHMIDT.
4. Gonorrhœa of the Prostate. ERNEST R. W. FRANK.
5. Prostatic Hypertrophy. LEWIS SCHOOLER.

1. C. H. Mayo gives S. Alexander's statement that the prostate behind the urethra does not enlarge. The enlargement occurs in the lateral and developing middle lobes. The lateral growths depress the urethra, the middle raises its inner posterior end thus increasing the length and curve of the prostatic urethra. The lateral lobes are nearly always encapsulated and glandular. The middle enlargement may be of 3 varieties: (1) Muscular those cases with a bar; (2) glandular and then encapsulated; (3) hypertrophy of mucous glands and bladder tissue. The operation for prostatic hypertrophy is treated into direct and secondary methods. The direct methods are (1) suprapubic, subpubic urethral perineal, and several recites. The more indirect methods are castration, vasectomy and Bier's operation of ligating the internal iliac arteries. [T. M. T.]

2.—R. Guiteras, in his article on **prostatic hypertrophy,** sums up as follows: (1) That the general practitioner should be educated to palpate the prostate and to use the other simple means of diagnosis employed in determining the shape and size of the organ. In default of previous training in rectal palpation he should at every opportunity familiarize himself with the feel of a normal prostate, and should thus educate his touch for prostatic diagnosis. (2) that the prostate corresponds pathologically in the male to the uterus in the female, and that its examination is just as important as uterine palpation, in which the general practitioner is, as a rule far more expert. (3) that in prostatics the care of the bladder before operation is a prime factor. The importance of training such persons to observe the minutiæ of catheter life, of making the kidneys as active as possible, and of rendering the urine as nearly normal as possible before prostatic operations, cannot be overestimated; (4) that every prostatic operation should be preceded by a thorough general examination, including an examination of the heart, the arteries, the urine, the bladder (for possible presence of stone or tumor), and of the urethra (for possible presence of a stricture), as well as by palpation of the kidneys. (5) that the statistics of the results of prostatic operations demonstrate that the successful cases belong most frequently to the class having a small amount of residual urine and a moderate prostatic enlargement. An early diagnosis is, therefore, of paramount importance. (6) that the choice of the operation must be based upon the lines drawn here according to the age, the resisting power of the patient, and the size and shape of the prostate, with special reference to the seat and extent of the hypertrophy, as well as the condition of the kidneys and bladder; (7) that in the course of prostatectomy, as well as prostatectomy, the prime object is to avoid as far as possible the occurrence of shock, and to prevent the congestion of the kidneys by proper precautions during and by proper treatment after the operation. [T. M. T.]

3.—L. E. Schmidt believes that there is a limited number of cases in which the **Bottini operation** can consistently be recommended, and in which the outcome must be satisfactory if the cases be carefully selected and the technique correct. In conclusion he states that good results of the Bottini operation will depend (1) on the careful selection of

cases; (2) on the proper technique of the operation and proper after-care; (3) on the immediate correction of errors and mishaps. [T. M. T.]

4.—E. R. W. Frank recommends the following **abortive treatment for cases of gonorrhea** which come under treatment soon after infection. If, after urinating, the second urine be clear, the anterior urethra is gently irrigated with a ¼ per cent. solution of protargol until the solution flows off clear. If the patient be hypersensitive, the urethra is cocainized with a weak solution (1-200), to which some protargol is added as a precautionary measure. After this a copious irrigation is applied to both urethræ with the same protargol solution. The fluid is allowed to enter the bladder until the patient experiences a desire to urinate; this requires about ¼ to ½ liter. The patient then empties his bladder. This procedure is repeated on the 2 following days. After 24 hours have elapsed, the discharge becomes sparse and serous and in most cases gonococci cannot be found. Leukocytes disappear in a similar manner and the specimen shows an abundance of epithelium and fibrin. If, however, gonococci persists to the third day, the cause of the failure is that the prostate was already infected, or that paraurethral passages exist in which gonococci are beyond the reach of treatment, or deformities of the urethral mucosa, folds, or valves may be the cause of the failure. [T. M. T.]

5.—L. Schooler's opinion in these cases is that massage is of no use whatever and, when it has been considered helpful, the author thinks that the diagnosis was at fault. *Catheterization* in a fair percentage of cases is successful for the purpose of evacuating the urine and keeping the bladder from becoming distended. The greatest objection to the method is the possible infection. *Dilatation* to preserve the channel for the voluntary discharge of urine is of great value and less dangerous than any of the above precedures. *Cystotomy* is also a temporary or procrastinating procedure, and, aside from furnishing relief of a transitory nature, produces its best results in cases in which the bladder is infected or in which cystitis is present as a complication. It also affords a means of examination of the interior of the bladder, and enables the surgeon to determine whether the cause of the obstruction is in the bladder, at the junction of the urethra and the bladder, or along the prostatic portion of the urethra, and whether there is a distinct enlargement of the so-called middle lobe, compression from pressure of the lateral nodular or unsymmetrical enlargement of the lateral lobes, or a sagging, toneless bladder; and, if inflammation be present, it permits rest by the rapid escape of the urine as well as by affording an opportunity of cleansing thoroughly the entire infected area. It also allows an opportunity for operation under the guidance of the eye and permits the pushing down of the gland by the finger in enucleation. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

April 26, 1902. (Vol. LXXV, No. 17.)

1. On Blood Pressure under the Influence of Acute Overstraining of the Heart. PROFESSOR THEODOR SCHOTT.
2. A Further Contribution to the Study of Summer Diarrhea. CHARLES GILMORE KERLEY.
3. Acute Joint Diseases of Infancy. T. HALSTEAD MYERS.
4. A Peculiar Symptom of Typhoid Fever. W. C. DOANE.

1.—T. Schott, in his **experiments on blood pressure under the influence of acute overstraining of the heart**, found, after healthy men or boys began to wrestle together until well-marked dyspnœa appeared, that the heart began to dilate, at first toward the right, but soon toward the left also; that the frequency of the pulse rose often as high as 120, though before exercise it was normal, and the pulse itself became small and very compressible, and even at times dicrotic. Occasionally also the pulse was arrhythmic, which signified that the blood pressure within the heart was likewise raised. The rapidity with which the dilatation disappears and the pulse and respiration return to normal depends partly upon the strength and elasticity of the heartmuscle and partly upon the behavior of the vascular system. In the young and healthy subject the heart returns to its normal condition much more quickly than in the old. In bicycling on level roads the heart shows no change, but on ascending grades, lasting a long time over rough roads, there was acute dilatation of from 2 to 3 centimeters in all directions and increase of the pulse-rate to 120 or even 140 beats to the minute. After dismounting the arrhythmic pulsation is common. The number of respirations may be raised to double the normal or higher, and the feeling of positive air hunger is common. It may be noticed that, when a healthy man repeats the above experiments, far less effort and far shorter duration of exercise are sufficient to produce the cardiac insufficiency. [T. M. T.]

2.—C. G. Kerley, in his **summer diarrhea cases**, advises no milk until the stools approximate the normal, which may mean a nonmilk diet for from 48 hours to several weeks. He substitutes cereal water and gruels. Barley water is generally used, 2 tablespoonfuls of barley to a pint of water. This is boiled 20 minutes and water added, so that there will be one pint when the 3 hours cooking is complete. In changing the taste one or two ounces of broth, beef, mutton or chicken can be added. Brandy and whiskey, so frequntly added to substitutes, should not be given to a child in this condition. White of an egg mixture he does not advise, as it so often passes unchanged into the intestines. Dextrinized gruels are advised when a stronger diet is necessary, and twice as much can be given this way. The substituted diet is allowed to be given at two-hour intervals, if the child will take and retain it in such quantity as he was accustomed to take of milk in health. Boiled water should be given, and at any time. In resuming the milk diet care must be taken that it is not done too suddenly. *Calomel* is advised in a case in which there is vomiting or a tendency thereto. *Castor oil* is given in acute septic cases with frequent stools and without stomach involvement. *Bismuth subnitrate* is to be given in all cases, not less than 10 grains every one or two of the waking hours, regardless of the age of the patient. When given in large amounts continuously, it is a drug of great value. To be of service it must produce black stools. The indications for *opium* are pain, tenesmus and frequent stools. In severe, or even in an average case, in which there is systemic poisoning, 4 or 5 passages a day are desirable and care must be taken not to stop the discharge too soon. The author thinks *irrigation of the colon* has been overdone. The patients which are benefited by the washing are those who have a moderate number of green mucus stools with or without blood; in short, the cases to be washed out are those in which there is something to be removed. [T. M. T.]

3.—T. H. Myers says that the medical treatment of this condition is as imperfect as the surgical, and that care should be used in regulating the food supply. This is especially advantageous in tuberculosis and pyemia. In suspected syphilis mercury is more valuable in the early lesions of the cartilage than iodides and may conveniently be applied in the form of the official ointment spread on a piece of flannel cut to the shape of the abdomen. Toleration is exceeded when a diarrhea appears. In the persistent lesions of syphilis seen in older children, the iodides must be added to the mercury and at times effects are only seen after several weeks. The author knows of no efficient medical treatment for hemophilia. [T. M. T.]

4. W. C. Doane says that in **typhoid fever**, when the **deafness** is only on one side, the prognosis ought to be guarded; when the deafness occurs on both sides the prognosis is favorable. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

April 24, 1902.

1. The Serum Test for Blood. E. S. WOOD.
2. Notes on the Production of the Test Serum in Rabbits. W. F. WHITNEY.
3. Notes on X-light. WILLIAM ROLLINS.

1.—E. S. Wood presents a critical review of the researches entering into the **the serum test for blood**, especially as relating to **medicolegal** cases. He recently applied the serum test to a murder case, in which the available suspected material consisted of one stain about one-quarter of an inch in diameter on the sleeve of a brown cloth jacket, another half-inch stain on the same garment. Other stains were scraped away and tested, from overalls, a towel, and a stone, while a separate test-tube contained a solution of known human blood. To each solution 2 to 3 drops of the test serum, obtained from a hematologically humanized rabbit, were added, with the result that a distinct precipitate occurred within one-half hour in the test-tubes containing the above mentioned substances, while no precipitate or cloudiness occurred in test-tubes containing blood solutions from the sheep, ox, dog and pig. [M. R. D.]

2.—W. F. Whitney adds a brief paper on the **production** of the test serum in rabbits and describes the method. He believes that in every case of death by violence, when murder is suspected, a strip of filter paper should be soaked in the individual's blood at the autopsy, and the material sent to an expert for examination, in order to dispel any doubt as to the individual's blood giving a serum reaction. [M. R. D.]

3.—William Rollins contributes some more observations **on the X-light**, discussing the transformer type of vacuum tube regulators for the X-light tubes, and the high potential bridge regulator. Many of his experiments have been conducted on guinea-pigs, and are of importance in the treatment of disease by the X-rays. If internal disease is to be treated, he states that we should use the radiation from a tube of high resistance, because this light being less absorbed by the superficial tissues, the latter are less affected relatively than when they are subjected to a radiation which is more easily absorbed by them, and thus more of the X-rays are available for the internal organs. From his experiments he draws particularly the following conclusions: We need powerful apparatus, and experimenters who are working hard to design such apparatus should be encouraged. Their results should not be condemned because the photographic results obtained with them in the hands of a few have been uncertain and less satisfactory than those obtained with old fashioned coils and static machines. His investigations showed him that the fault was not in new and powerful types of generators but with the tube makers. His article is concluded with a discussion of the need of an instrument for measuring the intensity of X-light. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

April 19, 1902.

1. The Nature of Prostatic Hypertrophy. ROBERT HOLMES GREENE and HARLOW BROOKS.
2. Sarcoma of the Uterus. D. S. FAIRCHILD.
3. The Relationship of Antistreptococcic Serum to the Treatment of Puerperal Sepsis. GEORGE E. RANNEY.
4. Surgery of the Liver. CARL BECK.
5. A Case of Infantile Cerebral Palsy with Autopsy Findings. L. PILCHER CLARK and T. P. PROUT.
6. Management of Umbilical Cord. C. S. BACON.
7. Some Observations on Resection of the Ribs in Empyema. ANDREW STEWART LOBINGIER.
8. Case of Right Canal Hernia, Complicated by Hydrocele and Suppurative Appendicitis. RAYMOND CUSTER TURCK.
9. A New Method for Removal of Internal Hemorrhoids Under Local Anesthesia. THOS. CHARLES MARTIN.
10. A Method of Suturing the Gall Bladder to the Parietes in Gall Bladder Operations. WILLIAM WOTKYNS SEYMOUR.
11. Glimpses of the Practice of Medicine and Surgery in Italian and Spanish Hospitals. N. SENN.

1.—Greene and Brooks discuss at considerable length the nature of **prostatic hypertrophy** reviewing briefly the literature of the subject and presenting the notes of 13 cases in which a careful examination of the gland was made. In each instance there were evidences of inflammation of the gland. The following conclusions were reached: 1. Prostatic hypertrophy of the aged is the result of chronic prostatitis. 2. It most frequently arises from chronic posterior urethritis, of whatever cause. 3. True neoplasms of the prostate are rare and are not concerned in the production of prostatic hypertrophy. 4. Carcinoma is apt to occur in the hypertrophied prostate as a result of the chronic inflammatory process. [J. H. G.]

2.—Fairchild reports a case of **sarcoma of the uterus** occurring in a woman, 65 years of age, the symptoms developing some years after the menopause. Abdominal section was performed, but on exposure of the uterus it was deemed best not to remove the organ. The author remarks that the occurrence of a malignant tumor of the uterus after the menopause is much less frequent than carcinoma, but more common than is usually stated. It is considered as the result of degenerative changes in fibromyomata. [W. A. N. D.]

3.—Geo. E. Ranney, in reporting a case of **puerperal sepsis** treated by the antistreptococcic serum, refers to the uncertainties existing about the use of this remedy. The method was successful in the case reported and the author thinks that the serum treatment of puerperal sepsis is not so satisfactory as other forms of treatment. [J. H. G.]

4.—Carl Beck, in a discussion of **surgery of the liver**, deals principally with the question of hemostasis. He presents an instrument that in part is designed to control a very large hemorrhage from the left lobe of the liver at a critical time. Beck reviews the various methods which have been proposed for controlling bleeding in operations upon the liver and reports the result of considerable experimentation upon animals with the instrument. In the case reported the liver substance was controlled by an elastic ligature and the stump was treated extraperitoneally, the patient making a good recovery. He recommends sutures for liver and lung tops of tissue and peritoneum attached at one end can be utilized for the support of ligatures through the liver substance in a satisfactory manner in animals and concludes as follows: (1) Liver tissue is sufficiently tough to safely transmit by sutures compression to the part distal to the ligature to be removed. (2) That by the support of the ligature from tissue from the same animal, preferably the fascia and peritoneum from the abdominal wall, is best suited. That the intraperitoneal or the intrapa[illegible] method is preferable to the extraperitoneal. [J. H. G.]

5.—Clark and Prout report a case of infantile cerebral [illegible] with autopsy findings. The case occurred in a female child of three years. The onset of symptoms noticed was when the patient was 2 years of age. The first symptom noticed was a [illegible] with loss of power in the right leg and arm. Examination of the child showed a [illegible] of the right leg and arm, accompanied by [illegible] of the right side. Spasmodic jerky movements of the right leg were observed. Sensation was not disturbed. The [illegible] were brought on by attempting to walk. The patient died in 1901. An autopsy was held 18 hours after death. The brain, without cord and membranes, weighed [illegible] gm. The weight of the left side was [illegible] gm. and that of the

right 501 gm. The author points out that the cerebral lesions were probably produced by venous thrombosis of surface veins and secondary hemorrhage resulted. This in turn caused more or less complete but asymmetrical atrophy of the entire left hemisphere, (microgyria, cystic degeneration and pseudoporencephaly). Secondarily the cerebral lesion caused maldevelopment of the whole right cerebellar lobe and extreme atrophy of the left thalamus and inferior olive. The cranial fossæ at the base also participated in the pathological condition most remarkably for an extra-uterine lesion. Their arrested development corresponded in location and extended to the brain masses which each contained. [F. J. K.]

6.—Bacon treats of the **management of the umbilical cord**, and gives a short résumé of the literature upon the subject. He remarks that there are 3 distinct physiological processes, namely: (1) Drying of the cord; (2) separation of the cord from the body of the child; (3) epidermization of the navel wound. It is in the second process that the influence of the bacteria is in nature's plan most efficient. There is no doubt that bacterial growth favors early separation of the cord. The best way to remove the cord aseptically is by cutting the jelly with scissors and ligating the vessel. The epidermization of the denuded surface left by the cast-off cord will go on much better when the parts are sterile than when they are infiltrated with bacteria and their poisons. The best place for ligating is close to the body of the child at the junction of the skin of the body and the amniotic sheath of the cord. The danger of secondary hemorrhage is greater, but this can be overcome by careful technique. Bacon employs an alcohol dressing for the cord followed by a dry dressing. [W. A. N. D.]

7.—Andrew S. Lobingier, after a general consideration of the subject of **rib resection in empyema**, presents the following conclusions: (1) Cases for operation must be selected with much care and judgment and without delay for repeated or too frequent aspirations. (2) Progressive tubercular involvement in young subjects is a contraindication for anything more radical than simple thoracotomy and drainage. (3) Cases long delayed, until the organic pleura is dense and contracted, require free resection and are apt to be attended by greater deformity and loss of lung tissue, than those resected earlier. (4) The periosteum must be removed completely and the U-shaped flap affords the best covering for this, as it does for the lung in the true Schede technique. (5) Irrigation is not at any time to be employed. The cavity may be wiped, both before and after curettage, with dry sterile gauze sponges. After this a light drain of iodoform gauze may be inserted, and the usual thick sterile dressing of gauze and cotton, under snug compression by adhesive strips, placed over the resected area. The after-treatment is that of any collapsed abscess cavity, drainage being abandoned as early as possible. Firm pressure over the collapsed area should be maintained by properly applied dressings until coaptation of the flaps has been fully established and the sinus closed. [J. H. G.]

8.—Raymond C. Turck reports a very interesting case of **right cecal hernia** complicated by hydrocele and suppurative appendicitis in an old man, 78 years of age. The patient was operated upon because of strangulation. The sac contents were found matted together with old and new adhesions and the appendix contained pus. Because of the inflamed condition of the tissues, the condition of the patient, his age, and the complication of pathological conditions, it was thought best to remove the testicle, the appendix and the hernial sac en masse. The patient made a satisfactory recovery. [J. H. G.]

9.—Thos. C. Martin describes a **new method for the removal of internal hemorrhoids** under local anesthesia. The operation consists in the gradual dilatation of the sphincter, the anesthetization of each individual hemorrhoid, and its removal by means of a cone-shaped clamp, a description and photograph of which accompanies the article. [J. H. G.]

10.—W. W. Seymour describes a method of suturing the gall bladder to the abdominal wall which consists in the introduction of silkwormgut mattress-sutures from within the gallbladder through the abdominal wall. These sutures bring the serous membrane of the gall bladder in close apposition with the parietal peritoneum. [J. H. G.]

11.—Will appear when concluded.

AMERICAN MEDICINE,

April 26, 1902.

1. Pneumonia; an Acute Self-Limited Systemic Infection. STEPHEN SMITH BURT.
2. Marrow- and Spleencells, Considered in Their Relation to the Bloodcells. EDWARD T. WILLIAMS.
3. Principles of Hydrotherapy. OTTO LERCH.
4. A New Method of Bisecting the Uterus. CHARLES H. RICHARDSON.
5. Anomalous Position of Cecum and Colon from Failure of Rotation. W. L. GRANT.
6. A Case of Extreme Gastroptosis. E. T. RULISON.
7. The Serum Treatment of Pneumonia. JOSEPH EICHBERG.
8. The Examination of the Blood in Relation to Surgery of Scientific, but often of no Practical Value and May Misguide the Surgeons. J. M. BALDY.

1.—S. S. Burt concludes an article on **pneumonia** with the statement that the disease is an acute self-limited systemic infection, whereof the concomitants, though various, are chiefly pulmonary; it is endemic, occasionally pandemic in many countries, and it occurs everywhere sporadically; regarding the lung tissue, the affection seems more in the nature of an exudate than an inflammation; the frequency of detection of the diplococcus in living blood in pneumonia suggests that by improved technique it will be found like the plasmodium in malaria invariably. Infection of the heartmuscle with resulting degeneration has more to do with heart failure than mechanical obstruction. The exact signifance of pathological leukocytosis requires further elucidation; pre-existing fertility as to the condition determines the degree of infection rather than the number of microbes which are in quality unchangeable. [T. L. C.]

2.—E. T. Williams considers the **marrow- and spleencells in their relation to the bloodcells.** The marrowcells are basophilic which shows them to be identical with the so-called large lymphocytes of the blood. The neutral and alkaline myelocytes found only in diseased blood are probably degenerated forms of the true myelocytes with which they are morphologically identical, though differing in tinctorial properties, which Williams believes to be due to chemical changes in the cytoplasm. He states that the marrowcells are in all probability the progenitors of the multinuclear leukocytes. He believes that the spleen, as well as the red bone marrow is active in the production of the erythrocytes. The spleen seems to have a less important agency in the formation of leukocytes than the marrow and lymphglands. [T. L. C.]

4.—C. H. Richardson describes a **new method of bisecting the uterus.** The patient is placed in the Trendelenburg position and the abdomen opened. If adhesions to the omentum and intestines exist, they should be carefully dissected with the knife from their adhesions rather than torn, as minute tears of the intestines are apt to occur from this procedure which are overlooked at the time of the operation. The abdominal cavity is thoroughly packed off with gauze tampons. The uterus with its adhesions can now be seen, and it is separated from the rectum without much danger of laceration. The uterus is brought well up and both coronaria seized with strong forceps, and firm traction exerted by assistants. An incision is made in the median line of the uterus, carried through the body and necessarily through the uterine cavity as well. The tension on either half prevents any considerable hemorrhage. If removal of the entire cervix is contemplated, the median

incision is carried down to the attachments of the bladder and rectum, and these organs freed from their attachment in the usual manner and the incision carried through the median line of the cervix. Most operators prefer to leave a short stump of the cervix, as this saves opening the vaginal vault, thereby eliminating the chances of infection from the vagina. [T. L. C.]

5.—W. L. Grant reports a case of a young man of 22, who had been suffering for one week from obstruction of the bowels, without vomiting. Death followed a few hours after operation. The autopsy revealed the presence of an inflammatory nodular and hemorrhagic mass of tuberculous origin in the mesentery, extending from behind the junction of cecum and colon upward, inward and backward toward the foramen of Winslow, size 7x3x¾ inches. This produced pressure on the bowels at each end, the upper constriction accounting for the absence of vomiting, and the lower for the obstruction. The distention of the gallbladder was also due to pressure on the duct at its entrance into the duodenum. [T. L. C.]

7.—Joseph Eichberg discusses the **serum treatment of pneumonia** and reports 6 cases so treated with one death. The general experience has shown that the use of the serum will not precipitate the crisis but will in many cases diminish the severity of the course of the disease. [T. L. C.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

No. 51.

1. A Little-Known Cancer Symptom in Human Beings. LESER.
2. An Experimental Foundation for Tendon Plastic. A. HOFFA.
3. A Re-agent for the Recognition of Iodine in Clinical Investigations. G. DEGENES and S. SABRAZES.
4. Disinfection of Localities Inhabited by Phthisical Patients. D. OTTOLENGHI.
5. Chronic Pemphigus of the Mucous Membranes of the Upper Respiratory Passages. J. GUGENHEIM.
6. Further Investigations Upon Puro. F. SCHAEFER.
7. Report Upon the Result of Vaccination in the Kingdom of Bavaria in the Year 1900. L. STUMPF.

1.—Leser calls attention to the fact that in many cases of **internal carcinoma** numerous purplish red **angiomas** are found in the skin. His attention was first called to this symptom in a case of carcinoma of the pharynx. Upon the first examination from 15 to 16 such tumors were observed. During 4 months in which the patient was under observation before his death 216 such tumors appeared. In association with Muller he has attempted by extensive observations to answer the questions whether the occurrence of such tumors is a common associated symptom with malignant tumors, especially carcinomas; whether such tumors occur also in healthy persons and whether the development of these tumors is of diagnostic value. The statistics included 76 cases of cutaneous cancer and 200 cases which certainly were not cancer. In only one of the 50 cases of cancer were these angiomas absent; in the other cases they were found sometimes in great numbers. In one case 76 such tumors and in another 58 were present. In the cases such tumors were found late in life but not in the cases of the ages at which carcinoma is common. Leser urges that this symptom should be searched for systematically. [J. S.]

2.—Hoffa has performed a number of experiments with the object of determining the **histological changes** that take place **in tendons** that have been elongated by the usual step-shaped incision. These incisions were made upon the tendons of animals and then at various intervals the site of the operation excised and examined microscopically. It was found that after the operation a scar was formed partly of the tissue of the tendon, partly of the peritoneum interna and externa, and the surrounding connective tissue. If the operation was aseptic, the proliferation of the tissue of the tendon itself is predominant. If, however, any infection occurred, the connective tissue is of no influence. In all cases there is considerable proliferation of the bloodvessels and infiltration with round cells. Gradually these disappear, although months afterward they can still be detected. [J. S.]

3.—Denegès and Sabrazes have performed a number of experiments with the iodipin test which consists in the administration of a mechanical combination of sesama oil and iodine. The advantage of this is that it is not decomposed either in the mouth or in the stomach, but only in the duodenum after it comes in contact with the bile, and therefore is an indication of the rapidity with which substances pass through the stomach. In order to recognize the iodine in the urine and in the sputum they used a sensitive paper prepared according to their own method. This consists of ordinary writing paper which has been thoroughly wetted on both sides with a solution of starch in which a small amount of sodium nitrate has been dissolved. It is important to allow one side of the paper to dry before the other side is wet. The advantage of this paper over the paper prepared by Bourget is that it can be kept an indefinite length of time without losing its sensitiveness, and it is not necessary to exclude light. When employed the paper is moistened with the suspicious solution and a drop of 10% solution of sulphuric acid allowed to roll down, when, if iodine is present, a blue color immediately results. [J. S.]

4.—Ottolenghi recommends for the **disinfection of rooms inhabited by persons suffering with phthisis** a thorough moistening of all suspected parts with a solution of bichloride of mercury, 5 parts in 1000. This moistening must be done twice and then the results are entirely satisfactory. As Ottolenghi has not employed the formalin method he cannot compare its efficiency with that of the bichloride method. This latter, however, is very simple and efficient. [J. S.]

5.—Gugenheim calls attention to the fact that in many cases of cutaneous pemphigus, eruptions occur upon the mucous membranes which consist of small blisters covered with a thin skin that soon breaks, leaving a small moist ulcer. This, however, may again be covered by vesicles. The eruption may occur periodically or it may be almost continuous, new blisters replacing the old. He reports the case of a woman 62 years of age who developed an eruption of blisters and sore places upon the mucous membranes of the mouth and throat. A grayish-white, sharply defined membrane could be observed upon the post-pharyngeal wall. This disappeared and later similar membranes were found upon the glottis. During further observation the character of the eruption varied from day to day in the most extraordinary manner, and at the end of two and a half months' duration of the disease was practically the same as at the beginning. [J. S.]

6.—Schaefer describes an acute anemia that occurs among persons who live in the poorer parts of large cities. Usually these persons are poorly nourished. Recovery usually takes place, but the restoration of the blood to its normal condition is a relatively slow process. There is usually complete loss of appetite during these attacks, and sometimes symptoms of gastric disturbance, hyperpyrexia, and nervous symptoms. He ordered puro, a preparation devised by Dr. Scholl, giving the greater the intensity of the symptoms in which the patient seemed to have improved the quicker the recovery. He also includes in his article some brief statistics of [illegible] scurvy, summer diarrhea, and various forms of anemia in which the results of the treatment of puro were very satisfactory. [J. S.]

7.—Stumpf gives very complete statistics and comments on the results of vaccination in the Kingdom of Bavaria in the year 1900. At this time there were [illegible] inhabitants in the Kingdom of whom 151,000 had died before vaccination. Of those who died before vaccination, 2 who accepted [illegible] thousand were inoculated: 150,000 of these were positive. This [illegible] and in the remainder the results were not known. In all exposed to infection [illegible] an average of about 5 months [illegible]. One hundred and twenty-five thousand

children were inoculated for the second time, and 121,000 gave positive results. In these also animal lymph was employed. The methods employed were very various. The majority of physicians used a lancet, usually made of platinium iridium alloy, which could be sterilized by holding it in the flame. Sometimes nickel-plated steel lancets were employed, sterilized in antiseptic solution. The common antiseptic solution used upon the skin was absolute alcohol. The paper is still unfinished. [J. S.]

REVUE DE MEDECINE.

December 10, 1901. (21me. Année, No. 12.)

1. Researches on Tuberculosis and Its Bacillus. J. FERRAN.
2. Study of the Heredity of the Anomalies of the Maxillary Bones and of the Teeth. V. GALIPPE.
3. Pneumo and Cardiopaludism. NAAME.
4. Articular Traumatism and Disorders of Sensation. M. CHAVIGNY.
5. A Critical Study of Streptococcus Epidemics. R. BERNARD.

1.—Will be abstracted when finished.

2.—The **heredity of dental anomalies,** even when they present similar characteristics in parent and child, has not sufficiently impressed observers; it, therefore, follows that the majority of cases collected without consideration of this possibility are made valueless since they have been attributed to an acquired pathological cause rather than to teratological or pathological heredity. The transmission of these stigmata may be strictly related to general disorders of which they are the expression without any of them being considered as presenting specific characters. They are expressions of teratological heredity as well as pathological heredity, the latter of which may be caused by an affection of the nervous system, a psychopathy or that condition known as neuro-arthritism. Gout, rheumatism, diseases due to the infections or intoxications, such as tuberculosis, syphilis, malaria, alcoholism and saturnism may produce the same stigmata. If one admits, as Galippe does, the constant parasitism of the testicle, whether it be normal or pathological, it is logical to accept the direct transmission by the spermatic filament of certain of these parasites, such as the bacteria of tuberculosis, of syphilis, of rheumatism, etc. Now, it is not reasonable to consider the infectious agent alone, but it is also necessary to take into account its products of secretion, toxins or zymases, products playing the role of agents of intoxication and carrying a perturbating element in the evolution of the new being, because they profoundly modify the statics of the generator. In the first instance, there is no heredity, properly speaking, but the mechanical transmission of an infecting agent by an infected generator. And if the action of the toxins is taken into account, they should be considered as disturbing the evolution of the embryo and as preparing morbid opportunities. In this way, outside of the domain of teratological heredity, the appearance of the stigmata of degeneration in children whose parents do not present the same stigmata are accounted for. The disturbances of development are manifested, not only by stigmata directly appreciable, but also in disorders in the structure of the organs presenting the deviation of their normal form or situation. This is true for the teeth as well as for the other organs. The **heredity of anomalies of the teeth** may be similar or dissimilar to the anomaly of the parents. It is well known that neuropathic patients very frequently present dental anomalies. The same is true of insane patients and of their children, as well as of idiots and microcephalic individuals. Dental anomalies are also frequent in patients who suffer from neuro-arthritism, rheumatism, gout, diabetes, scrofula, and tuberculosis. It is rational to admit that erosion of the teeth is a disorder of structure, that it assumes different forms and that none of these forms has a special significance. The author holds that the lesion of the structure and of the form of the teeth has no relation of cause and effect with syphilis. Delay in the eruption of the temporary and the permanent teeth is not characteristic of hereditary syphilis, but may be seen in all forms of degeneration, and the delay of eruption almost always precedes the appearance of anomalies. Delay of eruption and anomalies appear as successive and logical manifestations of the same disorders of evolution, whatever their cause. The same may be said of very small and very large teeth; they are anomalies that may depend upon any of the causes of degeneration. The diversity of form of the teeth is in relation with the races that enter into the development of a modern nation, and on this account, some perfectly normal teeth have been considered abnormal. It is not reasonable to try to make dental vulnerability an especial characteristic of hereditary syphilis. The persistence of the temporary teeth and the congenital absence of certain teeth are not peculiar to hereditary syphilis. Alcoholism, tuberculosis, neuropathic heredity may act as causes before syphilis and the latter only serves to aggravate the condition. The author denies that Hutchinson's teeth are pathognomonic of hereditary syphilis; but believes that any of the other causes of dental malformation may produce them. [J. M. S.]

3.—The disease of de Brun is characterized by a symptom-complex indicating a **solidification of the** upper portion of one or both **lungs.** Cough, when it exists, is dry and sometimes accompanied by attacks of fever, but the 2 most important signs are the absence of adventitious sounds, and the presence of an expiratory whistle. When the latter sign has disappeared, the inspiration becomes harsh and the expiration becomes clearly prolonged. This disease was **ascribed** by de Brun **to malaria** as the etiological factor. Naamé describes **a cardiac condition due to malaria** the signs of which include gallop rhythm in the tricuspid area, intermittent heart action, dilation of the right heart, reduplication of the pulmonary diastolic sound and, sometimes, bradycardia. [J. M. S.]

4.—While the articular effusion is ordinarily considered as the principal lesion in a case of hydrarthrosis of the knee, the attention of the physician should always be directed to the consecutive muscular atrophy, which persists for a long time after the joint has become perfectly dry. The functional impotence does not cease until the muscle has returned to its original volume and its normal vigor. The arthritis gets well quicker and easier than the muscular atrophy. In examining the thigh of a patient suffering from hydrarthrosis of the knee, Chavigny has recently observed some symptoms that he believes deserve further study. The patient said that beside the articular pains, properly speaking, he had, from time to time, a peculiar sensation of cold along the thigh that felt as though a cold liquid was flowing along the limb from above downward. Ordinarily, an uncomplicated **traumatic hydrarthrosis of the knee** is accompanied by hypoesthesia in the entire area of superficial distribution of the crural nerve. Spontaneous **disorders of sensibility,** on the other hand, are more rare; only 3 patients out of 20 have complained of a sensation of cold on the thigh. In cases of acute articular rheumatism affecting the knee joint and in one case of gonorrheal arthritis of the knee the muscular atrophy, even when it was pronounced, was not accompanied by disorders of sensation. This, therefore, may serve as a means of diagnosing between simple arthritis and rheumatism. The author has obtained like results when traumatic effusion into other joints than the knee were studied . Twenty-one case-histories are given. [J. M. S.]

5.—Bernard has contributed an exhaustive review of the **epidemics due to the streptococcus.** The monograph has been printed in *Revue de Médecine* for September and November, the last part being printed in the number under review. The author concludes as follows: The preceding study has for its object the demonstration of the fact that the streptococcus has a specific action even when it is associated with one of the recognized specific infections. This specificity is not always evident. There are certain instances at the beginning of epidemics in which all the forms of the clinical manifestations of the streptococcus are seen. These demonstrate, by the changes in the condition of the patient, the equivalence of different localizations. Cases are known in which many of the characteristic lesions have been observed in the same subject. In bacteriological studies the streptococcus is sometimes as fixed in its characters as the best determined species, sometimes it is very embarrassing by its instability. [J. M. S.]

Society Reports.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting held April 8, Dr. Joseph Collins in the chair.

Dr. G. W. Jacoby presented a young woman of 20, with asthenic bulbar paralysis, perfectly well until May, when double vision, nasal speech, regurgitation of fluids through the nose and weakness of the right hand were noted. He called attention to the broadness of the mouth, thickness of the lips, expressionless appearance of the face, difficulty in whistling, and inability completely to close the eyes.

Dr. William Aldren Turner, of London, read an experimental study of the reflexes in total transverse lesions of the spinal cord, considering more especially the knee-jerks. He said that the reflex phenomena varied considerably, depending upon whether they were studied experimentally or clinically. The temporary abolition of the knee-jerks was more commonly noted after high than low transections, but in no instance was complete absence observed. The influence of shock in laboratory transection was small, its effects being limited to distal parts. Many years ago, when working with Dr. Ferrier on experimental lesions of the cerebellum, he had noticed, in a case transected at the eighth dorsal segment, that the knee-jerks were brisk and increasing immediately afterward, and that they lasted 4 months. He describes some recent experiments on rhoesus monkeys, showing that the effect on the knee-jerks was influenced by the level at which the section was made. If the section had been made at or below the fourth dorsal segment, the knee-jerks were present as soon as the monkeys came out from the anesthetic. A patulous anus was rare. The limbs were in a state of flaccid palsy, rigidity and contracture occurring in time. In transection at the second or third dorsal segment some difficulty was experienced temporarily in eliciting the knee-jerks, and they seemed to be quickly exhausted. Transection at the first dorsal and the eighth cervical segments resulted in the knee-jerks being temporarily obtained with difficulty, entirely failing after 15 or 30 minutes. Various theories had been advanced to explain flaccid paralysis with loss of the knee-jerks in man. The most commonly accepted explanation was the Bastian-Jackson theory, which ascribes the loss of reflexes to cutting off cerebral influences. In no cases in which the cord had been completely severed had any return of the reflexes been observed. This explanation implied that the removal of the cerebellum should produce hypotonus and consequent loss or impairment of the knee-jerks, yet atonia has been observed after removal of the cerebellum. All observers agreed that even in those animals in which the knee-jerks are temporarily abolished, their reappearance was a question of time, yet in monkeys even a temporary loss was not always observed. Dr. Turner reported a case in which dislocation of the fifth cervical vertebra resulted in complete flaccid paralysis and loss of the knee-jerks. Post mortem examination showed that there was not complete transection, a thin bridge, about one mm. thick, persisting. This band was shown by microscopical examination to consist of degenerated white fibers. In another case there was a fracture dislocation of the eighth dorsal vertebra, and the post mortem examination, 16 months after injury, showed a depression of the cord, the latter having been converted into a mere ribbon. The reflexes persisted 4 months. The plantar reflex was present in transections above the lumbar enlargement in man. The crossed adductor and the superficial anal or perineal reflexes, like the plantar, were not abolished by transection of the spinal cord. While the condition of the knee-jerks in transection of the cord in monkeys was not constant, no such difference had been found in transection of the human spinal cord. Temporary abolition of the knee-jerks sometimes followed long after incomplete transections. In man, as in monkeys, though the knee-jerks might be abolished, the plantar and superficial anal reflexes might be maintained. In spinal transection in man, in high transections in monkeys, actions dependent upon neuromuscular tone were temporarily or permanently abolished, but true reflex movements were not impaired. The variation in the phenomena following spinal transections in monkeys would preclude the general application of Bastian's theory, for nothing excluded the view that the mechanism producing loss of knee-jerks or their temporary abolition in man was not in the spinal cord. Dr. G. L. Walton, of Boston, said that the present tendency in favor of cerebral reflex centers was largely due to Bastian's observations, but the reflex conditions found in disease were too varied to be explained by the acceptance either of cerebral or spinal centers. If the knee-jerks were temporarily lost, it was because the cerebral reflex center was rendered ineffective by injury or functional separation from the lumbar region. One point of divergence was in the newly born, in whom the knee-jerk was faint or wanting, and the cutaneous reflex active. The other point of divergence of the knee-jerk from the plantar reflex appeared in complete severance of the cord. In order to elicit the knee-jerk a certain degree of muscular tonicity was essential. Permanent loss of the knee-jerk in cases of severance of the cord might be due to inability of the spinal centers for tonicity. In the prematurely born, the spinal centers might not be able to act until the cerebral centers controlled the tonicity.

Dr. P. C. Knapp, of Boston, said that comparatively few observers had noted the extreme difficulty of proving anatomically that the cord is totally destroyed. A case had come under his observation in which, on removing the fractured laminæ, the cord was found absolutely divided. A year after the accident there was flaccid paraplegia with loss of the knee-jerk and retained plantar reflex. This occurred before attention had been called to the Babinski reflex.

Dr. C. K. Mills, of Philadelphia, said he did not feel that he could contribute anything new to this interesting subject, but he would mention the fact that he had had quite a number of cases, with autopsies, which tended to confirm the views expressed by Dr. Turner. The cerebrocerebellar theory had always seemed to him the most satisfactory. The fact that lesions at the cervicodorsal junction, when complete, were apt to cause loss of the knee-jerk was of great interest. Dr. Joseph Fraenkel thought that the more this problem was studied the less seemed to be really known about it which would be of value at the bedside. In conjunction with Dr. Collins he had carried on a clinical study of the reflexes, measuring at the same time the tonicity of the muscles. This study embraced about 600 cases, and included certain interesting pathological findings. They had become convinced that the knee-jerk was absolutely dependent upon muscle tonus. If the muscle tonus were increased through pain in the joint, there would be an increase of the knee-jerk. When the lesion of the spinal cord had been slowly progressive, there would be nutritive shortening of the muscle, but, the muscle tonus not being destroyed, the reflex persisted. Dr. M. G. Schlapp referred to a reported case in which, on histological examination, the cord was found absolutely severed in the dorsal region. This case overthrew the Bastian theory. He thought the reflexes should be considered in their abnormal conditions. The loss of reflexes could be explained by degeneration of the short neurons in the posterior roots having to do with the tendon reflexes. He had found this lesion of the cord in transverse lesion of the spinal cord, brain tumor, and alcoholism. These were facts, and consequently demanded more careful attention than theories.

Dr. Turner, in closing, said that until he had collected the results of his experiments in tabular form, he had had no idea that the condition of the reflexes was so extremely variable. He was in perfect accord with the position taken by Drs. Collins and Fraenkel. The effects on the reflexes observed in cases of disease of the cerebellum and in experimental lesions of the cerebellum were very different.

He thought we should ascribe these variable phenomena, not so much to the existence of a tumor in the cerebellum, as to interference with intracranial pressure from the presence of a morbid growth under the tentorium cerebelli.

THIRTY-FIRST CONGRESS OF THE GERMAN SURGICAL ASSOCIATION, HELD IN BERLIN, APRIL 2 to 5, 1902.

Wednesday morning, April 2, Dr. Kocher, Berne, in the chair. von Bruns, Tübingen, read a paper upon the **first dressing on the battle-field.** He stated that the present small caliber gunshot wounds are aseptic; that, on account of the small size of the skin wound, healing follows rapidly and aseptically; and that an aseptic dressing, applied to the wound at once, generally prevents secondary infection. He especially recommends a dressing of xeroform salve, covered with dry gauze and kept in place by adhesive plaster. Bertelsmann, Hamburg, reported his observations in Mafeking, attributing his good results to the warm African climate and to the fact that he let all wounds alone. von Bergmann, Berlin, presented two patients with **fractures of long bones,** due to gunshot wounds, with good recovery. Küttner, Hamburg, believes that the good results achieved in military surgery are due to the kind of bullet now in use, and to better treatment than formerly.

Trendelenburg, Leipsic, demonstrated a case of **gunshot injury of the heart.** The bullet remained in the heart-muscle, radiographs showing the bullet imbedded in the wall of the right ventricle. He recovered from the effect of the gunshot wound in spite of the heart injury. This has already been reported in the **Philadelphia Medical Journal,** April 12, page 639.

Hildebrandt, Berlin, discussed **penetrating wounds of the abdomen** and their treatment in the field. Gunshot wounds of the abdomen gave a mortality of 75%, the small intestine being most often injured. When the diagnosis of perforation is made, laparotomy should be immediately performed. In other cases he advises expectant treatment, performing the operation only when necessary.

Wednesday afternoon, April 2, Dr. Wohlgemuth, Berlin, in the chair. Nölker, Heidelberg, read a paper on the **treatment of fractures with primary bone suture.** As a result of his study, which included 4 fractures of the tibia and 2 of the humerus, he concluded that primary suture of the bones had not accomplished all that was expected. Several months had passed before there was complete consolidation. In spite of the suture, displacement of the fragments occurred in 2 places. Primary bone suture, however, is especially valuable in the treatment of oblique and rotary fractures, those involving joints, complicated fractures and cases in which 2 fractures have occurred in the same extremity. Arbuthnot Lane, London, spoke upon the **results of primary suture of fractured bones.** His studies upon the skeleton, especially in oblique fractures, led him to employ primary suture in many cases, more often in the lower than the upper extremities. He used silver wire or ordinary screws for setting the fracture, not touching the wound with his fingers, to prevent all infection. Complicated and old fractures and fractures of several bones presented many operative difficulties. König, Altona, believes that exact opposition of the bony fragment is not always necessary for a good functional result. This is, however, necessary when the fracture involves the joint. Trendelenburg, Leipsic, believes that the operative treatment of fractures is only to be used when a joint is affected. Pfeil-Schneider has already used this method for ten years. He objects to the use of screws. Körte, Berlin, does not believe that suture of the bones should be commonly used in the treatment of fractures. Henle, Breslau, and Bier, Greifswald, believe that this procedure is limited to few cases. Lauenstein, Hamburg, has had good results with Hausmann's screws, which he has used in 60 cases. Schede, Bonn, has used ivory nails in setting fractures of the neck of the femur. Schlange, Hanover, believes in primary suture with aluminum bronze wire in fractures of the legs between the middle and lower third. Bardenheuer, Cologne, and Wolff, Berlin, believe that extension will give much better results. Kocher advocates primary suture in epiphyseal fractures in children, reporting a case. Schede recorded a case, disagreeing totally with what Kocher had demonstrated.

Honsell, Tübingen, discussed **securing a good stump after amputation** and reported the good results achieved by von Bruns' method, keeping as much of the periosteum as was possible. He makes a large anterior and a small posterior flap. Among those who participated in the discussion on this subject were: König, Berlin; Bunge, Königsberg; Bier, Kiel; and Kocher, Berne.

Sultan, Göttingen, read a paper upon the **transplantation of dead bone into the soft parts** with or without periosteum. From numerous investigations, which were shown diagrammatically, he concludes that living bone is best transplanted into the soft part with periosteum; dead bone, however, must be placed in the periosteum to grow, otherwise it acts as a foreign body. The periosteum must maintain the natural relation with its nutrition. When this is so, absorption of the dead bone follows, with new bone formation.

Wednesday evening, April 2, Dr. von Bergmann, Berlin, in the chair. Joachimstal, Berlin, showed a number of **Röntgen photograms demonstrating the structure and position of the patella, with abnormalities.** Albers-Schönberg, Hamburg, demonstrated an apparatus which brought out renal calculi plainly on X-ray plates. He also showed a number of **radiographs** of interesting surgical cases, showing technical difficulties, such as sarcoma of the sternum, the changes of bones in syphilis, etc. Perthes, Leipsic, showed **Röntgen pictures** of the feet of Chinese women, pointing out the characteristic changes in position and structure of the toes and the calcaneum. Sudeck, Hamburg, showed **radiograms** of inflammations and injuries of the bones at the joints; Petersen, Heidelberg, of carcinoma with recurrence; J. Joseph, Berlin, of cases with abnormally small noses or ears; Albert Stein, Berlin, of the good effects of subcutaneous injections of vaseline. Doyen, Paris, then presented his series of cinematographic pictures, showing himself performing various operations, his final presentation demonstrating the separation of the Hindoo Siamese twins.

Thursday morning, April 3, Dr. Kocher, of Berne, in the chair. Gussenbauer, Vienna, read a paper on the **histogenesis of cancer.** He stated that the beginning of cancer was not known, for when the condition is recognized, the tumor is already far advanced. The so-called small-celled infiltration is formed of polymorphous cells. He believes that the cause of cancer is most probably parasitic in nature. von Kahlden, Freiburg, spoke upon the question of **recurrence in cancer.** He believes that recurrence only occurs when some carcinomatous epithelium is left after operation. It is possible, however, for recurrence to appear through the lymphchannels, embolic in character. Many carcinomata are multicentric. Recurrence may occur too small to be visible, as is often noticed in ovarian cancer. Recurrence through the lymphvessels occurs relatively early in cancer of the breast. Lupus and cicatricial cancer recur relatively late. As a general rule, when the original tumor has increased with rapidity, recurrence occurs rapidly. Petersen, Heidelberg, read a paper on **recurrence and recovery in cancer.** Local or direct recurrence generally follows cancercells left by operation. Indirect recurrence occurs when formerly healthy tissue in the neighborhood of carcinoma becomes diseased. Unicentric carcinoma gives direct recurrence, while multicentric cancer may give direct and indirect recurrence. He agrees with von Kahlden that recurrence rarely occurs by inoculation. Late recurrence is usually indirect. Yet bits of cancerous tissue left by operation do not necessarily cause recurrence, for regressive metamorphosis may occur, ending in their absorption. Thus it is that metastases rarely occur through the blood in cancer. von Mikulicz, Breslau, reported 106 cases, showing the treatment of **intestinal cancer.** He resected the part of the intestine affected, doing the operation in 2 stages, with an interval of 2 days between. Hochenegg, Vienna, reported the results of treatment in 282 cases of **intestinal cancer.** He also frequently used this method. Out of 114 cases of rectal cancer he had 30 absolute recoveries, which have gone over 3 years without recurrence; 10 of these are wholly continent. As he performed the operation in 2 stages, 3 years before the text-book on surgery was published, in which this is called the Mikulicz method, he disputes this nomenclature. Of 237 cases of rectal cancer radical treatment was followed in 174 cases, palliative treatment in 63 cases, the sacral method being most often used, with a very small mortality. Out of 174 radical operations 120 cases

were permanently cured. Krönlein, Zurich, read a paper on the **course of gastric cancer with internal and operative treatment.** Out of 264 cases, 53 of which were inoperable, 14 refused operation, so that 197 cases came to operation. They were divided into 73 exploratory laparotomies, 74 gastro-enterostomies, and 50 gastrectomies. On an average, those treated by gastro-enterostomy lived 3 months, while those treated by gastrotectomy as the operation for recurrence, lived 14 months after operation. He also has 13 cases of recovery following primary gastrectomy, the oldest of which was already 8 years old, so that he believed this operation markedly lengthened life. Lengemann, Breslau, discussed the involvement of the lymphglands in gastric cancer. He showed that when the lymphglands about the stomach reached the size of 2 mm. they were almost always already carcinomatous. Nöske, Leipsic, believes that the so-called Plimmer bodies have nothing to do with cancer, nor has the parasite of carcinoma yet been discovered. Doyen, Paris, delivered an address upon the **micrococcus neoformans and the treatment of cancer.** This microorganism, which he has but lately discovered in carcinoma and carcinomatous lymphglands, is exceedingly difficult to cultivate. He describes its peculiarities and has already prepared an antitoxin. He is, however, not yet certain that this is the cause of cancer. Schüller, Berlin, spoke upon the **parasitic origin of cancer and sarcoma,** describing the body which he found. O. Israel, Berlin, discussed the question of the **etiology of cancer.** After reviewing the subject, he stated as his opinion that it was only by a misunderstanding that protozoa came into the question at all. Among others who discussed the subject were: Drs. Garre and Prutz, Königsberg; Benda, Feinberg, and Stenzel, Berlin; Korteweg, Amsterdam; Tietze, Breslau; Grohe, Jena; and Vollbrecht, Darmstadt.

(To be continued).

MANHATTAN DERMATOLOGICAL SOCIETY.

Meeting held April 4, Dr. W. S. Gottheil in the chair.

Dr. J. Sobel presented a child of 5 weeks with **sclerema neonatorum.** The mother had had 6 children and 20 abortions. Over both deltoids there was marked induration of the skin and underlying tissues; the buttocks were hard and leathery, and there were small areas of induration on the chest. The prognosis is grave.

Dr. Pisko presented 2 cases of **herpes zoster,** one involving the right iliac region, the other the right chest. In the latter patient, who was taking Fowler's solution, symptoms of gastro-intestinal disturbance appeared with the herpes zoster, and Dr. Pisko believes the arsenic to be responsible for the eruption. Drs. Cocks, Oberndorfer, Abrahams and Sobel regard the eruption as accidental, not due to the arsenic.

Dr. E. L. Cocks presented a patient with annular shaped patches on the abdomen, chest and limbs, showing dark mottling in the center, presented as **erythema multiforme.** Drs. Oberndorfer and Abrahams agreed with him. Dr. Kirsch thought it a syphilide; while Drs. Pisko, Bleiman and Gottheil thought it looked like eczema seborrhoicum

Dr. W. S. Gottheil showed a woman with lesions on the face, neck and arms, the **atrophic remains of red circular patches** of years ago. The condition had been diagnosed lupus, eczema and a nerve lesion. Dr. Gottheil believed the atrophy was due to pressure from the presence of a previous growth since absorbed.

Dr. E. L. Cocks showed a case of **lupus vulgaris** involving both cheeks. As the result of treatment, pure carbolic acid locally and iodoform internally, the right side had entirely healed; the left side, untreated, shows typical lesions.

Dr. Oberndorfer presented a case of **erythema exudativum,** the eruption being limited to both forearms. He also showed a case of **molluscum sebaceum et verrucosum** limited to the scalp. Eruption began two weeks ago and spread rapidly; from the small pearly tumors the corpuscle could be readily expressed.

Dr. Pisko presented a case of recurrent **erysipeloid** involving the upper lip and wing of the nose. The first attack occurred 2 years ago, the second attack 2 months ago, unaccompanied by constitutional symptoms. Dr. Abrahams has seen many such cases, usually with a lesion of the nasal mucosa, by treating which the condition improved. Dr. Pisko again showed his case of **folliculitis** involving the forearms. All methods of treatment were of no avail. Sections show **granulomatous formation** with infiltration of the hair follicles. Dr. Pisko then showed a case of **diffuse scleroderma,** the patient taking 5 grains of thyroid thrice daily with benefit. Dr. Gottheil showed a case of **erythema multiforme** on the chest, abdomen, upper and lower limbs; a case of **sarcoma cutis** showing the result of treatment begun one year ago; and photographs of a case of **pityriasis rosea.**

BERLINER KLINISCHE WOCHENSCHRIFT.

January 27, 1902. (39 Jahrgang, No. 4.)

1. Separation of the Retina with the Nephritis of Pregnancy. JOSEF HELBRON.
2. The Prognosis of Glaucoma Operations. FRITZ MENDEL.
3. Remarkable Suicidal Attempts. MAX EDEL.
4. The Tuberculin Treatment and Sanatoria. WEICKER.

2.—Mendel reports 258 cases of **glaucoma,** in 234 patients, 144 in women, 83 in men, and 7 congenital. The glaucoma was simple in 78, acute inflammatory in 67, chronic inflammatory in 33, and secondary increase in pressure was noted in 49 patients. In 15 no operation was necessary, 9 being treated with eserine, with 8 recoveries. Iridectomy was done 218 times, while enucleation was performed 31 times. The results were best in acute inflammatory glaucoma, 82% cured; then in chronic inflammatory glaucoma, 77% cured; in simple glaucoma, 75% cured; and in secondary increase of pressure 50% cured. **Iridectomy** is the main treatment for glaucoma. [M. O.]

3.—Edel reports **three cases of attempted suicide.** A woman of 38 tried to strangle herself by winding her hair tightly about her neck, and then pulling it tighter, her hands being found stiffly contracted. She recovered, though almost dead when discovered. A man of 25 made a rope out of bits of his night shirt, and, fastening this about his neck, he put his right leg through a loop. Then stretching out his leg, he strangled himself. He was also resuscitated. The third case, seen in the Charlottenburg Insane Asylum was a woman of 42 who took 5 mg of atropine sulphate. She tried to commit suicide in the delirium which followed, but also recovered. The case-histories are given in full. [M. O.]

4.—Brehmer's statement that **sanatorium treatment can cure tuberculosis is now confirmed.** But the patient must remain in the sanatorium until well. Nowadays the average duration of the sojourn in a sanatorium is 13 weeks. **Weicker is much in favor of an injection of tuberculin in every case for the purpose of diagnosis.** Only when this is negative a patient should be discharged from a sanatorium as cured. The majority of cases, while improved, still give a positive tuberculin reaction. Patients in the late stages of consumption should be isolated in special hospitals. The best means of treatment is the facultative use of tuberculin in certain cases, especially after leaving the sanatorium. He concludes that the permanent improvement noted in sanatoria is not a permanent cure: but this result may be obtained by continuing the tuberculin cure after the patient leaves the sanatorium. [M. O.]

Meningococcic Cerebrospinal Meningitis following Abscess of the Buttock.—E. Albert reports a case of cerebrospinal meningitis in a soldier aged 20 with an abscess of the right buttock, which had been incised and evacuated. The symptoms were typical of meningitis, König's sign and coma were noted, and he died on the fifth day. The autopsy confirmed the diagnosis. Cultures from the meninges and the abscess revealed the meningococcus and animal inoculation caused suppurative meningitis. This is the only case reported of meningococci reaching the cerebrospinal fluid from an abscess of the buttock. (*Archivio di Medicina e di Chirurgia Militare*, October, 1901. [M. O.]

Special Article.

THE ORIGIN OF DERMOID CYSTS OF THE OVARY.

The theories concerning the origin of ovarian teratomata constitute one of the most interesting chapters in gynecology. Beginning with the unscientific but convenient assumption that these developments resulted from peculiar miscarriages of nature, a visitation from the gods, a manifestation of offended deity, the controversy includes the theories of impacted fragments of fetal tissue, the growth of twins one within the other (fetal inclusion, foetus in foetu), and an overgrowth or excessive development of certain fetal portions. None of these beliefs received a universal acceptation, and earnest investigators delved deeper and deeper into the mysteries of the interesting condition. The introduction and development of microscopy did much to open up the intricacies of the question, and in these later days the discussion has assumed a scientific and intensely interesting aspect. It remained for a German student and scientist, Wilms, to advance, three or four years ago, the theory of the parthenogenetic origin of dermoid tumors of the ovary, which he regarded as quite distinct from dermoid tumors of the orbit and other portions of the body. Herein lay the weak point of his argument. The latter growths he regarded as included fragments of fetal tissue or outgrowths of dermal structures, while those found in the pelvis and especially in the vicinity of the ovaries and broad ligaments he described as "atypical embryos," or attempts on the part of the female at reproduction without fecundation. This theory, while claiming many adherents abroad and in this country, is strongly, and we believe, rightly rejected by other equally scientific observers. In this country the learned brochure published late in 1901, by Dr. S. W. Bandler, of New York, is probably the strongest, and is apparently a conclusive, argument against the parthenogenetic theory of Wilms. Space will not permit us at this time to give an extensive summary of Bandler's views on this subject, but it is interesting to compare the conclusions he has reached with those published by Wilms. The latter states that the dermoid cysts of the head and thorax as well as a portion of the cysts in the retroperitoneal and retrorectal tissues originate through cell-displacement in inversions of gland-formations, or in the union of fetal folds. Bandler shows that in the development of the retroperitoneal dermoid cysts and retrorectal tumors the Wolffian body, the Wolffian duct, and the caudal intestine play the important rôle. Wilms remarks that the portion of the teratomata at the base of the cranium, and in the abdominal cavity are to be considered as double formations and are to be compared to *inclusio foetus in foetu*. Bandler holds that the teratomata at the base of the cranium originate from cell-displacement in the formation of the hypophysis duct. The teratomata or dermoid cysts of the pelvic cavity are not double formations but can likewise be explained as resulting from a displacement of cells. Wilms claims that, with the exception of those originating in the ovaries, all dermoid cysts are either cutis cysts or contain tissues which occur in their immediate neighborhood, and that from these other dermoid cysts the ovarian dermoids are to be sharply distinguished because of their form and origin. Bandler, on the contrary, holds that the other dermoid cysts are not pure cutis cysts, but often present just as numerous tissues and just as complicated formations as the ovarian dermoids; also that according to form and structure there is little difference between these other dermoid cysts and those of the ovary, and as regards origin there is no difference, for all originate from displaced cells. Again Wilms remarks that the dermoid cysts of the ovary all develop from a three-layered germinal formation, while Bandler states that the dermoid cysts of the ovary contain the products of ectoderm and mesoderm, while entoderm products are never found. Wilm states that as a result of the disturbances of development due to mechanical pressure the tissues and portions first differentiated come to more complete development and destroy the other tissues, whereby results the prevalence of ectoderm and other tissues of the head. Bandler claims that the tissues of the head are nowhere present and that the absence of placenta, chorionic villi, and umbilical cord disproves the theory of Wilms. Teeth have no specific meaning, since they occur in dermoid cysts in all parts of the body, and no tissues are found in these growths which may be regarded as real human internal organs.

The article of Bandler, founded upon careful microscopical examinations of the tissues of the various dermoids, appears to us to be a conclusive refutation of the parthenogenetic theory of Wilms, and we understand that a number of the German investigators are likewise rejecting the latter's conclusions. The controversy is, as we have said, one of intense interest.

Osteitis Deformans.—Gailliard reports a case of osteitis deformans in a man of 56. His skull is large, his legs are large and curved, the knees widely separated, the forearms bent, and the clavicles hypertrophied. All the lesions are symmetrical. There is no deformity of the extremities, no acromegaly. On standing, slight kyphosis is noted. He can only walk with difficulty. The nasal bones seem enlarged also. The disease has lasted six years. Béclère made Röntgen photographs of this patient, in which the main arteries of the extremities are plainly seen, being incrusted with lime salts. The diaphyses of the long bones are lengthened and deformed. The bones of the hands are thickly calcified and deformed, also, though this cannot be seen externally. Béclère thinks that the bony changes occur secondarily, following the calcification of the arteries. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, July 25, 1901. No. 26). [M. O.]

Primary Cancer of the Liver in a Patient with Hepatic Cirrhosis.—In the *Journal des Sciences Médicales de Lille*, (September 7, 1901, 24me. Année, No. 36), Vanlaer reports an interesting case of primary cancer of the liver which occurred in a man of 51, with delirium tremens and alcoholic cirrhosis of the liver. Four months before death he first noted hepatic pain and edema of the legs. His liver was immense, and there was ascites. He grew very thin before he died. At the autopsy the lungs were found congested, the kidneys small, sclerotic and degenerated, and the liver was enormous, weighing 7½ pounds. It was sclerotic and had a true glandular carcinoma in the right lobe. Vanlaer believes this to have been a primary cancer of the liver. [M. O.]

Original Articles.

THE SURGERY OF THE HEART. WITH PRESENTATION OF A CASE.

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Up to a very recent period surgical treatment of the heart was considered out of the question, as the general belief prevailed that the slightest manipulation of that organ might produce instant death from shock.

A hemorrhage from the heart muscle or from one of the cavities was considered beyond all surgical aid. Tillman in one of his recent works still emphasizes this point and declares that the surgeon is absolutely powerless when it comes to bleeding from a heart wound.

To-day, however, the heart is treated surgically with almost absolute impunity. Wounds of that organ are treated as they are in other parts of the body. Pericarditis, purulent and other forms, are treated by surgical means with excellent results. Acute dilatation of the organ is often relieved by aspiration, etc. So that the organ which formerly was looked upon as being so delicate that the slightest wounding of it might produce instant death, is punctured and manipulated with comparatively little danger.

It is intended, in speaking of the surgery of the heart to-night, to treat briefly of the wounds only, since to cover the entire field of surgery of that organ would be by far too extensive a subject.

As stated before, wounds of the heart up to a recent date were always left religiously alone. And it was not until after the experiments of Cohnheim, Rose, Ellsberg, and others, on animals and on the cadaver, that operation on the human heart muscle was attempted. Among the most valuable of all experiments were those made by Ellsberg in the laboratory of Mikulicz, the result of which is reported in *Johns Hopkins Experimental Journal* of September, 1899. He set to work in a systematic manner to determine how extensive injury the mammalian heart could withstand and how extensive a suture could be introduced without interfering with its function. He found:

Firstly, that the heart could be grasped with the hand or forceps and gently compressed with no appreciable difference in its action. It could be penetrated by a needle and a knife, producing only a temporary irregularity of the heart's action. He found this temporary irregularity following the wounding of both auricle and ventricle.

Secondly, he demonstrated that penetrating wounds produced during systole of the injured part, bled more than those produced during diastole. And he claimed that wounds of the ventricle, produced during systole, were larger than those produced during diastole. For instance, a wound, 2 mm. long, made in systole would become almost 3 mm. during the diastole. And one of 2 mm., made in the ventricle during diastole, became almost as small as 1 mm. during systolic contraction.

Thirdly, he found that oblique wounds bleed less than perpendicular ones. That in oblique wounds the walls of the opening are more closely applied to each other and also that the canal was longer, both factors favoring the formation of clot.

Fourthly, that wounds into the right ventricular cavity were more dangerous than those of the left, explained by the facts that the wall of the right ventricle was thinner and hence wound canal shorter, and also because the blood in the right side of the heart contained more carbon dioxide, and hence coagulated more slowly.

Fifthly, that wounds of the heart heal kindly and that cicatrix is usually complete in about 14 days.

Sixthly, that interrupted sutures are better than continuous ones. He found that the muscular tissue included in the suture always atrophied and was replaced by connective tissue. A smaller number of muscular fibres was included in the interrupted than in the continuous sutures, hence produced less atrophy and less scar tissue.

The above were the conclusions drawn from the experiments on more than 50 animals and have doubtless served to inspire a great portion of the confidence that is being manifested lately in heart surgery. At least I am free to say that in the few cases that came under our observation, the treatment was governed largely by the observations of Ellsberg.

The effects of manipulation on the human heart have been extensively observed in the cases operated upon in the last few years. Watton, in his case of penetrating wound of the right ventricle, made an opening in the right chest wall, large enough to introduce his fingers and with them held the heart while introducing the sutures. He performed his operation with very little difficulty. In the case operated upon at the St. Louis City Hospital, in April last, a report of which can be found in the **Philadelphia Medical Journal**, December 14, 1901, the edges of the wound were seized with two narrow forceps and the heart pulled forward into the opening in the chest wall until the sutures could be applied. The manipulation produced no appreciable shock or irregularity of the heart's action. In this case the knife which inflicted the wound had penetrated between the layers of pleura. There was bleeding into the pericardium, increasing the intrapericardial pressure and compressing the heart to the extent that the patient was pulseless and unconscious. The operation was performed without an anesthetic. When the opening in the pericardium was enlarged, allowing a free exit of the blood, and pressure on the heart was relieved, consciousness returned and the sutures were introduced while the patient was rational and we were in a position to determine any shock that might result from the introduction of the needle. There was none that was apparent to the operator. In the more recent case, which I will present to you to-night, the heart was held forward by means of the finger of an assistant, the manipulation producing but slight irregularity in the action of the heart.

By far the most frequent cause of death in heart wounds is hemorrhage and not shock, as was formerly supposed. It may prove fatal in two ways, firstly by exsanguinating the body, secondly by com-

*Read before the Medical Society of the City Hospital Alumni.

pression of the heart. The exsanguination of the body may occur if the external wound is so large as to admit of free bleeding to the exterior, or if the wound communicates with one of the pleural cavities and a direct flow established between the pericardial sac and that cavity. Since in 95% of the wounds of the heart the pleura also is injured, death occurs by exsanguination in the large majority of cases. There is, therefore, only a small number of cases in which death is produced by compression of the heart, or, as Rose calls it, by "heart tamponade." This manner of death occurs if the external wound is small and if the instrument enters between the layers of pleura; in other words, if the instrument enters through the extrapleural route. In these cases the bleeding occurs into the pericardial sac, distending it to its full capacity. It then follows that the intrapericardial pressure is increased to the extent that the heart is compressed and its action interfered with. This increase of pressure naturally occurs more rapidly if the bleeding is during systole, than if it occurs during diastole. Cohnheim demonstrated, during his experiments on animals, by injecting the pericardial sac, that the pressure manifested itself first on the auricles and beginning of the great veins, compressing them and producing a venous stasis. This may increase to complete obstruction to the flow of blood and is manifested by difficult respiration and cyanosis. It then follows that the ventricles, which continue to contract, pump themselves dry and the heart finally stops and death follows.

This intrapericardial pressure was demonstrated very nicely in our first case. When the pericardial opening, which was temporarily clogged with a blood clot, was enlarged to allow a better view of the heart, the blood spurted forth quite forcibly, carrying before it some of the large clots. The heart immediately began to act strongly, as it had been released of its strangulation.

It was distinctly observed that the bleeding occurred during diastole and stopped during systole. We were unable to offer a good reason for this until observing the wound on post mortem examination. It was clearly seen that the position of the wound in the endocardium was likely the explanation for the bleeding during diastole alone. I have the specimen here to-night and will demonstrate it later. You will see, if you look at the wound in the endocardium, that the wound lies between two columni carneae and runs parallel to them. I believe that, during the systolic contraction of the heart, the columni were drawn together, acting as valves to the opening and thus preventing the escape of blood; and that, during the relaxation of the heart muscle, the columni separated sufficiently to allow the blood to escape.

Wounds of the human heart heal kindly, as you will see by this specimen. You will see that the edges are firmly agglutinated although patient lived only 36 hours after suturing.

Diagnosis.—I have recently collected the literature on 27 cases of penetrating wounds of the heart, and from my observations I have concluded that it is very difficult and often impossible to ascertain whether the heart has been penetrated, or the pericardium alone has been injured. And yet it is very important to make the diagnosis correctly at the very beginning, as it might greatly alter the method of treatment. From a study of the various cases, I have found it advisable to bear in mind that the main symptoms and signs are those produced by hemorrhage. Less important are those of shock. These symptoms and signs are produced either by gradual exsanguination of the body or by compression of the heart. If the surgeon will bear this in mind, I think he will have taken an important step toward the correct diagnosis of the case.

Supposing a case were brought to our observation with an injury to the heart which was moderate enough to remain within the scope of operable cases, what symptoms or signs would we expect to see. The patient, if conscious, would likely tell us that, after the infliction of the wound, he was soon seized with a dizziness and vertigo, which compelled him to lie down. If patient is unconscious, our only source of coming to a correct diagnosis is from the signs. With a thorough knowledge of the anatomy of the heart the location and direction of the wound is a very important matter, and will often tell us what other signs we may expect. If the canal of the wound is so located and the anatomical relations tell us that the pleura is injured, we may expect the signs of internal hemorrhage. If the location and canal of the wound are such that the pleura could not have been injured, we may expect external hemorrhage, or, if the wound is small and closed with clots, we may expect hemorrhage into the pericardium with the usual signs of compression of the heart.

The signs produced by heart wounds may be classified under three headings.

Firstly, signs that indicate internal hemorrhage into the pleural cavity.

Secondly, signs produced by hemorrhage to the exterior.

Thirdly, signs produced by hemorrhage into the pericardium alone.

In hemorrhage into the pleural cavity alone, we will be apt to find patient anemic and covered with perspiration, the pulse rapid and weak; respiration may be labored on account of the compression of the lung; palpation may elicit the apex-beat in its normal position; percussion may show a slight increase in cardiac dullness and a dullness over the dependent portion of the chest cavity into which the hemorrhage is taking place. The most important sign, however, as given by writers in reporting their cases, is the splashing sound detected on auscultation and indicates the presence of blood in the pericardium not under pressure. A whizzing sound, owing to the presence of air in the pericardium, is also frequently heard. Auscultation over the chest shows the absence of vesicular murmur over the region from which lung has been displaced.

If hemorrhage is to the exterior only, the signs are usually most definite. The stream of blood may be red if coming from the left side of the heart, or dark in color if coming from the right side. It will be intermittent whether coming from the ventricle or auricle, but the intermittency will be most marked if the hemorrhage comes from the left ventricle. The pulse will be the same as in the foregoing, namely, weak and rapid, depending upon the amount of blood lost. Respiration will be free and easy

until after considerable bleeding has taken place, when cardiac dyspnea may present itself. Percussion will show a slight increase in the area of cardiac dullness. Percussion and auscultation over the lung would show little that is abnormal, excepting during the last stage.

If hemorrhage is in the pericardium alone, producing compression of the heart, patient will be more or less cyanosed, depending upon the amount of pressure upon the heart. The respiration will at first be shallow, but will soon become labored on account of the compression of the auricles and large vessels. No apex-beat will be noticed and the pulse will likely disappear entirely. Percussion over the cardiac area will show an increase of that area in all directions. Auscultation will show the heart sounds to be very feeble and barely audible. A splashing sound will likely be heard at first, but this will disappear as the pressure in the pericardium increases.

The conditions that may confound the diagnosis of injury to the heart are the injuries to the large thoracic vessels.

After all the main point for the surgeon to decide is, whether the hemorrhage that is taking place, is sufficient to endanger the life of the patient. It is this point that decides whether the case is an operable one or not.

I believe that all wounds in the chest causing a dangerous hemorrhage should be explored to the bottom, if, in the judgment of the surgeon, the injured parts are accessible.

This leads us up to the methods employed in approaching the heart. It may be accomplished in two ways. Firstly, by the extrapleural route, that is the route in which the pleura is not disturbed; secondly, by the intrapleural route, which takes you through one or another of the pleural cavities. The first method necessitates a removal of a part of the sternum, and is advisable only in cases in which the pleura has remained uninjured. By this route the pleural cavity is not opened, which is very advisable, as the entering of this cavity would add greatly to the dangers in the case.

I made quite extensive experiments on cadavers by means of long needles passed horizontally backwards in the region of the heart and, by repeated experiments, have in this manner outlined, pretty accurately, the boundaries of the pleural cavity anteriorly. Following these experiments I have outlined a flap that will cover all wounds of the heart in which it is advisable to employ the extrapleural method. The flap which consists of the skin and a section of the sternum is as follows:

An incision is made from the right border of the sternum transversely across on a level with the lower border of the third rib to a point about one inch to the left of the sternum. A second cut is made from the right border of the sternum across to a point one inch to the left of the sternum and on a level with the articulation of gladiolus with the ensiform. The left extremities of the two cuts are united by a perpendicular incision. The cartilages of the fourth, fifth and sixth ribs are divided, care being taken to remain close to the cartilages, particularly that of the fourth, as the pleura usually lies closely attached to that rib. It is an easy matter then to loosen, with an elevator, the tissues from the posterior surface of the sternum, as the pericardium is only loosely attached, and there is at no time any danger of injuring it.

With a cartilage saw and the costotome the sternum is readily divided. However, care should always be taken not to allow the instrument to pass beyond the right border of the sternum, as there is great danger of injuring the right pleura, which lies immediately back and comes up to the right border of the sternum. I have found it safest, after the sternum had partly been divided, to pass the finger back of the sternum and push away the right pleura before dividing the entire sternum. After dividing these bony structures the entire flap is forcibly turned toward the right side and the cartilages on the right side partly broken.

I can hardly conceive of a wound of the heart being produced in which there is no injury to the pleura that cannot be easily approached through this opening.

If the pleura has been injured, there can be no object in employing the extrapleural method. The pleural cavity being opened, the approach may as well be made through this cavity, as this operation is more easily and rapidly performed and offers a better view of the heart. It consists of an osteo-plastic flap, including the pleura, mucles and ribs. The best flap for the intrapleural method is that outlined by Rotter, and is as follows:

It consists of an incision, extending from the left border of the sternum, parallel to the third rib outward about two inches. A second incision is made on a level with the sixth rib and extending from the left border of the sternum to a point two inches toward the left side. A third incision connects the outer end of the first two incisions. The third, fourth and fifth ribs are then divided in the line of the incision, as are also the muscles and pleura. The entire flap is then turned forcibly toward the right side and the cartilages broken near the sternum. In this way the right ventricle and a large portion of the left can be brought clearly into view. The hand can readily be passed into the chest cavity and the heart grasped or pressed forward to facilitate the suturing.

Conclusions Drawn from My Observations in the Suturing of Heart Wounds.

Firstly. That gentle manipulation may be applied without producing shock.

Secondly. That the introduction of the sutures produces but a slight irregularity in the heart's action.

Thirdly. That heart wounds heal rapidly.

Fourthly. Intrapericardial pressure is increased even if hemorrhage occurs during diastole alone.

Fifthly. That all heart wounds, in which there is danger of fatal hemorrhage, should be sutured.

Sixthly. If the wound does not involve the pleura, the extrapleural route should be employed, as described above.

Seventhly. If the pleura has been injured, the intrapleural method should always be employed, and the flap devised by Rotter is the best.

Eighthly. Although it is advisable for the surgeon to familiarize himself with the methods of opera-

tion and the flaps devised by the different operators, a thorough knowledge of the anatomy of the region is most essential and each operator should modify the flaps as best suits his case.

PRESENTATION OF THE PATIENT.

The patient whom I am about to present is 27 years of age, born in Alabama, and entered the hospital on October 17th., 1901, suffering from a penetrating wound of left chest. Patient was in a semi-conscious condition and unable to give a history at that time. It was learned later that he had been stabbed on a steamboat near Chester, Illinois. Immediately after the injury, patient ran a distance of about 100 feet and then, becoming dizzy, he asked a bystander for a place where he could lie down. At this moment he fainted and fell. He knew nothing of his surroundings from this moment on until several days after the operation at the City Hospital. He was injured at 11.00 P. M. on October 16th., and arrived at the hospital at 1.30 P. M. on October 17th. His temperature on entering the hospital was 98°, pulse 104, respiration 32; pulse was somewhat irregular. Patient was also suffering from marked dyspnea. A hurried examination showed an incision wound in the sixth interspace, a little to the right of the left papillary line. Superficial area of cardiac dulness was somewhat increased toward the left; there was absolute flat-



The above is a photograph of the outline of the flap, the cross indicates the point of entrance of the knife.

ness posteriorly over the area normally occupied by the lower lobe of the left lung. A normal vesicular murmur was heard over the entire right lung and upper portion of the left lung. The sounds were remote and indistinct over the lower portion of the left chest cavity, indicating the presence of fluid. Over the pericardial area a splashing sound was heard, synchronous with the heart systole. From the symptoms and signs, a diagnosis of internal hemorrhage was made and the case was considered an operable one. Patient was therefore immediately prepared for exploratory operation. The finger was introduced into the wound and the depth of it explored, and it was found that the pericardium had been cut. The finger was then introduced through the incision in the pericardium and it was found that the heart also had been entered by the knife. In order to further explore the wound and ascertain its true nature, a flap was made including the fifth and sixth ribs on the left side of the sternum. The outlines of the flap were as follows:

The first incision was made along the lower border of the fourth rib extending for two inches outward from the left border of the sternum. A second incision was made along the lower border of the sixth rib, to a point about 2 inches to the left of the sternum. The outer extremities of the two incisions were united by a third incision. The fifth and sixth ribs were divided in the line of the outer wound, as were also the intercostal muscles and pleura. The entire flap, composed of skin, muscles and ribs, was forcibly pulled toward the right side, partly breaking the cartilages near the sternum. (The flap was a modification of that devised by Rotter and fully described above).

Through this opening an excellent view could be obtained of the pericardium and the cut in it. Blood could be seen trickling from the wound with every systole. The left lung, which was continually obscuring the field, was held back by large gauze sponges. Before doing this, however, the left chest cavity was emptied of its blood by turning the patient toward the left side. About 1½ pints were thus removed. The cut in the pericardium was then enlarged for the purpose of better examination of the wound in the heart. By tilting the heart forward by means of the finger of an assistant, a cut about ¾ inch in length was seen in the wall of the left ventricle, located quite far back. A constant small stream of blood was seen to flow from the wound. The wound was not probed, but from all indications had penetrated into the cavity of the heart. An attempt was then made to draw the heart forward with slender forceps, by grasping the edges of the wound, this, however, was found impracticable, as the handles of the forceps obstructed the field of the operator. The index finger of the assistant was again applied and the heart brought forward into excellent position. Two interrupted silk sutures were introduced by means of a highly curved gut needle, which stopped the hemorrhage completely. While introducing the sutures, the thickness of the wall of the ventricle was carefully borne in mind, to avoid the endocardium. While holding the heart in position and introducing the needle, only a very slight irregularity was noted in the heart's action. No endeavors were made at keeping the wound clean prior to the patient's entrance to hospital. Wound was therefore treated as an infected one and drains were introduced. A small drain was therefore placed in the pericardium, back of the heart, and the opening in the pericardium only partly closed. Another drain was placed in the pleural cavity. The osteo-plastic flap was then allowed to fall back into position and sutured, excepting at exit point of drain.

Patient was unconscious for several days after the operation. During this time he was given frequent hypodermic injections of physical salt solution and stimulants, consisting of strychnine and whiskey. The drains were removed on the 4th day.

On November 3rd., patient's temperature suddenly arose to 102° and he became very dyspneic, breathing was at the rate of 48 per minute and pulse was at the rate of 140, there was flatness over the lower lobe of the left lung and bulging over the left nipple. The external wound at this time was almost entirely healed. It was decided that empyema had developed and paracentesis was immediately performed. A pale red liquid was removed, which, on smear preparation, showed the presence of pus cells and red and white corpuscles. A hasty thorocotomy was then performed under local anesthesia. One inch of the left 8th. rib was removed and a large amount of purulo-sanguinulent fluid was drawn. A large rubber tube was then introduced and patient heavily stimulated. From this time on patient made an uninterrupted recovery.

On November 27th., patient began slight exercise with a view of expanding the lung and exercising the muscles of respiration. This was performed twice daily and consisted of blowing up a pneumatic bed ring and practice in a series of calisthenics.

Patient, as you see, has almost completely recovered, the only trouble he complains of now is a slight dyspnea on violent exertion, which is due, likely, to the weakened condition of his heart.

The Surgical Uses of Hydrogen Peroxide.—In the *Journal de Medecine et de Chirurgie Pratiques*, July 10, 1901), Lucas-Championnière states that very little hydrogen peroxide is generally needed, but this must be left in contact with the tissues for some time. It is indicated in the preparation for operation, in septic suppuration, in operations in which the skin remains intact, in stitch abscesses, and especially in all gynecological conditions, as an antiseptic. It is equally of service in the various specialties. Lucas-Championnière cautions against the use of too much hydrogen peroxide, as this diminishes the action of the drug. [M. O.]

THE RELATION OF URIC ACID AND XANTHIN BASES TO GOUT AND THE SO-CALLED URIC ACID DIATHESIS.*

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Until comparatively recent times there has been a very generally shared belief in uric acid as the cause of gout, and of many symptoms besides typical arthritic gout. Recently the pendulum has been rather energetically swinging from side to side. While conservative writers generally express themselves very guardedly concerning this question, those of partisan sympathies either uphold the older view more emphatically than ever, or, on the other hand, deny that uric acid has any influence. Some of those who oppose the uric acid theory believe, however, that closely related antecedent substances, the purin (or xanthin) bases, are the cause both of typical gout and of the uric acid diathesis, explaining the occurrence of these disorders through imperfect oxidation of the xanthin bases to uric acid.

If such contradictory opinions can still be expressed, it is evident that the question is not yet settled, and it is also evident that such energetic expression of extreme views is unwarranted. A number of the reasons for such a divergence of opinion are fairly easily found. Chief among them are the use of very faulty chemical methods, and erroneous ideas concerning the origin of the uric acid and xanthin bases. So far as may be necessary the faults of various methods of work will be mentioned, but in the first place a few facts will be noted, which concern the source of the uric acid and xanthin bases found in the urine, and the effect of diet and, in a general way, of abnormalities in tissue processes upon the amount excreted.

The most important fact recently determined concerning the source of these substances is that, under ordinary circumstances, the greater portion of both uric acid and xanthin bases comes from the food. But while this is entirely true, the old idea that variations in the excretion of uric acid are due to variations in the completeness with which nitrogenous substances are oxidized—increase being dependent upon imperfect oxidation of food and tissue to urea, lesser amounts to more complete oxidation—is now known to be erroneous. Changes in the excretion of uric acid or xanthin bases are not coincident with changes in the excretion of urea, but are, in large part, or perhaps wholly, independent of the urea excretion; and uric acid and xanthin bases are not excreted because they have in part escaped oxidation to urea, but because they are natural and products of the metabolism of a certain portion of the nitrogenous food and tissues, *i. e.*, those substances that yield nucleinic acid, the nucleoproteids. That is, nitrogenous substances yield different amounts of urea, and of uric acid and xanthin bases, according to the constitution of those nitrogenous substances, and the yield in uric acid and xanthin bases is not proportional to the yield in urea, nor is it dependent upon imperfections in the formation of urea. The urea and the uric acid and xanthin bases have a different source, and their formation depends upon wholly separate chemical processes, and the two classes of substances must be studied separately. Conclusions which are based upon a comparison of the two, or the establishment of a ratio between the two, are therefore wholly erroneous. Diet must be taken into consideration in studying either, but from wholly different standpoints, the amount of pure proteid contained being the important matter in connection with the urea, while the amount of nucleoproteid is the chief point in connection with uric acid and xanthin bases. The process of digestion of these two classes of foods is entirely different from the beginning. Pure proteid passes first through the usual stages of proteolytic digestion, and ultimately is largely excreted as urea; but it yields no nucleinic acid and probably no uric acid or xanthin bases. Nucleoproteid, on the contrary, is, according to the recent researches of Umber, broken up at once into a pure proteid fraction and nucleinic acid. The pure proteid passes through the usual stages of proteolytic digestion and increases the amount of urea excreted, while the nucleinic acid yields large amounts of uric acid and some xanthin bases, the steps leading to these end products being as yet almost wholly unknown.

The practical conclusion to be derived from these facts is that apparent variations in the excretion of uric acid and xanthin bases may be due largely to diet, and the discovery of such variations warrants no conclusion unless it is known that they are not due to the diet. We have no practical way of determining with any degree of exactness how much nucleoproteid any diet contains, and further we do not know just how much uric acid or xanthin bases should be furnished by a given quantity of nucleoproteid. Indeed, it is wholly probable that individuals differ in the amount of uric acid and xanthin bases which they excrete while on the same diet, and also that any individual will excrete different quantities at different times when on the same diet. Therefore it is allowable to state that variations in excretion are abnormal only when they are apparently not due to diet, and when the variations are more marked than those that occur normally when on a constant diet. This means that we have no satisfactory means at our command to demonstrate comparatively slight variations from the normal, and some pathological changes in the excretion may escape our knowledge. But we have, at any rate, learned that we must avoid drawing conclusions from slight variations.

It has been stated that the greater part of the uric acid and xanthin bases comes from the food. This is in itself sufficient to demonstrate the incorrectness of a theory concerning the source of these substances, which for some time was in great favor but which is now known to be erroneous. After Horbaczewski and his followers demonstrated that uric acid and xanthin bases are furnished by the breaking down of tissues rich in nucleoproteid, such as thymus, spleen and pancreas, and general observers found that the uric acid was often increased coincidently with the presence of a leukocytosis, the theory arose that the uric acid and xanthin bases

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of the urine are almost solely the products of the decomposition of leukocytes. As stated, however, they are now known to be chiefly the products of the decomposition of the food taken, and hence in large part unrelated to changes in the leukocytes. Further, contrary to comparatively recent teaching, there is no constant relation to changes in the number of leukocytes. Numerous observers have demonstrated this fact, and as striking an example of its truth as I have seen was shown by the condition in two cases in which I investigated the urine. One of these was a case of leukemia with over 350,000 leukocytes per cmm.; the other one of so-called Banti's disease with only about 2000 per cmm. The latter patient passed about 0.3 grams in the 24 hours, while the leukemic excreted less than 0.5 grams per day and his xanthin bases lay between 0.040 and 0.070 grams. While we must admit that some of the uric acid and xanthin bases undoubtedly comes from leukocytic decomposition, because of the chemical composition of these cells, this portion is certainly small under ordinary circumstances, and perhaps is never large. The fraction which is derived from the body tissues is probably increased much more largely by changes in the activity of the blood-forming organs and in the structure of these organs than by variations in the number of the circulating leukocytes.

The testimony concerning the influences of disease of these organs on the excretion of uric acid is, however, limited and indefinite. So far as the spleen is concerned, observations indicate that this organ has no decided effect. The same is, I believe, true of the lymph glands. Both the lymphatic tissue and the spleen seem at times to have some influence, but the diseases of the spleen or lymph glands, which at times seem to be associated with an increase, are often unaccompanied by any changes; and removal of the spleen does not have any distinct effect.

I think it probable that the bone marrow has a more decided and constant influence upon uric acid and xanthin base formation and excretion. Leukemic changes in the bone marrow are, so far as observations have been made, nearly always accompanied by a striking excess in excretion, while leukemic changes in the lymphatic apparatus often are not accompanied by such an excess, and in a number of cases of the latter kind in which excess was found it was either probable or certain that there was marked disease of the marrow as well; and there are other minor reasons for thinking that the marrow has a prominent influence. But all our knowledge concerning the source of the uric acid and xanthin bases produced in the body is vague and indefinite, and we are justified in saying only that all organs rich in cells probably contribute a share, and there is no good reason to think that the blood-forming or blood-destroying organs have a much more important influence than that of others.

One thing may, however, be considered to be fairly certainly demonstrated, *i. e.*, that the liver does not have the extremely important influence that was for so long a time attributed to it. It is possible that the liver plays a somewhat more important role than other organs; more probably, however, its influence is dependent solely upon its size and its richness in cells. And whatever its influence may be, it is but a fraction of that exercised by the tissues in general. A theory, originated chiefly by Bunge, is that uric acid is produced largely by synthesis from glycocoll. This, if true, would help to rehabilitate the old view that the liver is of chief importance in the production of uric acid. The theory is, however, unsupported by any convincing testimony, and there is so much evidence against it that it is very probable that it is incorrect, or that, at any rate, if any uric acid is produced in this way, it is small in amount.

To turn to the relation which uric acid and xanthin bases bear to the special conditions in which they are supposed to be active, namely, gout, and the so-called uric acid diathesis, and first to consider their relation to actual gout. The relation of uric acid to gout, being the more important, may be discussed first.

The chief theories concerning the action of uric acid in gout which are put forward by those who believe that it causes this disease, are (1) that it acts as a poison, and (2) that its effects are mechanical.

The supporters of these theories use a number of facts conjointly, and it will be necessary, therefore, to intermingle the discussion of them somewhat.

As to the main facts which are known concerning uric acid in gout, these are chiefly, that uric acid is found in the blood of gouty subjects in abnormally large amounts, a fact which has been repeatedly denied since Garrod first asserted it, but which has been satisfactorily demonstrated to be usually true, even when the best of modern methods was used in estimating the uric acid (Magnus-Levy). Further, it is practically settled now that there is, in many cases at any rate, and in most of those properly studied, a decided reduction in the excretion of uric acid before the attacks, and an equally marked, and even more notable, rise in the excretion during and after the attacks. In other words, it now appears evident that there is not, as was once stated, an added retention of uric acid at the time of the attacks, but a decided increase in its excretion at this time (Magnus-Levy, His et al.). Further, it is of course known—and has for a long time been known—that there is a deposit of urates in the tissues about the joints, and in some other tissues. Very important testimony of the relation of uric acid to gout may also be found in the recent reports of Freudweiler and His in particular. Contrary to the teaching which has been quite generally accepted recently, these authors find that injection of urates causes distinct local necrosis, and this necrosis seems too wide-spread to be due wholly to mechanical action, and must be at least partly toxic; and, contrary to the teaching of the Ebstein school, it seems to be secondary to the deposit of urates and to be due to the urates. It is also accompa-

nied by acute inflammatory reaction, and there is subsequently a development of fibrous tissue, the lesions resembling those which are found in gout about the deposits of urates. The methods which these investigators used were the best that have yet been applied to the study of this point, and the followers of Ebstein have been unable to upset their evidence.

The mention of this work is sufficient to demonstrate that those who have recently been stating that uric acid is absolutely nontoxic have not sufficient ground for their assertions, and are indeed opposed to the most convincing and most modern testimony in making this statement. When the work quoted is properly considered, it lends considerable probability to the view that the local lesions in gout are due to uric acid or urates, makes it seem not impossible that the main symptoms of an acute attack are caused by this substance, and strongly suggests that, after all, the general symptoms of the disease are due to it. There are, however, very weighty reasons for thinking that this is not true. In the first place, there is reason to believe that the arthritic symptoms in the attack are not due to new deposition of urates. One of the principal facts pointing against such a view is that the excretion of urates occurs during and immediately after an attack and not in the interval, and the decrease in the excretion appears before the attacks while there is relative freedom from symptoms. The attack, therefore, is not accompanied by added retention of uric acid, but by its freer excretion. Furthermore, whatever the effects of the injection of urates, there is no doubt that much of the deposit of urates in gouty persons occurs without the clinical evidences of inflammation, for many of the tophi are formed without any direct symptoms. In addition to this, uratic deposits are often found in persons who have not had any symptoms pointing to their presence, and who have never had any symptoms of gout. While, therefore, the injection of urates does demonstrate the possibility that uric acid may have some local toxic action, it does not demonstrate that it produces the local symptoms in gout.

And the peculiar course of the excretion of uric acid does not justify one in drawing any immediate conclusions. We may give up the old idea that the attack is due to an increased retention of acid and still believe, as has recently been suggested by the His school, that the symptoms are due either to a solution of deposits and a flooding of the tissues with uric acid, or that some alterations in metabolism cause an increase in the uric acid in the blood at the time of the attack, and that the attack really acts as a curative measure by getting rid of some of the excess of uric acid. But there is no evidence that uric acid is present in the blood at the time of the attack in any larger amounts than during the interval. Indeed, there is good evidence that the amount does not vary distinctly in these two periods. And one of the most difficult facts to overcome in reaching a belief that uric acid has any important toxic action in gout is that the ingestion of an amount of uric acid, larger than that which we have reason to consider, is added to the circulation under such circumstances, and an amount, certainly larger than the additional excretion in the urine, has been administered to animals and to men without the production of more than slight symptoms of local irritation of the stomach and urinary passages. And, further, persons who were actually subjects of gout have been given food which produces uric acid in large amounts, and have even been given nucleinic acid, which is certainly the chief source of uric acid, in considerable quantities without intensifying their symptoms at all, and, indeed, in some cases with improvement in their symptoms, though the uric acid was increased as shown by the excretion. Even more worthy of consideration is the fact that the reduction in the excretion is not confined to the uric acid or the purin bases before the attack, and the increase in the excretion after the attack also involves other substances than those just mentioned. The total nitrogen of the urine, as compared with the intake, falls in the intervals, and rises excessively during and after an attack, *i. e.*, there is definitely known to be a severe loss of body protein at the time of the attack, such as is seen in acute toxic conditions, while in the interval there is a very decided retention of nitrogen, a retention that suggests that seen in convalescence from acute toxic states, but is still rather too great to be attributed to mere effect of loss. The variations are certainly too great to permit of their being produced by the variations in the uric acid, or uric acid and purin bases alone. Again, there is no good reason for attributing this tissue-loss to intoxication with uric acid, for there is no evidence that an excess of uric acid in the circulation can cause such a loss, and much evidence that it does not. We have far more reason for the belief that there is some other agent at work which causes a general toxic tissue decomposition during the attack, and that the excretion of uric acid increases with the excretion of other products of tissue destruction, rather than for the view that increase in the uric acid causes this general tissue decomposition, whether this increase is produced by solution of uratic deposits or in other ways

As to direct consideration of the excess of uric acid in the blood in gout, there is good evidence that such an excess exists, but an excess of uric acid in the blood is also found under other circumstances, both in acute conditions, particularly pneumonia, and in chronic conditions, notably leukemia and nephritis, and there is in such conditions no evidence that this excess causes any distinct symptoms or produces any of the lesions characteristic of gout. Actual gout and gouty tophi have at times been observed in both nephritis and leukemia, but gout is exceptional in nephritis and both gout and typhus formation are rare in leukemia.

The evidence, then, against a general toxic action of uric acid or urates as the cause of gout seems to me to be so strong that it cannot be believed

that they are the main cause of the general symptoms, whatever the effects may be where injected in quantities.

There has often been an attempt made to explain the peculiar periodicity of gout and the supposed deposition of uric acid at the time of the attack by the statement that there are alterations in the alkalinity of the blood, the alkalinity being supposed to be reduced at the time of the attack, and the reduction causing the deposition of urates. So far as this theory teaches that the deposition of urates causes the attack, it is, I think, largely disproved by the previously stated facts. But either as an explanation of the disease *in toto*, or of its periodical course alone, it is even less satisfactory than that of intoxication. The theory was built chiefly upon supposition, and more accurate work (Klemperer, Magnus-Levy) shows that the alkalinity is not altered at the time of the attack as compared with the interval, and there is no demonstrable variation from the normal at any period.

The pure mechanical theory of the relation of uric acid to gout was most actively supported by Gerhard himself, and more recently and more energetically by Sir William Roberts. It was based by the latter author chiefly upon the following hypotheses: He considered the local arthritic symptoms of the attack to be due to deposition of biurates about the joints, while he attributed the more general symptoms at the time of the attack or at other periods to small deposits in other regions, the greater part of the latter deposits being probably rapidly dissolved in most cases and leaving no post mortem evidence that they had been present, and in other cases being overlooked by the pathologist. He believes that uric acid is found in the body normally in the form of a quadriurate, that it is retained in gout and that the retained quadriurate in the presence of salts of the alkalies is transformed into the less soluble biurate. The fluids of the body, more particularly the synovia and lymph, become supersaturated with biurates and the excess crystallizes out. The reason that deposits occur in the regions in which they are ordinarily found, is, he thinks, that the synovia and lymph contain a larger amount of sodium salts than the other fluids, and sodium salts cause the biurate to precipitate from solutions. He believes that uric acid has no special toxic action, and thinks its influence is purely mechanical. There are a number of objections to this view. In the first place, there is no good evidence that uric acid ever forms the so-called quadriurate, and the teaching that it is present in normal blood as a quadriurate depends purely upon hypothesis and very imperfect analogy. Further, there is good evidence that urates are deposited in gout and other conditions without causing any symptoms resembling gout, or indeed any symptoms at all. And, again, if uric acid does produce the arthritic symptoms in gout, the best evidence at hand tends to show that it does so chiefly by its toxic action, an action which Sir William Roberts denies. There is no good reason—according to the statements he gives—why some uric acid should not crystallize out in the blood-stream, if its existence in gout depends upon supersaturation in the fluid which it contains, and the presence of a large amount of sodium salts. For he states that the blood is saturated or oversaturated in gout, and the blood contains sodium salts in only a little smaller amount than the synovial fluid. But the evidence concerning its crystallizing out in the blood-stream, even that offered by Sir William Roberts, is wholly negative. These arguments are, however, valueless in either sense, for Klemperer's work shows that the blood of gouty subjects is by no means saturated with urates. More important testimony against this theory is found in the fact that the blood does not contain more acid at the time of the attack than in the interval, and hence that there is no evident reason for a deposit at this time. And again we may refer to His and Magnus-Levy's work showing that the excretion of uric acid is greater at the time of the attack than before; an observation pointing to the solution of the deposits at this time, rather than to their increase. Still more important is the previously mentioned fact that there is a loss of nitrogen at the time of the attack, which is so severe as to indicate strongly that there is a decided intoxication at this time, a poisoning which one cannot attribute to mere local irritation and inflammation; the assumption of a general toxic action of uric acid would be more acceptable than this view. And, finally, there is quite as marked an overloading of the circulation with uric acid in some other conditions, as there is in gout, and in some of these conditions we should, if the theory under discussion were correct, find at least a very marked tendency to gout. Nephritis is the most important of these conditions. There is in this disease a marked tendency to increase of uric acid in the blood, and this increase, as it apparently is in gout, is due to retention. At the same time, there is a marked tendency to retention of sodium salts. These would appear to be the ideal conditions for the production of gout, and yet nephritis and even prolonged uremia, without symptoms of gout, are immeasurably more frequent than the same conditions combined with gout. And it is only by a great strain upon one's credulity that one can attribute the general and visceral symptoms of gout, and particularly the extremely violent symptoms that may be seen in retrocedent gout to depositions of uric acid. Scattered depositions of the acid, which would prove this, have never been found. Sir William Roberts asks, "Have they ever been looked for?" It may be answered that with modern methods of fixing and hardening tissues they could not have been entirely overlooked. The claim that they are slight and that they are easily and soon dissolved, is not susceptible of either proof or disproof; but many of the characteristics of the general symptoms are such that it taxes one's ingenuity to attempt to conceive of the manner in which a mere deposition of uric acid could cause them. The reasons given are, I think, sufficient to

demonstrate that the purely mechanical uric acid theory will not hold, whatever hypothesis is used in support of it. The lack of evidence that deposition occurs at the time of the attack, and, more especially, the distinct evidence that some toxic agent is at work, are, I believe, sufficient to put this theory beyond consideration.

The main question, then, which is to be decided is, I think, whether uric acid causes both general toxic symptoms and local toxic symptoms, as well as the local symptoms of irritation that would be caused by any foreign body; whether it causes some or all of the local toxic and mechanical symptoms, but no general symptoms of importance; or whether it causes no symptoms at all that can be directly attributed to it, excepting those which would be produced by any foreign body deposited about the joints. I believe that the testimony which I have mentioned demonstrated with a very great degree of probability that uric acid does not cause any notable evidences of intoxication and does not produce the decided general symptoms of the disease. On the other hand, I believe that the work of Freudweiler and His obliges us to admit that uric acid may produce much of the local difficulty in gout at the time of the attack, as well as in the interval, through its local toxic action when present in extremely concentrated form. There is now certainly only weak ground for the belief that it has a purely mechanical action in gout. Its role in gout may perhaps be compared with that of sugar in diabetes, though the analogy is not perfect by any means; that is, excessive quantities of sugar in the blood are harmful and are apparently capable of producing chronic inflammatory changes, but hyperglycemia is a result of the causal condition, not itself the cause. I believe that uric acid may justly be looked at in much the same way, but looked at in this way it would be given only a subsidiary role in the disease and the main cause of the intoxication would then have to be referred to some other toxic substance or substances as yet unknown.

There is one thought which has not been considered, but which is worthy of brief attention. I believe that it is possible that the uric acid in gout is different from the uric acid in other conditions in which an excess apparently does not cause symptoms. This at first of course seems to be extremely improbable, but I think it is within the bounds of possibility. It is known that many substances, when produced differently, have different physiological actions, although their chemical constitution seems to be exactly similar, and this is notably true of several of the xanthin bases, which are closely allied to uric acid. Caffeine, for instance, when derived from its natural source, is only slightly toxic, while some synthetic preparations of caffeine are extremely toxic; and while guanine has little toxic action, as a rule, some preparations of guanine are very toxic.

It may then be considered as a remote possibility that the uric acid in the blood in gout is, in part at least, present in a form which is toxic while it is not notably toxic in other conditions. This is, however, extremely improbable and there are many facts which point strongly against such a view.

The question of the relation between uric acid and the so-called uric acid diasthesis may be dealt with more briefly, for there is much less real evidence to be weighed. It is impossible to consider seriously the numerous claims which have recently been made that disorders of various kinds are due to uric acid. Certain writers insist that epilepsy, hypochondriasis, neurasthenia, and other nervous disorders; disturbances of the alimentary tract of the most various kind, even including diseases of the teeth, gums, and throat; and apparently everything else that is not clearly due to some other cause, may be attributed to an excess of uric acid. This is merely a superficial way of escaping from difficulties.

The impulse to such expressions was given largely by Dr. Alexander Haig's publications, in which it is claimed that the ratio between the uric acid and the urea is an index of the presence or absence of an excess of uric acid in the system and of poisoning by this substance. All the conclusions reached by Dr. Haig are based essentially upon this assumption; but, unfortunately, all the conclusions reached by such methods must be considered wholly valueless, for, as stated earlier, the ratio between the uric acid and the urea has no value as an index of the amount of uric acid produced or retained in the system or of the activity of oxidative processes. The essential fallacy in this teaching lies in the assumption that uric acid should be almost entirely excreted as urea; and that, when the amount of uric acid in proportion to that of urea rises, the uric acid is present in the system in abnormally large amounts. This is wholly incorrect. The ratio between the uric acid and the urea, as has been stated, depends chiefly upon the character of the food; not upon the activity of metabolic processes. Hence, it would be quite as fallacious as to draw exact conclusions concerning the severity of diabetes by determining the ratio between the sugar of the urine and the urea, without controlling the diet; and, if the diet is considered, Dr. Haig's gout ratio loses its apparent importance. The changes in the uric acid excretion, which he describes as the result of the use of drugs, are, in large part, not confirmed by other investigators that have used better methods. These, as well as many of his other results, are evidently due to the use of methods that are antiquated and are unsuited to serious investigations.

In a discussion of the so-called uric acid diathesis there is no place for all this array of diseases. It is quite as unjustifiable to include all of these under the name of uric acid diathesis as to call any obscure disturbance of health neurasthenia. There are, however, two general classes of cases in which the wisdom of the term uric acid diathesis deserves consideration: In the first there are, with other symptoms of varied kind, atypical arthritic symptoms, tophus, or uric acid calculus formation, per-

haps a marked tendency to the eczematous, or other skin eruptions, common in subjects of gout, usually the methods of life general among gouty persons; and often a very strong family history of actual gout. In such cases one is usually justified in deciding as he would in typical gout, whether uric acid has any real relation to the disorder. If it produces the symptoms, it must cause most of them by toxic, not by mere mechanical action. As I have stated, the testimony concerning gout favors the view that the toxic symptoms in this disease are, for the most part, not due to this substance; I believe, therefore, that the same is true in cases that seem to be irregular gout—that is, that uric acid may produce some of the symptoms, but cannot be looked upon as the prime cause of the disturbance. Since marked local symptoms and urate deposits are usually absent in these cases, the testimony in favor of uric acid is much less marked than it is in actual gout.

The second class of cases is composed of those in which there are no distinct symptoms immediately suggesting actual gout, but in which there is often the same history of excess in food or in alcoholic beverages, with a sluggish life, frequently a family tendency to the same condition, often decided periodic exacerbations of the symptoms and a tendency to the deposit of uric acid or urates in the urine; while headache, depression of spirits, and gastro-intestinal disturbances are very frequent, and there is often—especially very late in life—a disposition to grow fat, and to the development of renal and cardiovascular changes, and of chronic bronchial catarrh. Not uncommonly, a mild and inconstant glycosuria appears in older subjects; and occasionally definite gouty symptoms or actual gout ultimately develop. Unless distinct symptoms of gout appear in such cases, it is difficult—and, indeed, I think it is impossible—to say that there is a real relation to gout. The characteristics of these cases, which are shared by all of them, are that there is evidently a disturbance of nutrition; that there is usually overfeeding, and probably insufficient oxidation; and that the urine frequently shows a deposition of urates. That they all belong to the class of gouty diathesis is, I believe, questionable in the extreme; and that uric acid plays an important role in the production of the symptoms is exceedingly improbable.

The appearances of the urine demonstrate nothing, except that its condition is unfavorable to the complete solution of the uric acid or urates. Its appearance does not prove that the amount of uric acid varies in any way from the normal, for it is well determined that a deposit may occur from many causes besides increase in the amount of uric acid; and actual estimations of the uric acid—which, with others, I have repeatedly made in such cases—have shown no frequent or notable variations from the normal. In other words, the study of uric acid in the condition which bears its name, when carried out by proper methods, has been fruitless; and this study, by itself, would indicate that uric acid bears no definite relation to the diathesis.

Hence, if we believe that uric acid is the cause of this condition, we must hold this belief upon the strength of two hypotheses: That these cases are really instances of gout, masquerading in strange costumes; and that gout is due to uric acid. As to the latter hypothesis, it is unnecessary to repeat myself further; as to the probability that these cases are really irregular instances of gout, I think that the testimony is wholly unsatisfactory, so far as drawing any definite and positive conclusions is concerned. That some of these patients develop gout is insufficient ground for stating that all of them have been of gouty diathesis from the beginning, or that even those that do develop gout had originally any condition that was, in itself, related to that disease. Were the tendency to gout more constant with them, it would be of more importance; but I do not believe that actual gout occurs in a large proportion of these cases, unless the term gout be made to include all those disorders that are due to civilized life—a method of using the term that has been adopted by some authors.

I think, in other words, that we have been calling a large number of varied disturbances of metabolism by one name, and by one that, so far as we yet know, is not actually deserved by many cases in this class. We are obliged to group them together at present, because we have, as yet, no way of distinguishing them; but there is probably no more successful means of limiting knowledge concerning any disorder than by giving a name which implies a knowledge of its cause. I think we should admit that we have no good reason for believing that uric acid causes the disturbances attributed to it, and that we do not know the true cause. We should then be much more likely to make more careful classifications of these cases, and to learn more about their actual clinical characteristics and about their etiology. One thing is certainly true; estimation of the amount of uric acid present in the urine, whether a good method or a bad one is used, is utterly valueless from a diagnostic standpoint. There is a widespread notion that the condition called uric acid diathesis can be diagnosed by estimating the uric acid, but when carried out for this purpose such a procedure is a waste of the examiner's energy and of the patient's money.

As was noted in the beginning of this paper, and as is known to all of you, there was made, some years ago, a very active attempt to prove that gout is due to an excess of xanthin bases in the system; and, more recently, in this country particularly, there have been some attempts to show that the "uric acid diathesis" is due to the same substances. This question may be dealt with most briefly of all. The basis of this teaching was the supposedly exact observation, by Kolisch and a number of writers that followed him, that the xanthin bases are increased in cases of gout; and also that in renal disease their amount is increased. The latter increase was supposed to be due to imperfect oxidation to

uric acid, as a result of the renal disease itself; for Kolisch taught that the oxidation of xanthin bases to uric acid is carried out by the kidney. As is so often the case, the original teaching has persisted in the minds of many, even after it has been proved to be incorrect. Kolisch's views have been demonstrated to be wrong in both particulars; namely, there is not an increase in the xanthin bases excreted in gout, and, so far as subsequent investigations have gone, there is no reason for thinking that disease of the kidney has any influence upon the oxidation of xanthin bases to uric acid.

The statements originally made were due, as have been so many statements concerning uric acid, to the use of bad methods, more especially the Krüger-Wulff method, which practically always gives results that are too high. The use of more exact processes—particularly that of Salkowski—has served to contradict and disprove the statements of Kolisch and his followers.

A good deal of stress has been laid upon the toxicity of some of the xanthin bases. That they are toxic, however, proves nothing concerning gout or the uric acid diathesis. Besides the xanthin bases there are numerous excretory substances that are toxic; but we do not accuse them of being the cause of gout or the uric acid diathesis, and we have, from a study of their excretion, no better reason for thinking that the xanthin bases are the actual cause of these conditions. The excretion of these bases is about normal, and, consequently, the conditions concerning them are in this particular the same as those concerning any other toxic excretory product that one may wish to choose; and more direct methods of experimentation with the xanthin bases, while they have shown that these substances may cause toxic lesions, especially in the kidneys, have also demonstrated that, with the possible exception of adenin, they are apparently incapable of producing the joint-lesions characteristic of gout. The whole discussion concerning the xanthin bases, so far as any work relating to them has gone, may, unfortunately, as Friedrich Müller puts it, be brought to the conclusion that the use of bad methods has led to a great waste of time, for it gave the impulse to an extensive study of these substances, a study which better methods have shown to be wholly fruitless.

STATIC ELECTRICITY IN THE TREATMENT OF INSANITY.

By ROBERT HOWLAND CHASE, M. D.,
of Philadelphia.
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Doubtless, the high place that electro-therapy has attained in recent years, is largely due to the recognition of its value as a remedial measure, which now widely prevails, and its adoption by many prominent physicians has at last rescued it from the domain of quackery, establishing it firmly upon a scientific basis.

Static electricity, which has gained so great an eminence of late, is one of the best modes of applying electricity for medical purposes. To those who have not followed the development of the subject, it may be a cause of surprise that its application to the cure of disease dates back to 1750. To Benjamin Franklin—the many-sided genius of his day—indisputably belongs the credit of having introduced static electricity into this country, and as an acknowledgement of his invaluable services therewith, it is often called by his name. One may find much interest in the account that he gives of his early experiments upon patients that flocked to him for treatment by means of this agency, which in the past had assumed a mystical character. Since then, there have been made from time to time sporadic efforts to popularize it in the medical profession, and probably its recent employment as the best electrical method of exciting vacuum tubes for the production of X-rays has done more than anything else to accomplish this result.

Strangely enough, the principles involved are practically the same as they were one hundred and fifty years ago, but the chief point of difference lies in the fact that the apparatus has been extensively improved and modernized, especially during the past fifteen years. Static electro-therapeutics has now fully established its worth and each year sees many physicians adding static machines to their armamentarium. No sanitarium of to-day would be regarded as efficiently equipped without such appointment and the number of asylums and hospitals that are entering the list is increasing constantly.

The disadvantages found in the practical use of this form of electricity are, that it requires considerable skill on the part of the operator, and knowledge of its technique; he must be able to use the medium in its manifold modes of application to the best advantage, and to have sufficient acquaintance with the intricate relations of the apparatus to seek for and remove defects, as well as to overcome whatever difficulties may arise. One writer, on the subject, has compared very aptly the static machine in the hands of an inexperienced operator to an empty rifle.

It was the absence of a self-charging appliance which rendered these machines unsatisfactory in former years, but with the introduction of the Holtz machine in 1865 and its subsequent improvement, this serious objection has been removed. It is well for the physician who may desire to pursue this treatment to begin with a thorough study of the subject under a competent instructor, supplementing it by reading the best standard works: considerable proficiency will follow upon a course of a few months study, although the earnest student will find as he progresses that the subject, like any form of high art, is inexhaustible and that the field is broad enough to exercise his highest powers in its adaptation.

In late years there has been a growing disposition on the part of asylum physicians, in extending the "hospital plan", to adopt in the treatment of the insane the so-called accessories, that are the prescribed routine in nervous ailments, in the form of electricity, baths, massage, and rest-cure. Static electricity thus finds a useful field among certain classes of cases in our insane asylums, to which its

health-giving properties may be administered beneficially. To be sure, it has no specific power either to cure or to prevent insanity, but its influence is similar in its action to drugs, in so far as it affects the mind through the body. At Friends' Asylum static electricity has been applied in selected cases for some years, and while it may not have been always successful in affording relief, the general trend of treatment has been efficacious. In our hands it has been joined with other remedial measures, so that it is difficult to estimate with precision its own immediate influence upon mental improvement and cure; in a few instances its restorative action seemed but little short of the miraculous. For example, a lady, aet. 59, single, admitted in 1890, suffering from melancholia; she had been in the institution about eight years and was thought to be incurable. Static electricity in the form of the "breeze", (as she was too timid and nervous to take any other.) was administered regularly each day in a *séance* lasting about twenty minutes. It was not long before a favorable change was noted in her symptoms and the subjective effect upon her was so decided that she often spoke of the benefit she felt, which was contrary to her usual gloomy expressions in relation to everything that touched her life. A steady improvement took place in her mental and physical health and in the course of some months, rather more than half a year, the patient returned to her home restored.

In our experience the neurasthenic forms of mental ailment, such as the melancholias, are the ones in which expectation may be most fully realized. We have used the "breeze" in the largest series of cases, although the "spark" directed to the spine or to various parts of the viscera is most potent when used with skill. Dr. P. M. Wise, while Superintendent of the St. Lawrence State Hospital for the Insane, reported a number of cases in which little hope of recovery was held, that recovered afterwards upon prolonged treatment by static electricity alone; and he came to the conclusion that in many cases of insanity, especially in all forms of chronic mental depression, even when recovery seemed hopeless, there was good prospect of restoration to health, or to a condition of comparative comfort and usefulness, by the application of this therapeutic measure.

With the onset of insanity, the general health is impaired and it is common to find sleeplessness, anorexia, torpidity of the bowels, accompanied by excessive brain activity or inertia, with concomitant motor depression or excitement. It must be borne in mind that strenuous efforts early made to restore the normal conditions of the brain and nervous system, to improve the nutrition of the body, to induce sleep and self-control, are pressing indications, if one has in view the patient's restoration to reason. It is not expected, of course, that static electricity will perform wonders where organic lesions have hopelessly impaired function, but its beneficial effects are usually found in the acute mental disorders, in restoring a balance to the system in smoothing away the restlessness, the insomnia, the melancholia and re-invigorating the tone of both mind and body. In actual practice it is often necessary for the operator to display a considerable amount of discretion in the personal management of these cases, but as he grows more skilled, an aptitude for the work comes with experience.

There is prevalent among the general public a great respect for the value of electricity as a general therapeutic agent and the majority of mental patients sharing this faith, are deeply impressed by its mere application. It, therefore, does good not only by its direct effects upon the system, but it also indirectly has a further remedial value, in its power of "suggestion". Another important advantage of the use of static electricity is in the facility with which it may be used without inconvenience or annoyance to the patient in the removal of clothing; and in the breeze we have undoubtedly the pleasantest form in which electricity can be applied and one which may be given readily to the most nervous and timid patient without exciting fear or discomfort.

There are many cases on record, showing the value of static electricity in the insane, of which the following case, reported by Dr. W. N. Knowlton, Boston, Mass., published by Dr. S. H. Morrell, in his Manual on Static Electricity, is a fair type.

This was a case of delusional melancholia, in a married woman, aged 49 years, who was admitted to the hospital in December, 1895. She had suffered from indigestion for years, had been growing nervous, hypochondriacal and sleepless. She had fallen into the habit of taking but little food, and had lost in weight from 175 lbs. to 125 lbs. For the two weeks previous to her admission to the hospital she had been confined to bed. On examination after entrance, she was found to be thin, pale, agitated and depressed in spirits. She declared that she was going to die, and talked constantly about her severe suffering, and had marked delusions in regard to her body and also concerning her food. She remained in this condition throughout the winter. Early in March, 1896, she sat up for a few hours each day, taking her food in liquid form, but she insisted that her distress of mind was beyond endurance and she repeatedly wished that she might die. At this time treatment by static electricity was commenced, sparks being applied for ten minutes to the spine and over the stomach, liver and abdomen three times a week. In six weeks time her weight had increased twenty pounds and she took more solid food, although she complained of various painful and disagreeable sensations from her head to her feet. By July she had improved still more and while she was yet irritable and complaining at times, she was frequently cheerful and animated, manifesting an interest in her surroundings. Finally she was reported, in the middle of August, as being very much better in every way, sleeping and eating well.

Multiple Nodular Gummata of the Palms of the Hands.—At a recent meeting of the Medical Society of the Paris Hospitals (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, July 25, 1901, No. 26) Paul Gallois presented a patient, a man of 32 who had contracted syphilis 6 years before. Three years ago he noticed nodular tumors upon the palmar surface of the hands, as large as peas, and as many as 20 upon each hand. One or 2 were seen on the dorsal surface of the fingers, and on the forearms. They appeared as tiny nodules, which grew rapidly. They caused no pain, but were as hard as pebbles. Puncture showed that they were not cysts; while operation, in which several were removed, showed them to be fibromata. Upon specific treatment they have all disappeared. Other similar cases are cited from the literature. This form of tertiary syphilis is very rare. Mixed treatment seems all that is needed to cure the condition. [M. O.]

AN INVESTIGATION OF SOLANUM CAROLINENSE, WITH REFERENCE TO ITS SPECIAL VALUE IN THE TREATMENT OF EPILEPSY,

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General Characteristics.

Solanum carolinénse belong to the solanaceae or nightshade family, an order characterized by its furnishing many valuable drugs, and it possesses as synonyms: Horse-nettle, bull-nettle, sand-brier, treadsaf, treadsoft and poisonous or ground potato.

Chemical Investigation.

In order to determine what constituents are present in the drug, and also to find out which are the most active portions therapeutically, quantitative analyses were made of the various parts of the plant, with the following results: All parts of the plant were found to contain two alkaloidal constituents, which chemical examination proved to be solanine and solanidine combined with an organic acid, called solanic acid. The solanidine was found to be present in about 7.6% the amount of the solanine. The fruit contained the largest amount of alkaloidal constituents, hence is the most active therapeutically, then the root, leaves and stem in the order of their activity.

Pharmaceutical Investigation.

A series of tinctures, fluid extracts and solid extracts were prepared by percolation from the various parts of the drug, using various menstrua in order to determine the best solvent of the active constituents, and a mixture of two volumes of alcohol and one volume of water proved the most satisfactory. These preparations were allowed to stand for several months to test their permanence, and the following are my conclusions:

The best preparations of the drug for internal administration are the fluid and solid extracts, as they are the most concentrated, and are permanent. They also contain the least amount of alcohol, the presence of alcohol being particularly objectionable in epileptic conditions for which this drug is chiefly indicated.

Microscopical Examination.

A microscopical examination of stained sections of the various parts of the drug showed the presence of starch, tannin, (calcium oxalate, crystals), mucilaginous matter, resin and fixed oil in addition to the usual structural constituents. For drawings illustrating these, see *American Journal of Pharmacy*, Vol. 69, No. 2, article on Solanum by the author.

Medicinal Properties and Uses.

Solanine has been used extensively for a number of years by the negroes in the southern States in the treatment of epilepsy, and with excellent results, as has been confirmed by a number of observers. It has been used in hysterical convulsions with prompt results, also in a case of eclampsia, in which it controlled the convulsions after everything else had failed. It has proven valuable in Bright's disease when the kidneys were acting but slightly and the patient was taken with convulsions; it completely controlled the convulsions, besides being an anodyne and antispasmodic, also a valuable and active diuretic. It is efficient in controlling epileptic convulsions attending painful menstruation, also epileptic attacks associated with imperfect development, chorea and puerperal eclampsia. It has been used with much success in pregnancy with convulsions due to albuminuria, also in uterine hemorrhage, and it acts as a powerful styptic in arresting hemorrhage.

In order to obtain satisfactory results, the remedy should be carried to its full constitutional effect, which is indicated by drowsiness and stupor, then reduce the dose. It has been used with good results in tetanus and neurasthenia, and it appears to restore the want of equilibrium between the gray and white matter of the spinal cord. It does not affect the epigastrium like the bromides.

Solanine is used instead of morphine in neuralgic affections, the vomiting of pregnancy, in bronchitis and asthma. Desnos recommended the administration of solanine to persons addicted to the morphine habit in place of morphine, when a sedative is required. According to him it is a valuable remedy in painful diseases of the stomach, similar in its action to cocaine and chloroform water. It is well adapted to individuals who easily become accustomed to morphine (hysterics and inebriates). Solanine is a poison to the terminal motor plates. It narcotizes the medulla and spinal cord, causing a paralysis of the terminal sensory and motor nerves. By reason of this, solanine is to be classed among the best of analgesics. It may be prescribed in large doses without danger, and it presents none of the inconveniences of morphine and atropine, and there is no danger of an accumulative action. It does not cause congestion of the brain, even in the aged, and probably a like freedom exists in children. In all cases in which it is necessary to calm excitement, relieve pain or overcome spasms, it promises excellent results. It may be given with advantage in place of morphine to relieve any of these conditions.

Dr. E. Q. Thornton has investigated the physiological action of solanum on frogs by injecting the soft extract hypodermically into the posterior lymph space in doses of about three mg. to the gram weight of the batrachian, and he found that the drug depresses respiration, has little or no effect on the circulation, depresses the cerebrum and stimulates the cord. The reaction to acids is lost before tactile sense, and the same may be said of heat.

Clinical Investigations.

In order to confirm the reports of various observers as to the efficiency of this drug in the treatment of epilepsy, a series of clinical investigations has been carried out in four Philadelphia Hospitals, the drug being tried on about 25 cases of epilepsy in its various forms, and the results have been very encouraging. In these investigations the fluid extracts of the fruit and root, as prepared by the author, were used. In order to show its efficiency I will give, in detail, one case in which it was used.

M. E., white, aged 16. Intelligent school girl. Grand mal (idiopathic). Family history: Mother and father both living. Mother very nervous and father suffers from rheumatism. Two sisters living, and very nervous. One brother living and well. No heredity as to the epilepsy neurosis.

Previous history: Always been in poor health, menstruation very irregular. Dysmenorrhea when menstruation was in progress. Present medical history: She began five years ago to have convulsions, severe grand mal in type, which condition continued for about a year. There was then an intermission for a few months, when they reappeared and have continued ever since up to the time of admission for treatment. The attacks occur at intervals of about nine days, and, as a rule, lasting a few minutes. Appetite good; bowels regular. Heart examination shows a mitral regurgitant murmur present. This has not given any demonstrative symptoms. She was treated for about three weeks with the bromides at another hospital, in June, 1900, without much relief, so she returned home. Bromism occurred very readily in this patient. At that time a thorough examination of the pelvic organs was made without finding any lesion, in fact no reflex cause can be found in this case; hence the designation idiopathic.

Treatment: This was commenced on the day of admission, November 7, 1900. She was given 3 i of the fluid extract of the fruit three times daily, with aloin, belladonna, strychnine and cascara pills to relieve constipation. Diet was restricted to semisolids, and intestinal autointoxication thus eliminated. On November 8, 1900, she had an attack at 6.35 A. M. It is to be noted that the patient has not had another attack since that time. She was kept under regular treatment up to March 16, 1901, when she was sent home with instructions to continue treatment for several months and report if any attack developed. No return of the condition has resulted. Under treatment the respirations and pulse were normal in frequency. On February 6, 1901, she had a severe attack of tonsillitis when the drug was withheld, but she had no attack during the intercurrent malady, as is usual with the epilepsy neurosis. The drug has had no depressing effect on the digestion, which has remained absolutely normal, a condition that was not so under other treatment, especially the bromides.

Conclusions:

The above represents a case of typical idiopathic epilepsy in a type of individual in which the neurosis is not in any measure hereditary. The conclusion can be reached therefore that in this particular case solanum has proven an efficient remedy, all other therapeutic remedies having failed to afford relief up to this time. The patient was instructed to continue the drug for one year, despite the cessation of the seizures. The patient's general condition was much improved under treatment. The attacks in this case were sudden without any aura whatever, the patient falling violently and passing immediately into tonic then violent clonic convulsions, accompanied by frothing at the mouth and biting of the tongue.

The following table shows the results of the treatment in sixteen cases with the fluid extracts of the fruit and root, as prepared by the author commencing with f3i as an adult dose and increasing to the full constitutional effect.

The following conclusions are reached as the result of the above clinical investigation.—That Solanum Carolinènse from the foregoing clinical study seems to warrant the following conclusions of its use in epilepsy. 1. It is of greatest value (probably better than any one known remedy) in grand mal of idiopathic type without hereditary taint and where the disease has begun beyond the age of childhood. 2. It is perhaps next of greatest value in hysteroepilepsy with marked convulsive seizures. In cases of petit mal the drug does not seem to do the great good that we have noted in the major type of the disease. 3. In cases of well advanced epilepsy of any type in which there is degeneration of the cerebral neuron, the drug will act specifically for a time even better than the bromides, but it will finally be determined that the bromide salts will ultimately control the attacks better in these cases. 4. The foregoing clinical study has brought out sufficient clinical evidence to warrant the statement that the inherent advantage of vegetable depressomotors is great as compared with any mineral salt given with the same intent, since destruction of the bloodcorpuscles by the latter is a most detrimental feature towards lessening the resistance of the individual in a disease, where, above all, the constitutional tonicity should be favored as ideal treatment. 5. A thorough impregnation of the nerve cells can alone be had and therefore cure hoped for in epilepsy in proportion as solanum is pushed to the fullest physiological dosage and maintained through periods of months, a year not being too short a time to warrant its discontinuance. 6. The fluid extract of the drug made freshly is the ideal form of pharmaceutical preparation given in ascending doses commencing with one fluidrachm and increasing to the full constitutional effect. 7. It is to be decidedly preferred to the bromides in those cases in which it can be used advantageously, because no toxic symptoms follow its free administration and the mental faculties are not impaired by its use.

A CASE OF FOREIGN BODY IN THE LUNG. DIAGNOSIS CONFIRMED BY RADIOSCOPY.*

By FRANCIS HUBER, M. D.,
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The relative frequency of the accidental aspiration of foreign bodies into the air-passages, has aroused renewed interest on the part of our surgical colleagues. The older plans have been perfected and new methods of relief devised. It is not the object of this paper to enter upon the broad questions of treatment or discuss the relative advantages of the different methods advocated.

Of the various articles which have appeared in the journals recently the following contain the most recent views. De Forest Willard, in an elaborate paper "Removal of Foreign Bodies from the Air Passages", read before the American Medical Association, has covered the ground fully. The subject of pneumotomy and pneumectomy was thoroughly discussed by J. B. Murphy, of Chicago, at the same meeting. Incidentally we may refer to the case of H. Muller, (*Lancet*, January 29th, 1901,) who reports the removal of a foreign body from the bronchus by intrathoracic tracheotomy. The method and after-treatment are discussed in detail.

In the brief communication presented below, the diagnosis only will be considered. Frequently no difficulty is encountered. The history points clearly

*Read by title before the Medical Society of the State of New York, October 16, 1901.

to the nature of the trouble, or, in the case of children, some older person may have been present, a witness of the accident.

Children who are permitted to play upon the floor, without proper supervision, may accidentally aspirate a foreign body into the air-passages and the exact condition of affairs remains unsuspected until the dyspnea, paroxysmal cough, cyanosis, septic symptom or pulmonary gangrene arouse our suspicions. Before reporting our case, it may be of advantage to review briefly some of the main features or causes of gangrene of the lung—a process not infrequently occasioned by the accidental aspiration of a foreign body. A symptomatic diagnosis of gangrene, when the characteristic odor is present, is readily made. The diagnosis, however, is not complete until the cause is discovered. As Osler truly writes, "gangrene of the lung is not an affection *per se*, but occurs in a variety of conditions when necrotic areas undergo putrefaction."

It is met with (a) as a sequence of lobar pneumonia, particularly in diabetic or debilitated subjects and in the insane. (b) It is prone to follow aspiration pneumonia, as the foreign bodies, particularly if of an animal origin, rapidly take on putrefactive changes. (c) The fatal contents of a bronchoectatic or tuberculous cavity readily excite gangrene in the adjacent structures.

Embolism particularly, if originating in bone diseases or in a septic process elsewhere, as in typhoid fever or other conditions attended with lowered tissue resistance, may be followed by this serious complication.

At times it may not be possible to determine the cause. In all cases, however, the etiological factor ought to be sought for. In the case reported below, a careful analysis of the history together with the physical signs lead to the probable diagnosis of the presence of a foreign body as the ultimate cause of the gangrene. An X-Ray photograph, made by Dr. Cole, of the Roosevelt Hospital, gives an excellent picture of the object and proves that the suspicion was well founded.

Bertha F., 21 months old, Russian-Polish parentage was admitted to the "Jacobi Ward," Roosevelt Hospital, June 10th., 1901. A short time before admission, through the courtesy of Dr. Grocht, the patient was seen in consultation by the writer. She was in a septic condition, somewhat emaciated and had been running a temperature more or less regularly for the past five weeks. At the beginning the odor of the breath was very offensive, as the mother puts it, similar to that of a watercloset. Gradually, it grew less and less and, at the time of the consultation, it could only be made out during the time of the paroxysmal coughs. The spells, though spasmodic in character, did not resemble whooping cough in any respect. The breathing was accelerated, but not labored.

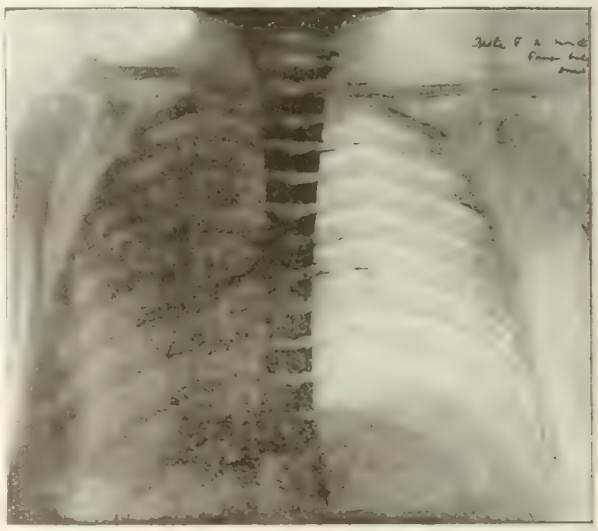
The history, the odor of the breath, with loss of flesh and strength, and the existing septic condition lead us to infer the existence of a septic bronchopneumonia with a localized gangrene. In searching for some etiological factor, the mother was again carefully questioned, several additional factors were elicited tending to throw new light upon the case. These points had been previously overlooked or forgotten. The fact was elicited that about five months ago, while sitting on the floor playing, the little girl suddenly began to cough, became cyanosed, and appeared to be on the point of suffocating. The attack passed over in a very short time, but from this period on paroxysmal coughing-spells developed.

The mode of onset and the subsequent gangrene lead to the suspicion that a foreign body was present in the air-passages. With the consent of the attending physician and the parents, the little patient was admitted to the "Jacobi Ward" for further observation and study and also to have an X-ray picture taken. Physical examination—right lung, moderate compensatory emphysema, otherwise normal. Left lung, posteriorly over both lobes flatness; dullness in the axilla and also laterally. Respiratory movements deficient. Breathing generally feeble; over lower lobe about angle of scapula and to its inner aspect, distant bronchocavernous breathing. Vocal fremitus diminished, numerous fine and coarse rales over area of flatness, some friction sounds heard posteriorly over lower lobe. Heart not displaced, no murmur.

Prior to this examination several exploratory punctures had been carefully undertaken with a negative result—a sacculated empyema or abscess of the lung having been suspected by the physician in attendance.

Diagnosis, septic pneumonia with pulmonary gangrene, [illegible] probably to a foreign body accidentally aspirated five months ago. On admission to hospital marked evidences of rickets were found. The child was pale and hectic in looks, nutrition fair. Pulse rapid and fair in quality; breathing rapid, dyspnea; frequent loose cough, paroxysmal in character attended with a decidedly fetid odor. No sputum. The foul odor was only perceptible after a spell of coughing. Appetite poor, bowels regular, temp. 101°, pulse 152 and respiration 60.

Urine amber acid, trace of albumin, amorphous urates. Heart, liver, spleen normal. The pulmonary condition as given above. Through the courtesy of Dr. L. G. Cole an "X-ray" picture was taken. The nature and position of the foreign body were thereby revealed. The plate shows in



Foreign Body in the Lung.

[illegible] the extent of the [illegible] of the lung. The case was [illegible] the [illegible] the serious nature of the patient's condition [illegible] to the parents. Their permission to operate was obtained but not much encouragement was given as the little girl was obviously in the last stage [illegible] the child was obviously moribund and to the [illegible] as the child [illegible] as soon as the pleura was opened. Restored with [illegible] dead two days later. Unfortunately no autopsy could be obtained.

To recapitulate, the diagnosis of septic pneumonia with localized gangrene of the left lung was readily [illegible] the fetid odor and the physical signs. Remembering that gangrene is usually a secondary condition, a more careful cross-examination of the mother brought to her mind the fact that some months previously, while playing on the floor, the child was seized with a [illegible] spell which

soon passed over. There was then a period of calm interrupted by a paroxysmal cough, unattended by any rise in temperature. Months later gangrene set in with the characteristic odor which later on was only perceived during the spells of coughing. The gangrene in a measure, no doubt, was due to the irritation of the foreign body, not very clean at that, on to the interference with the local circulation and the acts of respiration. As a result a local putrid infection occurred with ulceration and infiltration giving rise to a secondary septic pneumonia and finally general contamination. The sudden onset and history of a suffocative attack, the paroxsymal cough and subsequent gangrene, led us to suspect a foreign body. The suspicion was confirmed by the X-Ray examination, an invaluable aid in making a positive diagnosis under such circumstances. If these points had been kept in mind, an earlier diagnosis would without doubt have given the surgeon a more favorable opportunity to remove the offending body and possibly have saved the child.

TRAUMATIC MENINGITIS WITH EFFUSION—CEREBRAL CONVULSIONS—DOUBLE TREPHINING—RECOVERY.

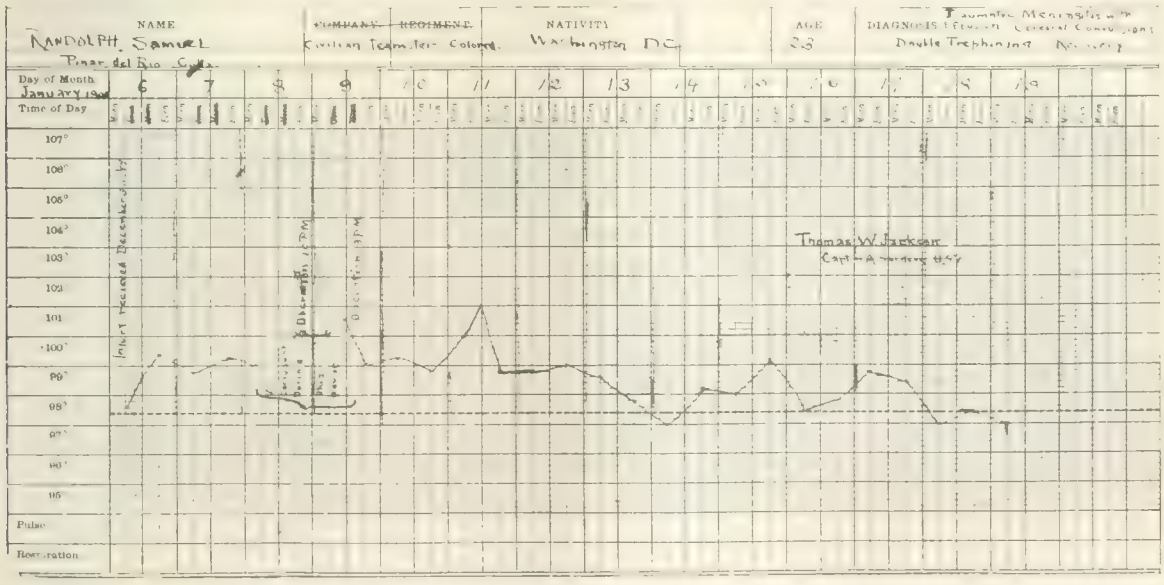
By THOMAS W. JACKSON, M. D.,
of Naic, Luzon, P. I.
Captain and Assistant Surgeon, U. S. V.

Upon the morning of January 1, 1900, S. R., colored teamster in the employ of the United States, appeared at the Post Hospital, Pinar del Rio Cuba, with a contused wound of the scalp, one inch long, situated at the hair border, left frontal region, two inches above supra orbital ridge. He complained of severe frontal headache. The scalp wound did not include all the soft tissues and did not require suturing. An area extending several inches beyond the contusion was shaved and an antiseptic dressing was applied. Careful examination of the entire head disclosed no other contusion nor abrasions, although the scalp in the right parieto-occipital region was tender upon pressure. Neither fracture nor depression was present.

A saline purge was ordered and appropriate treatment for headache prescribed, and the man returned to his work at the corral.

The history of his injuries is as follows: Upon the evening of December 31, 1899, the patient, while intoxicated, created a disturbance in a saloon and was assaulted by the bar tender with an iron bar or pipe. He was knocked down and beaten upon the head both in the left frontal and right occipito-parietal region. He arose, left the saloon and appeared the following morning at the hospital as above stated.

The patient performed his duties as teamster until the morning of January 6, appearing twice this time for dressing, the contusion healing promptly. He complained, however, of persistent headache, and upon the morning of January 6, while at work, he fell and lost consciousness and was removed to his quarters and later to the Hospital. Upon examination he was found to be stupid, with full slow pulse, pupils of equal size and apparently normal. There was no appreciable loss of power in any member. Subsequent inquiry showed that he had never before had fits or convulsions. The temperature rose during the day to 100.4° F. (vide chart). For thirty-six hours he remained in this condition, refusing food and responding stupidly to inquiries, his only complaint being of headache. The case was considered one of meningitis due to trauma and small doses of calomel and salines were given every hour without visible effect other than free catharsis. The entire scalp was shaved and an ice cap was applied to the head and counter-irritation to the back of the neck was maintained. During the morning of January 8 patient had a convulsion, general in character, followed by prolonged unconsciousness. This seizure and the subsequent ones resembled epileptic seizures very closely, and were of terrible severity and general in character. During the succeeding thirty hours, thirteen of these convulsions occurred. Upon the evening of January 8 I decided to operate for the relief of intracranial pressure and proceeded to do so at 10 P. M. under chloroform anesthesia, assisted by Dr. J. F. Preswell and Dr. P. Lundy. In the absence of any localizing symptoms the site of contusion in the left frontal region was chosen, a generous horseshoe-shaped flap was reflected and a half-inch trephine opening through the skull was made.



The bone was found to be perfectly smooth and normal upon both internal and external plates. There were no adhesions between the dura and skull, but the dura seemed dark in color and bulged into the trephine opening. It was incised and more than 15 c.c. of clear fluid escaped. A probe was introduced between the membranes to facilitate the escape of fluid. The pia mater was markedly injected. The dura was not closed and the button of bone was not replaced. The scalp wound was closed, and drainage strands of catgut extending from angle to angle were left in the wound. Patient reacted promptly and without shock, the

operation having lasted 35 minutes. No convulsions occurred until the following morning when the seizures began again and continued with great severity until the second operation, each convulsion markedly reducing the strength of the patient. The onset of the convulsions was carefully observed and it was found that movements began in the muscles of the left limbs and that occasionally the onset was preceded by a rotation of the body to the left side. The onset of the convulsion was usually so sudden and apparently so general that this fact was not at first noticed.

At 3 P. M. January 9, I proceeded to trephine the skull in the right occipito-parietal region, at a point obliquely opposite the site of the first operation. The condition of the patient when he went upon the operating table was extremely grave and it seemed probable that each approaching convulsion would be the last. One seizure occurred upon the table just as the anesthetic was being administered. The operation lasted thirty minutes. The flap was 2½ in. by 3 in. and was reflected upwards. The trephine opening was enlarged by the Rongeur forceps to the size ¾ in. by 1½ in. The dura was very dark and bulging. There was no depression of the inner table of the skull nor adhesions between skull and dura within a distance of 1½ in. from the perimeter of the opening in the skull. Upon opening the dura there was a gush of brown fluid containing a number of small dark blood clots. The amount of fluid was certainly 45 cc. The pia mater was intensely red and injected. Exploration with the little finger revealed nothing else and gauze strips ½ in. wide were introduced between the membranes for some distance beyond the border of the opening into the cranium for drainage. Heavy silk strands for drainage were laid from angle to angle of the scalp incision, and the wound then closed with silkworm gut. The usual antiseptic dressings were applied. The progress of the case from this time was in every respect satisfactory. Relief from symptoms was immediate and complete. There were no general convulsions following the second operation. Upon the 11th, 12th and 13th of January the patient had several attacks of twitching of the left facial muscles and the left hand, due, I am sure, to the irritation of the gauze and disappearing with its removal. He was very willful for the first week and it was necessary to put his hands in a restraint apparatus to prevent him from removing the dressings.

Upon the 19th of January he was walking about and anxious to return to work, his mind clear and appetite excellent. The operation wounds healed uneventfully and the only sequel was a slight impairment of grasp of the left hand. This, however, was transient and upon April 14, 1900, when I left Pinar del Rio for the United States, the patient drove me to the station in an ambulance drawn by four very spirited mules, and he handled them with strength and skill.

The Early Diagnosis of Relapse in Typhoid Fever.—Professor Lemoine of Lille discusses relapse in typhoid fever in the *Bulletin Médical* (January 4, 1902.) Relapse is much more frequent than a second attack of typhoid, statistics showing that relapses occur in 9%, recurrence in only 4% of all cases. The main cause seems to be inability of the organism to overcome the invasion of the typhoid bacilli in one reaction, a repetition of symptoms occurring with continued reaction. Youth seems to predispose to a relapse. From 25 cases of typhoid with relapse, observed by Lemoine, he noted that certain positive signs lead the physician to expect a relapse, an excessive or sparse eruption, continued constipation an irregular temperature curve, the persistence or reappearance of the diazo-reaction with defervescence, a lead color of the face, an exaggerated appetite compared with the state of the fever and the tongue, persistence of the splenic enlargement, feeble agglutinating power, and the absence of critical diuresis and sweating. There are also certain negative signs which preclude the occurrence of a relapse, low temperature, slow pulse, and polyuria. In some cases there is also a marked tachycardia, which, when joined with the other positive signs, will furnish an early diagnosis of coming relapse in a case of typhoid fever. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ending April 26th., 1902:

SMALLPOX—United States.

			Cases	Deaths
CALIFORNIA:	Los Angeles.	Apr. 5-12.	4	
	San Francisco.	Apr. 6-12.	15	
COLORADO:	Denver.	Apr. 5-12.	9	
DISTRICT OF COLUMBIA:	Washington.	Apr. 12-19.	1	
FLORIDA:	Jacksonville.	Apr. 12-19.	9	
ILLINOIS:	Belleville.	Apr. 12-19.	1	
	Chicago.	Apr. 12-19.	24	
	Galesburg.	Apr. 12-19.	1	
INDIANA:	Evansville.	Apr. 12-19.	2	
	Indianapolis.	Apr. 12-19.	22	1
KANSAS:	Wichita.	Apr. 12-19.	2	
KENTUCKY:	Covington.	Apr. 12-19.	10	
LOUISIANA:	Shreveport.	Apr. 12-19.	7	
MAINE:	Portland.	Apr. 12-19.	1	
MASSACHUSETTS:	Boston.	Apr. 12-19.	9	4
	Chelsea.	Apr. 12-19.	1	
	Malden.	Apr. 12-19.	2	
	Somerville.	Apr. 12-19.	1	1
MICHIGAN:	Detroit.	Apr. 12-19.	10	
	Grand Rapids.	Mar. 29-Apr. 19	4	
	Ludington.	Apr. 12-19.	5	
NEBRASKA:	Omaha.	Apr. 12-19.	23	
NEW JERSEY:	Camden.	Apr. 12-19.	1	
	Newark.	Apr. 12-19.	2	4
NEW YORK:	New York.	Apr. 12-19.	56	8
OHIO:	Cincinnati.	Apr. 12-19.	17	
	Cleveland.	Apr. 12-19.	1	
	Dayton.	Apr. 12-19.	1	
	Toledo.	Apr. 12-19.	1	
PENNSYLVANIA:	Allegheny.	Apr. 12-19.	4	
	Columbia.	Apr. 12-19.	6	
	Erie.	Apr. 12-19.	8	
	Johnstown.	Apr. 12-19.	1	
	Philadelphia.	Apr. 12-19.	2	1
	Pittsburg.	Apr. 12-19.	3	
RHODE ISLAND:	Providence.	Apr. 12-19.	2	
SOUTH CAROLINA	Greenville.	Apr. 5-12.	2	
SOUTH DAKOTA:	Sioux Falls.	Apr. 12-19.	1	
TENNESSEE:	Memphis.	Apr. 12-19.	22	
	Nashville.	Apr. 12-19.	1	
VERMONT:	Burlington.	Apr. 5-12.	1	
WASHINGTON:	Tacoma.	Apr. 6-13.	3	3
WEST VIRGINIA:	Wheeling.	Apr. 6-12.	1	
WISCONSIN:	Green Bay.	Apr. 12-19.	10	
	Janesville.	Apr. 6-13.	2	
	Milwaukee.	Apr. 12-19.	3	

SMALLPOX Foreign.

AUSTRIA	Prague.	Mar. 29-Apr. 5.	1	
BELGIUM:	Antwerp.	Mar. 29-Apr. 5.	3	3
CANADA:	Winnipeg.	Apr. 6-12.	3	
CHINA:	Hongkong.	Mar. 1-8.	4	2
COLOMBIA:	Cartagena.	Mar. 29-Apr. 5.	1	1
FRANCE:	Marseilles.	Mar. 1-22.	2	
	Paris.	Mar. 29-Apr. 5.	3	3
GREAT BRITAIN:	Birmingham.	Apr. 5-12.	1	
	Dundee.	Mar. 29-Apr. 5.	4	
	Glasgow.	Apr. 6-12.	18	2
	Leeds.	Mar. 1-Apr. 5.	1	1
	Liverpool.	Mar. 29-Apr. 5.	7	
	London.	Mar. 29-Apr. 5.	101	74
	Plymouth.	Apr. 5-12.	1	
INDIA:	Bombay.	Mar. 15-22.	8	
	Calcutta.	Mar. 15-22.	11	11
	Karachi.	Mar. 15-22.	13	4
ITALY:	Naples.	Mar. 29-Apr. 5.	3	
	Palermo.	Mar. 29-Apr. 5.	1	
MEXICO:	Mexico.	Mar. 1-Apr. 5.	1	
RUSSIA:	Vera Cruz.	Mar. 29-Apr. 12.	4	3
	Moscow.	Mar. 22-29.	21	7
	Odessa.	Mar. 29-Apr. 5.	7	1
	St Petersburg.	Mar. 29-Apr. 5.	8	1
TURKEY:	Smyrna.	Mar. 1-8.	1	1

YELLOW FEVER.

DUTCH GUIANA:	Paramaribo.	Mar. 1-31.	27	27
FRENCH GUIANA:	Cayenne.	Mar. 22-29.	1	1
	Maroni.	Mar. 27.	1	1
	St. Laurent.	Mar. 27.	2	2
MEXICO:	Vera Cruz.	Mar. 29-Apr. 5.	4	3

PLAGUE.

INDIA:	Bombay.	Mar. 15-22.	72	
	Calcutta.	Mar. 15-22.	42	
	Karachi.	Mar. 15-22.	20	

CHOLERA.

CHINA:	Hongkong.	Mar. 1-8.	1	1
INDIA:	Bombay.	Mar. 15-22.	9	9
	Calcutta.	Mar. 15-22.	30	30
STRAITS SETTLEMENTS:	Singapore.	Mar. 1-8.	2	2

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Dr. Rodman's Proposal for a Voluntary Board of National Examiners.—The situation, or situations, at present existing in this country with respect to the licensing of medical practitioners, is most unsatisfactory. So long as each state issues its own license there are bound to be confusion and hardship. A legally qualified practitioner in one state has no legal status if he crosses the line into another state. He is practically outlawed. This comes from our system of state governments, by which the fiction (for it is largely a fiction) is maintained that each state is "sovereign." In reality we are all citizens of the United States. Every man is free to go and to live and to transact business wherever he chooses in this broad country. Trade and intercourse are absolutely free; and yet in respect to the practice of medicine this country is split up into a large number of commonwealths, in every one of which an American physician is in effect a foreigner, except in the one in which he happens to have a license. The situation is anomalous, and, in many ways, intolerable.

Our own feeling is that the only real satisfactory solution of this difficulty would be for the general government to take the matter in hand and pass a general law. We are not prepared, however, to discuss constitutional law in these columns. Good authorities say that such a scheme would be "unconstitutional;" to which we, individually, feel like replying, "So much the worse for the Constitution." We believe that the Constitution was made for the country and not the country for the Constitution. The organic law of the United States should be sufficiently flexible to meet the needs of the country. If it is not so, it should be made so.

We take pleasure in presenting in this number a paper by Professor William L. Rodman, of this city, in which he outlines a plan for a voluntary board of national medical examiners. Dr. Rodman recognizes the legal difficulties that stand in the way of action by the general government. He very wisely does not stop to discuss constitutional law, but accepts it as it appears to stand, and passes on to discuss a system by which he believes that a practical solution of our present difficulties may be reached. We commend this paper to the careful consideration of our readers. The plan will doubtless come up for discussion at the next meeting of the American Medical Association, of which body Dr. Rodman is an influential member. Its advantages are very evident; and some of the difficulties in its way will doubtless be urged in the discussion. Among these practical difficulties, we should think, would be the objection that such a board, having no legal status, might not be recognized by all the states. Herein would arise the question of state "sovereignty," or shall we better call it, state pride and jealousy? The problem is a difficult one, but we are convinced that Dr. Rodman has met it more than half way.

The Meeting of the Association of American Physicians.—In the columns of this issue of the **Philadelphia Medical Journal**, under the head of Society Reports, will be found abstracts of the papers read at the Seventeenth Annual Meeting of the Association of American Physicians. We call the attention of our readers to the papers presented at this meeting, all of which represent careful preparation and many of which are the results of extensive original observation and experimentation. The paper by Rachford and Crane, on the Toxicity of the Ammonium Compounds; that by Abbott and Gildersleeve, on the Acid-fast Bacilli; that of Flexner, on the Histological Alterations of Cytotoxinic Intoxication; of Adler, on the Effects of Tobacco on the Tissues of Rabbits; the discussion on Splenic Anemia; the paper of Lewis and Packard, on Thermic Fever; that of Stengel and Edsall, on Gelatine as a Hemostatic, and that of Shattuck, on Tuberculous Peritonitis, are worthy of special mention. The evening session, which was devoted to a lantern-slide demonstration, was a valuable and instructive feature. The business of the meeting was conducted with dispatch, and the program was finished but little later than was expected. A word of criticism might be added on the discussion of technical points in physiological chemistry, which might better be brought up in a society devoted more exclusively to chemistry than is one composed of clinical investigators

and workers in other lines of scientific and experimental medicine.

The Havana International Sanitary Congress.—Dr. G. M. Guitéras has recently submitted to this government his report of the proceedings of the International Sanitary Congress held at Havana in February last. One of the speakers called attention to the fact that eight International conferences, dealing exclusively with sanitation, have been held in Europe up to this time, while only one previous congress had been held in America, that convened in Washington on the invitation of the United States in 1881. The fact that more than a decade had passed without a second International conference having been called by the United States was regarded by this speaker, Dr. Juan Santos-Fernandez, of Havana, as proof that the other nations of America have not been in the proper condition to derive practical benefit from such assemblies. He believed that better results were to be obtained from the initiative of private individuals than by the exclusive work of governments. A number of interesting papers were read before this congress, dealing for the most part with questions of international sanitation and quarantine regulations. The resolutions recently adopted relative to these subjects by the Pan-American Congress in the city of Mexico were accepted in full and incorporated in the resolutions passed at the conclusion of the Havana meeting. An interesting feature of the proceedings was the report of the Committee on Yellow Fever, which presented the following resolutions: "First, that the stegomyia fasciata is, up to the present time, the only means demonstrated for the transmission of yellow fever. Second, in accordance with the above, prophylaxis should consist in the destruction as far as possible of this species of mosquito, and the best means should be adopted to prevent these mosquitoes from gaining access to persons ill of yellow fever. Third, that quarantine measures against yellow fever shall be based thereon." The first and second resolutions were accepted unanimously, but representatives of the U. S. Marine-Hospital Service stated that they could not accept the third proposition in the form presented. It was necessary to bear in mind in the reformation of quarantine regulations against yellow fever the opinion of the health authorities of the Southern United States. The third proposition was finally rejected by a substantial majority. A number of important measures were recommended by the Congress, among which we may mention the formation of antileprosy leagues under the patronage of the respective governments, and also the recommendation that leagues against tuberculosis be established. Another valuable suggestion was that the campaign of publicity be initiated in all countries in which malaria exists relative to the discoveries recently made as to the transmission of the disease. It was further recommended that contagious diseases should be classified from the point of view of maritime sanitation, especially emphasizing the period of incubation of each disease. The inspection of cattle at the port of departure and of the vessel in which they are to be transported and the importance of vaccination when circumstances require it were advocated. The Congress expressed a belief that these measures should be included by the different governments in their code of laws as a preventive against the introduction of epizootics.

The Hysteria of Panic.—As are object lesson of the capabilities of the human mind to be madly unreasoning, the panic which occurred recently in this city among a crowd of girls in a cigar factory, is probably unrivalled. These girls, several hundred in number, were employed on two floors of a large building. Suddenly at the sound of a scream of pain from a poor mute, who had fallen and hurt himself, these hundreds of girls—terror-stricken, heedless, unreflecting, thinking only of fire or thinking of nothing—rush headlong to one staircase; push, crowd and jam themselves into it; and in less time almost than it takes to write it, cause the horrible death of eight of their number, and the cruel maiming of scores more. All this in spite of the fact that there were several other staircases, as well as numerous fire-escapes, built expressly to meet such emergencies.

It is difficult to analyze such a psychological exhibit as this—and yet, in a sense, it is not difficult to understand it. History affords such examples, but we recall nothing so swiftly tragic as the one we here deplore. The lower animals come the nearest to making identically such displays—as, for instance, the stampede of wild horses or of cattle on the plains. The Australian cow-boy watches in the saddle all night for the dreaded rush of his hundreds of cattle which any unusual sound may start. In the human subject the infection of example usually takes a little longer to germinate; there is a prodromal period, a period of incubation, which may be measurable.

Hence we have epidemics of hysteria in schools, and of certain crimes, and religious frenzies, and all sorts of panics and devilries growing out of ignorance and superstition. But in the case of these poor cigar makers it was the fright of fire—just as

in war it is the mad fear of disaster among men that brings on some wild retreat. Motley, in his history of the Dutch Republic, relates instances in which thousands of Dutch soldiers were cut to pieces by the Spaniards like so many beeves, without resistance. They were paralyzed with fear.

In the case of these unfortunate girls, most of whom were mere children, the catastrophe was all the more grievous because seemingly it could have been so easily averted. There was no fire. The building was well constructed, and furnished with ample means of exit. Human forethought seems to have been neither lacking nor to blame.

What About the Factory Laws?—According to the *Ledger*, the panic described above reveals that the factory laws in this State were violated. It is alleged that some of these poor children were under 13 years of age. The law in Pennsylvania is as follows:

"No child under 13 years of age shall be employed in any factory, manufacturing or mercantile industry, laundry, work shop, renovating works or printing office within this State."

Children between 13 and 16 years of age require a certificate from their parents as to their age.

The fact is that sordid parents often break these laws willfully in order to reap gain from their young children's labor. This is so especially of some foreigners in this country. This sordidness is one of the great obstacles in the way of enforcing factory laws. The very persons who should protect children—i. e., their own parents—are the ones who offend. The panic was probably in part due to the tender age of the victims.

Medical Colleges in Small Towns.—A correspondent writes us that there is perhaps more to be said in favor of the small town as the site of a medical school than was admitted in our recent editorial upon the subject of Oxford as a medical center. He says that, if a thing has been done well once, the presumption is that it can be done well again, and there doubtless are a few excellent medical schools situated in small towns in the United States. Some of the universities of Germany, situated in towns of not more than six or seven thousand inhabitants, have medical schools renowned the world over. But he does not pretend that the small town is a desirable place for a medical school. There are few arguments in favor of it and many arguments against it, but our correspondent thinks it is possible to give adequate instruction in some branches of medicine in a small town, and the question is, why have some of our larger universities failed so completely in establishing a medical department that takes rank with their other departments?

Our friend's argument is as follows: The prime requisite of any medical school is that it should attract to its halls a considerable body of selected men as students. After all, the student body is the essential element of a university, and without it the university might just as well cease to exist. Now to attract these students three things are required. First, a competent faculty, and by competent men we mean not merely men capable of giving lectures, and demonstrations, but men capable of doing original work. But it is sometimes claimed that it is impossible to secure these facilities in a small town. That is certainly not true, says our correspondent, of a thickly settled country like Germany, or even of a country as thickly settled as the eastern and middle United States. For this purpose it is necessary to have a first-class hospital of ample size; and then, if the faculty is distinguished, this hospital will draw upon the surrounding country for material to keep its wards full. Such a hospital, of course, requires money. It should be regarded as, in a sense, a part of the teaching equipment of the medical school and should be supported from the revenues of the university so that it may be entirely under the control of the latter. Third, an adequate teaching-plant should be provided, including laboratories, lecture-rooms, demonstration-rooms, etc. This appears to be the department that occupies the minds of most of our university authorities now-a-days. It has been our correspondent's experience in Germany that some of the laboratories in which the greatest amount of original work is done, are small, ill-lighted and unattractive rooms, the chief inspiration coming from the professor in charge of the department.

Granted, then, the willingness to spend money, particularly in the direction of salaries for the teaching force, so that the very best men can be attracted to the medical school, our correspondent believes that even in clinical medicine there are many good men who would prefer the academic career to the active practice of their profession, if only they could be assured of congenial surroundings and sufficient income. He sees no reason why a satisfactory medical department should not be created in some of our great universities, not situated perhaps in the larger cities of the Union. On the other hand, he says, the heritage of the incorporated medical shool, existing for the financial benefit of the faculty, has inspired some of the men conducting our large universities with the idea that the medical school should always be a source of profit; that

the physicians in the medical school, on account of the distinction they lend the faculty, and thereby the increase in their practice and in the size of the fees they are able to charge, should be drawing a sufficient compensation for the position. It does not seem to occur to them that if in the purely technical branches, such as chemistry and anatomy, it is desirable to have men who devote their time entirely to the subject, this may also be true of the practice of medicine or of surgery.

Our correspondent, it seems to us, has drawn a rather ideal picture. In the thickly settled parts of the United States, especially in the East, the medical college in the small town is neither numerous nor prosperous; and this evidently because, in such parts, it has to face the rivalry of the big colleges in the great cities. The small colleges heretofore have been most numerous in the most thinly settled States. The reason is obvious.

The Sanatorium Treatment of Tuberculosis.—In a recent number of *Public Health Reports* there is an extract from the minutes of the proceedings at the conference of the chief physicians of German sanatoria for consumptives, held in the Imperial Insurance office at Berlin, on October 25, 1901, contributed by Frank H. Mason, United States Consul-General at Berlin. Prince Bismarck believed that every working man and woman in Germany should be compelled to contribute to a state insurance fund in order that the aged and sick should not become paupers, dependent upon charity, but should have the right to demand and receive assistance from the State.

The contributions are made in the form of stamps which must be purchased by the insured persons at the post-office and affixed to cards provided for the purpose. The payment of these premiums entitles the holders of the cards to a pension when they are too old to work, or become incapacitated to earn a living through sickness. When it is remembered that 100,000 persons in Germany succumb to consumption annually, and that the number of patients suffering with this disease in that country at the present time is estimated at 1,000,000, it is not surprising that the imperial insurance office should evince a lively interest in the practice at the sanatoria for consumptives. Moreover, the statistics recently published by the imperial health office at Berlin show that 87.7 per cent of the patients treated for consumption by the open-air system were discharged as cured or improved, so that it has been demonstrated that a timely course of proper treatment will, in many cases, preserve the capacity of the patients to earn a living, thus preventing a number of persons from becoming superannuated and claimants for pensions under the compulsory insurance law.

Among the questions discussed were the personnel of the sanatoria, the employment of patients in the sanatoria, the common treatment (1) of men and women, (2) of tuberculous and nontuberculous and (3) of insured and other patients in the same sanatorium.

Dr. Friedeberg said that the subject of the occupation of patients in the sanatoria was the vital point. The increase in the weight of the patients of the institution is generally very rapidly reduced on the return of the patient to the former occupation—generally an exhausting one—and permanent cures are therefore very seldom obtained. In many cases patients are received in the sanatoria who are, in the precise sense of the words, still capable of working, and with whom it is, therefore, no wonder that they are, on their discharge from the institution, able to earn a living.

The president, Dr. Gaebel, called attention to the fact that according to the statistical data carefully compiled at the imperial insurance office, it had been demonstrated that even after the lapse of four years from the time of discharge, 26 per cent. of the patients out of the sanatoria had remained capable of earning a living, in a sense of the invalidity insurance law.

Dr. Jacob thought it was an easy matter to find occupation for the female patients in the sanatoria. During the last decade, he said, the importance of the diet had been more and more recognized.

He supported the proposal of Dr. Friedeberg for the erection of interim institutions and convalescent homes, in order that the patients should not be obliged, on recovery, to return immediately to their old occupations.

He suggested that similar arrangements should be made in connection with the children's sanatoria now being erected.

Dr. Everken, Dr. Rahm,, Dr. Koch and Dr. Pannwitz, were of the opinon that in sanatoria the sexes should be separated. On the other hand, Dr. Pickert and Möller had seen no evil results from a common treatment of the sexes.

The Bill to Change the Name of the Marine-Hospital Service.—This bill, known as the Perkins Bill, (S. 2162), has been reported favorably in the United States Senate, and, according to our latest advices, will probably become a law. We commented on the bill at considerable length in our editorial columns on January 11th, and gave it our unqualified approval. Its objects are to change the name of the Marine-Hospital Service, and to further define and enlarge the scope of that important public service. We shall comment on the subject at greater length in the near future, but in the meantime desire to call our readers' attention to what we said on January 11th.

Indecent and Immoral Advertisements.—We should suppose that the laws of the United States prohibiting the passage of any indecent or immoral publications through the mails, would be sufficient to exclude some of the newspapers of the day. There are newspapers of a certain type that do not hesitate to carry a line of advertisements that are gross

ly immoral. Commercialism has risen above all sense of decency with them, and they do not scruple to publish the covert advertisements of the abortionist and the pander. There is evident, however, among the better newspapers a tendency to guard their advertising columns. That the postal laws are not enforced against those that offend public decency, is not to the credit of the government. In fact, the responsibility lies largely upon the officers of the law, for where the law exists, the executive is to blame if the evil continues.

At a recent meeting the Kansas City Academy of Medicine passed a series of resolutions on this subject. It demands a censorship over the press, and calls the attention of the Post-Office Department to its broken and unenforced laws. We shall await developments, and keep our eyes on the Post-Office Department.

An Inquest on a Mummy.—Our British friends can sometimes do the unconsciously humorous thing to perfection. They have lately been holding an inquest on a Peruvian mummy. But this "crowner's quest" was no more funny than the gravity with which the *British Medical Journal* assures its readers that the coroner did right. The British public have finally wakened to the fact that the coroner should be laughed at, and the mummy has been pronounced dead because the coroner "sat on it."

The innocent cause of all the trouble was a Peruvian mummy which some one was sending by express to a museum in Belgium. The unfortunate relic was discovered in a box in a railroad station in Liverpool. It was undoubtedly dead, but the coroner was sent for to certify to the fact. He held an inquest (poor man!), but did not find the cause of death, and now he is being guyed. As he is only a coroner, we have not much sympathy with him. He succeeded, however, in spoiling the mummy; and a law-suit followed, with big damages. We have always maintained that coroners hold too many inquests, and we think they should not be encouraged to include imported mummies among their victims.

The Medical Society of the State of California has passed a series of resolutions condemning the Mayor of San Francisco for removing the Board of Health and for announcing that plague does not and never has existed in California. In the meantime another death from plague is announced in California—at Davisville, wherever that is. To the outsider the spectacle continues to grow more complicated and interesting.

According to Mr. Roger S. Tracy, in the *Century Magazine*, the expectation of life for males at birth has increased nearly four years during the last fifty years. This is owing to advances in medical and hygienic science. In New York City the death-rate has fallen from 35.2 per thousand in 1860 to 22.9 at the present time. Those who claim that medicine is not an "exact" but only a "speculative" science, should revise their judgment in order to conform it to the facts.

In the *North American Review* the Hon. James Bryce, the eminent English author, lauds the work done by the United States Government in Cuba—especially the sanitary work. It is satisfactory to reflect that this work, forced upon us by war, has placed this country in the fore-front of nations which know how to practise the arts of peace.

Current Comment.

THE RISING TIDE OF IMMIGRATION.

However firmly the gates of our Pacific ports may be locked against undesirable immigrants from Asia, there is no immediate prospect of measures to check the incoming at the Atlantic ports of the great stream of immigration from Europe, the character of which does not tend to grow more desirable from year to year. The arrivals at Ellis Island, our immigrant station in New York harbor, have been very heavy indeed this spring, and the present year promises to bring a greater number of recruits to our shores than we have received in any one season for ten years. The proportion of immigrants from eastern and southern Europe is constantly increasing. The Italians are much the largest single element in our recent immigration, and next to them come the people of various races inhabiting the Austro-Hungarian empire, while the third largest contingent comes from the dominions of Russia, most of these, however, being Poles and Russian Jews. We have been getting as many Greeks during the last year or two as Englishmen and Scotchmen. For that matter, the Syrians and Armenians who come to this country are decidedly more numerous than the Englishmen. The Germans and the Irish continue to come in substantial numbers, but nothing like such a volume as in former years. The Scandinavians, also, continue to send a good number of people each year.

—*American Monthly Review of Reviews.*

NO QUARANTINE AGAINST CUBA.

The Health Officer of New York has decided that it is unnecessary to quarantine against Cuban ports this Spring on account of the freedom of the island from yellow fever. This seems a small matter, but back of it lies a story of American efficiency that will always be an eloquent chapter in the history of the island, no matter what its future. This redemption of the island ports, of Santiago and Havana particularly, from the contagious diseases once rife there, is a result that in itself practically justifies, if justification were needed, the war with Spain. Before the American occupation Cuban ports were pest-holes, whose condition lay heavily on commerce with the United States, since one of the articles of export that was never listed in the invoices, but which secured entrance into American ports all too often, was the deadly fever. The cost in lives, in money lost in the embargo put on

commerce in the South and in the administrative outlay which the general Government and the States involved were called on to make in order to stamp out the epidemics, has reached enormous figures, and that the end of this state of things is in sight should be a matter for general congratulation.

—*The Philadelphia Press.*

A BLACKMAILER CAUGHT.

One of the rarest and most diabolical attacks upon physicians which it has ever been our lot to record was inaugurated in Toronto a few weeks ago by Thomas McKibbon, and a woman whom he claimed as wife as an accomplice.* * * The *modus operandi* of the blackmailer was to send for the doctor to visit the wife or young child at their apartments; or the wife would call at the doctor's office. After the lapse of a few days McKibbon would wait upon the doctor and charge him with having had improper or criminal connection with Mrs. McKibbon, and threaten him with criminal action, and a civil suit for $5,000; in fact threaten him with moral assassination, unless the doctor was prepared at once to make a satisfactory settlement. Dr. King placed himself in connection with the Crown authorities, and meanwhile, in a cool, level-headed manner, planned the capture and conviction of the villain by drawing evidence from him while in his office, in the hearing of a secreted witness, sufficient amply to prove the criminality of the attempt, after which he was arrested. * * * When his time for trial arrived, he pleaded guilty and asked for mercy. * * * Judge McDougall sentenced him to serve two years less one day in the Central Prison; and in doing so said, "No man is safe from the blackmailer." "I regard it as one of the most despicable crimes that could be committed." "The next blackmailer that comes before me will get the longest term the law imposes." Every member of the medical profession is equally and constantly exposed to the danger of blackmailing, and Dr. King has conferred a benefit upon his professional brethren by his courageous conflict and capture of McKibbon, the audacious blackmailer.

—*The Canadian Practitioner and Review.*

Correspondence.

THE FERMENT OF THE APPENDIX.

By JOHN ANDERSON, M. D., of Seattle.

To the Editor of the **Philadelphia Medical Journal:**

In view of the recent and tremendous interest in the appendix that has been excited by the discovery of the frequency of inflammatory conditions in this organ, and the extraordinary results of surgical interference, we believe that it will be of interest to your readers to describe some recent hypothetical discoveries in regard to the physiology of this organ.

The appendix can properly be described as a glandless duct; that is to say, the mucous follicles in its wall, inasmuch as they do not secrete a specific substance, can be left out of consideration. Formerly it was supposed that the appendix had no particular function and was practically a relic of an anatomical structure found in herbivora, but it has recently been discovered that it exhales a volatile ferment which possesses the peculiar power of accumulating in the nervous system of any person who inhales it, causing peculiar changes when a sufficient quantity has been inhaled. As surgeons are most exposed to this deleterious substance, the results have been most carefully noted in connection with them. The first symptoms are a slight tendency to dogmatism. This increases to such a point that, usually, after about 200 appendectomies have been performed, the surgeon believes that he knows all that possibly can be known about this operation, and that the internal medical man knows nothing at all about appendicitis. By the time 500 operations have been performed, a sufficient quantity of the brain-curdling ferment has usually accumulated to cause the surgeon to believe not only that he knows all about appendicitis, but that neither the internal medical man nor any other surgeon whosoever he may be, and no matter how much he may agree with the opinions of the surgeon who has been infected, knows anything at all about the subject. In this stage the victim usually exhibits a marked degree of euphoria, and occasionally acts as a violent irritant when brought in contact with any medical society in which the subject of appendicitis is being discussed.

Now that this ferment has been discovered, it is to be hoped that by the injection of suitable quantities either surgeons may be rendered immune, or that we may produce in some of the lower animals an anti-appendicitis serum that will prevent or perhaps even cure the fatal effects that we have described.

HUMAN AND BOVINE TUBERCULOSIS.

By D. E. SALMON, D. V. M., Bureau of Animal Industry, Washington.

To the Editor of the **Philadelphia Medical Journal:**

Referring to the letter of J. George Adami, M. D., page 681, this Journal, April 9, 1902, concerning Chauveau's experiments on the communicability of human tuberculosis to cattle, it appears to me that the explanation of Chauveau's conclusions is not at all plain. Dr. Adami says:

"Stated briefly, Chauveau developed tuberculosis in calves by feeding them with material from acute miliary tuberculosis in man, as again by intravenous injection of the same material, but found that, whereas bovine tuberculous material, injected subcutaneously, led inevitably to a rapid generalization of the disease, human tuberculous material caused a localized disturbance at the point of inoculation with little * * * liability to lead to generalized disease."

This would lead one to conclude that Chauveau discovered there was great difference between the effects of human and bovine tuberculosis when inoculated subcutaneously in cattle. I fail to find anything in Chauveau's article justifying this position. What Chauveau says is that "before his experiments with human tuberculosis were made, he had performed 3 subcutaneous inoculations with bovine tuberculous material, and had obtained the same results, that is to say, a local specific tumor, with tuberculization of the nearest gland, without the least manifestation of generalization of the infection. These comparative experiments agree, then, in proving that the inoculated tuberculosis may remain localized a long time before producing generalized lesions. They complete, in fact, the demonstration that I wish to give, namely, that the human tuberculous virus acts on the bovine species exactly like the tuberculous virus which originates in this species itself."

The original French is as follows:

"Ce fait de generalisation n'a pas été constaté seulement dans les expériences faites avec la matière tuberculeuse provenant de l'espèce humaine. Avant ces expériences, j'avais fait, sur la vache trois inoculations sous-cutanées avec de la matière tuberculeuse bovine et j'avais obtenu les mêmes résultats, c'est-à-dire une tumeur spécifique locale, avec tuberculisation du ganglion le plus voisin, sans [illegible] de généralisation de l'infection.

"Ces expériences comparatives s'accordent donc pour prouver que la tuberculose inoculée peut rester fort longtemps localisée avant de produire des lésions généralisées. Elles achèvent enfin la démonstration que je voulais don-

ner, à savoir que le virus tuberculeux human se comporte, sur l'espèce bovine, exactment comme le virus tuberculeux qui provient de cette espèce même."

AN EXPLANATION.

By J. GEORGE ADAMI, M. D., of Montreal.

To the Editor of the **Philadelphia Medical Journal:**

Calling this afternoon upon Dr. Salmon at the Bureau of Animal Industry, I was there shown a copy of the letter forwarded to you by him a few hours previously. It is, I confess, not a little painful to discover that in my anxiety to be absolutely accurate, I have only succeeded in perpetrating a worse inaccuracy; for unquestionaly the matter is as Dr. Salmon states it. Re-reading Chauveau's article, I am at a loss to make out how I came to overlook the paragraph quoted. I can only imagine, but do not like to believe, that, studying the article at the end of a long morning's work in the library, and so with dulled attention, my preconception of what it contained, gained from the abstract already in my possession, led me to note the points confirmatory of that abstracted and not to grasp the subsequent argument. But this is no excuse.

Reviews.

The Life of Pasteur, by René Vallery-Radot. Translated from the French by Mrs. R. L. Devonshire. Two Vols. Westminster. Archibald Constable & Co., Ltd., 1902.

This work is of peculiar interest to members of the medical profession, for it is the life of a man who, without a medical education, has placed the science of medicine under the deepest and most lasting obligations to him. In this respect the life and work of this great scientist were unique. Pasteur often regretted that he had not had the training of a physician; and yet his greatest contributions to science were in the domain of pathology, and his discoveries have enrolled him forever among the great expounders of fundamental medical facts. It was not inappropriate that one of the arenas of his most aggressive combats was the French Academy of Medicine, as well as the Academy of Sciences, and it was but logical that he was acknowledged and claimed as an honorary member of the profession.

This biography is written with great vivacity and charm, as well as with a most sympathetic appreciation of the true import of Pasteur's labors; and, moreover, is so well translated that it preserves in style and spirit the characteristics of a genuine French memoir. This is saying much, for the French have long retained an ascendency in this department of literature. They come naturally by the art of writing memoirs and biographies—an art in which the English especially do not equal them. The truth of this assertion is displayed on a cursory comparison of this life of Pasteur with the recent, and equally important, life of Huxley. We regret to have to say that the advantage is with the French biography in literary form and execution.

The personality of Pasteur was striking. He was a man of strongly marked individuality, and one of the attractions of this work is the faithfulness with which this personality is preserved in its pages. Of the most humble origin, being the son of a poor tanner, the eminent scientist was a shining example of what can be done by poor but enlightened parents in the education of a son. The obligation he held to his parents was always one of the sacred motives of his life: his acknowledgment of it was always fervid and pathetic; and no finer passage can be found in the story of any man's life than where Pasteur, at the dedication of a tablet to mark the humble cottage in which he was born, turned the event into an occasion for an eloquent and pious tribute to the memory of his father and mother. Pasteur had, indeed, most of the noble qualities that grace the domestic circle and the circle of friends; and he was particularly happy in all the relations of private and public life. This work is especially valuable for the picture it presents of the intimate associations of a leading French savant.

Not the least conspicuous merit of Pasteur was his intense patriotism. He never dissociated this from his scientific zeal. The two were inseparable in his mind. When he made a discovery in science, it was for the "glory of France." This combined patriotic and scientific zeal was often amusingly shown, but it was never amusing to Pasteur. He saw no humor in it, as the American reader must. To the outsider, who regards science as international, the connection between the microbes of charbon and the "glory of France" is not always apparent. But in this respect Pasteur was genuinely French. Some French writer has claimed that "chemistry is a French science." For Pasteur, bacteriology was essentially Gallic. This intense patriotism showed itself when Pasteur, after the Franco-German War, returned his honorary diploma to the University of Bonn; and, later, when he refused a proffered honor from the present German Emperor. He could not distinguish between the rape of Alsace and the cause of hydrophobia.

This French peculiarity is the cause of the only conspicuous demerit in this book. The world outside of Paris and France is too much ignored. Not sufficient credit is given to foreign workers. With the exception of Sir Joseph Lister and Koch, few outsiders are mentioned in the whole work, and Koch receives but scant consideration.

In respect to the purely scientific contents of the book, the reader will be repaid for a careful perusal of its pages. The work should be read by everyone who wishes to be informed on the great events and progress of bacteriology. Pasteur, if not the father of this science, was certainly its great exponent. His work began naturally in chemistry (for he was a trained chemist), and its first fruition was a study of crystallization, especially in tartaric acid. This led him naturally to a study of fermentation; and the demonstration of its microbian nature followed. From this time onwards Pasteur was a microbiologist. His greatest merit was to have seized the truth that fermentation had its counterpart in infection. To him, more than any experimenter, modern science owes this conception of the infectious diseases. As for the rest, all is detailed in this Life. Pasteur advanced to the study of silkworm disease, to charbon or splenic fever, to septicemia, to chicken cholera, and to hydrophobia. But he supplied the inspiration for the study of many more, and his students took his methods abroad for the study of cholera and plague.

In his scientific life Pasteur was not only an experimenter and originator, but he was a controversialist of the first order. What he discovered in the laboratory he championed in the Academy. To this fact are owing in a measure the success of his work and the preservation of his fame. He was furiously opposed, but he was furiously aggressive. Without medical education, he appeared single-handed against the greatest French physicians in their own Academy, and forced victory. It was to the credit of the Academy that they gave him the privilege of debate. The whole story is of absorbing interest.

With allowance for some rather natural French effervescence, and for a somewhat limited range of vision (which barely extends to England and Germany, and never to America), this book must be adjudged one of the most notable contributions to the belles lettres of medicine.

[J. H. L.]

Ophthalmic Myology, a Systematic Treatise on the Ocular Muscles. By G. C. Savage, M. D., Professor of Ophthalmology in the Medical Department of Vanderbilt University, small 8 vo., pp. VIII, 589: with sixty-one illustrative cuts and six plates. Published by the author, Nashville, Tenn.

Perusal of this work will evidence to anyone who is able to follow the intricacies of this, one of the least popularly understood branches of ophthalmology, that the author has given the subject he has had to deal with, an amount of consideration and research that dwarfs all previous attempts that have been made here and abroad. He is to be congratulated upon the systematic manner in which he has presented such an immense amount of subject matter, much of which is—as of necessity comes to those who delve deeply and seriously into any questions—new and original.

To cavil at miner discrepancies in regard to fixed

anatomical facts; to discuss uncertainties of statements regarding uncertain physiological action; and to find fault with methods of procedure that necessarily give rise to definite results—ill becomes anyone who is sufficiently broadminded to leave such minor matters alone. The duty of a conscientious reviewer of this type of work set before him in a volume like this—one of the life works of an earnest and competent observer is, is such a book doing good? is it advancing the knowledge of the subject? is the author broadening the scope and usefulness of rational medicine? can he be helped? These are the queries! If so, he and his labors must be met more than half way: they must be considered in a spirit that is free from the ignorance of scorn, and dealt with by a mind that is devoid of all envy of competition. In this manner, the present reviewer, who has read every page of the copy of the work that has been given to him for the purpose, has performed his duty. He has found much that is good, and more that will be of benefit to him and others. To his co-laborers, he can recommend a detailed study of the book; to those who are at all interested in obtaining a consummate knowledge of disturbances and diseases of the ocular muscles, he can safely offer the work as a useful and valuable guide. [C. A. O.]

Hæmoglobin-Scala.—T. W. Tallqvist. Andra upplagan. Helsingfors. Wentzel Hagelstam's Förlag. American Agent, Edward Pennock, Philadelphia. Price, $1.50.

This remarkably simple method of estimating the hemoglobin has received considerable favorable comment of late from a number of hematologists and clinicians. The little book consists of a number of detachable sheets of white filter paper. A drop of blood is withdrawn in the usual way and a piece of this filter paper thoroughly saturated with it. The color of the paper is then compared to a carefully prepared scale at the back of the book which will indicate at once the amount of hemoglobin present. The test can only be performed by daylight. For all practical purposes the method is quite satisfactory and the results compare favorably with those obtained by the more complicated hemoglobinometers. [T. L. C.]

On the Study of Binucleation. K. A. Kutschuk (*Archiv Biologitscheskich Nauk*, Vol. IX, No. 1) made a number of experiments on animals (guinea-pigs) to determine the relative distribution of binucleate cells in the liver under normal and abnormal conditions. To determine the normal distribution, the animals were kept under observation for 11 days, then killed and portions of the liver removed for examination. The sections were fixed in bichloride of mercury for 2 hours at body temperature, transferred into alcohol of increasing strengths, and imbedded in zylol-paraffine. The method of staining was that recommended by London, intended to bring out the outlines of the individual cells. The sections were kept in ammonioferric alum for ½ hour, washed in water, stained in 1% solution of hematoxylin in 10% alcohol, for ½ hour, again immersed in the ferric alum solution for ½ hour, washed in water, dehydrated in alcohol and zylol and mounted in balsam. In another series of guinea-pigs the bile duct was ligated, the animals killed 2-3 days subsequently and the liver studied in the same manner. The following conclusions were reached: 1. In a normal guinea-pig, judging from a count of 58,192 cells, the average percentage of binucleate liver cells is 9.88. 2. In a guinea-pig with a ligated bile duct the average percentage of binucleate cells, in a count of 77,296 liver cells is 5.86. 3. The ligation of the bile duct appears to be a factor influencing markedly the direct division of the cells but not their nuclei. 4. A systematic study of binucleation furnishes data in favor of the theory of the autonomy of the cell constituents, the cell-body and the nucleus. 5. The ligation of the bile duct acts differently on direct and indirect division, showing once more that the process of karyokinesis is subject to different laws than the process of direct division. [A. R.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Medico-Chirurgical Hospital.—The new laboratory building was opened May 1, short addresses being delivered by the president of the institution and by Professors E. J. Houston and L. W. Fox. The new building is at the corner of Eighteenth and Cherry streets. It is said that the chemical laboratory is one of the finest in the United States. The cost of the building has already been $125,000.

Mosquitoes at League Island.—Petroleum is soon to be used for exterminating the mosquitoes at League Island Navy-yard. Besides sprinkling the marshes and pools on the island with oil, doors and window screens are being placed upon all the buildings.

Associated Health Authorities and Sanitary Officers of Philadelphia.—The ninth annual meeting was held at Butler, Pa., May 7 and 8, in conjunction with the fifty-first regular meeting of the Pennsylvania State Board of Health. The feature of the evening was a symposium on smallpox. Dr. William M. Welch, of Philadelphia, delivered the annual address upon vaccination. A number of other interesting papers were read.

Samaritan Hospital.—The corner-stone of the new administration building was laid May 3. When this new building is completed the institution will have a frontage of 300 feet and will be able to accommodate 100 patients.

Scarlet Fever.—An epidemic of scarlet fever prevails in the southern section of Philadelphia, particularly in the Thirty-sixth Ward. For the week ending May 3, 103 cases were reported, with 7 deaths from this disease. The other infectious diseases all show a decrease during the past week. 97 cases of typhoid fever were reported with 7 deaths; 41 of diphtheria with 3 deaths; and but 15 of smallpox with one death.

University of Pennsylvania.—The Dean of the Medical School has decided not to allow any graduate of a medical school other than the regular school of medicine to take any one of the post graduate courses to be given by the University Medical School this spring.

Measles in Norwood, Pa.—An epidemic of virulent measles at Norwood has resulted in the closing of the public schools. The smaller children seem most affected.

Death of Dr. Miller.—Dr. John S. Miller, formerly assistant demonstrator of anatomy at Jefferson Medical College and surgeon to St. Joseph's Hospital, died in Denver, Col., April 29, aged 46 years. He was graduated from Jefferson Medical College in 1881, and was resident physician at the German Hospital.

NEW YORK.

The Association of the American Medical Colleges will hold its annual meeting at Saratoga, June 9. The presidents will be Drs. W. L. Rodman, of Philadelphia, and H. B. Ellis of Los Angeles, Cal. The secretary of the association is Dr. Bayard Holmes. Among the subjects to be discussed are: "Should a knowledge of French and German be required for admission to medical schools? If so, to what extent?" "What should be the requirement in Latin?" "What should be the minimum requirement in mathematics?" "To what extent should a knowledge of biology be required?" "And to what extent should a knowledge of physics and chemistry be demanded?" Among those expected to enter the discussion are Mr. J. R. Parsons, Jr. secretary of the Board of Regents, New York; Dr. G. M. Kober, Georgetown University; Dr. Robert Reyburn, Howard University; Dr. W. H. Earles, Milwaukee Medical College; Dr. J. D. Smith, Women's Medical College, Baltimore; Dr. J. L. Heffner, Syracuse, N. Y.; Dr. E. A. de Schweinitz, Columbian University; Dr. O. U. B. Wingate, Wisconsin Medical College; Dr. K. L. Whitehead, University of North Carolina; and Dr. G. W. Hubbard, Meharry Medical College.

Dr. Jacobi's Retirement.—Dr. Abraham Jacobi, for 32 years professor of pediatrics in the College of Physicians and Surgeons, New York City, will resign this spring. He was born in Westphalia in 1830, studied in Greifswald and Gottingen, and was graduated at the University of Bonn. Coming to this country in 1857, he became lecturer on infantile pathology, and, in 1860, professor of the diseases of children, occupying the first chair upon that subject in

New York. In 1895 he received the offer of a clinical professorship in one of the largest schools in Germany, but refused to leave America. Two years ago, on his 70th. birthday, he was presented with a "festschrift" written in his honor. Dr. Jacobi holds membership in and has been president of the most important medical societies in this country, and is an honorary member of many European societies. He has written numerous text-books and treatises upon children's diseases and other professional subjects. In 1895 the University of Michigan conferred upon him the degree of LL. D.

Duty Upon Surgical Instruments.—The Albany Hospital, Albany, has had to pay duty upon certain surgical instruments, a microscope, and other articles, imported for the use of the hospital, under a recent ruling of the Treasury Department, which decided that a hospital, in spite of its incidental educational features, is not an institution incorporated and established solely for educating purposes, nor a college, academy, school, or seminary of learning

Long Island College Hospital.—The annual Alumni Scientific meeting will be held May 10. Papers will be read by Drs. G. R. Butler and J. O. Polak. The paper of the former will be discussed by Drs. Stengel and Packard, of Philadelphia, and Drs. W. H. Thomson and Jacobi, of New York. Dr. Polak's paper will be discussed by Drs. Clark and Baldy, of Philadelphia, and Drs. Pryor and Janvier, of New York.

WESTERN STATES.

Colorado State Medical Society Prize Essay.—The Colorado State Medical Society offers a prize of $25 for the best essay, for circulation among the laity, upon the dangers of self-drugging with proprietory medicines. The competition is open to all. Essays must be typewritten, in the English language, must contain not more than 3000 words, and must be submitted before June 15, 1902. Each essay must be designated by a motto; and accompanied by a sealed envelope, bearing the same motto, and enclosing the name and address of the author. The essay receiving the prize will become the property of the Society for publication. Others will be returned to their authors. Essays should be sent to the Literature Committee, Dr. C. A. Graham, secretary, Stedman Block, Denver, Colorado.

Kansas City Academy of Medicine.—From a paper read by Dr. J. W. Kyger, on the decadence of the American race, it was shown that one of the causes of this condition was the publication in newspapers of personal medical advertisements. The Academy of Medicine of Kansas City, Missouri, therefore resolved that such personal medical advertisements be abolished from the newspapers; further that the attention of the post-office department be called to this matter, that the distribution of such newspapers, periodicals, and magazines be prohibited in the United States.

Medical Society of the State of California.—At the annual meeting, held April 15 to 17, the following resolution was adopted:

Whereas: The Mayor of the city of San Francisco has seen fit to remove the so-called old Board of Health, and Whereas: The Chief Executive of the City has stated that he has determined, after a prolonged personal investigation, that bubonic plague has never existed in San Francisco, and Whereas: The position is absolutely unsupported by any competent, unprejudiced physician who has made personal examination of suspects or alleged cases of plague before or after death, or who has examined the bacteriological evidence presented; and if further in direct conflict with the findings of the Federal Government Experts and Special Commission; therefore, be it Resolved: That the Medical Society of the State of California emphatically condemn this action on the part of the Mayor of San Francisco and at the same time endorse the position always maintained by the old Board of Health in its sanitary defence of the people of the city of San Francisco and of the country at large. The following officers were elected for the ensuing year: President, Dr. F. B. Carpenter; vice-presidents, Drs. C. C. Wadsworth and B. A. Hodghead; secretary, Dr. G. H. Evans, and treasurer, Dr. E. E. Kelly.

International Association of Railway Surgeons.—At the annual meeting, held at St. Louis, April 30, representatives were present from the United States, Canada, and Mexico. The convention was in session 3 days. Dr. Rhett Goode, of Mobile, Ala., president of the Association, presided. Governor Dockery delivered an address of welcome, to which Dr. F. J. Lutz, of St. Louis, responded.

The Arkansas State Medical Society will meet at Little Rock, May 13 to 15.

Experiments to Prevent Plague.—Drs. V. C. Vaughan and F. G. Novy, of the University of Michigan, expect to leave for Asia about the middle of June, upon an expedition to India for testing the efficacy of benzozone, an organic peroxide which is believed to be a cure and a preventive of typhoid fever, cholera, plague, dysentery and all other diseases, the seat of which is in the intestines.

Plague in the United States.—The Public Health Reports for April 25 contain the announcement of another case of plague in San Francisco. The patient, from Davisville, Cal., was brought to San Francisco, where death followed April 20. The last reported case before this was one brought to San Francisco from Berkeley, Cal., death occurring February 22.

MISCELLANY.

United States Marine-Hospital Service.—The Senate Public Health and National Quarantine Committee directed a favorable report upon the Perkins-Hepburn Bill, May 5, after very careful consideration. This is the bill first introduced into the House of Representatives December 18, 1901, by Mr. Hepburn, and later read before the Senate by Mr. Perkins, recommending a change in the name of the U. S. Marine-Hospital Service to that of the U. S. Health Service, providing for an increase in the efficiency of that service. Some few amendments were made which did not affect the value or character of the bill, which will most probably soon become a law.

Cholera.—General Chaffee has issued stringent orders to prevent the spread of cholera in the Philippines. No aerated water except imported, and no unboiled water at all can be used. Sentries are posted at all hydrants to prevent anyone from drinking. Precautions are also taken against infection by flies. Persons exhibiting symptoms of cholera are at once ordered to report to the army surgeons. A soldier died May 5 of cholera on the U. S. transport *Warren* in quarantine at Manila. Crew and passengers have been landed, and the steamer will be fumigated and quarantined for another 5 days.

Bubonic Plague.—It is reported that bubonic plague has appeared at Nairobi, Zanzibar, Africa, March 20. Rigorous quarantine is enforced, and active measures taken to stamp out the disease. Only negroes and natives have so far been attacked. It was noted that the outbreak of the disease was preceded by the death of several thousand rats. Twenty cases with 5 deaths have occurred.

Obituary.—Dr. Peter R. Thombs, at Pueblo, Col., April 28, aged 62 years.—Dr. Philip Fulmer, at Dingmans, Pa., April 28, aged 72 years.—Dr. Frederick A. Castle, at New York City, April 30, aged 62 years.—Dr. James Taylor, at Greensburg, Pa., April 30, aged 87 years.—Dr. Cyrus D. Hottenstein, at Philadelphia, Pa., May 1.—Dr. John S. Miller, at Denver, Col., April 29, aged 46 years.—Dr. Zabdiel B. Adams, at South Framingham, Mass., May 1, aged 80 years.—Dr. E. W. Aldrich, at Los Angeles, Cal., May 4.—Dr. E. Fred Russell, at Madison, Wis., April 28, aged 68 years.—Dr. John B. Wily, at Gerardstown, W. Va., May 4, aged 72 years.—Dr. Abram Harshberger, at Philadelphia, Pa., April 10, aged 62 years.—Dr. Geo. F. Hulbert, at St. Louis, Mo., April 22, aged 75 years.—Dr. John Homans, at Boston, Mass., May 4, aged 45 years.—Dr. Charles McDonough, at Reading, Pa., May 5, aged 76 years.—Dr. M. A. Cachot, at San Francisco, Cal., April 29.

CONTINENTAL EUROPE.

Tuberculosis in Cattle and Man.—Professor Behring, in his forthcoming book on tuberculosis in cattle, details the results of 6 years' investigations at Marburg, where he was assisted by Drs. Ruppel and Roemer. He affirms that tuberculosis in man and cattle is propagated by identical bacilli, and that the seeming differences between human and bovine bacilli result from the capacity of the bacilli to accommodate themselves to the organism in which they live. He reaches the conclusion that, chemically and physiologically, tubercle bacilli in man and cattle are of the same species. He has successfully infected cattle with virus from human beings, producing fatal tuberculosis. He has discovered a method to render cattle immune

against tuberculosis by vaccinating cattle when they are young. This he declares to be his greatest discovery. The method is in use on farms at Marburg.

Efficacy of Diphtheria Antitoxin. The use of Professor Behring's diphtheria serum has resulted, according to statistics just published, in the lowest death-rate ever recorded from diphtheria in Berlin, in 1901. The deaths from diphtheria were then 469. Prior to the introduction of Professor Behring's serum the deaths from this disease ranged from 1300 to 2600 a year. In all but one of the Berlin hospitals the serum treatment is in use. In these, the mortality is from 12 to 13%, whereas in the one hospital where it is not used the mortality is 64.7%.

Potassium Iodide for Tuberculosis.—Another attempt to combat tuberculosis has been communicated to the Academy of Medicine by Dr. Spadari. He claims to have arrested the progress of incipient consumption by administering potassium iodide in solution in very small doses, each dose followed by an inhalation of essence of turpentine lasting 10 minutes. This treatment is concurrent with the usual hygienic and dietetic treatment.

University Notes.—Berlin: A bust of the late Professor Griesinger was unveiled, April 18, in the new clinic for nervous diseases in the Charité Hospital.—Dr. L. Landau has been made professor of obstetrics and gynecology. —**Berne:** Dr. Carl Emmert, professor of medical jurisprudence, the oldest member of the medical faculty, celebrated his 80th. birthday, April 13th.—**Breslau:** Dr. Schirmacher has been appointed chief of the clinic for syphilis and dermatology.—**Graz:** The professorship of dermatology, left vacant by the death of Dr. Jarisch, has been offered to Dr. Rille, of Innsbruck.—**Greifswald:** Dr. Moritz, of Munich, has accepted the position of director of the medical clinic formerly held by Dr. Krehl.—**Munich:** Dr. Friedrich Müller, of Basel, has been appointed director of the second medical clinic, replacing Dr. von Bauer.—Dr. Fritz Doit has been appointed director of the medical polyclinic in Reisingerianum, replacing Dr. Moritz.—**Pisa:** Dr. C. Fedeli has been appointed professor of medical pathology and Dr. D. Baldi, professor of pharmacology.—**Prague:** Dr. Karl Chodounsky has been appointed professor of pharmacology in the Bohemian University, replacing the late Dr. Jirus.—**Tours:** Dr. Barnsby, professor of natural history, has been appointed director of the medical school.

In von Leyden's Honor.—The *Berliner klinische Wochenschrift*, No. 16, which appeared April 21, and the *Wiener Klinische Rundschau*, No. 16, which appeared April 20, are "fest" numbers in honor of the 70th. birthday of Dr. Ernst von Leyden. The Medical Society of Charkow has elected him an honorary member.

A Bill Against Corsets.—Dr. Philippe Marechale, of Paris, is making an effort to have the manufacture of corsets placed under state control, as according to his estimation, drawn from the investigation of six thousand cases by means of X-rays, 25 per cent. of the young women who wear corsets die of pulmonary diseases, 15 per cent. suffer from organic derangement throughout their entire life, while only 30 per cent. retain their health. One article of the proposed measure prohibits women under thirty from wearing any kind of corset, under penalty of three months' imprisonment and a fine of not less that $193.

Pasteur Institute, St. Petersburg.—During the past year, 1061 persons were treated at the Pasteur Institute, connected with the Institute of Experimental Medicine at St. Petersburg, with a mortality of 0.1%.

Actinomycosis in France.—Professor A. Poncet, of Lyons, recently read a most interesting study, prepared with Dr. L. Berard, before the Academie de Médecine, upon human actinomycosis in France. This was first noted in 1888. Altogether, Dr. Poncet has collected 146 cases. The disease has been observed in 22 out of the 87 departments of France. Probably thousands of cases pass undiagnosed each year. This fact is much to be regretted, because the disease is certainly curable when treatment is begun early. The possibility of actinomycosis being the cause of ulcerative and suppurative lesions should not be forgotten.

Obituary.—The death is announced of Dr. Henri Rendu professor of medicine in the Paris faculty, member of the French Academy of Medicine, and secretary of the Medical Society of the Paris Hospitals, aged 58 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

April 19, 1902.

1. Remarks on a Series of Cases of External Operations on the Larynx. A. M. SHEILD.
2. Some Observations on Thirty-five Cases of Chronic Suppuration of the Maxillary Antrum. H. TILLEY.
3. The Treatment by Asch's Operation of Devitations of the Nasal Septum. E. S. YONGE.
4. The Influence of Nasal and Nasopharyngeal Obstruction upon the Development of the Teeth and Palate. A. L. WHITEHEAD.
5. Foreign Body in the Esophagus. J. McKENZIE.
6. The Causation of Death during the Administration of Chloroform. E. H. EMBLEY.

1.—Sheild reports a case of foreign body in the larynx a case of fibroma of the larynx, 2 cases of epithelioma of the larynx, 2 cases of stenosis of the larynx, and 3 cases of papilloma of the larynx, operated upon through an incision in the neck. Sheild always uses chloroform in these cases and insists on the importance of having it administered by a highly skilled anesthetist. The larynx and trachea are exposed through a longitudinal incision running from above the thyroid to 1½ inches below the cricoid cartilage. The isthmus of the thyroid gland is retracted downwards, the trachea opened and a tube covered with compressed sponge introduced. Eight minutes are allowed to elapse for the sponge to swell and shut off the field of operation from the respiratory tree. Great care should be taken that the tube is well constructed so that there can be no danger of the sponge becoming detached from the tube. The anesthesia is continued by having the administrator blow the chloroform vapor into the tube by means of a bent cannula. The thyroid cartilage is divided by a fine saw if it is calcified, or by means of strong scissors curved on the edge, leaving, if possible, the extreme upper border intact so as not to interfere with the petiolus of the epiglottis. The edges of the cartilage are grasped with forceps, retracted and everted and the growth or foreign body removed. In order to diminish the troublesome oozing, the tissues from which the growth springs are painted with a 20% solution of cocaine to which is added 10 grains of suprarenal extract dissolved in half dram of cold water. A Turkey sponge to which is attached a strand of silk is pressed into the trachea at the lower angle of the laryngeal wound, the growth grasped with forceps and freely excised. Pressure is made on the wound inside of the larynx with sponges wrung out of spirits of turpentine. The application of the actual cautery finally checks all oozing. Iodoform is dusted upon the part and the thyroid cartilage is united with kangaroo tendon, drilling the cartilages with a fine drill if they be markedly calcified. The tracheal tube is removed as soon as the patient has recovered his coughing reflex and partial sensibility. The opening in the trachea is allowed to granulate. The patient keeps the sitting position in a steam tent and occasionally inhales the vapor of creosote. Three times a day a spray of equal parts of listerine and water is used for the larynx. Rectal alimentation is employed for 2 days. At first swallowing is performed by the patient lying on the side, the tube of the feeder being placed in the dependent cheek. The voice should not be used for at least a month and then only in a quiet whisper. F. T. S.

2.—Chronic suppuration of the maxillary antrum is caused by trauma, carious tooth and infection through the nasal passages. A carious tooth is the most frequent cause. There is no relation between antral disease and atrophic rhinitis. The symptoms consist of a chronic

nasal discharge made worse when the head is dependent, headache and neuralgia in some cases, gastric symptoms in others, pharyngeal and laryngeal irritation in many, aural symptoms in a few, and rarely hemorrhage from the nose. The prognosis is good as regards the relief of the symptoms if there be no complicating ethmoid or frontal sinusitis, nasal polypi, or carious bone in the walls of the antrum. Dental cases are more amenable to treatment than those of intranasal origin. The duration of the condition, the general health of the patient and the persistence in following treatment are also factors in the prognosis. The diagnosis is made by detecting a purulent discharge in the middle meatus after careful cleansing of this meatus, especially after the head has been held so that the maxillary ostium becomes the lowest point of the antral cavity. The diseased antrum is less translucent than its fellow and finally a fine trocar and cannula may be passed backward and outwards into the antrum through the inferior meatus. The best treatment consists in removing the second bicuspid or first molar tooth, perforating the antrum through the socket, and inserting a silver tube. This is simple, affords drainage from the most dependent part of the antrum, can be performed under gas anesthesia, and is successful in the majority of cases. When it fails, the more radical operation of opening the antrum through its anterior wall may be performed. In 3 of the author's cases the alveolar operation was followed by alarming hemorrhage. [F. T. S.]

3.—Yonge reports 4 cases of **deviated septum** operated upon by the Asch method. The results were excellent in all the cases. In one case a small perforation followed the operation, but this causes no trouble. [F. T. S.]

4.—**Nasal obstruction** is due to abnormal conditions of the turbinated bones by bony or soft tissue hypertrophy, to deviations or exostoses of the septum, to congenital stenosis of the nares, foreign bodies, rhinoliths, new growths and to contraction by growth or inflammatory swelling outside the nose. Nasopharyngeal obstruction is due to the presence of adenoid vegetations, new growths, enlarged tonsils, prominence of the atlas, or inflammatory swelling. The face is vacant, the mouth open, the jaw hanging and the voice curious in tone; there is a nasal discharge, diminished hearing, recurring headaches, snoring at night, and, in older children, a high palate, irregular teeth, and deformed chest. When nasal obstruction occurs before the second dentition, the palate becomes high and domeshaped, the alveolar process forms an ellipse instead of a semicircle, the lateral margins are approximated, and the whole growth of the upper jaw is retarded, but the milk teeth are in their normal position. After the second dentition the alveolar processes become more approximated, the palate more elevated, and the jaw V-shaped; the median incisors are turned so that their lingual surfaces look toward each other, the lateral incisor and, frequently, the biscuspids are pushed inward and the molars outward. [F. T. S.]

5.—McKenzie reports a case in which a **penny lodged in the esophagus** where it is crossed by the right bronchus. It was located by the X-rays and removed with long forceps after the expension of considerable force [F. T. S.]

6.—As the result of a series of physiological experiments on dogs, Embley concludes that the heart muscle itself is very sensitive to the poisonous effects of **chloroform.** Chloroform raises the excitability of the pneumogastric nerve, especially in the early part of its administration. This increased excitability of the vagus mechanism is due to the action of chloroform on the centers. The inhibitory action is more intense and fatal, because it is exercised upon a heart the spontaneous excitability of which is already diminished. Chloroform vapor, not stronger than 1% in the air, administered to morphinized dogs after a period of mild excitation, slowly depresses the vagus excitability; above 2% in the air inhaled, it may occasion dangerous persistent inhibitions in dogs. Section of the vagi in dogs or atropinization absolutely abolishes sudden heart arrest from chloroform, the heart under such conditions failing slowly with rapid pulse. Under these conditions the respiration fails when the bloodpressure falls sufficiently, and invariably long before the heart stops. The central medullary vasomotor system is stimulated, at any rate for a time, by chloroform. Experiments show that the effects of chloroform on the peripheral vasomotor mechanism are paralytic, and on the central system stimulative. Failure of respiration is due to fall in bloodpressure, and with a good bloodpressure respiratory failure is practically impossible. Chloroform in the early stages of the administration should be given slowly and in a strength of less than 1% until the initial increased excitability of the vagus mechanism gives place to diminished excitability. [F. T. S.]

LANCET.

April 19, 1902.

1. Goulstonian Lectures on Some Abnormal Physical Conditions in Children. (Lecture II.) GEORGE F. STILL.
2. The Lumleian Lectures on the Comprehensive Study of Thoracic Phthisis. (Lecture III.) F. T. ROBERTS.
3. The Hunterian Oration on Organotherapy. ARTHUR T. DAVIES.
4. A Case of Purulent Peritonitis associated with Empyema; Recovery. HENRY ASHBY.
5. Two Cases of Paralysis Agitans in the same Family, in which Improvement Followed the Administration of Hyoscine. JUDSON S. BURY.
6. On Cardiac Inadequacy. ALEXANDER MORISON.
7. Pyrexia of Gastro-Intestinal Origin during the Puerperium. ETHEL M. N. WILLIAMS.
8. Primary Carcinoma of the Ampulla of Vater. F. DE HAVILLAND HALL.

1.—Still delivered the second lecture **on some abnormal psychical conditions in children** before the Royal College of Physicians of London on March 6, 1902. In this lecture he discusses the morbid defect of moral control associated with psychical conditions. He reports a number of cases which lend support to the view that defect of moral control may not only be the result of congenital limitation of the capacity for its development by some lesion of the brain dating from antenatal life, but it may also be due to arrest or delay of its development by physical disease occurring in infancy, and further, if there has already been considerable progress in its development, that it may be lost to a greater or less degree as the result of psychical disease, particularly lesions of the brain and certain febrile conditions. He next discusses the defect of moral control as a morbid manifestation without general impairment of intellect and without physical disease. He thinks that cases of this kind may be divided into 2 groups, (1) cases in which there is a morbid failure of the development of moral control; and (2) cases in which there is a loss of already acquired moral control. He reports cases which illustrate these conditions and he finally concludes it would seem from clinical evidence, as was suggested by the lack of any constant proportion between general intellect and moral defects in imbeciles, that a morbid defect of moral control may occur apart from any general impairment of intellect. We can recognize in children both the morbid failure in the development of moral control and also a morbid loss of already acquired moral control. [F. J. K.]

2.—Roberts delivered the third lecture **on the comprehensive study of thoracic phthisis** before the Royal College of Physicians on March 20, 1902. This address is devoted to the study of the clinical history and investigation of thoracic phthisis. He discusses the various modes of on-

set. He outlines clinical investigation of cases under the following headings: (1) Symptomatology; (2) physicial examination; (3) special instruments and apparatus; (4) examination of the sputum; (5) examination of the throat and main air-passages; (6) removal of fluid from the pleural cavity or other morbid products from the chest; (7) inoculation with tuberculin; (8) agglutination test; and (9) the use of the Röntgen rays. All of these points are discussed at some length. Finally, the author calls attention to the course and termination of thoracic phthisis. [F. J. K.]

3.—Davies delivered an address on **organotherapy** before the Hunterian Society on February 12, 1902. His introductory remarks are summarized in a brief abstract. The use of animal substances in medicine dates back to 1500 B. C. Dr. William Salmon's work, published in 1677, gives an enormous number of preparations of extracts from the human body and from animals. The use of animal extracts as therapeutic agents in modern medicine may be traced to the lectures of Dr. Brown-Sequard, given in 1869, at the Paris School of Medicine. It was his object to point out that all glands with or without excretory ducts elaborate an internal secretion which is of great importance. More recent experiments have confirmed his view. He remarks that the internal secretion of the testicle has not been actually discovered, the results of castration in children, however, seem to show that it exists, for it is well known that in such cases the skin remains soft, the hair does not grow, muscular development is impaired, the voice remains treble, the mammæ undergo enlargement and such persons tend to take on fat. When testicular extract is injected subcutaneously, it produces an increase of hemoglobin, the cardiac force is strengthened, the vascular tone is exalted, and the mind becomes more active. He points out that in insanity its effect has been indefinite. Ovarian extract has a similar but less powerful effect. The administration of ovarian extract has been found useful in amenorrhea with chlorosis, in the menopause, in the symptoms following oöphorectomy and in amenorrhea from prolonged lactation and hysteria. Ferri and Beston state that ovarian juice given in overdoses may cause death. Overdoses given to dogs cause erection and ejaculation of semen, hemorrhages into the spinal cord and death. The assumption that ovarian secretion has an influence upon the mammary glands as pointed out by Beston led Stanley Boyd to perform oöphorectomy in cases of cancer of the breast. The results were unsatisfactory, in 6% of the cases life was prolonged for 2½ years. The therapeutic use of thyroid extract is discussed at some length. Its undoubted value in cretinism and myxedema is cited. It is also a valuable remedy in cases of parenchymatous goiter which occur in adolescents, and its administration is often quite sufficient to obviate surgical interference. In cases of adenomata or cysts of the thyroid it is indicated. He points out that there is much evidence to favor the view that the symptoms of exophthalmic goiter are due to an overaction of the thyroid gland, and that the administration of the thyroid extract in many cases produces positive harm; there is also strong evidence against the ovaraction theory, as Hutchinson has shown. The absence of uniformity in the histological structure of the gland in exophthalmic goiter, the occurrence of unilateral symptoms in some cases and the fact that the gland itself in some instances is not enlarged, and the absence of any toxicity or alteration in the thyroid secretion of the enlarged gland, are points which tend to destroy the hypothesis of hyperthyroidism. He mentions the various conditions which have been treated with thyroid extract with considerable success, such as skin affections—psoriasis, lupus, ichthyosis, and alopecia. Discussing suprarenal extract, he states that all modern works tend strongly to confirm the view that the suprarenals are functional glands of importance to the animal economy. The use of suprarenal extract in the treatment of Addison's disease has, on the whole, been unsatisfactory. The author cites many cases taken from the literature, only in a few were there positive results. He details the brilliant results which have followed the use of suprarenal extract in conditions other than the one for which it was originally given. He quotes the results of many observers, particularly Oliver and Shaffer who have found that suprarenal extract is one of the most valuable vasoconstrictor and cardiac tonics. It acts alike on the striped and unstriped muscles, given either locally or by the mouth. The extreme muscular debility and weakness and the low arterial tension in Addison's disease explain such symptoms when its influence is absent. Its value in certain cases of heart disease has been shown. When applied locally, it acts as a powerful astringent and relieves the pain occurring in cancer of the breast and esophagus and in tuberculous laryngitis. It has also been used successfully in checking severe epistaxis. He mentions that thymus gland extract, which, as was shown by Svehla's experiments, when injected intravenously in man, in the pig, and in the cat, causes (1) lowering of blood pressure; (2) acceleration of the pulse due to its action on the heart; and (3), in large doses, restlessness, with dyspnea and death. Thymus gland extract has been employed by Hector Mackenzie in cases of exophthalmic goiter, who found that it had no effect on the goiter or heart or exophthalmos, but that it improved the general condition. Pituitary body extract has been used in cases of exophthalmic goiter with negative results, as a rule. He states that hepatic extract was employed by Gilbert and Carnot in a case of diabetes mellitus due to functional debility of the liver with the result that it reduced the quantity of sugar in the urine from 160 grams to 138 grams in 4 weeks. It has also proved beneficial in alcoholic cirrhosis. Pancreatic extract has been employed in cases of diabetes mellitus with varying results. In some instances it appeared to possess distinct value. von Noorden found that pancreatic preparations give good results in cases of chronic steatorrhea accompanying diabetes. Extract of intestine has been employed with considerable success to combat stercoremic poisoning occurring in cases of strangulated hernia and in vagination of the bowel. He mentions that renal extract has been used in cases of nephritis and uremia with temporary benefit. The results obtained from splenic extract in cases of exophthalmic goiter and in enteric fever have been favorable. Pulmonary extract acts well in cases of pleuropulmonary suppuration with osteo-arthritic conditions. The bony deformities seem to be arrested. He mentions that nervous extracts have been recommended in epilepsy, locomotor ataxia, chorea and neurasthenia. Shober has found mammary gland extract useful in uterine fibroids. It controls bleeding, inhibits the growth of the tumor up to a certain point and renders the patient more suitable for operation. Parotid gland extract has been found useful in controlling the pain in uncomplicated ovaritis. [F. J. K.]

4.—Ashby reports **a case of purulent peritonitis** associated with empyema which occurred in a girl of 8½ years. The patient had been in good health up to September 10 1901, when she was seized suddenly with diarrhea and vomiting. Her temperature rose to 103° F. Vomiting ceased in a few days. The patient also complained of severe pain in the abdomen and left chest. The author first saw the patient on September 21, 1901, when she was still suffering from abdominal pain which was paroxysmal and very severe. He found signs of consolidation of the lower two-thirds of the left lung posteriorly. The right base was also involved. The patient's temperature was 101°, the pulse rate 140 and the respiration hurried. No improvement occurred during the following 12 days when Dr. Ashby again saw the patient. There were signs which indicated a large quantity of fluid in the abdomen and evidence of effusion in the left pleura. The patient was operated upon and [illegible] of pus were evacuated from the abdomen. A por-

tion of a rib was excised and pus removed from the pleura. The patient eventually made a good recovery. The peritoneal pus was thick and viscid. It was crowded with cocci which were encapsulated and arranged in tetrads. Vigorous cultures of the micrococcus tetragenus were obtained on agar and gelatine. The empyemic pus contained a small number of pneumococci and a few encapsulated cocci arranged mostly in pairs with a few tetrads. Cultures on agar revealed colonies of typical pneumococci and large colonies of micrococcus tetragenus. He states that from the clinical evidence he believes the peritoneum and pleura were affected similtanously. [F. J. K.]

5.—Bury reports 2 **cases of paralysis agitans** in the same family, in which improvement followed the administration of hyoscine. The chief points of interest in these cases were the presence of typical symptoms of paralysis agitans in a brother and a sister; the onset of the symptoms at a comparatively early age and the improvement which followed the administration of hyoscine. [F. J. K.]

6.—Morrison contributes an article **on cardiac inadequacy.** He believes there are differences in cardiac adequacy on the part of one heart as compared with another. He relates 2 cases which also illustrate the influence of diminished bulk of the heart and disproportionate smallness of the organ compared to the size of the body. [F. J. K.]

[F. J. K.]

7.—Williams discusses **pyrexia of gastro-intestinal origin during the puerperium,** and reports 2 cases. The first occurred in a married woman, aged 27, who was delivered normally of a female child on April 6, 1901. On the second and third days after delivery the temperature was normal and the pulse ranged from 96 to 100. Four days afterwards the patient complained of abdominal pain and headache. On the 11th., the temperature rose to 101.6°F. and the pulse was 120. Involution was proceeding satisfactorily. An enema of soap and water with 2 oz. of turpentine was given which brought away some hard feces and a great deal of flatus. An intra-uterine douche was also given but brought away nothing. The temperature then fell to 101°F. but subsequently rose to 103.8°F. and the pulse to 132. Headache and abdominal pain were less severe. Another enema of 2 liters of a dilute solution of creolin was given from a fountain douche which brought away a large amount of feces and flatus. The temperature then fell to 101.6°. On August 12, the morning temperature was 98.8° and remained normal. The second patient, primipara, had been a sufferer from constipation which had grown much worse during pregnancy. The patient was delivered of a female child on November 12, 1901. After delivery the pulse was 68 and the temperature 100°F. A gradual rise in the temperature then occurred, and it rose as high as 103.6°F. on the morning of November 18. It remained high for some days. Calomel and enemata were employed to relieve constipation. On the 19th., a rash developed over the body which looked much like measles, differing only in that it was of a brighter red color and very irritable. After the bowels were freely moved, the temperature gradually fell. He remarks that the rash was a very prominent feature in the latter case of gastro-intestinal poisoning. [F. J. K.]

8.—Hall reports **an interesting case of primary carcinoma of the ampulla of Vater.** The patient, a man 46 years of age, was seen on October 6, 1900, by Dr. Hall in a consultation with Mr. G. W. Simpson of Lamberhurst. During the preceding August the patient had had a febrile attack accompanied by pains in the head and limbs which resembled influenza. The temperature declined in 3 or 4 days. The patient suffered from itching and flatulence. One week later jaundice developed. The patient felt quite ill, but there was no vomiting or diarrhea or pain. The jaundice continued. An examination on October 6, 1900, showed that the liver was uniformly enlarged, the gall bladder distended and the temperature normal. The patient had lost 28 pounds since the commencement of his illness. On January 8, 1901, the patient was admitted into the Westminister Hospital under the care of Dr. Hall. At this time he was deeply jaundiced; the liver was regularly enlarged and the gall bladder was distended. The spleen could not be felt and ascites and edema were not present. The stools were clay-colored and very offensive. The urine contained bile. On January 7, 1901, fever developed and death occurred on the 11th., at which time the temperature was 107°F. An autopsy was made 8 hours after death by Dr. S. Lazarus-Barlow. A columnar cell carcinoma was found, occluding the duodenal orifice of the common duct and Wirsung's duct. The biliary ducts were much dilated and the main pancreatic duct was also dilated. The liver was large, hard and deeply bile-stained. The interesting points in this case were intense itching a week previous to the appearance of jaundice, the absence of vomiting, diarrhea, pain, and the suddenness of the onset. [F. J. K.]

MEDICAL RECORD.

May 3, 1902

1. Inoperable Round-Celled Sarcoma of the Upper Jaw with Metastases Successfully Treated with the Mixed Toxins of Erysipelas and Bacillus Prodigiosus.
   O. K. WINBERG.
2. The Indications for the Surgical Treatment of Cholelithiasis. A. A. BERG.
3. Functional and Paralytic Strabismus.
   D. B. ST. JOHN ROOSA.
4. Hydrophobia and the Pasteur Method—A Rejoinder.
   CHARLES WINSLOW DULLES
5. Cancer of the Prostate Complicated by General Fibroid Change of the Urethra—Urethrotomy—Prostatotomy, by the Bottini Method—Subsequent Partial Enucleation. GRANVLLE MACGOWAN.
6. Gonorrheal Rheumatism.
   B. DOUGLAS WESTERVELT.

1.—O. K. Winberg reports a remarkable case of **inoperable round-celled sarcoma of the upper jaw, with metastases,** successfully treated with the **mixed toxins of erysipelas and bacillus prodigiosus.** The patient was a veterinarian, aged 40 years, with a good family history, who was struck over the right superior maxilla by the horn of a bull. Two or 3 weeks later, to relieve the great pain which was present, the canine tooth was pulled. No relief was afforded. Later the first bicuspid was also pulled and the antrum was explored with no evidence of abscess being found. A diagnosis of sarcoma was made and excision of the upper jaw was proposed and carried out. The whole growth could not be removed. A mass, the size of a hen's egg, underneath the ear on the opposite side was also totally excised. After a few days the sarcomatous growth began to increase in size invading the nose and extending along the palate into the pharynx and also involving the parotid region. The patient continued to grow rapidly weaker and more emaciated. Jaundice set in, which was at first slight and then became more pronounced, finally there was tenderness and increased dulness in the hepatic region. Nausea and vomiting were present; the patient was constipated; the stools were clay-colored and the urine was dark with bile. The diagnosis of **metastasis to the liver** was accordingly made. The patient's condition was unfavorable in every way and at this time it was decided to employ the toxins. Dr. Wm. B. Coley presented the patient before a recent meeting of the Surgical Section of the New York Academy of Medicine. The course of the case from the time that the injections began was most favorable and, finally, when the patient was presented before the Academy examination, he showed no trace of the tumor either in the neck, face or jaw and the abdominal examination showed nothing

abnormal. Dr. Coley, in his comments on the case, states that it is remarkable from the fact that the cure was obtained by injections remote from the tumor. Therefore, the effect on the tumor was entirely due to systemic rather than local action. The tissue from the tumor was examined microscopically by a number of pathologists including Dr. William H. Welch. The diagnosis was **round-celled scarcoma of an acinous gland.** [T. L. C.]

2.—A. A. Berg discusses the indications for the **surgical treatment of cholelithiasis,** which he summarizes as follows: (1) **Operations of choice**—undertaken in the quiescent period with the object of avoiding serious complications—a simple procedure, and followed by 2 to 3 per cent. mortality. (a) Severe cholecystitic pain; or oft repeated, uncomplicated attacks of biliary colic; persisting in spite of medical treatment. In virtue of which symptoms the patient became invalided, and incapacitated for work. (b) After the first attack of **acute cholecystitis,** associated with fever. (2) **Compulsory operations**—undertaken at any time of the day or night; often amidst unfavorable surroundings, and on patients who are septic, emaciated, and of low vitality. Difficult and laborious procedures, and attended with high mortality—50 to 75 per cent. (a) Foudroyant and intensely acute attacks of cholecystitis. (This may be the first indication of calculous disease, but usually follows previous milder attacks). (b) Hydrops, empyema, gangrene, or perforation of the gall bladder, cholemia, abscess of the liver, and diffuse peritonitis. [T. L. C.]

3.—D. B. St. Roosa objects to the word concomitant in the definition of strabismus and believes that it is much better to adopt the names **functional strabismus** and **paralytic strabismus,** as suggested by Panas, to describe the 2 great varieties of strabismus. The latter form may be **monolateral** but the former cannot be. He objects to the term monolateral strabismus except as it refers to the affection resulting from paralysis; while there may be an apparent monocular convergence or divergence of one eye in functional strabismus, it is always shown to be bilateral on the application of a simple test. [T. L. C.]

4.—C. W. Dulles makes answer to the critics who have taken him to task for his position on **hydrophobia and the Pasteur method.** He states that his whole attitude to this subject will be better understood if he calls attention to the fact that he is not talking about **rabies** at all, but that he has restricted himself to the consideration of **hydrophobia in mankind.** He does not believe that this disorder is the result of the inoculation of a specific virus, but is either a symptom occurring in some one of a variety of diseases or a psychical manifestation, and that the cases which can be fairly classed under the latter head have very often followed the bite of a perfectly healthy dog. [T. L. C.]

5.—**Granville MacGowan** reports a case of **cancer of the prostate** which was complicated by general fibroid change of the urethra. **Urethrotomy** was performed, followed by **prostatotomy** by the **Bottini method,** with subsequent **partial enucleation.** The patient did not recover. Two other cases, which were operated on by the Bottini method showed marked improvement, and the writer believes that this form of operation is a feasible one in **cancerous prostatic** obstruction of the bladder neck, but of no use if the obstruction is far forward in the **membranous or prostatic urethra.** [T. L. C.]

6.—J. D. Westervelt, discussing **gonorrheal rheumatism,** advises the use of **potassium iodide** and the **internal administration of cod-liver oil.** [T. L. C.]

MEDICAL NEWS.

May 3, 1902. (Vol. 80, No. 18).

1. Another Chapter on Phthisiophobia and the Resolution Adopted by the New York Academy of Medicine. S. A. KNOPF.
2. Intravenous Infusion of Saline Solution. GEORGE CRILE.
3. The Right and Wrong Use of Digitalis Based on Cardiac Pathology. WILLIAM HENRY PORTER.
4. Operative Treatment in Certain Suppurative Conditions of the Kidneys. ALEXANDER B. JOHNSON.
5. On the Technique of Cystoscopy in the Female. FREDERIC BIERHOFF.

2.—G. Crile gives the effect of the **saline solution** causing death, when given in large amounts. (1) *Circulation.* When an injection is given at about normal temperature into the circulation from a height producing a pressure greater than that of the blood we find a rise in bloodpressure. This rise generally appears as soon as the force of the stream is added to that of the circulation. The rise is sometimes abrupt and at other times gradual. (2) *The effect upon the blood itself.* Generally after an infusion the number of red cells is decreased. In some instances there would be a secondary increase. The variation of the blood count is not proportionate to the amount of the infusion. This is especially marked from blood from the liver. The tendency to clot seems to increase with the infusion. There is also a marked increase in the tendency to hemorrhage. (3) *On respiration.* The respirations are increased or diminished, according to circumstances. If saline is introduced rapidly, the alteration both as to increase in frequency and in the amplitude of the stroke is more decided. (4) *Effect upon tissues and organs.* An increased amount of fluid in the skin. The muscles of the extremities contain a slightly increased amount of fluid and those of the trunk and neck are decidedly more edematous. (5) *Respiratory tract.* The mucous membrane of the nose is edematous and usually bathed in mucus. In the latter stages mucus discharges freely from the nose. The mucous membrane of the trachea is edematous, being more or less filled with clear, though more frequently with bloody, fluid. (6) *Alimentary tract.* The mucous membrane of the mouth is thickened and edematous, and there is a free discharge consisting of a mixture of watery fluid and mucus. In some instances there is a free discharge of fluid which probably comes from the stomach. The pharynx, esophagus and stomach are edematous, the mucous membranes being especially thickened. (7) The *liver* in most instances is hard and greatly enlarged. (8) The *gall bladder* is usually filled with bile. (9) The *spleen* usually contains more fluid than normal. (10) The *pancreas* is in most instances enlarged and edematous. (11) *Urinary tract.* The kidneys are slightly enlarged. [T. M. T.]

3.—W. H. Porter recommends that **digitalis** be discontinued every few days to avoid sudden and fatal syncope. In both insufficiency and stenosis of the left auriculoventricular orifice it improves the condition temporarily; in the former instance by more quickly and effectually closing the incompetent orifice. It also intensifies the systolic contraction and more completely empties the contents of the ventricular cavity into the aorta. In a similar manner, in mitral stenosis, the prolonged diastole, with an increased contraction of the auricle, enables the latter to fill the ventricle more completely. Up to the point of overcoming the increased arterial tension and the removal of the venous engorgement, the physiological action of the circulation as well as the mechanical action of the heart is greatly improved. Once the normal tension has been reached and passed, the action of the digitalis is detrimental to all the physiological functions of the body because it increases the work of the cardiac muscle poisons the muscle fibers and progressively decreases the nutritive supply distributed to the organ. In aortic lesions either in incompetency or stenosis, there seems to be no good reason for using digitalis at any stage. In fatty degeneration or any extended condition of the heart muscles, digitalis is contraindicated. In hypertrophy it might be useful in cutting down the nutritive supply, thus lessening the tendency further to hypertrophy, even if the hypertrophic condition could not be completely removed. It should not be given to influence the heart and circulation when the arteries are very much relaxed and the pulmonary or systemic veins overfilled with blood. It has been advised to give nitroglycerine in conjunction with digitalis so as to overcome the damaging effect of the drug. [T. M. T.]

4.—A. B. Johnson divides **purulent infections of the kid-**

neys into several divisions: (1) An acute pyelonephritis attended by the formation of multiple foci. (2) Pyonephrosis, in this term including those forms of suppuration in which the process is an infectious one from the beginning, involving the substance of the organ and representing often a stage of the first group. (3) Solitary or few abscesses in the kidney, sometimes of a necrotic or gangrenous type, following injury, occurring in the course of acute infectious diseases, pyemia and as a metastatic process due to the presence of pyogenic foci in distant parts of the body, but not to be classed in the category of distinctly pyemic infections. (4) Cases of suppuration occurring as a secondary process in hydronephrosis. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

May 3, 1902. (Vol. LXXV, No. 18.)

1. The Mechanical and Operative Treatment of Tuberculosis and Other Affections of the Joints. A. M. PHELPS.
2. A New Treatment for Deafness from Chronic Catarrh of the Middle Ear; a Preliminary Report. W. H. BATES.
3. Deformities Due to Muscular Paralysis; Method of Production; Possibilities in Tendon Transplantation; Combinations That Have Been Made to Correct Deformity. WISNER R. TOWNSEND.
4. Operations for the Relief of Paralytic Deformities, With Special Reference to Tendon Transplantation; Introduction, History, Indications for Operation. ROYAL WHITMAN.
5. Suture of a Perforating Wound of the Sclerotic. CARL KOLLER.

1.—A. M. Phelps believes that **mechanical treatment** should always be employed from the beginning to the end of the disease and should not be commenced until the diagnosis of joint inflammation has been made. If the patient has been suffering pain, a few days' rest in bed should be prescribed, and as soon as the pain subsides braces or supports should be applied. These applications will restrict every motion of the joint, putting it absolutely at rest and effecting extension in proper lines for the relief of intra-articular pressure. It has also been found that the joints of the lower extremities require more protection than those of the upper extremities on account of the weight, and for this reason it is necessary that these joints be protected by braces. In children it is necessary to have the apparatus at least 2½ inches below the bottom of the foot and there should be a point of impact against the tuberosity of the ischium. By far the best supporter is one that has for its upper point of impact a steel ring, properly padded. In adults it is different and other forms of apparatus can be used. He emphasizes the fact that no case of hip joint disease recovers inside of 2 years and the mistake that is constantly made is to remove the brace too soon. In knee joint disease, particularly in children, he knows of no better brace than Thomas's. In diseases of the shoulder joint he uses a pad adjusted into the axilla by passing adhesive strips around the arms and body, it throws the head of the bone away from the glenoid cavity and absolutely fixes it. In elbow joint disease plaster-of-Paris is the best dressing. In wrist joint disease plaster-of-Paris is very efficient, except when extreme spasm of the muscle is present. In spine disease the plaster-of-Paris and aluminum corsets are advised. The author's opinion in regard to operative treatment is: (1) It is most important for the purpose of exploring the joint. (2) Any abscess of any kind should be immediately opened and cleaned out. In abscess of the wrist and hip joint there should be no delay. Abscesses which have discharged into Scarpa's triangle should never be opened at that point. In diseases of the bones of the knee nothing but curetting should ever be performed, and this may be repeated from time to time. In tarsal disease in children with suppuration immediate operation is required. [T. M. T.]

2.—W. H. Bates in his **new treatment for deafness** found beneficial results in cases which were not benefited by treatment of the nasopharynx or Eustachian tube, or by operative measures in the middle ear. The only objection to this new method is the necessary time required in order to obtain good hearing. The author believes that this can be overcome as soon as the technique of removing the excess of connective tissue from the inner wall of the tympanum has been perfected. [T. M. T.]

3.—W. R. Townsend gives the following factors in the production of deformities due to muscular paralysis: (1) Gravity. (2) The [illegible] of nonparalyzed muscles. (3) The arrested development and growth of all tissues in proximity to the muscles paralyzed. (4) The results of weight applied to weakened structures. (5) All other causes. It has been written to correct the bony lesions that are apparent in the weak or flail joint, and to fix the [illegible] directly to the periosteum. This has a double advantage: (1) The security of the new attachment, no atrophied tissue being used. (2) The surgeon has a wider scope for satisfying the indications in a given case. Care must be taken in selecting a point of insertion, and especially not to interfere with the nutrition of the tendon by unduly stretching it, yet it must be so stretched that it will be enabled to act to the best possible mechanical advantage. In a case of equinovarus, the tibialis anticus should be split from its insertion to the belly of the muscle. The outer edge is then separated and attached to the periosteum of the cuboid bone. In a case of calcaneovalgus, divide the peroneus longus on the outer border of the foot, pass it between the tendo Achillis and the bone and attach it to the periosteum of the os calcis, internal to the insertion of the tendo Achillis. The above gives an idea of what can be done in various paralyses. [T. M. T.]

4.—In Whitman's opinion, the **possibilities of tendon and muscle transplantation** are greatly overestimated. There is no doubt that, under favorable conditions, one may count upon a certain degree of compensatory hypertrophy of the transferred muscle, but it is very doubtful if a weak muscle can ever carry on its own work, and at the same time that of a far more powerful neighbor. It is unsatisfactory, because one is uncertain of the standard by which success is estimated, and because these results are in few intances final. As ordinarily performed, the pre-existing deformity is overcorrected and the foot is then fixed in a plaster bandage for several weeks or months until the position of overcorrection is so impressed upon it that, on the removal of support, functional success seems assured. This primary effect persists for a certain time, until the shortened tissues again stretch and the grafted muscle is subjected to the full strain of use, when functional weakness again becomes manifest. This partial relapse may be delayed or prevented by massage, exercise and appropriate support; in other words, by the care that almost always makes a result in private better than in hospital work. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 1, 1902.

1. Problems Relating to Surgery of the Stomach. WILLIAM A. MAYO.
2. Thrombosis of the Cavernous Sinus; with Report of 4 Cases, Including One Cranial Operation. EDWIN WELLES DWIGHT and HARRY H. GERMAIN.
3. The City Consumptive Hospitals and the Duty of the Municipality and People Regarding Consumption. EDWARD O. OTIS.

1.—An article on the **problems relating to surgery of the stomach** is contributed by Mayo. His personal experience relating to gastric surgery is mentioned. In order to explore the interior of the gastric cavity, a transverse incision is made 3 inches in length through the anterior wall, half way between the pylorus and the cardiac orifice. A short rectal speculum, 2 inches in length and ½ inch in diameter, is then introduced and the fluid removed by suction. Then, by inserting one hand behind the stomach, almost the whole of the mucous surface can be passed in review before the end of the speculum with direct illumination. He has found that enlarged lymphatic glands are present in the majority of diseases of the stomach marked by retention and fermentation of food. He believes there is a large group of cases of gastric dilatation with symptoms, which upon surgical exploration reveals no adequate cause for the condition. He states that pyloric spasm due to a microscopic ulcer may explain some of these cases of dilatation. The author has examined 100 stomachs in order to determine the normal size of the pyloric orifice, by in-

vaginating the duodenal walls into the stomach, the stomach into the duodenum. Cases previously diagnosticated as pyloric spasm revealed no abnormal condition. He thinks the most perplexing cases of gastrectasis are those of neurotic origin. He contends that the question of operation for gastrectasis is to be decided largely on personal equation between the experience of the surgeon and the disability of the patient. His experience, which is in accord with that of many other observers, has led him to conclude that gastric drainage, especially gastro-enterostomy, rests the stomach, permits of the escape of secretions and increases the nutrition, thereby aiding recovery. He has found gastro-enterostomy a most satisfactory operation on the stomach. In cases of gastric carcinoma, gastric drainage, with few exceptions, has given little relief, and he believes palliative operative interference hardly justifiable. Good results were obtained by gastro-enterostomy in benign conditions. [M. R. D.]

2.—Dwight and Germain report **4 cases of thrombosis of the cavernous sinus.** The first occurred in a man, 40 years of age, who suffered from cellulitis of the face; thrombosis of the cavernous sinus then developed. The patient was operated upon and death followed. The second case occurred in a middle-aged man who had suffered from carbuncle of the neck, which was followed by thrombosis of the lateral, petrosal and both cavernous sinuses. The patient died. The third case was one of thrombosis of the lateral cavernous sinuses due to purulent otitis media, and mastoid abscess. This patient died after a brief illness. The fourth case was one of septic infection of the frontal sinus followed by thrombosis of both cavernous sinuses, which occurred in a woman, 26 years of age, and terminated fatally. [M. R. D.]

3.—Otis discusses the city consumptive hospitals and the duty of the municipality and people regarding consumption. He reaches the following conclusions: (1) Consumption is one of the most prevalent diseases, especially among the poor. (2) It attacks its victims at the most useful period of their lives. (3) It is contagious or communicable, and hence avoidable. (4) It is most prevalent in crowded portions of a city and in tenement house existence. (7) The contagion is restricted, as with our contagious diseases, by isolation. (8) Sanatorium treatment, especially for the poor, gives the best results with favorable cases. (9) Sanatoria and consumptive hospitals afford the best means of isolation. (10) By means of such institutions, we steadily and surely reduce the existing number of cases. (11) Every means which increases the resisting power is established and maintained by favorable environment, as to abode, place of labor, rest, food, etc. (13) Economically it is probably less expensive to care for the poor consumptive in a sanatorium or consumptive hospital than in any other way. (14) Morally, we owe the destitute consumptive in our midst a reasonable opportunity for recovery, or a decent place to die in. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

May 3, 1902.

1. The Function of the Soluble Ferments of the Blood in Intercellular Digestion. ALFRED C. CROFTAN.
2. Epilepsy, its Etiology, Pathology and Treatment Briefly Considered. WILLIAM P. SPRATLING.
3. Blackwater (Hemoglobinuric) Fever, with a Report of Two Fatal Cases Occurring in the U. S. Military Hospitals at Manila, P. I. JOSEPH C. CURRY.
4. The Comparative Values of Cycloplegics. C. H. BAKER.
5. The Surgical Treatment of Ascites Due to Cirrhosis of the Liver. M. L. HARRIS.
6. Röntgen Rays in Pulmonary Disease. ALBERT ABRAMS.
7. An Analysis of Fifty-two Cases of Tetanus Following Vaccinia. With Reference to the Source of Infection. 1839-1902. ROBERT N. WILLSON.
8. Glimpses of the Practice of Medicine and Surgery in British and Spanish Honduras. N. SENN.
9. Proposed Constitution and By-Laws for State Societies.

1.—Croftan discusses **the function of the soluble ferments of the blood in intercellular digestion.** This article discusses at some length the origin of ferments, their various functions and their final destination. [F. J. K.]

2.—Spratling contributes an article **on epilepsy, its etiology, pathology and treatment.** [F. J. K.]

3.—Curry reports **2 fatal cases of blackwater (hemoglobinuric) fever** occurring in the U. S. Military Hospitals at Manila, P. I. The first was that of a soldier, 27 years of age, who had been in service 3½ years. He arrived in the Philippine Islands in March, 1899, in good health. In January, 1901, he had chills and fever. On November 9, 1901, he was admitted into the army hospital in Manila with the following history. Two days before his admission he became slightly jaundiced and on his way to Manila he passed bloody urine. On admission he was markedly jaundiced. The patient was anxious and stated that he had no chills or fever, except for a slight one 2 days before entrance into the hospital. After he had passed bloody urine he took 24 grains of sulphate of quinine. On admission his temperature was 101.5°F. At this time a blood examination for malarial parasites was negative, but considerable leukocytosis was present. On November 10, the patient vomited frequently and diarrhea was present. The stools contained much blood and the urine also contained blood. On the evening of the ninth, quinine was given hypodermically in 10-gr. doses every hour for 4 doses. On the following morning the temperature was 99.4°, pulse 104 and the respirations 20. He died at 3 P. M. after a convulsion. Autopsy revealed an enlarged soft spleen, acute nephritis, acute hepatitis and general icterus. Malarial parasites were not found in the blood of the spleen or liver. The second case occurred in a civilian who had previously served in the army up to August, 1901. The patient had been in the Philippine Islands since June, 1899. In November, 1900, he had an attack of malaria. On the day previous to admission into the hospital he had a chill followed by fever and profuse sweating; he vomited frequently and had severe pains in the right side, hip and shoulder. Following the chill he passed bloody urine. On November 7, the blood examination for malarial parasites was negative. There was a marked leukocytosis. Repeated examinations for malarial parasites were made with negative results. The patient passed very little urine which contained much albumin, casts, hemoglobin, and some red bloodcells. The patient died on November 11, 1901. The direct and immediate cause of death in this case was ascribed to hemoglobinuria, acute nephritis, acute hepatitis, general icterus, and acute splenic tumor. The indirect cause was undetermined. The author describes the geographical distribution of blackwater fever, considers its etiology, symptoms, physical examination, diagnosis and treatment. He summarizes as follows: That one case of blackwater fever was treated vigorously with quinine and the other symptomatically without quinine; both terminated fatally. He thinks that quinine in the first case was distinctly harmful. His conclusions are the following: The part played by quinine in such cases is obscure. Whether it acts as a direct irritant on the kidneys, or on the blood itself, is not clear. Quinine acts differently in the same individual in different malarial attacks. Sometimes it apparently produces hemoglobinuria, then, in a subsequent attack, it has no such action (Marchiafava). The whole question of blackwater fever needs much more investigation. At present we can only theorize as to its causation. The relation between hemoglobinuric fever and the malarial fevers is not clear. Quinine during a hemoglobinuric paroxysm appears to be distinctly harmful. [F. J. K.]

4.—Baker gives his view regarding **comparative values of cycloplegics.** He mentions that the ideal cycloplegic must be safe, sure, its effect must be of short duration, its action prompt, its exhibition must consume the least possible time, it should be inexpensive, and its solutions must keep well. The use of hyoscine hydrobromate for the first 15 years, and for 8 or 10 years almost to the exclusion of atropine, has given him more and more confi-

dence in it. He has used it in about 3000 cases for refracting and has yet to see a serious bad result from its employment. He recommends a .5% solution. He believes that hyoscine hydrobromate is the best cycloplegic at our command. [F. J. K.]

5.—Harris, after a consideration of the literature **of the surgical treatment of ascites due to cirrhosis of the liver** and the various reported cases, presents two patients operated upon by himself and reaches the following conclusions: (1) While the increased tension in the portal system is an important factor, it is not the only one concerned in the production of ascites. (2) Talma's operation in itself is quite simple and practically devoid of danger, as the deaths have been due to complications or to the advanced stage of the disease. (3) As the chronic inflammatory changes in the peritoneum are materially instrumental in maintaining the ascites, the operation should be performed early, in a pre-ascitic stage if possible, in order that the reduction of tension in the portal system may delay the appearance of these changes and secondarily the ascites, as long as possible. (4) In a few cases the ascites has apparently been favorably influenced by the operation, but such has not been the rule, nor does it appear that the operation has in any way modified the usual course of the disease. [J. H. G.]

6.—Abrams contends that **the Roentgen rays** are of great value in the diagnosis of pulmonary diseases but he thinks that the X-rays must, however, be regarded as an adjunct to other methods of examination and that no physical examination can be considered complete without their employment. [F. J. K.]

7.—Abstract will appear when concluded.

AMERICAN MEDICINE.

March 1, 1902.

1. Dietetic Aphorisms for Infant Life. J. P. CROZER GRIFFITH.
2. On the Effect of the Digestion of Gelatine on its Styptic Properties. HORATIO C. WOOD, JR.
3. A Simple Method for Determining Percentages of Milk in Home Modification. ROWLAND GODFREY FREEMAN.
4. Cysts of the Ureter. HENRY HARRIS.
5. Indications for the Mastoid Operation. LEE WALLACE DEAN.
6. A Leiomyoma of the Skin Arising from the Erector Muscle of the Hair-Bulbs. ERNEST HOAG.
7. Report of a Case Belonging to the Erythema Group or Henoch's Purpura, with Chronic Parenchymatous Nephritis—Autopsy. EDWARD JUDSON WYNKOOP.

1.—J. P. C. Griffith presents a number of dietetic aphorisms for infant life. These are: (1) **Nature's way and nature's food are the best.** (2) **Do the best you can with what you have.** Discussing this point he states that the rule is a good one, that our artificial food should approach the proportionate composition of woman's milk as closely as possible; it is harmful for us to adopt any one fixed formula, because we cannot in any event make the mixture exactly like human milk, even if this latter had an absolutely fixed composition. The mixture must be made to suit the requirements of the child. (3) **Keep up with the times.** Under this head he emphasizes the necessity of studying the approved methods of preparing infant food in a scientific way. The modern method of feeding is the only scientific and satisfactory one and demands a knowledge of the **percentages of the amount of fat, sugar and proteid matter** which the milk contains. The physician determines merely to give a child a certain percentage of fat, for instance, instead of saying that he will add so many teaspoonfuls of cream to the milk mixture. He gives a method of calculation which may be followed. (4) **Know what you want,** he advises physicians. It is necessary to understand why certain milk mixtures are to be preferred to others and upon what physical conditions in the infant a change should depend. (5) **Don't be lazy.** Do not accept ready-made formulæ, but study carefully the conditions found. The use of commercial foods he has found less and less necessary. They may do untold harm. (6) **Go slow;** in a too rapid increase in the strength of the milk at the end of the first year or through feeding with starchy foods of various sorts. The propriety of making a change in the food and the nature of this change must be determined by studying the individual child. It must not be done purely because a certain age has been reached. He concludes his paper with the subject of feeding in disease, and his last aphorism is: **Starve,** by which he means a judicious temporary reduction in the amount and strength of food given in various diseased states. [T. L. C.]

2.—H. C. Wood, Jr., discusses the effect of the **digestion of gelatine on its styptic properties.** He concludes that pepsin digestion does not destroy the coagulating effect of gelatine on the blood; that the resulting product is dialyzable and therefore capable of absorption. The administration of gelatine by the mouth in the treatment of hemorrhage is therefore a rational procedure. **Gelatose** seems to antagonize, if given in sufficient quantity, the anticoagulating action of peptone. [T. L. C.]

3.—R. G. Freeman recommends the following method of obtaining percentages in modifying milk: (1) After having decided on the number of feedings, for the 24 hours, the amount to be given at each feeding, and the formulæ of the food required, first determine the desired relation between the amount of fats and proteids, and obtain a cream or milk in which these constituents exist in that proportion. (2) Dilute this cream or milk with the required amount of water. (3) Determine the percentage of sugar required for 24 hours' feeding and order the same in packages containing the required amount. (4) If [illegible] water is added, the amount so added must be deducted from the amount of water used. [T. L. C.]

4.—Henry Harris discusses cysts of the ureter and gives a résumé of the literature of the subject. The views as to the etiology of this condition are considered in 3 classes: (1) That they are due to closure of glands, ducts or crypts of the mucous membrane with consequent retention; (2) that they are an infectious process due to the invasion of protozoa; (3) that they are derived from Brunn's epithelial nests; by degenerative changes more or less physiological or by injuries to the ureter, mainly inflammatory. He presents notes of 3 cases which occurred in Johns Hopkins Hospital and states that the etiology of these would incline him to agree with Lubarsch that 2 factors are necessary; the presence of Brunn's epithelial nests and injury to the ureter of which inflammation due to stone or other causes plays the main role. [T. L. C.]

5.—L. W. Dean states that in making a differential diagnosis between **systemic disease and mastoiditis** in addition to the ordinary symptoms the examination should include that of the **fundus** to determine whether choked disc exists and the thorough examination of the tympanic membrane and the middle ear. A sudden elevation of temperature of 103°-105° is to be regarded as a symptom. [T. L. C.]

ANNALS OF SURGERY.

December, 1901.

1. A Contribution to the Pathology, Diagnosis and Treatment of Subphrenic Abscesses after Appendicitis. C. A. ELSBERG.
2. On the Differentiation Between Inflammatory Processes and [illegible] of the Bones by the Rontgen Rays. C. BECK.

3. On the Pathology, Symptomatology, and Diagnosis of Tuberculosis of the Peritoneum. D. N. EISENDRATH.
4. Treatment of Tuberculosis of the Peritoneum. C. FENGER.
5. Tuberculosis Herniosa and Appendicitis Tuberculosa. E. W. ANDREWS.
6. Obturator Hernia of the Bladder and of the Fallopian Tube. R. J. GLADSTONE.
7. Note on X-ray Burns and their Treatment. T. W. HUNTINGTON.
8. Contribution to the Surgery of True Cystic Kidney. J. NIEMACK.
9. Ureteral Anastomosis. Report of a Successful Case. W. K. TURNER.
10. Stone in the Bladder of a Female Child of Four Years. M. F. PORTER.

1.—Elsberg has collected 71 cases of **subphrenic abscess** following appendicitis and reports 2 which have come under his own observation. Of 179 subphrenic abscesses 23 were secondary to appendicitis (Maydl), and 9 subphrenic abscesses have been observed among 600 cases of appendicitis (Sonnenburg). These abscesses after appendicitis occur as the result of a pyemic infection, as the vestige of a general purulent peritonitis, or as a localized process, the result of direct extension from the iliac fossa, either retroperitoneally when the appendix is retrocecal, or up along the ascending colon when the appendix lies in front of the cecum. In the cases collected by Elsberg the abscess was extraperitoneal in 20 cases, intraperitoneal in 35, and the location was doubtful in 18. In 50 cases the subphrenic lesion followed an appendiceal abscess, in the 7 the appendicitis did not progress to suppuration, and in 16 no details were given. Perforation of the diaphragm occurred in 25% of the cases. The mortality was 40%, 15% in the operative cases and 25% in the nonoperative. Elsberg advises resecting about 2 inches of the ninth and tenth ribs somewhere between the scapular and anterior axillary lines according to the position of the abscess. After the ribs have been resected, the reflection of the pleura is protected with gauze and the aspirating needle plunged through the diaphragm, the opening is enlarged with forceps and the abscess cavity drained with a tube. If the purulent collection be situated near the median line well up under the dome of the diaphragm, it will be necessary to drain through the thorax after sewing the diaphragmatic to the costal layer of the pleura in order to avoid infection of the sac. [F. T. S.]

2.—Beck publishes a number of excellent **skiagrams** illustrating the inflammations, the chronic infections, the neoplasms and the cysts of bone.

3.—See Department for Coöperation and Original Research for June.

4.—See Department for Coöperation and Original Research for June.

5.—See Department for Coöperation and Original Research for June.

6.—Gladstone describes a **hernia of the Fallopian tube through the right obturator canal, a hernia of the bladder through the left obturator canal,** and a right femoral enterocele, all found in the same subject in the dissecting room. The patient died of cardiac disease. The rectum was markedly narrowed by a valve of Houston, a condition perhaps accounting for the herniæ, as defecation must have been accompanied by much straining. [F. T. S.]

7.—Huntington reports an **X-ray burn** of the abdomen about the size of a tea-saucer which he successfully treated by excision and skin grafting (Thiersch). [F. T. S.]

8.—Niemack reports a case of **movable cystic kidney** on the right side, occurring in a woman of 43 years. The kidney became infected from some unknown source and nephrectomy was performed after first palpating the left kidney, which felt normal through an incision. The patient succumbed to uremia the following day. Niemack suggests that in a similar case it would probably be better to bisect the kidney and drain. [F. T. S.]

9.—See **Philadelphia Medical Journal,** April 5, 1902, p. 61.

10.—Porter's case of **stone in the bladder** is interesting, because it occurred in a female child, scarcely 4 years of age, because of the weight of the stone, 60 grains, and because the stone was removed by suprapubic cystotomy followed by immediate closure of the bladder. The child was discharged at the end of 12 days, well. [F. T. S.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

December 24, 1901. (No. 52).

1. The Modern Determination of Immunity with Special Consideration of the Performance of Immunization for the Practical Physician. WEICHARDT.
2. The Bloodless Treatment of Congenital Dislocation of the Hip. DREESMANN.
3. A Case of Profound Idiocy: With Changes in the Skeleton. W. WEYGANDT.
4. Water Bottles For Urological Purposes. F. DOMMER.
5. Lactation Atrophy of the Uterus. L. FRAENKEL.
6. The Value of Wassmuth's Inhalation Apparatus. E. EMMERICH.
7. Report upon the Results of Vaccination in the Kingdom of Bavaria in 1900. L. STUMPF.
8. The Ideal Climate. K. RANKE.
9. Hermann Löhlein. LAUBENBURG.

2.—Dreesmann discusses the **treatment of congenital dislocation of the hip.** This he accomplishes by various manipulations designed to bring the head of the femur into the acetabulum. The thigh is flexed at an angle of 90° and then abducted 90°. Under these circumstances the head usually slips over the upper edge. It is important, as soon as reposition is accomplished, to allow the leg to be functionally active. For this purpose an apparatus must often be used, a sort of walking basket. It is very important in all these cases to prevent relaxation. In order to be certain that it has not occurred, Röntgen pictures must be made. As the patient improves, the adduction diminishes and the leg gradually straightens, so that in the course of 5 or 6 months it is usually possible to do away with the plaster bandage. Altogether he has treated 22 patients suffering from 31 dislocations of the hip, that is to say, 9 were bilateral, and of these 9, 4 have concluded their treatment. In one intercurrent tuberculosis interfered with the result, and in the other 3 there was considerable functional improvement with reposition on one side and anterior relaxation on the other. Five cases are still under treatment. Of 13 children with unilateral dislocation 3 are cured with permanent reposition; a fourth was cured but died subsequently of tuberculous meningitis; 3 are still under treatment, and 6 have now been cured for periods of from 18 months to 4 years without any tendency to relapse. No disagreeable results have ensued in any case. [J. S.]

3.—The patient, a congenital idiot, 34 years of age, showed extraordinary deformity. The head was of fair size; there was total scoliosis of the spinal column; the lower extremities were contracted; the right leg was bent about its middle at an acute angle; there was a large tumor of the neck; the teeth were defective; there was no understanding of language or ability to communicate ideas. He was able, however, to fix a light, to shake hands, and enjoyed playing with a mouth harmonica. From time to time he laughed hartily. He was able to eat, but often choked. The case therefore represents an extreme degree of **skeletal deformity associated with profound idiocy.** [J. S.]

4.—Dommer describes a **utensil** by which it is possible to isolate the external genitalia when it is desirable to apply any particular form of treatment to them. It consists essentially of a small board upon which the patient sits, with a small basin attached to one end, and an apparatus which acts as a guard. [J. S.]

5.—Fraenkel, in reply to Thornes' article insists that there is a form of **lactation atrophy of the uterus** which exceeds the physiological limit and becomes pathological. He thinks this particular condition is produced by too prolonged nursing. Thorne replies to this that the lactation atrophy of the uterus is so rare that its possibilty should not be regarded as a cause for interfering with nursing. [J. S.]

6.—Emmerich states that some experiments carried out

by himself and Wassmuth upon the inhalation apparatus of the latter showed various defects, which, when they were overcome, enable them to secure a very satisfactory stream of fine fluid particles into the upper air passages. [J. S.]

7.—Stumpf, in continuation of his article on vaccination states that the favorite form of incision consists of parallel lines, in the direction of the axis of the limb, sufficiently far apart. Occasionally cross-lines were made. At least 4 incisions should be made in each child. Occasionally a protective bandage was applied. Sometimes very different results were obtained with different portions of the same supply of lymph. The complications were slight. In 6678 cases of vaccination in the city of Munich, only 19 required subsequent treatment, and in the majority of these the only lesion was a slight irritation around the site of vaccination. In 3 cases there was a generalized eruption over the face and head. In 3 cases there was abscess formation of the axillary glands, and in one case a phlegmonous infiltration of the right shoulder. In the country districts acute cases of generalized vaccinia were reported. In a few cases pustules were conveyed by the children to other parts of the body. Often the mothers of the children attempted to prevent the success of the inoculation by washing the place after the physician had left; they were usually unsuccessful. One child died shortly after vaccination. In 2 cases the children had suffered from diarrhea before being vaccinated; in several others the children died of meningitis and diarrhea shortly after vaccination. In other cases deaths were reported from pneumonia and bronchitis. Two children died of infantile convulsions, and, in fact, none of these cases appear to have been due in any way to the vaccination. In several cases the local newspapers and the populace believed that the vaccination was the cause of death. One of these children had a typical attack of measles 10 days after vaccination. There was no inflammation in the arm. Another child had diarrhea followed by inflammation of the lungs several days after vaccination and died. In another case during vaccination the child became cyanosed, but subsequently recovered. In still another case vaccination was accused of causing a sore on the buttocks which had existed from the time of birth. In another instance the child was exposed in being brought from the place where vaccination was performed, and died. Stumpf therefore believes that in none of these cases is there any reason to believe that vaccination had any bad effect. In several cases numbers of adults were inoculated on account of the existence of an epidemic. [J. S.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

January 9, 1902.

1. Concerning the Importance of Gelatine as a Nutriment. A New Nutritive Preparation, "Gluton." H. BRAT.
2. On Some New Nutritive Preparations. A Study in Color Analysis. S. WEISSBEIN.
3. On the Sequels of Dysentery. F. HAASLER.
4. On Plague. (Continuation). W. KOLLE and E. MARTINI.
5. Critical Observations Concerning the Physicochemical Investigation of Mineral Waters. F. JUETTNER.

1.—Brat prepares gluton by allowing acids to act upon gelatine for several hours at a high temperature. The acids are then neutralized, and the dialyzed or filtered product is concentrated by evaporation. He finally obtains a yellowish-white powder, which he calls gluton. This dissolves readily in water and does not gelatinize in concentrated solutions. It can be used in various ways as a drink, as an addition to other soft foods, etc. The author has made investigations of the metabolic conditions while using this substance, and also reports an investigation of the conjugate sulphates and fatty acids of the urine while using it, which indicates that there is no increase of intestinal putrefaction. The metabolic investigations indicate that gluton is quite as valuable as gelatine in maintaining metabolic equilibrium. Brat believes that it has just as much influence upon nitrogen metabolism as the albumin nutritive preparations, and acts in smaller doses. It is well digested, and may be used in much larger doses than gelatine. The author investigated its influence upon uric acid excretion, and found that it rather decreased than increased the excretion of that substance. [D. L. E.]

2. The author used the pancreatic triacid solution of Pappenheim. The albumins and peptones are acidophilic; the nucleoalbumins and caseins, basophilic. Cellulose is also basophilic; starches and fats do not stain with aniline dyes but may be stained respectively with iodine and osmic acid. The method of staining was to put a small portion of the [illegible] from examined in a centrifuge glass about half full of water, add 10 drops of the stain, shake for 2 minutes, and then centrifugate, repeatedly washing with distilled water until the wash-water was perfectly clear. He then examined microscopically. He gives a series of tests which he has obtained with various preparations and decides that the method is a very valuable one: that it is easily carried out; and that every practitioner, by the use of this method, may determine the value of a [illegible] preparation. [D. L. E.]

3.—Haasler gives a general description of the pathological changes which he has found as sequels to dysentery. Among the points of interest which he mentions are the repeated discovery of marked involvement of the ileocecal region—especially, in repeated instances, perforation of the cecum, the vermiform appendix being involved only secondarily. In 2 instances, the cases appeared clinically to be appendicitis; but proved, upon post mortem examination, to be dysentery associated with severe disease of the appendix. [D. L. E.]

4. The investigations with regard to plague serum which the authors have carried out led them to the conclusion that, when markedly virulent cultures are used, its curative action is extremely slight in rats, mice, or guinea pigs, whatever the mode of infection. Even in cases of moderate or slight virulence, if the serum was used later than 24 hours after the infection, or when the animals already showed signs of illness, the serum seemed worthless. However, in most of these instances there was some prolongation of life. [D. L. E.]

BERLINER KLINISCHE WOCHENSCHRIFT.

February 3, 1902. (39 Jahrgang, No. 5.)

1. Tympanites. S. TALMA.
2. The History of the "Lid-Closing Pupillary Reaction." MEYERHOF.
3. An Artificial Esophagus. SIEGFRIED SPIEGEL.
4. Pulmonary Emboli Following Operation for Appendicitis. A. OPPENHEIM.
5. The Present Position of the Tuberculin Treatment. J. PETRUSCHKY.
6. Separation of the Retina with Nephritis of Pregnancy. JOSEF HELBRON.

1.—Talma reports a case of partial tympanites in a girl of 15, whose menstruation had not yet appeared, showing many signs of hysteria. First her abdomen was very prominent above the umbilicus. Examination showed that the tympanites was not dependent upon hysterical contraction of the diaphragm. Under anesthesia the tympanites disappeared. Tympanites resulted only when the transverse muscles and the diaphragm contracted simultaneously. Afterward complete hysterical tympanites resulted. Hysterical tympanites involving the epigastrium, partial or general, is due to relaxation of the upper abdominal muscles, to partial contraction of the transverse muscles, or to contraction of the diaphragm. This may resemble an abdominal tumor for some time. All 3 causes were present in this case. [M. O.]

2.—Meyerhof states that von Graefe described the "lid-closing pupillary reaction" or Westphal-Piltz phenomenon as early as 1854, in an article in the *Archiv für Ophthalmologie*, volume I, page 418. He referred to it again in 1877, in the fourth volume of his *Handbuch der Augenheilkunde*. It is due, not to mechanical cause, but to irritation of the oculomotor nerve with the facial nerve. While not of much practical worth, it is of some value in diagnosis. [M. O.]

3.—Spiegel describes an artificial esophagus which he has constructed. It is complicated, but from all its details,

which are well illustrated in diagrams, it seems practical. He advises its use in cases in which feeding through a gastric fistula becomes necessary for a long time, and when the patient feels the desire to chew and swallow his own food, to approximate the normal condition as well as possible. [M. O.]

4.—Oppenheim gives the case-histories of 6 patients with appendicitis in whose lungs emboli occurred, following the operation for appendicitis. In 5 cases symptoms typical of pulmonary infarct were noted, with successful recovery. In the other case a large clot probably formed in the pulmonary artery and death followed. With some organic heart lesion the blood stream is slowed and some alteration of the bloodvessel walls occurs. Following this a clot forms and either becomes organized connective tissue, or softens. Sonnenburg's statistics also show the frequency of pulmonary emboli after appendicitis operations. The occurrence of emboli may not be due to the operation, when purulent appendicitis exists. But after operation thrombosis occurs in the injured bloodvessels and marantic emboli result. In some cases emboli pass unnoticed, causing no symptoms. As the heart becomes weakened from the operation, these patients must be kept absolutely flat upon their backs, to prevent the occurrence of emboli. Great care must also be taken with the anesthetic. [M. O.]

5.—In an extensive discussion upon the present position of the tuberculin treatment in sanatoria, Petruschky states that experience in the diagnostic and therapeutic properties of tuberculin has now become so thorough that blunders are no longer made in its use. He believes that the tuberculin treatment, combined with the physical and dietetic methods employed in sanatoria, forms the best means of combating tuberculosis which is not too far advanced. An early diagnosis is always indicated. In the treatment of tuberculosis 2 things are needed, places for the examination of those with suspected consumption, and hospitals for those with advanced tuberculosis. [M. O.]

6.—Albuminuric retinitis is common in chronic nephritis; but separation of the retina is rare, even in the nephritis of pregnancy. Comparatively few cases were found in the literature, which was fully reviewed. Hebron reports a case, a woman of 23, who suddenly became blind when 8 months pregnant. The ophthalmoscope showed albuminuric retinitis with separation of the retina, while the urine showed albumin, 3½ per thousand. Four days later induced delivery followed, the child being stillborn. In 10 days the retina had completely healed, and in another month she was perfectly well. This makes 21 such cases reported. The onset is sudden and there is total or almost total blindness. Recovery occurs rather rapidly. The prognosis is good except in chronic nephritis. The separation is due to changes in the walls of the retinal capillaries, followed by some exudation. With induced labor the condition improves. In the prophylaxis the urine should be carefully examined after the third month of pregnancy. [M. O.]

MEDICINSKOIE OBOZRENIE.

Vol. LVII. No. 1, 1902

1. On Malignant Lymphoma. I. K. SPIZSHARNI.
2. Resection of the Cecum on Account of Tuberculosis. A. PH. KABLUKOFF.
3. A Case of Myasthenic Paralysis Following Influenza. A. I. ABRIKOSOFF.
4. A Case of Anesthetic Leprosy. I. IA. LIUBOVITCH.
5. The Therapeutic Value of Iodolen. A. IORDAN.
6. The Pathological Anatomy of the Comatose Form of Malaria. S. P. TSCHERNISCHEFF.
7. On the Study of Intestinal Obstruction. I. M. RACHMANINOFF.

1.—Spizsharni discusses the nosology, pathological anatomy, symptomatology and pathological diagnosis of malignant lymphoma, and reports a case of this affection in a young man, a high-school teacher, 25 years old, in whom the enlargement of the glands commenced in the right groin. In about a week the enlargement disappeared, and reappeared at the end of about 6 weeks, followed by enlargement of the glands of the axilla and other parts of the body. The patient was badly developed, had a long and narrow chest and gave a family history of tuberculosis. His personal history was also unfavorable. Examination of the respiratory, circulatory and uropoietic organs showed nothing abnormal. The sputum was found free from tubercle bacilli. The blood contained 4,800,000 red bloodcorpuscles per cmm., 95% hemoglobin and showed a slight increase in the white bloodcells. The spleen was not enlarged. Two of the enlarged glands from the right axilla were removed for microscopical examination and found to be the seat of malignant lymphoma. No indications of tuberculosis were present. Under treatment with sodium arsenate the enlargement of the glands subsided now and then during the course of the disease. At the end of 3½ months after onset the patient developed a right-sided dry pleuritis and colitis. During the attack the gland enlarged still more. The patient recovered somewhat and gained a little in weight. He left for the South, where he soon died of miliary tuberculosis. This case, then, was one of a combination of malignant lymphoma and tuberculosis. [A. R.]

2.—A. Ph. Kablukoff points out the rarity of tubercular affection of the cecum sufficient to give rise to a tumor. Of the 15 resections of the cecum performed by Russian surgeons since 1887 only 3 were made on account of tuberculosis. The differential diagnosis between tuberculosis and cancer is at times extremely difficult. The diagnostic points formulated by Obrazts of are: (1) That in cancer of the cecum the tumor alone is felt on palpation, while in tuberculosis the entire cecum with the adjacent walls is felt; (2) in cancer the edges of the tumor are well marked and sharp, while, in tuberculosis, the infiltration becomes gradually indistinct; (3) in cancer, constriction of the intestine supervenes quite rapidly. However, notwithstanding these characteristics, cases are met with in which a differential diagnosis is impossible. This is illustrated by one of the cases of tuberculosis of the cecum reported by the author. The case is that of a woman, 33 years old, with a [illegible] family and personal history. Eleven months prior to admission she developed, while in a state of perfect health and in the 6th month of pregnancy, [illegible] abdominal disturbances characterized by colicky pains, [illegible] vomiting, alternating diarrhea and constipation, ending abortion of the [illegible] month. Four months after the onset she was delivered of a well-formed child. About 2 months later [illegible] symptoms were added to the above symptoms. On examination the abdominal walls were found [illegible] over the right side of the liver and slightly encroached the latter normal with the exception of a [illegible] systolic murmur at the right apex, the heart [illegible] and the pulse rapid; urine normal. In the right iliac region a tumor the size of a fist was felt. The growth was [illegible] nodular and slightly movable from side to side. The cecum could not be felt. The diagnosis in this case was established on the operating table. On opening the abdomen a tuberculous mass was found adhering to the [illegible] and a portion of the ileum and [illegible] to the right [illegible]. The peritoneum was studded with miliary tubercles. The cecum and [illegible] of the ileum [illegible] the abscess wall removed and the wound edges united by a [illegible] suture and a Mikulicz [illegible]. The patient [illegible] a good recovery and remained in perfect health for [illegible] 2½ years when she had a recurrence of the [illegible] symptoms and developed pulmonary tuberculosis. A fatal termination followed at the end of 3 months. In the [illegible] case a man, 44 years old, presented symptoms similar to the above but showed in addition a tubercular affection of the lungs. A resection of the cecum and a portion of the ileum was followed by a gradual improvement which lasted for 2 months, when a recurrence of the disease took place, terminating fatally. Concerning the [illegible]

nosis in tuberculosis of the cecum, the author remarks that the immediate results of the operation are far better than in cancer, but the ultimate results are extremely unfavorable. [A. R.]

3.—A. I. Abrikosoff reports a case of **myasthenic paralysis following influenza.** The patient, a girl, 30 years old, had 2 attacks of influenza, the last complicated by a pneumonia of short duration. A few days after the last attack she developed **progressive paralysis of the voluntary muscles,** sensation and other functions having remained normal. Under treatment with baths, forced feeding and hypodermic injections of sodium arsenate, the patient gradually improved and was able to leave the hospital on the fortieth day in a fair condition. A permanent recovery, however, the author does not anticipate. As to the etiology, the affecton is ascribed to the action of the toxins of the influenza bacillus. [A. R.]

4.—Liubovitch reports in detail a case of **anesthetic leprosy in a man,** 39 years old. There is no history of hereditary influence or contagion, the disease having appeared **spontaneously** when the patient was 34 years old. The leprosy bacilli were found in large numbers in the affected areas. The case demonstrates the assertion of Babes that no sharp line of demarcation exists between the various forms of leprosy, the **bacilli being capable of invading any tissue.** In the case of anesthetic leprosy, the nervous system is the tissue invaded. [A. R.]

5.—Iordan reports favorable results obtained by the use **of iodolen in the treatment of tertiary syphilis.** This new drug is a combination of iodol and albumin. It is a yellowish, odorless and tasteless powder insoluble in water, alcohol, etc. It is put up in two forms: Iodolenum internum, containing 9-10% of iodol, which is to be employed instead of the iodides, and iodolenum externum, containing 36% of iodol, which is to take the place of iodoform. The 14 cases treated by the author, including a case of **malignant syphilis,** did very well under the iodolenum internum in doses of 12-20 gm. daily. Iodism was not infrequent, but of shorter duration and lesser severity than when iodides are given. Iodolenum externum was employed in the treatment of **primary and gummatous ulcers** and was found equal in effect to iodoform or its substitutes. [A. R.]

6.—Tschernischeff describes in detail the **post mortem findings in a case of pernicious malaria.** The patient, a man, 29 years old, was received at the hospital in a comatose condition. Examination elicited nothing definite, and the diagnosis lay between relasping fever, pyemia and hepatic cirrhosis. An examination of the blood, however, revealed the presence of numerous plasmodia malariæ. The patient died in a state of profound coma 4 days later, despite the liberal use of quinine. The autopsy and subsequent histological examination revealed marked changes **in the central nervous system,** characterized by cellular degeneration, chromatolysis and complete thrombosis of many of the capillaries, the thrombi being composed almost entirely of parasites, both round and crescentic. The latter were also found in large numbers in the blood of all the internal organs and the peripheral circulation, even 48 hours after death. Next to the nervous system, the **liver and spleen** were found to be the seats of pathological changes characterized mainly by excessive pigmentation. Thrombi were found in neither of these organs although the parasites were numerous. A number of illustrations accompany the paper. [A. R.]

7.—Rachmaninoff discusses the **theories and classification of intestinal obstruction** and describes the pathological anatomy of 25 cases of various forms of obstruction which came under his observation. [A. R.]

WIENER KLINISCHE WOCHENSCHRIFT.

January 23, 1902. (XV Jahrgang, No. 4.)

1. The Point of Attack of the Tetanus Toxin. L. ZUPNIK.
2. Aneurysm of the Pulmonary Artery with Persistent Ductus Botali. JOSEF KRZYSZKOWSKI.
3. The Effect of Fracture upon the Circulation and Temperature. RICHARD FIBICH.
4. A Perforating Gunshot Wound of the Skull with Destruction of the Brain and Recovery. KARL DIWALD.

1.—The main symptoms of **tetanus** are continued, unbroken muscle contraction and general convulsions of short duration. In ordinary tetanus the muscles of the jaw and neck are first affected; in experimental tetanus these symptoms spread from the point of infection. The muscular contraction is due to the specific effect of the tetanus toxin upon the musculature. From experiments Zupnik noted that the brain played no role in the pathogenesis of tetanus. Contrary to Meyer's conclusions, he believes the effect of the tetanus toxin to be purely local. After describing the results of injecting tetanus toxin into the spinal cord, Zupnik concludes that the poison of tetanus toxin attacks the muscles peripherally, and, in the spinal cord, only the motor cells. The muscular contraction results from the former, the convulsions from the latter. The toxin reaches both muscles and cord by the blood. The period of incubation covers the reaction of the tissues to the toxin. Small amounts of the poison are conducted along the nerves to the subarachnoid space, whence they enter the blood. Either set of symptoms may predominate, as the toxin affects the muscles or the spinal cells most. That trismus comes first is purely mechanical. [M. O.]

2.—After reporting the histories of 10 cases of **aneurysm of the pulmonary artery,** published with anatomical description, Krzyszkowski reports his own observation, in a girl of 17, who died suddenly with hemoptysis. The autopsy showed an aneurysm 2½ cm. from the origin of the pulmonary artery, changes in the wall of the artery, with a defect of the intima and media. There were many small aneurysms of the pulmonary capillaries, with infarcts, most marked in the left lung, and a persistent ductus Botali. This persistent ductus Botali Krzyszkowski considers the cause of the aneurysm formation, from the increase in the local bloodpressure which it occasioned. The smaller aneurysms were probably due to sclerosis. The literature of the subject is fully reviewed. [M. O.]

3.—From a series of experiments which are described in detail, Fibich concludes that a rise of temperature in a dog after the **subcutaneous fracture of bones** is due to the rubbing of the fragments; that the pulse is increased with this, only lasts a short time, and is then decreased; that sometimes the temperature falls before rising; and, finally, that these symptoms occur so rapidly that they cannot be due to absorption or infection. They must, therefore, be due to the effect of the fracture on the nerves. [M. O.]

4.—Diwald reports the case of a cadet who **shot himself in the forehead,** the bullet passing through the skull in two places. He never lost consciousness. Blood escaped from his nose, and the wounds of exit and of entrance permitted the escape of blood and broken bits of brain tissue. Under anesthesia the wounds were cleansed, sutured, and packed with gauze, the skin being almost closed over it. The wounds healed well. Three weeks later paralysis of the right facial nerve was noted, but this quickly disappeared. Six weeks afterwards he was perfectly well, though from 60 to 80 grams of brain substance had been lost. [M. O.]

January 26, 1902. (XV Jahrgang, No. 5.)

1. Cancer and Malaria. L. PROCHNIK.
2. Bacteriohemagglutinins and Antihemagglutinins. R. KRAUS AND ST. LUDWIG.
3. A New Reaction of Human Milk. ERNST MORO and FRANZ HAMBURGER.
4. Keratosis Nigricans. SIEGFRIED GROSS.
5. Multiple Aneurysm of the Pulmonary Artery with Persistent Ductus Botali. JOSEF WICZKOWSKI.

1.—Prochnik, who has practised for 25 years in the Dutch East Indies, states that cancer is rather common there, contrary to the opinion of Lolly. (*Deutsche medicinische Wochenschrift*, 1901, No. 42). Malaria commonly occurs with carcinoma, which has never been known to recover spontaneously, even after recovery from malaria. Every European who remains in the tropics long contracts malaria in some form. Prochnik denies absolutely the existence of any immunity against malaria, as Koch understands immunity. The natives seem almost as prone

to malarial infection as the Europeans. Fifty per cent. of the soldiers are attacked yearly. Considering the mode of life in the tropics, it seems probable that the infection is transmitted in some other way than by mosquitoes. Thus, it is almost impossible for anyone to have cancer without having malarial fever at some time during the growth of the tumor. Yet no cases of recovery from cancer are known. Statistics show that hardly a dozen officers are over 45 years of age, for the limit of tropical service is six years. Thus, when cancer occurred, it was at a comparatively early age. During 9 years, but 41 cases of carcinoma were found, and they were mainly hepatic carcinoma. Cirrhosis of the liver is common after long standing malaria, but is rarely due to alcohol. For the European in the tropics takes too much and too rich food, and his liver, intestines and spleen become cirrhotic, aided by attacks of malaria. These pathological tissue changes are surely favorable for the origin of carcinoma. Prochnik reviews the diseases treated, and his experience during his sojourn in the tropics, in closing [illegible] [M. O.]

2.—From a series of experiments which are fully described, Kraus and Ludwig conclude that different microorganisms form bacteriohemagglutinins as well as hemolysins; that both disappear at 58°; that normal animal serum cannot paralyze hemagglutination, though it does destroy hemolysis; that by specific immune serum hemagglutinins and hemolysins are paralyzed; that both occur independently; and that **the hemolysis bears no relation to the hemagglutination.** [M. O.]

3.—Moro and Hamburger found that a drop of **hydrocele fluid** from an infant, **to which a drop of human milk is added, clots almost immediately.** When cows' or goats' milk is used, this reaction does not occur. When cooked or heated human milk is employed, the clotting also results. When clotted ox-blood, shaken into fine particles, is added, at 38°, the hydrocele fluid clots slowly. The cause of this reaction is by no means clear. It is possible that [illegible] ferment exists in human milk and not in the milk of animals, which produces clotting with the fibrinogen of the hydrocele fluid. [M. O.]

4.—Out of 26 reported patients with **keratosis nigricans,** the diagnosis was doubtful in 7 cases. Gross reports a case of uterine cancer in a woman of 58, her illness having begun a year before admission. She grew thin and weak, and there was itching in the axillary and popliteal spaces. There was marked pigmentation, with fissures, hard follicles, and papillary excrescences. Death from cachexia occurred in 10 days. The autopsy showed cancer of the uterus and of the retroperitoneal and mesenteric lymphglands, with keratosis nigricans. The minute histological changes in the skin and lymphglands are described in detail. From this it seems that keratosis nigricans is often found with malignant neoplasms. [M. O.]

5.—**Aneurysm of the pulmonary artery** is not only rare, but the diagnosis is very difficult. Wiczkowski gives the clinical history of an aneurysm of the origin of the pulmonary artery in a girl of 17, with multiple aneurysms of the capillaries and a persistent ductus Botali. There were cough, expectoration, pain in the right side, fever, night sweats, etc. A systolic murmur was audible at the pulmonary area, over the manubrium and carotids. Pulses were equal and there was no dulness or cyanosis. Pleural friction sounds and rales were heard. Three months after admission dulness appeared on the left side, from the clavicle to the third rib, with pulsation in the jugular veins. The heart hypertrophied and the systolic murmur grew louder. Dyspnea with hemoptysis was noted two days before death. The diagnosis was exceedingly difficult. The patulous ductus Botali was undoubtedly the cause of the aneurysm, from arteriosclerosis following inflammation of the arterial walls, due in turn to the increased blood pressure. Yet such a condition is very rare. [M. O.]

JAHRBUCH FUER KINDERHEILKUNDE.

January, 1902. (Volume 55, No. 1.)

1. Buttermilk as a Food for Infants. TEIXEIRA DE MATTOS.
2. Raw Milk in Infantile Atrophy and Chronic Gastro-intestinal Catarrh. S. MONRAD.
3. Diphtheria in the Children's Hospitals of Vienna from 1886 to 1900. F. SIEGERT.
4. Peptonized Milk for Healthy and Sick Infants. LEO LANGSTEIN.

1.—**Buttermilk,** which was used as a food for infants in Holland as early as 1770, is very inexpensive. Teixeira de Mattos has used it for years with success, preparing it by the addition of rice and barley, heating it for 25 minutes, and then adding loaf sugar. This is well shaken up before giving it to the child. 15 case-histories are reported in full, showing both a marked gain in weight and the absence of all symptoms of indigestion. Acute and chronic gastro-enteritis disappear and rachitis is seldom seen. The lactic acid of buttermilk does no harm and but very little free hydrochloric acid results. No case of infantile scurvy has ever appeared in infants taking buttermilk. This, however, is not indicated during the first month of life. Vomiting grows less or stops entirely, and diarrhea is never caused by it. When constipation exists, or the child ceases to gain in weight, cow's milk may be added to the buttermilk, increasing it daily. The indications for the use of buttermilk are poverty, many attempts to find a milk which will agree with the child, and any doubtful case which is not thriving on the breast from some unknown cause. A full description of the manufacture of buttermilk follows, with the details for its preparation as an infant food. Tables are given to show that an infant upon buttermilk does as well as one on the breast; that too frequent stools cause no symptoms, and the feces passed show no relation to the food ingested. While colon bacilli were not found, lactic acid bacilli were present in the feces. The more acid the buttermilk, the more alkaline were the stools. [M. O.]

2.—Monrad believes that, while the casein of mother's milk is digested in the stomach by pepsin, that of cow's milk is only digested by trypsin in the intestines. Experience has shown that sterilized milk is better digested than uncooked milk. But no experiments have as yet shown a greater food value for infants in sterilized milk than in raw milk. Monrad details 5 case-histories of infants fed upon raw cow's milk, diluted with barley water. All showed symptoms of atrophy and dyspepsia, and all improved upon unsterilized milk, while sterilized milk, when given again, caused the return of dyspeptic symptoms. While bacteria are eliminated by sterilization, the milk is so changed that rickets and scurvy seem often to follow. Therefore, **in certain cases of chronic gastro-intestinal catarrh and infantile atrophy Monrad advises uncooked** milk, diluted with barley water or whey if necessary. Great care and cleanliness are necessary in milking, stabling cows, pans, etc., that as few bacteria as possible enter the milk. The milk diseases are from the microbes of typhoid, diphtheria, scarlet fever and the colon bacilli. [M. O.]

3.—Siegert reviews the **statistics** of the 5 Children's Hospitals in Vienna from 1886 to 1900, where 17,625 children were treated for **diphtheria.** The figures are arranged in tables. In 1894, when antitoxin was first used, the deaths fell markedly, even among those with intubation or tracheotomy. While [illegible] died from 1886 to 1894 out of 4,964 patients, from 1895 to 1897 only 837 died out of 4,183. There remains no doubt of the value of antitoxin in diphtheria. [M. O.]

4.—Langstein reports the case-histories of 2 healthy infants, 3 dyspeptic infants, and 20 infants with organic gastro-enteritis, to all of whom peptonized milk was given. All were under the age of one year, the majority of the conditions being caused by artificial foods. All improved, usually rapidly. Vomiting ceased first. Until [illegible] peptonized milk was well borne even by young infants in small quantities and then gradually increased in strength. Langstein insists upon well shaking the peptonized milk, since this causes fine curds, which are more easily digested. [M. O.]

ARCHIVES DE MEDECINE DES ENFANTS.

January, 1902. (Volume 5, No. 1.)

1. Lithemia in Children. JULES COMBY.
2. The Treatment of Diphtheria. P. GEFFRIER and E. DUFET.

1.—In an exceedingly interesting and thorough article Comby discusses **lithemia in childhood,** a diathesis which is generally hereditary and accompanied with a permanent disturbance of nutrition. It is frequent among the children of rich, intellectual people in cities and is often

in generation after generation. It is, however, often unrecognized except by an expert, though the diagnosis is easy when diabetes, asthma, gout, migraine, obesity or renal calculi exist. Comby details the usual, rather obscure symptoms. These children may be very fat or very thin; development is good, while their intelligence is always noticeably high. There is often anemia, with perhaps some enlarged lymphglands. Later, chlorosis may appear. Venous hum and functional murmurs are heard. There may be flushing or pallor, tachycardia or bradycardia, arrhythmia, headache, dyspnea, palpitation, pain or syncope, but there is no organic heart lesion. Coryza, hay fever, epistaxis, laryngitis, bronchitis, asthma, rheumatism, influenza, etc., occur easily, and anorexia, boulimia, pica, gastritis, enteritis, jaundice, hemorrhoids, or cyclical vomiting may be noted. Changes may occur in the urine, glycosuria, albuminuria, frequently orthostatic, polyuria, pollakiuria, with cystitis, urethritis, renal lithiasis, vesical lithiasis, hydronephrosis, pyelonephritis, movable kidney, vulvitis, etc., resulting. Such children are often nervous, with night terrors, convulsions, migraine, constant headache, or neurasthenia. Skin diseases are frequently seen, hyperidrosis, urticaria, edema, prurigo, seborrhea, pityriasis capitis, acne, psoriasis, and eczema. Not only are they specially prone to acute rheumatism, but uricemic arthritis may occur. Hydrarthrosis, ankylosis, torticollis, myalgia, ostealgia, muscular rheumatism, gout, etc., have also been observed. Odd attacks of fever occur, lasting a week or two, intermittent or remittent, unaffected by quinine. The cause of these symptoms is the auto-intoxication due to the lithemic diathesis. In the treatment of lithemia it is important to live in the fresh air, with exercise to prevent overeating, sedentary living, overwork, etc. No meat should be given children under 3, no alcohol, spices, game, etc. Milk and vegetables are sufficient. Besides, bathing, friction, massage, etc., are of service. Alkalies, water, and intestinal antiseptics are indicated. Acute attacks need rest and diet. Most important for these children is continued hygiene, with the regulation of the functions of the gastro-intestinal tract, skin, lungs, and brain. [M. O.]

2.—Geffrier and Rozet conclude that **injections of Roux antidiphtheritic serum may cause trouble, even in small amounts;** that as good, if not better, results follow the injection of small doses of the serum; and that less accidents follow small than large doses. It seems to aggravate renal symptoms. Thirteen case-histories of anuria following the injection of serum are given in full, 4 of them personal observations. When a child arrives, even before the result of cultures is known, from 5 to 20 cc. are injected as routine treatment, according to the age of the infant. The throat is washed with a bichloride solution (1 to 50) daily, as long as membranes exist. Out of 410 patients, 45 died. Diphtheria bacilli were found in only 309 cases, with 28 deaths. But 8 of these died from other causes, leaving 20 deaths from diphtheria, 6½%. Laryngeal stenosis occurred in 127 cases, 104 of which had either intubation or tracheotomy performed. Albuminuria was noted in 1/5 of the cases, while paralyses followed in 10%. Geffrier and Rozet do not advise injecting this serum, even in small doses, prophylactically. [M. O.]

Hemorrhagic Typhoid Fever.—Dettling, in the *Archives de Medecine et de Pharmacie Militaires* (November, 1901), gives the case-histories of 7 cases of typhoid fever of marked hemorrhagic type, which occurred among 300 cases seen in the Belvedere Hospital, in Tunis. There was purpura in 4 of the cases, subcutaneous ecchymoses in 2 cases, and general hemorrhages of the skin and mucous membranes in the last case. But one case recovered. Typhoid fever of the hemorrhagic type is usually fatal. The condition of the patient can usually be told by the pulse, especially in cases of this kind. [M. O.]

Society Reports.

THE ASSOCIATION OF AMERICAN PHYSICIANS.

Seventeenth Annual Meeting, Held at Washington, D. C., April 29 and 30, 1902.

FIRST DAY, MORNING.

The President's Address, which is published in the present number of the Philadelphia Medical Journal, was delivered by James C. Wilson, of Philadelphia.

H. K. Rachford and W. H. Crane, of Cincinnati, read a paper entitled **comparative toxicity of ammonium compounds. A study in auto-intoxication.** Ammonium in combination with the acid ions normally found in the human body forms more toxic compounds than sodium in similar combination. When injected into mice these salts produce [illegible] of excitability, paralysis and convulsions from which the animal may recover, or to which it may succumb. Ammonium is a factor in producing symptoms in cases of acid intoxication depending upon the acid ion with which it is combined. Salts of ammonium and organic acids are comparatively nontoxic; while the inorganic acid ions form highly toxic salts. In fact, the salts of the organic acids may have a slight antitoxic action. Sodium is not drawn upon, as a rule, to neutralize the acids of the body; but under certain conditions this base may be drawn upon to replace the ammonium in neutralizing these acids. Potassium is sometimes used to neutralize the acids and may contribute to the symptoms of acid intoxication. Potassium ions are of about ⅔ the toxicity of the ammonium ions. The toxic action of the potassium ion is manifested by labored breathing and death by asphyxia. Therapeutically, sodium is the most preferable substance as a neutralizer of the acids producing acid intoxication. The acid ions act in the production of acid intoxication as carriers of ammonium. When large quantities of ammonium in combination with organic acids are circulating in the blood in diabetes mellitus there may be no toxic symptoms. Ammonium is better adapted to the elimination of organic acid than to the elimination of the inorganic acid ions. C. A. Herter, of New York, said that we are not justified in attributing any toxicity to the salts of ammonium in the organism. Whenever ammonium excretion is excessive, it is due to the presence of large quantities of inorganic acid ions or to food containing ammonium salts.

B. Meade Bolton and Carl Fisch, of St. Louis, read a paper entitled **an estimate of the amount of toxin in the blood of a horse infected with tetanus.** In guinea pigs tetanus toxin is found constantly in the blood after injection. For this reason, the work on which the paper is based has consisted in inoculating 2 horses with garden earth, known to contain the tetanus organism, from the results of tests upon small animals: in inoculating one horse with a culture that produced tetanus in smaller animals; and a study of one horse that had become inoculated accidentally. The blood from all 4 horses was drawn at intervals of 24 hours after inoculation and the amount of toxin in the serum determined by the injection of guinea pigs and other smaller animals. The minimum fatal dose of toxin, obtained from one of the horses, for guinea pigs varied between 1.5 cc. and 2 cc. for an animal weighing 300 gm. Toxin appears in the blood of the horse several days before the appearance of symptoms; it increases in amount until the symptoms develop; and from this time it gradually diminishes in quantity until, at the time of death, it has usually entirely disappeared. Although the horse is a very susceptible animal to accidental tetanus, it proved to be difficult to produce tetanus by inoculating the animal with earth known to contain the tetanus bacillus. A. C. Abbott, of Philadelphia, said that he had examined the heart's blood of a child within 24 hours after death from tetanus by ingesting it into white mice. No symptoms of tetanus resulted. In answer to S. J. Meltzer, of New York, Polk mentioned that the differentiation of tetanospasmin from tetanolysin was not attempted.

A. C. Abbott and Nathaniel Gilbralsove, of Philadelphia, [illegible] the etiological significance of the

acid-resisting group of bacteria and the evidence of their botanical relation to the bacillus tuberculosis. The acid-fast bacilli do resemble the bacillus tuberculosis somewhat in their tinctorial characteristics, but the tubercle bacillus will withstand the action of acids for a longer time and will withstand the action of stronger acids than any of the members of the acid-fast group. With 5% sulphuric acid, tubercle bacilli resisted decolorization 20 minutes; the members of the acid-fast group resisted 7 minutes. The acid-fast group of bacilli cause, in certain animals, nodular growths that resemble tubercles in appearance. The authors have found, however, that these tubercles do not present all the characteristics of tubercles. There is no evidence of caseation and no evidence of general dissemination. The nodules resemble actinomycotic nodules. These organisms seldom produce nodules in the lungs, but nearly always produce nodules in the kidneys. Occasionally growing masses were found within the nodules that resembled actinomyces. Then, looking carefully, it was found that these actinomyces were present in every nodule. In hogs and calves these organisms, in fairly large doses, gave either no results at all or only produced granulation tissue at the point of inoculation; there was no dissemination of the organism within the body of the animal. They, therefore, probably do not produce disease in milch herds by the ordinary methods of inoculation. Their relation to the bacillus tuberculosis is believed by the authors to be a close botanical one. They are also of the opinion that the term bacillus applied to the bacillus tuberculosis is a misnomer. The most satisfactory term is actinomyces. The paper was illustrated by numerous excellent drawings. Simon Flexner, of Philadelphia, said that he had examined some of Abbott's specimens and that, in his opinion, the lesions produced by these organisms were not true tubercles. The lesions resembled granulation tissue very closely and were, in reality, foreign body tubercles or pseudotubercles. S. Solis-Cohen, of Philadelphia, asked if the same differences in the nodules were found in other animals than calves and hogs. S. J. Meltzer, of New York, asked about the alcohol decolorization of these organisms. Abbott, in reply to Cohen, said that in order to produce the nodules, the organism should be inoculated intravenously. The same differences in histology were observed in rabbits as in calves and hogs. He had not studied the alcohol decolorization.

Simon Flexner, of Philadelphia, read a paper entitled **histological alterations in cytotoxinic intoxication.** The study of immunity as related to the body cells is replacing that as related to micro-organisms. Many kinds of body cells, when injected into alien animals, give rise to the production of cytotoxins agreeing in many physiological properties with bacterial and other toxins. Among other effects they seem to act specifically upon cells of the kind from which they were derived. Thus far the injurious action of cytotoxins upon cells has been little studied histologically, and not at all upon the lymphatic organs which would seem to be peculiarly adapted for demonstrative lesions of toxic nature. The cytotoxins are almost specific and the histological changes produced by them have been described as degenerative. In the lymphatic system toxins have been produced for the lymphnodes, the spleen, and the bone marrow by the action on geese of the cells of these organs from rabbits. The lymphnodes react to the lymphocytotoxin in the same way that they do to experimental diphtheria infection. The reactions are generalized and the nonlymphatic organs are not attacked. There is evidence that it is possible to produce autolysins in the body for certain epithelial cells, and this suggests that certain poisons may set going a vicious cycle that may have as a result the production of such lesions as the cirrhoses. In the terminal infections it has been found that, in the majority of cases, there is a great reduction in the normal complement of the blood serum or an absence of it. The immune body may be occasionally absent from the normal blood. A. C. Abbott, of Philadelphia, said that in relation to the terminal infections he had observed that animals that have been given alcohol for varied lengths of time there was a reduction of from 25% to 35% of the complementary substance in the blood.

Victor C. Vaughan, of Ann Arbor, read a paper entitled **a study of bacterial cells,** which is a resumé of work done in his laboratory during the past 2 years. He and his assistants have studied the pigments of the bacillus prodigiosus, which are of 2 kinds, both soluble in water and both capable of staining cotton, silk and wool. One of the pigments is brown and the other is pink. The latter gives a spectrum similar to that of oxyhemoglobin. His work indicates that bacterial cellular toxins contain 2 or more toxic groups, one of which is much more readily split off than the others. This explains the decrease in toxicity that has been generally observed in solutions of bacterial toxins on standing. He has worked with the bacillus coli communis, the diphtheria bacillus, the anthrax bacillus, and the sarcinæ, among others. The bacterial bodies are extracted with ether and powdered. The powdered substance is the cellular toxin and can be used to produce immunity in rabbits. From the rabbits antitoxic substances can be obtained that will protect other rabbits, but that will not protect guinea pigs. He has obtained from the cellular anthrax toxin, by the action of dilute sulphuric acid, a product that is fatal to guinea pigs and that produces the histological lesions of anthrax. This is known as the anthrax toxin. Life in its lowest unicellular manifestations is the association of matter with that form of energy which endows the latter with the potentiality of assimilation, growth and reproduction. One unicellular organism differs from another not only in the matter which makes up the cell, but also in the special form of energy with which the matter is associated.

I. Adler, of New York, read a paper entitled **some effects of tobacco on the tissues of rabbits.** Rabbits were fed upon [illegible] cabbage saturated with a watery extract of tobacco. The animals were at first nauseated, but they soon resumed their normal health and not only did not refuse food but ate all of it. No animal died. After 3 weeks, an animal was killed, but showed no signs of disease. In 24 days, an animal was killed and all its organs were found to be normal except the liver. In this organ there was a marked though not extensive collection of round cells around the smallest interlobular vessels. After 2½ months, an animal killed had a large, pale, granular liver which was firmer in consistence than normal and [illegible] was cut. There was an increase of the interlobular tissue throughout [illegible] The connective tissue did not extend into the lobules and the liver [illegible] After 4 months the liver presented the same [illegible] appearance except that it was more granular in order. The other organs were normal. The fibrous tissue was increased in bulk and extent and entered the lobules. The bile ducts and the bloodvessels had undergone [illegible] but the pancreas and the [illegible] were normal. In the lungs and in the heart there was [illegible] but it was very little and the latter was not passing beyond its capacity. [illegible] did not intend to transfer the [illegible] nts to human cirrhosis. The bile [illegible] but the experiments have [illegible] an increase of fibrous tiss[illegible]

[illegible] Philadelphia Medical [illegible] a case of hematoporphyrinuria, which will [illegible] the Philadelphia Medical Journal. [illegible] which was published in the pages of that journal. W. Allen Sharp, of New York, reported [illegible] after treatment in which multiple [illegible] occurred.

[illegible] of Chicago, read a paper entitled pneumococcic arthritis. The pneumococcic arthritis is a very common [illegible] In some instances a slight traumatism of previous history of the joint have been the exciting causes of the localization of the infection. The localization of the joint lesion usually occurs during convalescence. This clinical phenomenon coincides with the [illegible] experiment that attenuated organisms

will produce the disease in a normal joint, or that very large doses of a highly virulent organism injected into a joint of a partially immune animal produce the lesion. The disease may be limited to the synovial membrane; it may involve the cartilages and the bone; or it may attack the periarticular structures. The disease is usually monarticular and involves the larger joints. The diagnosis should be made only after bacteriological examination of the fluid. The disease may be primary in the joints. The prognosis is usually grave, because of the severity of the primary pneumonia or of the accompanying bacteriemia, or because some more vital organ is simultaneously affected. Spontaneous recovery has occurred and in some cases aspiration and rest have resulted in cure. When pus is present, the treatment should be by incision and drainage. It is possible, however, that surgical treatment may be too radical. Since Cave's paper, in 1901, in which 31 cases were reported, 21 additional cases have been recorded, making a total of 52, 3 of which occurred in the experience of the author. William Osler, of Baltimore, said that the cases of pneumococcic arthritis might be divided into 3 groups: (1) Localized arthritis; (2) arthritis associated with pneumonia, and (3) arthritis associated with general pneumococcus septicemia. He described a case of the latter variety that occurred in an old negro man. Pneumococci were found in the cerebrospinal fluid, in the blood and in the joint fluid, before death. The patient died on the fifth day, and, at autopsy, pneumococci were found in a meningeal exudate which was present, in the fluid of the arthritis and in the blood. The primary seat of the lesion was difficult to determine. John H. Musser, of Philadelphia, said that he had seen a similar case in which pneumococcus septicemia followed pneumonia. The sternoclavicular joint was first involved. The patient recovered.

William T. Howard, Jr., of Cleveland, read a paper entitled **the pathology of herpes labialis and of herpes zoster occurring in acute croupous pneumonia.**

In a case of croupous pneumonia, dying on the sixth day of the disease, 3 days before death, there was marked herpes of the upper lip and of the nose, most marked on the left side. Histological study of the left Gasserian ganglion and its branches showed marked congestion of the veins about the superior maxillary nerve at its origin, with hemorrhage into the capsule and into the part of the ganglion nearest this branch. In addition to the hemorrhage there was cellular infiltration and proliferation, with compression, and destruction of some of the ganglion cells. The right ganglion showed congestion of the same veins, without hemorrhage, but with some cellular infiltration of the ganglion tissue near the superior maxillary branch. No degenerations were found in the roots of the fifth nerves or in the superior maxillary nerves. In a second case of croupous pneumonia, 3 days before death, there was a marked herpes zoster in the sixth thoracic region of the left side. A similar eruption was found on the day of death on the left side of the abdomen in the eleventh thoracic region. Only the lower portion of the cord and the lower spinal root ganglia could be removed at the autopsy. Sections of the left eleventh thoracic ganglion showed congestion of, and hemorrhage into, its capsule. At one side of the ganglion the capillaries were congested and a few red bloodcells were present in the interstitial tissue. In one small area there were a few disintegrated ganglion cells with slight round cell infiltration. In other portions of the ganglion numerous amyloid and hyaloid bodies were found in lymph-spaces and apparently in ganglion cell stroma. Degenerations could not be demonstrated in either the nerve, the posterior roots or in the spinal cord. Histologically, the lesions in the skin were identical in the 2 cases. As the lesions in the ganglion and in the skin in herpes labialis and nasalis, and in herpes zoster of pneumonia, are the same, and as they have the same pathology as ordinary herpes zoster, it seems probable that the various forms of herpes are identical. William H. Thomson, of New York, said that he believed that herpes occurring in the course of croupous pneumonia is a symptom of favorable import.

FIRST DAY, AFTERNOON.

H. F. Vickery, of Boston, read a paper entitled **a case of Hodgkin's disease with recurrent fever.** The patient was a girl, aged 19 years, who was under observation for 78 days. She presented febrile periods of from 6 to 8 days with afebrile intervals of about the same length. The Widal reaction was made twice with negative results. There was no evidence of tuberculosis, no reaction to tuberculin. An excised gland presented the structure of a mixed-celled sarcoma. There was leukopenia and death in coma. There was no autopsy. As yet the absolute relation of tuberculosis to pseudoleukemia is not established. The author believes that the recurrent fever is due to some as yet unrecognized organism. M. Allen Starr, of New York, reported a case of a female, aged 36 years, who was suffering from some general nervous symptoms. He made a diagnosis of recurrent fever. The woman had a tuberculous family history and a neuritis of the brachial plexus. Some of the enlarged cervical glands on one side of the neck were removed and histological examination showed them to be positively tuberculous. Three attacks of fever occurred, followed by afebrile periods varying in duration from 10 to 40 days. Then the lymphnodes on the opposite side of the neck were removed. These were found to be not tuberculous. The spleen was enlarged; there was no evidence of tuberculosis of the lungs nor of the mediastinal lymphnodes. Francis P. Kinnicutt, of New York, said that he had seen this same patient since February of this year. The disease is progressing. The liver and spleen are both enlarged, as are the mediastinal lymphnodes. John H. Musser, of Philadelphia, said that the large proportion of cases of Hodgkin's disease that he had observed were examples of tuberculous lymphadenitis. Inoculation experiments ought to be performed before tuberculosis is excluded as an etiological factor in such cases. The nomenclature is not satisfactory. William Osler, of Baltimore, said that he had seen a patient in whom the attacks of recurrent fever occurred, accompanying lymphosarcoma.

William Osler, of Baltimore, read a paper entitled **splenic anemia and its varieties.** There is a separate disease known as splenic anemia which is characterized by chronicity, enlargement of the spleen, leukopenia, chloro-anemia and hemorrhages, and which terminates with jaundice and ascites accompanying cirrhosis of the liver. He read a synopsis of an illustrative case. Splenectomy was performed and the patient died on account of hemorrhage from dilated veins situated in the gastrosplenic omentum. The chronicity is striking; more than half the cases have lasted longer than 7 years. Hemorrhages usually come from the stomach, although in some instances the bleeding takes place from other organs. Pigmentation of the skin was seen in 7 cases and in some of these it resembled argyria. The anatomical changes have not been found characteristic. Anemia splenica should be differentiated from pernicious anemia with enlarged spleen, from syphilitic cirrhosis of the liver and from Hodgkin's disease. The treatment is unsatisfactory. Splenectomy has been done in 3 of the author's cases. In one case recovery resulted and the patient has remained in good health for 4 years; in the second patient death occurred on the operating table, and in the third patient death occurred from hemorrhage 2 days after the operation. The nature of the disease is unknown. John H. Musser, of Philadelphia, reported 2 cases of anemia with enlarged spleen. In one case the patient had glycosuria of grave character but of transient duration. Still later he died from rapid tuberculosis. The post mortem examination showed enlargement of the liver without cirrhosis, enlargement of the spleen and cirrhosis of the pancreas. Microscopically, the splenic pulp was normal and there was some proliferation of the bile ducts in the liver. In the second patient there was an extreme leukopenia, the blood containing from 1400 to 3000 leukocytes, with an increase of lymphocytes. The patient died. The author is not able to assure himself that the disease is a distinct entity. It seems as though we might with much reason look at the liver as being the primary seat of the disease. Frank Billings, of Chicago, said he thought the disease was quite rare. In one case that he had seen there was a distinct decrease in the size of the spleen following hemorrhage. Richard C. Cabot, of Boston, said that he had seen 11 cases that might be considered examples of this disease. He had seen 7 other cases that were excluded from the list, 2 because there was attendant enlargement of the lymphnodes, 2 because they occurred in Armenians, and 2 because they were in children. He had also seen 7 cases of chronic enlargement of the spleen without anemia. He can see no good reason for calling this a special disease. There are many cases of secondary anemia of unknown cause and many cases of enlargement of the

spleen of unknown cause in which it is difficult to exclude cirrhosis of the liver and chronic malaria as an etiological factor. Alfred Stengel, of Philadelphia, referred to 2 cases of so-called Banti's disease, one of which came to autopsy. One patient was a Frenchman who served as a soldier in Africa and who had lived in Mexico. He had not had malaria, but had suffered from dysentery which was followed by chronic diarrhea. He had a low erythrocyte count, a leukopenia that never passed 6000 in spite of orchitis, general stomatitis and other septic complications. The patient died, and examination of the tissues showed microscopic hemorrhages into the spleen. The second patient was an Italian, in whom the blood condition was similar to that of the first patient. He also has had septic complications. He referred to the case of a child who presented a similar condition, with the exception of an occasional leukocytosis. At autopsy, splenic enlargement, such as is often secondary to other conditions, was demonstrated. C. W. Stiles, of Washington, said that he often finds enlargement of the spleen accompanied by anemia in cattle. In one epidemic he found a quadruple infection with parasites: 3 forms of strongylus and uncinaria areata. There is a strongyle that lives in the stomach of man. He suggested the advisability of looking for intestinal infections in case of splenic anemia. He believes that intestinal parasites are more common in this country than is usually supposed. The uncinaria in this country is a different variety from the uncinaria duodenale of Europe. He has named it uncinaria Americana. Charles Cary, of Buffalo, reported 2 cases that might be considered as belonging to the class referred to by Osler. William H. Thomson, of New York, reported 4 cases that presented enlarged spleen, anemia and ascites, which suggested the condition but which did not correspond exactly to it. In fatal cases of enlarged spleen the autopsies have been very varied in their findings. The probability is that in every case in which the spleen is enlarged the splenic condition is due to some infection. F. P. Kinnicutt, of New York, said that he had seen cases in children that apparently belonged to this group. William Osler said that he did not originate the name splenic anemia, but merely adopted it to single out a definite group from the heterogenous class of enlargements of the spleen. The disease has nothing to do with cirrhosis of the liver.

H. F. Vickery, of Boston, read a paper entitled **a case of albumosuria associated with pernicious anemia.** The patient complained of weakness, dyspnea and a pumping sensation in the chest. Albumosuria was present but was not associated with disease of the bones. The blood showed a condition of pernicious anemia. John H. Musser, of Philadelphia, reported a case of pernicious anemia associated with albumose in the urine, without bone disease. There was marked fatty degeneration of the intercostal muscles. A Jacobi, of New York, said that he had always thought that albumosuria was not due to disease of the bones alone. He said that he had often seen albumosuria in cases of pernicious anemia and he was of the opinion that it was not at all uncommon in this disease. Vickery said he thought that the commonest cause of albumosuria was myeloma of the bones.

William S. Thayer, of Baltimore, read a paper entitled **acute hemorrhagic polymyositis.** The disease is characterized by local muscle tenderness and pain and is accompanied by cutaneous eruptions and edema. It usually comes on suddenly or after indefinite prodromal symptoms. The course of the disease is progressive and death usually results. The etiology of the disease is obscure. The author reported the case of a man, aged 24 years, who, after a traumatism, felt a snapping sensation in the shoulder. This was followed by swelling of the arm, edema and purplish skin eruption. This condition gradually disappeared, but 6 or 8 months later a similar attack affected the arm without apparent cause. Last fall, after a traumatism, the patient had another attack in the right foot and leg. The attack in which the author saw the patient came on without apparent cause and involved the arm and the pectoral region. A piece of the superficial fascia was removed under cocaine anesthesia. A considerable amount of edematous fluid escaped from the incision. Microscopically, this specimen showed edematous connective tissue with fibroblasts and hemorrhages. He thought that the origin of the disease was similar to that of angioneurotic edema. Richard C. Cabot, of Boston, said that he did not understand how the diagnosis of myositis was made since muscle was not examined. A. Jacobi, of New York, said that the simplest form of myositis was that due to traumatism. Multiple myositis is rarely associated with purpura, and, as purpura is micro-organismal in origin, the hemorrhages into the muscles must be a part of an infection. He said that the interstitial atrophy which was present in his patient indicated a disease of the muscle. He admitted that there was some question as to the proper position of the case in the nomenclature.

Morris J. Lewis and F. A. Packard, of Philadelphia, read a paper entitled **a report of cases of thermic fever treated at the Pennsylvania Hospital in the summer of 1901.** Nineteen cases of thermic fever were admitted to the Pennsylvania Hospital during the first week of July, 1901. The number of negroes was small, showing the comparative immunity of this race. No patient with a temperature of below 106° F. died; no patient with a temperature of 111° F. recovered. The previous habits of the patients seemed to have had an influence on the results. The leukocyte count was variable, 3 cases only showed leukocytosis. The erythrocytes were not increased in number. Those patients who had a temperature of 103° to 104.5° F., 34 in number, were treated by rest, ice cap, cool bath, aromatic spirit of ammonia, strychnine and alcohol. Those patients who had a temperature from 104.5° to 106° F., 10 in number, were treated with stimulants, ice cap, cold bath or ice rub. Those patients who had a temperature from 106° to 108°, 15 in number, of whom 3 died; and those who had a temperature of 108° or over, 22 in number, of whom 8 died, were treated by bleeding, salt solution, and ice rub. Bleeding is not advised as a routine measure, but when a falling temperature is accompanied by impairment in the general symptoms it should be done. Normal saline solution by hypodermoclysis requires too much time in administration and its action is slow in appearing. Intravenous injection, on the other hand, results in rapid action and is a more satisfactory method of administration, as the saline solution can be injected through the wound made for bleeding. Ice rubbing in patients with very high temperature is the most efficient means of reducing the fever. Richard C. Cabot, of Boston, asked whether sunstroke occurred in arid regions. If it does not, is the absence due to lack of humidity? Frank Billings, of Chicago, referred to a case of sunstroke in which the patient escaped from exposure to the sun. John H. Musser, of Philadelphia, reported 6 cases of thermic fever in which the temperature was between 106° and 115° F. Two of the patients recovered. He advocated the intravenous injection of salt solution. F. A. Packard, of Philadelphia, said that in no case did the intravenous injection of saline solution do harm and that he felt sure that more patients were cured by its use than recovered without it.

Alfred Stengel and David L. Edsall, of Philadelphia, read a paper entitled **a clinical and experimental investigation of the value of gelatine as a hemostatic.** The value of gelatine as a hemostatic is greatly exaggerated by clinicians, although it has an action in increasing the rapidity of the coagulation of the blood. The authors have used gelatine in 12 cases of typhoid fever with hemorrhage, in some cases of gastric ulcer with hematemesis and in 4 cases of hemorrhage of pulmonal origin. After injections of gelatine and feeding with gelatine in cases of typhoid fever, patients whose condition was of great gravity and who were expecting fatal hemorrhage, have passed the period of danger, seeming to justify the continuation of the treatment. In cases of gastric hemorrhage the treatment was positive of good results, only in effect it seemed to be the food that contains one per cent. of free calcium; and the addition of this amount of calcium would double the amount of that substance in the blood, and, therefore, ought to [illegible] the coagulability of the blood. This has not been demonstrated experimentally in the large vessels but only in the small vessels the coagulation was accelerated. Gelatine is not an acid substance and therefore could not act as an acid does in its effects. When gelatine is added to blood, the corpuscles agglutinate, there is a precipitate of the fibrinogen and the blood thickens rapidly. The presence of the gelatine itself appears to have some effect on the blood. After injection of gelatine the serum of the blood contains a precipitate in a gelatine solution. To summarize, gelatine increases the coagulability of the blood (1) by increasing

the calcium content; (2) by its effect on the red blood-corpuscles, and (3) by its own viscosity. Clinically, the employment of this substance is not free from danger, as it may produce areas of coagulation in the muscles and these areas may break down and form abscesses. It may also produce stasis in the skin and the areas may become necrotic. It may injure the kidneys, since gelatine is excreted by the kidneys as such. None of the patients treated by the authors developed this complication, however. Pulmonary edema may develop. When gelatine is taken into the stomach, it may act as a coagulant by its local influence. In typhoid fever patients, it has occasionally produced nausea. M. H. Fussell, of Philadelphia, said that he had used gelatine in a patient suffering from typhoid fever who had had hemorrhages for 3 days. The hemorrhages stopped quickly. Each injection was very painful, and was followed by sloughing. George L. Peabody, of New York, said that he had found that one per cent. solution of gelatine produced a great deal of irritation unless it was carefully sterilized. S. J. Meltzer, of New York, referred to a number of reported cases in which the tetanus bacillus had been found in gelatine. Frank Billings, of Chicago, said that after using gelatine in a number of cases he had returned to calcium chloride in normal salt solution on account of the pain produced by the gelatine injection and the uncertainty of the action of the substance. Calcium chloride does increase the coagulability of the blood in 2 weeks by 75%. He thought that he could get all the good out of calcium chloride and sodium chloride that could be obtained from gelatine. James Tyson, of Philadelphia, said that he could draw no conclusions as to the efficiency of the gelatine injections. He had seen no harmful results from the use of gelatine even after long periods of time. Alfred Stengel said that he had had no cases of sloughing in his patients.

FIRST DAY, EVENING.

The evening session was devoted to a demonstration by the use of the projectoscope. Simon Flexner, of Philadelphia, demonstrated the **hemolymph glands** for A. S. Warthin, of Ann Arbor.

Charles S. Bond, of Richmond, Indiana, demonstrated specimens of **mitosis in cells in the circulating blood** for George Dock, of Ann Arbor.

Frank Billings, of Chicago, demonstrated slides showing **anguillula aceti obtained from the urine** of 2 patients. C. W. Stiles, of Washington, said that such a specimen might have been obtained from the urine that had been placed in a bottle that had formerly contained vinegar. He had found this worm once in the urine obtained by catheter from a female patient. In this case the worm might have entered the bladder from vaginal douches acidulated with vinegar. Filaria sanguinis hominis and pin worm might be confounded with the anguillula. A. Jacobi, of New York, said that several years ago he reported to the Association a case in which anguillula aceti has been found in the urine of a girl, 13 years of age.

James Ewing, of New York, demonstrated slides showing **vaccine bodies.** The number of these bodies bears a close relation to the amount of hemorrhage in the lesion. He concluded that the vaccine bodies are red bloodcorpuscles that have been englobed by epithelial cells. The question remains whether all the vaccine bodies are of this kind; but he himself has been unable to find any others. He also exhibited a slide, showing a discrete variolous lesion of the trachea, which indicated that the first effect of the variolous toxin is degenerative. In reply to a question by William H. Welch, of Baltimore, Ewing said that he had not been successful in attempting to inoculate the cornea. [J. M. S.]

(To be Continued.)

TWENTIETH GERMAN CONGRESS ON INTERNAL MEDICINE.

Wiesbaden, April 15-18, 1902.

In his opening address Naunyn, Strassburg, the president, spoke feelingly of the lately deceased members, von Ziemssen and Liebermeister. Then Ewald, Berlin, reported upon the diagnosis and treatment of gastric ulcer, as did also Fleiner, Heidelberg. In the afternoon session, von Leyden discussed the cause of cancer. The next morning was devoted to a celebration of von Leyden's seventieth birthday. Addresses were made by Naunyn, von Leyden, Hecker, Nothnagel, and von Ibell, Oberbürgermeister of Wiesbaden.

First session, Tuesday morning, Alten, Berlin, in the chair.

Ewald, Berlin, made an exhaustive report upon the **diagnosis of gastric ulcer.** Van Yzeren's theory that the cause of gastric ulcer lies in a spasm of the pylorus seems improbable, both conditions probably being the result of hyperacidity. In the last 10 years Ewald has seen over 1080 cases. He used the stomach tube only for confirming the diagnosis. In most cases, since the diagnosis was obtained without it, it was not used. Should uncontrollable hemorrhage occur, the stomach tube should be passed at once, with ice water. The great majority of cases showed no increased secretion of hydrochloric acid. Hyperacidity was present in 34.1%; acidity was normal in 66.8%; and there was subacidity in 9%. Lactic acid was always absent. Blood was frequently found in the stomach contents, while hematemesis occurred 203 times among 364 patients, 54.5%. While this symptom is of great diagnostic value, 3 varieties of hemorrhage may be mistaken for it; menstrual hemorrhage, hemorrhage with severe septic processes, and parenchymatous hemorrhages. Several examples were cited to show the frequency of these errors. The so-called hemorrhagic erosions either easily heal of themselves, or later become true ulcers. Positive diagnosis of the situation of the hemorrhagic artery is no more possible now than it was 10 years ago. When spasm or tumor of the pylorus is found, an ulcer, cicatricial thickening, or cancerous neoplasm must be suspected. Even histological examination of some of the hypertrophic tissues, which seem to be benign hypertrophy of the pylorus when excised, may later show typical cancerous development. Many more cases have been quoted to show this. Pain in gastric ulcer is not always typical. In old ulcers the pain may resemble cardialgia, the gastralgia of the initial stages of phthisis or the pre-ataxic stage of tabes, or hernia of the linea alba. Great loss of flesh or cachexia occurs but rarely. No value should be laid upon swelling of the lymphglands. An hour-glass stomach may present great difficulties in diagnosis, since it may be the result of a previous gastric ulcer. Insufflation of air, however, brings out the shape of the stomach. Should perforation occur into the abdominal cavity, symptoms are typical and the condition is readily recognized. It is, however, hard to tell when an ulcer has spread to neighboring organs, except in the few cases in which symptoms are characteristic. Many such cases are treated as functional neuroses, especially those with old perigastric adhesions. In such cases operation is of great value, causing permanent recovery. In young, chlorotic and anemic subjects the differential diagnosis between a neurosis and a gastric ulcer is almost impossible. When the stomach is not affected, its contents are generally normal; thus it is that affections of the gall bladder and bile ducts may be differentiated from pyloric and duodenal ulcer. Ulceration of the esophagus is rarely taken for gastric ulcer, since its condition is generally recognized by the esophagoscope. Whether the ulcer is simply peptic, or tubercular, syphilitic, etc., can be told from the course of the disease whether the symptoms of ulcer were noted at the beginning or only in the course of these general diseases. As a rule, however, tubercular or syphilitic ulcers of the stomach are only found after death.

(To be Continued.)

THIRTY-FIRST CONGRESS OF THE GERMAN SURGICAL ASSOCIATION.

Berlin, April 2-5, 1902.

(Continued from page 788.)

Thursday afternoon, April 3, Dr. Wohlgemuth, Berlin, in the chair.

Körte, Berlin, reported 60 operations for **subphrenic abscess.** In almost half of the cases the abscess followed appendicitis, the next most frequent cause being gastric ulcer. A few of the cases were due to gall stones, echinococcus of the liver, pancreatic abscess, empyema, perinephritis and diseases of the ribs and spleen. In 41 cases he operated through the pleura. In 14 cases a pleural exudate was found. Two-thirds of the cases recovered. Rehn, Frankfort, spoke upon **the treatment of abscess in the peritoneal cavity.** He advises early operation in all cases at the point of suppuration. The cause of the inflammation should be removed and drainage left. There is but little danger of abdominal hernia following. Sprengel, Braunschweig, reported his results in **the treatment of appendicitis and peritonitis.** He divided his 500 cases into serous appendicitis, perforative purulent appendicitis, and general appendicitis. He concludes that early operation for appendicitis before the peritoneum is affected is the only correct treatment. Sonnenburg, Berlin, spoke upon **the pulmonary complications of appendicitis.** Pneumonic and pleuritic symptoms, probably due to emboli, often follow laparotomy. Thrombosis and embolism were noted in 5% of the operations, even among patients operated upon between attacks. He warns physicians against the use of digitalis and advocates morphine as the only treatment for dyspnea after operation. Roux, Lausanne, evacuates the abscess during the attack and removes the appendix later. Out of 700 operations he had but 2 deaths. Hayem, Paris, spoke on **the treatment of general peritonitis.** The diagnosis of suppuration is made from local symptoms, general symptoms and the pulse. The incision should be directly upon the abscess. The technique of his operation is described in full, including the question of drainage. He has never seen recovery follow acute, septic general peritonitis, when the exudate reached from the pelvis to the subphrenic region. When it is necessary to make an artificial anus he uses the first part of the jejunum. Friedrich, Leipsic, discusses **the etiology of general peritonitis.** His experiments have shown that anaerobic bacteria play the principal role.

Riedel, Jena, demonstrated a **large twisted diverticulum** of the small intestine. This had caused ileus in a woman of 31. The symptoms resembled appendicitis. Death followed 48 hours after operation. von Eiselsberg, Vienna, spoke of **the operative treatment of large rectal prolapse.** Massage was of great use; Gersuny's twisting method was always useless; resection has often been followed by recurrence, while good results followed fixation by colopexy in 12 cases. He described his method of operation in full, and advises it in severe cases. Helferich, Kiel, agreed with von Eiselsberg. Sprengel, Braunschweig, discussed **the pathology of disturbances of the circulation in mesenteric vessels.** He showed 4 cases, one of anemia with ileus, another of hemorrhage due to slowly developing stenosis. The case-histories are given in full, showing thrombosis of the mesenteric vessels. Bunge, Königsberg, spoke of **Talma's operation.** He prefers the extraperitoneal method of attaching the omentum to the anterior abdominal wall, having used it in 8 cases of cirrhosis of the liver and ascites, with 4 recoveries, 2 deaths, and 2 failures. From the literature he found 90 cases of ascites with 32 recoveries. He believes the operation to be indicated in diabetes also. It has cured hematemesis. Jaundice and urobilinuria are contra-indications. Franke, Braunschweig, spoke of the dangers of Talma's operation, reporting 2 cases. Kocher, Berne, demonstrated a **peptic ulcer of the jejunum after gastrojejunostomy.** Payr, Graz, demonstrated a number of preparations of intestinal diverticula and discussed the cause of axial twisting in intraperitoneal organs. Ehrhart, Königsberg, discussed **wounds of the liver.** Prutz, Königsberg, made a contribution to the study of indicanuria, the result of experiments upon animals. Reerink, Freiburg, spoke upon permanent results in transplantation of the stomach, also in animals. Petersen, Heidelberg, told of the **operative treatment of hemorrhage** in gastric ulcer. He advises posterior gastro-enterostomy. His mortality was 3%. Heidenhain, Greifswald, Goepel, Leipsic, and Krönlein, Zürich, reported cases of gastric ulcer. A number of gentlemen then discussed gastric ulcer and gastro-enterostomy. Korte, Berlin, believed that the bleeding point must always be found. Küster, Marburg, agreed with him. Kocher, Berne, believed that too great importance should not be placed upon statistics.

(To be Continued.)

LA PRESSE MEDICALE.

February 1, 1902. (No. 10.)

1. The Surgery of Labyrinthine Suppuration.
MARCEL LERMOYEZ.

1.—Lermoyez discusses in detail the subject of **labyrinthine suppuration,** with its etiology, pathology, symptomatology, course, diagnosis, prognosis and treatment. He believes that internal otitis is the most common complication of otorrhea, the labryinth, though systematically [illegible] by the surgeon, not often being [illegible] by the pus. Infection reaches the labyrinth through the blood, from parotitis; by the brain, from meningitis; or by the ear, from otitis media, most frequently. The labyrinth may be opened by injury, such as fracture of the skull; by operation, as puncture of the round window, extraction of the stapes, etc.; or by accident, in the removal of foreign bodies from the auditory canal, paracentesis of the tympanum, or curettement of the mastoid cells. Acute cases generally follow scarlatinal otitis, while chronic cases occur with cholesteatoma or tuberculosis. The pus burrows its way to the labyrinth by erosion of the external semicircular canal, the oval window, the round window, the promontory, or the cochlea. The suppuration may be diffuse or localized. Pus from the labyrinth may reach the brain by the internal auditory canal, the aqueducts, the superior semicircular canal, or the veins of the aqueducts, meningitis or brain abscess following. The suppuration may cause fever in some cases, but when the [illegible] nerve is affected, hearing and [illegible] when the vestibular nerve is affected, continued or paroxysmal vertigo, nystagmus, unequal pupils perhaps, and decided lack of orientation result. The prognosis is better when meningitis and other complications are absent. Recovery is gradual, and deafness persists. The diagnosis may be very difficult. The [illegible] must be curetted first, then the internal ear should, if necessary, be trephined. While a dangerous proceeding, the good results warrant the operation when the diagnosis of labyrinthine suppuration is certain. If no fistula be found from the mastoid cells, or, though a fistula be found, yet symptoms persist, or meningitis or brain abscess be feared, trepanation is indicated immediately. The technique of the operation is given in detail, with many diagrams. [M. O.]

February 5, 1902. (No. 11.)

1. The Medical Clinic at the Laennec Hospital, Paris.
L. LANDOUZY.

1.—Landouzy, the new professor of clinical medicine, delivered his inaugural address January 31, in the new clinic at the Laennec Hospital. Until this year Professor Jaccoud, now retired, held the clinic at the Pitié Hospital. Landouzy reviewed the subject of **clinical medicine** from the time of the ancients, and exhorted the younger men to work passionately for the good of humanity, to ameliorate the conditions of the people morally and materially. [M. O.]

Special Article.

PRESIDENT'S ADDRESS.

DELIVERED AT THE SEVENTEENTH ANNUAL MEETING OF THE ASSOCIATION OF AMERICAN PHYSICIANS HELD IN WASHINGTON, APRIL 29-30, 1902.

By J. C. WILSON, M. D.,

of Philadelphia,

Professor of the Practice of Medicine in Jefferson Medical College.

Gentlemen:—It has been the custom since the founding of the Association for the member whom you have selected to preside at your meetings to open the scientific business of the annual session with some introductory remarks of a general character.

These addresses, as set forth in the volumes of the transactions are as diversified as they are entertaining. Some treat of the science and art of medicine in the broadest philosophical spirit; others of matters relating to the advancement of the interests of the profession as a body and the increase of its usefulness in an every-day, practical manner. Historical subjects have formed the theme of more than one of these discourses and he who seeks accurate knowledge relating to contemporary medicine may well turn to these volumes, in which are to be found not only the erudition of the student of medical history, but also an epitome of the best work of the period in pathology and clinical medicine. One admirable address consists chiefly of an analysis of the work of the Association to the time of its tenth session in 1895. As one would expect in a body like this, made up almost to a man of workers in hospitals either on the side of the wards or that of the laboratories, the principles and details of hospital organization and the subject of hospital abuse have been much considered. Perhaps the most interesting and important portions of many of these addresses, as having a kind of personal bearing, have been those relating to our meetings and our work and containing suggestions for the present and future welfare of this body.

Were I to have yielded to an early impulse in the matter, I would have undertaken an historical subject and spoken of the growth of Medical Societies in America, and their influence upon the development of the profession as an organization. It would have been agreeable to me and I trust not unacceptable to you to have traced the history of the struggle of the American Physician to escape from the bondage of his isolation in the earlier periods and the gradual evolution of the idea of a profession. The beginnings were far back, about a century and a half ago. Two organizations, one in Boston, one in New York, but both short-lived, preceded the oldest existing medical society in this country, the Litchfield County Medical Society, of Connecticut, which was founded in 1765, and is still active and flourishing. About the same time—1766—the physicians of Northern New Jersey, held a meeting at New Brunswick, which was attended by delegates from all parts of the state and effected a permanent organization, the objects of which as stated in the preamble to the constitution were "mutual improvement, the advancement of the profession, the promotion of the public good and the cultivation of harmony and friendship among the members." This society held regular meetings twice a year until the breaking out of the Revolutionary War. In 1781, the Massachusetts Medical Society was incorporated. Toward the close of 1786, the College of Physicians of Philadelphia, was instituted. Other organizations of similar purpose followed from time to time until that memorable meeting of May 7, 1847, at which by the election of Chapman as president; Knight, Stevens, Moulton and Buchanan, as vice-presidents; Stillé and Dunbar, as secretaries; and Hays, as treasurer; the organization of the American Medical Association was finally carried into effect.

The service rendered to the profession and through the profession to the people by this great association with the constituent state and county societies which it has fostered, cannot be overestimated. It has brought the profession together and gives it solidarity. It has not only encouraged the formation and growth of local societies, but has proved a constant stimulus to activity on their part. It has by means of its section work and excellent journal, set a high standard of professional attainments, and fostered among practitioners a deep sense of responsibility and a lofty conception of the duties and privileges of their calling. But the very nature of its organization carries with it inherent and serious defects. A body made up of delegates from local societies supported by members equally devoted to local interests and not especially selected for professional attainments is necessarily a representative body. Based upon political lines it is swayed and frequently controlled by political methods rather than by those of science. Ability in the one is mostly developed at the cost of proficiency in the other. Hence, constant abuses, too obvious to require enumeration or discussion. This fault has been so far recognized as to have led to a reorganization of the Association, by which its general business has been very strictly separated from its work in the sections and entrusted to a house of delegates especially chosen for the purpose. To what extent this arrangement will favorably influence the organization as a whole must be determined by the test of time.

Meanwhile, under the influence of a rapidly developing tendency to specialism, other national societies of more limited scope came into existence upon a wholly different principle of organization. Among the earlier of these were the American Surgical Association, the American Obstetrical Association, the American Gynecological Association and the body which I now have the honor to address. At the time of the organization of this Association in 1886, it was proposed to form a Congress of American Physicians and Surgeons by a union of existing special national associations. This proposition was soon carried into effect. Since that period many new national societies have been organized and have become constituent bodies in the Triennial Congresses.

The motive which led to the institution of these

associations has never been more clearly and tersely set forth than by Delafield in his brief introductory address. It is the desire to have "an association in which there will be no medical politics and no medical ethics; an association in which no one will care who are the officers, and who are not; in which we will not ask from what part of the country a man comes, but whether he has done good work, and will do more; whether he has something to say worth hearing, and can say it. We want an association composed of members, each one of whom is able to contribute something real to the common stock of knowledge, and where he who reads such a contribution feels sure of a discriminating audience."

The recurring meetings and the series of transactions which form the permanent record of our work tell more eloquently than I am able to do how faithfully these purposes have been carried out.

But time presses and I forbear to dwell further upon a subject which is alike of historical and of present practical interest. The favorable influence of the local and national societies is manifest alike in the medical life of the individual and of the many. Without these societies there could be no organized profession. Without their continuing development and increasing usefulness the progress of medicine will be hampered and retarded.

Death has made sad breaks in the list of our membership. Of one hundred and sixty-four, thirty-five have passed away. The last two of the original seven whom the association elected honorary members have died during the year that has passed. Among those who have left us, several have ceased from their labors early in careers bright with hope, others in the midst of the richest activity and usefulness, and some crowned with honor at the close of long fruitful lives.

In this last group must be placed the names of the honorary members whom me mourn.

John T. Metcalfe, died on the 30th. of January, 1902, at the age of eighty-four. Born at Natchez, Miss., he was educated at West Point and served in the war against the Seminoles, in Florida. He subsequently studied medicine at the University of Pennsylvania and engaged with great success in the practice of medicine in New York. He became professor of the institutes and practice of medicine in the University Medical College, physician to Bellevue Hospital and consulting physician to a number of medical institutions. Dr. Metcalfe was of singularly engaging personality and enjoyed a remarkable popularity which was due far more to his lofty professional attainments and skill than to his amiable character. He was not a prolific writer, his chief contributions to medical literature relating to the nature and treatment of the malarial fevers and yellow fever. But he was the very type of the practitioner of his day, accomplished, judicious, wise, devoted to the welfare of his patients, faithful to the interests of his professional colleagues. It is no slight token of the high esteem in which he was held that he was chosen an honorary member of this association when it was founded, at a period when by reason of premature infirmities resulting from ill-health he had for some years retired from active professional life.

Meredith Clymer, whose long career came to a close but yesterday, was also one of the seven original honorary members of this association. He died in New York, on the 20th. of April, at the age of eighty-five. He was graduated at the University of Pennsylvania, in arts in 1835, and in medicine in 1837. After some years of study abroad he settled in Philadelphia, where he practised medicine for ten years, occupying during this period several teaching positions of importance. He was physician to the Philadelphia Hospital and had charge of the Cholera Hospital, in Philadelphia, during the epidemic of 1849. He was for a time professor of the practice of medicine in one of the Colleges of Richmond, Va., and subsequently, having removed to New York, was appointed, in 1850, professor of the practice of medicine in the Univertsity of New York. In 1871, he became professor of nervous and mental diseases in the Albany Medical College. Dr. Clymer was greatly interested in army medical matters during the Civil War, and served during the war and subsequently as Medical Director of the Department of the South.

He was a man of great energy and diversified attainments. His earliest important contribution to the literature of medicine was a treatise upon the fevers. He became especially interested in subjects connected with the nervous system and his works in this branch of medicine are of value. He was for a period editor of the Medical Examiner and Associate Editor of the Journal of Nervous and Mental Diseases, and prepared the American Edition of Aitken's practice of medicine. He wrote an oration on Rush and an essay on hereditary genius.

The sudden death William Waring Johnston came to us in the midst of the preparations for this meeting with a shock. He was an original member of the associaition and was earnestly devoted to its interests from the beginning. He found time in a life given to his profession as practitioner, consultant and teacher to prepare admirable papers for our meeting and to take an active part in our proceedings. His generous service in arranging the details for these meetings was rendered so modestly that most of us were unaware of our obligation to him. He was long our treasurer and at the time of his death a member of the Council. It is not necessary for me in this assembly to undertake to characterize Dr. Johnston as a physician. His high gifts were recognized in the many honorable appointments conferred upon him and in the eagerness with which his services as a practitioner and consultant were sought. He is sadly missed in this city, the especial field of his usefulness. His memory will be affectionately cherished by the members of this association.

The activity and influence of this association continues to increase. The number of papers presented is each year greater than can be read. The volumes of the transactions are larger than ever before and their contents are of the highest scientific value. There is now as always a long waiting list of those who crave the distinction of membership and are

worthy of it by reason of ability, training, applicative energy and personal character.

Permit me to present to your consideration the following suggestions, several of which have been brought forward by my predecessors:—

First, That in many instances, the form of a communication best suited for publication is not that adapted for presentation to an audience such as this and that details of clinical histories or of experiments and copious quotations from the literature can often be omitted in the reading of papers without detriment to their value.

Second, that all subjects should be presented with reasonable conciseness. The cost of the volume of the transaction has become so great that the annual dues must be increased or an assessment made to meet it. This year the Council have authorized the Recorder to pursue the latter course, if necessary.

Third, that the papers should be handed to the Recorder directly after the meeting or with as little delay as possible. The last volume of the transactions was held back several months on account of the delay in forwarding a small number of the papers.

Fourth, that the wise suggestion of Dr. Da Costa, repeated by our last President, Dr. Welch, in regard to the honorary list be considered by those "who have been members for a long time but find it inconvenient to attend regularly, yet wish to remain with us."

Fifth, that the time is now at hand when our membership should be increased to one hundred and fifty.

Sixth, that the number of new members elected in any one year should not exceed ten.

A Case of Splenic Anemia.—Méry discusses a case of splenic anemia in a girl of 10, markedly anemic, with slight fever, headache, and abdominal pain, existing for three months. (*Bulletin Médical*, December 11, 1901). At four years she had an attack of hemorrhagic gingivitis which lasted a year. She had a chronic gastro-enteritis, and both skin and mucous membranes were very pale, while her face was puffed. The spleen was much enlarged, reaching 6 cm. below the margin of the ribs, and the liver was slightly increased in size. There were no enlarged glands, and no other signs or symptoms. Erythrocytes numbered 2,600,000, leukocytes 4200. Upon iron, quinine, and arsenic, the spleen decreased, but rapidly increased again. The diagnosis rested between malaria, primary tuberculosis of the spleen and liver, and splenic anemia. The history excluded malaria, and the tuberculin reaction was negative. In this case the illness seems to have begun at four years, with gingival hemorrhage, and it is possible that Banti's disease may be the final result. Arsenic is the only drug which has caused permanent improvement. Méry will continue this treatment, with possible splenectomy, if the splenic anemia does not improve, and the spleen becomes much smaller. [M. O.]

Meningeal Hemorrhage in Hemophilia.—In the *Bulletin Medical* (November 13, 1901), Couty reports a case of meningeal hemorrhage in a boy of 10, whose brother, aged 14, and cousin, aged 18 months, showed hemophilia. At the age of 7, he struck his ankle, which bled profusely. This year he fell upon the back of his head, after which distinct meningitic symptoms appeared, with convulsive movements of the left side of his face and left arm. He recovered rapidly. As the cervical glands were all enlarged, there was some suspicion of tuberculous meningitis. Yet Couty believes the conditions to have been simple meningeal hemorrhage with hemophilia. Neither of the parents or grandparents showed hemophilia. [M. O.]

Original Articles.

A VOLUNTARY BOARD OF NATIONAL EXAMINERS.

By WILLIAM L. RODMAN, A. M., M. D.,

of Philadelphia

Professor of the Principles of Surgery and Clinical Surgery in the Medico-Chirurgical College, and Professor of Surgery and Clinical Surgery in the Woman's Medical College of Pennsylvania.

At the recent meeting in Washington City of the Committee of National Legislation representing the American Medical Association, the subject of reciprocity between the several states was very generally discussed, and considered practically impossible with so many states and territories, each with its own standard and no two alike. In some states there is no State Board of Examiners and the several counties of the states fix a standard. More than half of the states were represented at the conference, and the interchange of opinion was free. The committee appointed one year ago made a majority report through its secretary, Dr. Emil Amberg, advising against reciprocity, and in favor of a national board of examiners. The committee had, however, been working upon the hypothesis that such a board could be created and sustained by act of Congress. Letters read from Senator Burrows and others caused the committee to drop the idea of a National Board created by Act of Congress, as such legislation would certainly be unconstitutional and in conflict with the several states. The states are sovereign and cannot be coerced by the general government.

There is, however, nothing to prevent, or seriously in the way of, a voluntary National Board of Examiners, whose examinations shall be of such a character and high standard as to command the respect of the several states and cause them to issue a license to any one who has successfully passed such an examination. To fail to do so, as was said by Professor William H. Welch in the discussion, would make such state ridiculous. I, therefore, offered this amendment to the report of the committee, which was promptly accepted and unanimously approved after full discussion. I then suggested that this board consist of six members, viz., the Surgeons-General of the Army, Navy and Marine-Hospital Service and three equally representative civil practitioners; two to be elected by the house of delegates of the American Medical Association and one by the American Congress of Physicians and Surgeons. A seventh might be added to represent the National Board of Examiners. This Board would at once have the confidence of the profession, as it would be comprised of able men absolutely above suspicion. The time of meeting should be from June first to July first, so as to accommodate the graduates of all schools.

The examination should be both theoretical and practical. Applicants should be taken into the wards of hospitals and be given opportunities to make diagnoses, and examine urine, sputum and blood, as well as outline courses of treatment.

The place of meeting should, as a rule, be in Washington; provided its hospital facilities are adequate. It is desirable, however, to vary the place

of meeting from time to time so as to make the board truly a national one, and to subserve the interests of the greatest number of applicants.

The fee should be not less than $25.00, the maximum amount chaged by a state board, so as not to bring the national into too great competition with any state board.

Now, what would be the inducement to graduates to go a distance, assume greater expense possibly than they now do, only to get a diploma which need not be recognized by the states? My answer is that as every state and territory in the Union now recognizes the commissions of medical officers of the Army, Navy and Marine-Hospital Service, so they would be glad to recognize the certificate or diploma of any one passing an examination conducted by able and distinguished men representing all sections of the country. A man with such a diploma should be permitted, like the constitution, to follow the flag and practise medicine and surgery anywhere within our possessions. Now, if a man moves from Pennsylvania to New Jersey he must pay $25 additional for the privilege, and in other states pass another examination as well. This is manifestly unfair to men who are excellent practitioners but necessarily rusty in the theoretical branches, such as anatomy, physiology, chemistry, etc., etc.

There would be another inducement to young men to appear before the national instead of a state board: there are many positions within the gift of the federal government, such as contract sugeons in the Army, Navy and Marine-Hospital Service; physicians to Indian Agencies and members of pension boards of examiners in all parts of the country, requiring the services of more than average men. Any one holding the diploma or certificate of such a national board would at once have the advantage over any one else less fortunate. In truth, in nearly all such cases, a further examination could, with perfect justice to the government, be waived. So manifest are its advantages that each year there would undoubtedly be a larger number of applicants; and in time sub-boards would be necessary to accommodate the number applying—each to meet in some large city with abundant hospital facilities and accessible to many applicants.

There is but one serious question involved, and that is whether or not the expenses of such a board could be met for a year or two out of the fees of applicants. There would be only three or four examiners to pay, as I was told by each of the Surgeons-General that they would act, or detail some one from the service, gratuitously.

There is also, I take it, little doubt that suitable quarters for conducting the examinations could be furnished by the Bureau of Health which is almost certainly to be established by this congress.

Should the fees be insufficient to secure the services of the best men, the American Medical Association could well afford to pay for the two members appointed by it. Certainly this great organization, with money in its treasury to spare, can well afford to give something to a cause having behind it the best elements in the profession. It is unfair to ask that any one worthy of the appointment as examiner should give a month, possibly longer, to even so excellent a cause without compensation. So could the American Congress of Physicians and Surgeons provide, if necessary, for its appointee.

A voluntary board is better for the profession than a compulsory one, for its standard can reasonably be made higher, and its certificate be a diploma "cum laude." Moreover, the profession will be elevating and purifying itself and not trusting to legislation to accomplish the purpose which under our form of government is impracticable, even though it were desirable.

I have little doubt, however, that the fees would be sufficient to pay the examiners well even the *first year*. If the examination should be held in Washington, it would be very accessible to all the Eastern schools, representing, we will say, a thousand graduates. There will be more; as Philadelphia alone has each year about 400. The Eastern schools are of such standard that they would encourage their graduates to go before the Voluntary National Board, and it would be safe to count upon ten per cent. (100) of the graduates of Washington, Baltimore, Philadelphia, New York, Richmond and Charlottesville (University of Va.) and other cities adjacent to the capitol doing so. $2500 should thus be assured; the expenses would be nominal and all over and above expenses would be divided between the three examiners. I am informed that the officers representing the three public services would be estopped from accepting compensation. This ten per cent. could be probably doubled by the board meeting in Washington a week, and then spending a week in each of the three large cities adjacent to it; viz., Baltimore, Philadelphia and New York. The medical schools in these cities would willingly furnish quarters and facilities for conducting the examinations, and the hospitals furnish all necessary clinical advantages. This plan has been unanimously endorsed by the delegates from the several states meeting with the committee on National Legislation and will be recommended to the House of Delegates at the coming meeting of the American Medical Association. It is to be hoped that it will be carefully considered and either it or a better plan at once inaugurated; as something should be done to encourage a higher and better medical education and to give in return something in the way of privileges and professional standing to those possessing it.

Vaccination and Revaccination in the French Army.—The number of successful vaccinations in the French Army has decreased markedly since 1897 says Dr. Vaillard in the *Archives de Médecine et de Pharmacie Militaires* for November, 1901. In 1894, successful vaccinations numbered 72%; now they are only 60%. While the first revaccination formerly took in 54% of cases, now it takes in but 30%. Later revaccinations take in 30% of cases. Vaillard believes that fresh glycerinized vaccine lymph is most likely to be followed by success; that scarification should be employed, making three incisions upon each arm, from 2 to 3 mm. long; and that an aseptic dressing should be applied to keep out any chance of infection. He gives long tables of statistics upon which he bases his conclusions. [M. O.]

DIAGNOSIS AND MANAGEMENT OF SOME OF THE MORE COMMON LESIONS OF THE ADULT KNEE.*

By V. P. GIBNEY, M. D., LL. D.,
of New York.

The invitation so courteously extended by the President and Secretary to read a paper on this occasion was simply irresistible, and the honor done a sojourner in your city is, I am sure, not an empty one. The title chosen ought to call out a discussion as beneficial to the reader as to the hearers and participants, and it shall be my aim to present the subject in a manner that will elicit an expression of opinion on certain phases of knee joint diseases by no means clear to the majority of physicians and surgeons engaged in special, as well as in general practice.

I have made no attempt to report in detail a long series of cases, but have tried to report in abstract a number that will bear upon the more common diseases and disorders of the joint.

The lesion most common, as all of you know, in the knee of childhood is a tuberculous epiphysitis, familiarly known as "white swelling," and the management of such a lesion may be embraced in two terms—immobilization and protection in any and all stages of the disease. The active practitioner is called upon to diagnosticate a number of lesions occurring in the adult knee, and remarks on this subject are never out of order.

From an etiological standpoint this broad distinction may be made between the diseases of childhood and those of adult life: In the former the bacillus of tuberculosis is the all-important factor. In the latter trauma is the most important. Lest the statement may be regarded as too sweeping, let me add that trauma plays a very important role in the causation of *exacerbations* in the tuberculous diseases of bones in children, and that the object of treatment is to avoid and minimize the effects of traumata intrinsic and extrinsic.

Diagnosis in joint disease is of prime importance, and if I were inclined to indulge my predilection, I would devote the entire evening to this one phase of the subject, but my aim shall be to point out the steps only which lead up to correct diagnosis. One of the most important steps is the cultivation of a habit of close observation, and I know of no better way of attaining this end than by a painstaking record of the case. The man who keeps no notes of his cases fails to profit by experience, unless he be gifted with a wonderful memory, and even then he fails to keep in consecutive order the different steps of treatment and the changes in character that often make a case of absorbing interest. Errors in diagnosis are most frequent when critical examinations are not made. It really takes no more time to inspect both knees, both thighs and both calves; to palpate, to measure and to test functions, at the same time jotting down the results, than it does to discuss with the patient or the family the topics of the day and, incidentally, the history of the case. After an exhaustive examination preceded by a simple concise narration of the facts connected with the history, there is often enough time left for a chat on social events, the weather, &c., &c.

The gait is another step which aids one to reach a diagnosis. At my last clinic in the College of Physicians and Surgeons, I was especially fortunate in having for demonstration four men who presented as they walked back and forth across the "pit," four different types of lameness. One held his knee slightly flexed and walked without bending it, bringing his weight on the toes and the ball of the foot; this was a case of chronic arthritis ending in ankylosis in faulty position. One walked with the knee hyperextended at the moment of contact, heels striking the floor first, and yet as he lifted the foot of the lame knee for the next step, the knee was bent over a small arc; this was a case of chronic disease as well, but the sensitive area was along the anterior borders of the joint. One flexed and extended the knee as he walked, bringing the foot down with a kind of "flop," as if there were a loss of power in the quadriceps extensor; he had hydrops articuli dependent on renal disease. The fourth man walked with the knee perfectly straight, dreading the slightest motion as he stepped; his was a case of contusion of the subpatellar bursa.

An injury to the knee may be confined to a small area, and yet the inflammatory extension may be such as to limit the functions of the joint, producing at times a general arthritis, less frequently a simple synovitis. The point of injury is generally marked by ecchymosis at the time the physician is called, and a little palpation will determine the exact focus of injury.

While attending the meeting of the American Medical Association, May, 1896, the daughter of my host, a young lady of 20 years of age, fell from a bicycle on the 4th. of May, and within a few hours the joint filled with fluid. I saw her the following day. The synovial sac was distended, and its anatomical boundary could be distinctly mapped out. The patella floated on the fluid; the point that came in contact with the ground was the side of the patella, and it was easily determined just what was the damage done. The surgeon who saw her with me at the time was anxious to apply a plaster-of-Paris bandage, but the young lady demurred, because she was anxious to attend a dance that evening. From a pretty extensive experience with strips of rubber adhesive plaster in sprains of the ankle, I felt reasonably sure that a like treatment in this case would favor the resorption of the fluid and bring about a good result in less time than it could be accomplished by the use of plaster-of-Paris. So I strapped the knee at once, not encroaching upon the popliteal space, and put her to walking at once. She was able to dance that evening; was around and about the following day, and I saw her on the evening of the 7th., 2 days later, at a reception. A strapping, a few days subsequent, sufficed to effect a cure, the fluid having rapidly disappeared.

I mention this case simply as an illustration of the behavior of a knee in which synovitis is the lesion. Incidently, I may mention the treatment which I have found quite efficient in a pure uncomplicated case. A strip of adhesive plaster, about an inch in width, and long enough to reach two-thirds of the way about the limb, is applied about the beginning of the insertion of the ligamentum patellæ, running obliquely. A second strap crosses this; the third overlaps the first half way; the fourth the second, and so on until the upper border of the synovial sac is reached. No attempt is made fully to extend the

*Read at a meeting of the Medical Society of the District of Columbia, Feb. 26, 1902.

limb, and it is left in the slightly flexed position in which it is found. Immediately following this is a roller bandage, used to make the plaster adhere more closely. If there is much pain and other evidence of active inflammation, nothing is better for the next few hours than an ice-bag. Some surgeons who are enamoured of this treatment insist on the patient using the limb at once, on the theory that the action of the quadriceps femoris tendon will assist in disposing of the fluid. While this is a tribute to the adhesive plaster method, I can not help but feel that the knee joint is too important for any such experimentation, and, unless a necessity arises for the use of the limb, I prefer to have it used with caution for the next few days. At this time the parts will have shrunken a good deal, and the strapping may be reapplied.

Where synovitis is late developing and depends upon the gradual extension from a localized periostitis or from a detached fringe of the semilunar cartilage or from a subpatellar bursitis, the strapping is merely a factor in the management of the case. It is, as we say, an adjuvant. The question of immobilization presents itself for consideration, and a posterior splint, plaster-of-Paris bandage and axillary crutches are often necessary to control the inflammatory reaction. Let me illustrate.

A gentleman, 22 years of age, at Yale, presented himself for treatment of a traumatic arthritis on the 2nd. of December, 1901, and I found the thigh only a half inch smaller than its fellow, the knee from a half inch to three-quarters larger; the normal contour completely effaced, and the parts over the internal condyle exquisitely sensitive; he was unable to extend the limb beyond an angle of 150° or to flex it beyond 90°. There was thickening without any marked effusion throughout the entire synovial sac; the popliteal bursa was not involved. Last summer, while playing golf, he was conscious one afternoon of straining his knee. There was much pain at the close of the game; he was unable to sleep that night and the synovial sac was much distended the following morning. He regarded it simply as a "golf knee," without knowing exactly what was meant by the terms, got a pair of crutches and hobbled around. It grew stiffer and stiffer, and at the end of the week was in the position of marked flexion. Hot fomentations, followed by hot and cold water douches, with massage, effected a reduction of the deformity at the end of three weeks. A silk elastic knee cap was worn as a convalescent dressing, and he regarded himself as apparently well until the beginning of November 2 months later. While climbing over some rocks on a geological expedition the pain recurred; but there was less swelling than before and less deformity. After moderate use, even with the cane or crutches, there was increased heat in the parts and his suffering was greater. I was unable to locate the original lesion in this case, but felt reasonably certain that it was in the neighborhood of the muscular attachments around the internal condyle. Treatment employed was light strokes of the Pacquelin cautery, with the immediate application of strips of rubber adhesive plaster and a posterior splint. Within a few days I applied a protection apparatus known as the Campbell brace. This consists of a thigh and a calf band of sheet steel connected by steel bars, jointed at the knee, so that the limb may be locked or accorded motion as the surgeon wishes. The bar on the outer side extends to the outer side of the shank of the shoe, in front of the heel, an inch above which a free joint is made. The object of this latter device is to prevent too much constriction about the limb for the maintenance of the apparatus in position. It simply distributes the weight and does not give full protection: it immobilizes, and, if complete protection is necessary crutches may be employed. The cautery was employed about three times a week during the next four weeks, when it was found that he could extend the limb fully to 170°, the synovial thickening had disappeared, and the tenderness over the condyle was much less pronounced. Early in February I gave him a small range of motion in the apparatus, a little short of that he could voluntarily make, and when I saw him last, on the 15th. of February, he had a full range of motion, had no tenderness about the knee, was walking easily. The treatment now employed, which I regard as very important in the convalescent stage, is the restoration of the power to the quadriceps femoris and the other muscles whose insertion is around the knee. This is accomplished by massage and active and resisting exercises. Just as soon as the muscles are restored, the apparatus can then be removed and the cure will have been completed.

The diagnosis of traumatic arthritis is sometimes exceedingly difficult, and requires more time than one can give at the first examination. I am reminded of this picture of a case seen by me in consultation with Dr. Reginald Sayre, October 2nd., 1900.

It was in a well-grown miss of 13 years of age—one of twins. The doctor had been obliged to divide the responsibility with her physician in the country, and the ordinary methods of treatment had proved rather unsatisfactory so that it became a question for differential diagnosis between a simple and a tuberculous arthritis. The history was that, when she was 5 years of age, there was treatment for weak ankles extending over a period of two or three years; when eleven years of age she fell from a bicycle, striking the patella; two or three weeks subsequently synovitis developed, and at this time she was seen by Dr. Sayre, who advised immobilization in plaster-of-Paris. This was applied by the local physician and was worn for 3 months; the end of which time found the family much discouraged. Later, crutches and a high shoe on the opposite side were employed. Then followed a period of douches and massage, more or less vigorous, active and passive movements. Again Dr. Sayre was called in, and advised the Campbell brace with motion at the knee; this was followed by increased swelling of the joint, pain and disability. We found on examination a good deal of infiltration and bogginess about the joint, tenderness over the inner head of the tibia, atrophy of thigh one and a half inches and reflex spasm on extension beyond 100°. The family history was negative, and we both agreed upon a plan of treatment which was fixation of the limb in plaster-of-Paris, applied secundum artum, and axillary crutches (ring) and tenotomy with one of two interrogation points. The mother protested against the use of plaster, and we were obliged to compromise. Dr. Sayre was ill shortly after our consultation, and he referred the case to me for treatment. Then came a question of management. I locked the Campbell brace she had, strapped the knee, and made use of the crutches, feeling quite sure that I should be able before long to employ the plaster-of-Paris. After a little while I used the Sayre knee splint, which she had in stock, but got up so many excoriations from the metal in plaster that I finally got consent to put the limb up in plaster-of-Paris. This was the latter part of November, 1901. I put my best to make the plaster-of-Paris bandage a work of art and to the appreciation on the part of the mother and daughter was extensive. From this time to the present I have had to do little or nothing in managing the case. The plaster was changed every 2 or 3 months up to the 18th. of January, 1902, when there was no longer any occasion to consider the question of tuberculosis. The limb now is the same size as its fellow, and the range of motion is nearly as good. She is wearing the Campbell brace with a full range of motion, is having massage to the thigh and calf daily, and resistive movements, and the knee is getting to be well.

I could, did time and your patience permit, narrate instance after instance in which the question of diagnosis was for a long time difficult, and in which a plentiful knowledge of the dangers to be avoided by a proper management of the case have proved satisfactory, and in which finally diagnosis became simple enough.

The physical signs of a tuberculous knee whether in the child or adult are usually sufficiently pro-

nounced to enable one to arrive at a proper conclusion without delay; but there are instances, especially when the family history is tuberculous, that are extremely puzzling. The loss of contour, the general thickening, the bony enlargement, the reflex spasm and the extreme chronicity, are usually quite enough for a diagnosis.

I am sure you will pardon me if I trespass on your time in a little further elucidation of differential diagnosis.

On the 23rd. of September, 1894, I saw a lady, 22 years of age, whose family history was laden with tuberculosis. She herself was thin, poorly nourished, and while there was no evidence of pulmonary disease, she had been set aside as the next victim. Eleven months prior to this date, while walking on a hardwood floor, she slipped, fell and struck the inner side of the left knee against the floor. She got up at once, and had no inconvenience whatever, going about as usual; at the end of two days, however, there was marked ecchymosis on the inner side of the ligamentum patellæ and the parts were quite sensitive. Little swelling ensued, but no involvement of the joint proper. After a week or ten days of pain and inconvenience, plaster-of-Paris was employed. She bore this for only a few days, and compromised on crutches, which she used for some time thereafter. From that day to the date of my examination, eleven months, there was pain and lameness every day, and both were aggravated by use; her sleep was disturbed by reflex spasm. Four or five weeks prior to my visit, fly-blisters were employed and plaster-of-Paris for a week or two. I found distinct tenderness over the semilunar cartilage, some about the internal condyle, but no bony enlargement. Extension beyond 170° gave pain, and flexion beyond 150°. There was no effusion into the joint or on either side of the ligamentum patellæ. There was one inch atrophy of the thigh. The knee measurement showed a little increase in size over the patella. With the history impressed upon my mind and yet with the lesion apparently confined to the inner edge of the semilunar cartilage, I eliminated tuberculosis, subject, however, to revision. I ordered a brace such as I have described before, a posterior splint to wear at night, and proceeded to give enough protection to the joint, at the same time determined to employ counterirritation. It was at least a month before any relief followed, and I was inclined to attribute this relief to the plentiful pustular eruption produced by adhesive plaster. I insisted on the brace being locked at the knee, and insisted on her being out of doors as much as possible. The case proved a tedious one, and it was fully a year before I was enabled to dispense with the apparatus. In the summer of 1896 she was in Ashville, N. C., troubled with a cough, but not dependent on pulmonary lesion. Since that date she has been free from pain and from lameness, rides horseback a good deal, and up to the present time she continues well. Whenever she is in the city, she usually calls to report how well she is doing, but never has occasion to seek my advice about the knee.

While the following case has been to all appearances equally good, the suspicion of tuberculosis continued for a much longer time.

A lady, 24 years of age, was referred to me on the 6th of December, 1897, by a medical friend, with a note that she had had two different attacks of synovitis, with a large effusion each time, and each time she recovered after being laid up for about 2 months. A year or two before, she sustained a fall. Since that time she had had pain and enlargement of the knee joint, but not much fluid. The knee was growing larger, and she was daily becoming more crippled. She herself was poorly nourished, and I was inclined from the examination to regard the arthritis as probably rheumatic. The knee itself was an inch and a half larger than its fellow, was limited in its range of motion, and presented a good deal of puffiness about the ligamentum patellæ. I proceeded to treat her on the same lines as in the preceding case, but soon found it necessary to employ a skin-fitting plaster-of-Paris bandage, which gave much relief. At the end of two and a half years it was still necessary to immobilize the knee, although there was little difference in size, but any use seemed to bring on an exacerbation. The family physician believed that she had tuberculosis of the knee; I went over the history in detail on the 3rd. of April, 1899, and found that she had been lame more or less since she was 9 years of age, but there were such complete remissions from time to time that I could not persuade myself that the lesion was tuberculous. She had, at that time, a good deal of spasm about the knee; it ached for two or three weeks continuously. There was extra heat and enlargement notwithstanding all the protection and immobilization given to the knee, for I had used a peritoneal crutch in addition to plaster-of-Paris. From this date to the 26th. of January, 1901, there was a gradual improvement both in her physical condition and in the knee itself, but for a year past she had been engaged to be married, and was very anxious to discard apparatus. She could extend easily to 180° and flex to 140°. There was very little tenderness and little thickening on either side of the ligamentum patellæ. I gave it as my opinion, that she was ready to dispense with the apparatus, provided the X-ray revealed no evidence of bone lesion. I had the picture taken, but it was a poor one, and we were obliged to wait a little longer for a second one, which showed absolutely no bone lesion whatever. I made my report in writing, but heard nothing further from her until the 29th. of October, 1901, when my stenographer reported that she had seen a friend of the lady in Harlem, which friend had reported that she went to an osteopathist after the X-ray was taken, (she being in possession of the negative), and that she had made a good recovery, was walking without lameness, was married, and to all appearances fully restored

This case, of course, goes to the credit of the osteopathist, who was fortunate enough to get it at a time when massage and active movements were indicated. A case, however, similarly managed and presenting symptoms very like the one just reported, got a return of motion and just as complete a cure in my own hands. The details are so similar that I refrain from presenting them in full. This patient had a tuberculous family history; had on many occasions during the long course of treatment signs and symptoms so suggestive of tuberculous disease, that he got an opinion from one or two of my colleagues without my consent; these opinions being invariably that his case was most likely tuberculosis. At the date of my last observation, December 22nd., 1899, he had no pain, could extend fully to 180°, flex to 110°, walked without support, and regarded himself as thoroughly restored.

The material at hand for a discussion of rheumatic conditions of the knee is so large that I am at a loss just how to present the different phases with proper illustrations. We have the ordinary acute monarticular rheumatism, devoloping in a patient with a rheumatic or gouty history. The knee symptoms are sometimes so acute that the patient actually forgets pains and aches in other joints. It happens, too, that this exacerbation is caused apparently by a fall or injury, and it is very hard to differentiate between a simple traumatic arthritis and a rheumatic one the trauma of which is an exciting cause.

One of the simplest forms of rheumatic synovitis may be illustrated by a case occurring in a gentleman, 73 years of age, whom I saw at the suggestion of a friend in June, 1890. The patient was going about in a wheeled chair. He stated that for 2 or 3 months prior to the date of my visit he had had twinges about his knee, but seven weeks prior to that time, without any known cause, the right knee began to swell. The pain was not great, but he found it difficult to walk. He consulted his physician, a homeopathist, who applied a posterior splint with bandages, and he hobbled about on crutches for 3 or 4 weeks; then got further advice in the same school, that he should discard

splints, inasmuch as his trouble was constitutional. I suggested aspiration, but gave him a good prognosis in any event, and saw nothing more of the patient for at least a year. The report at this time was that his knee gradually improved, the infusion within a few weeks disappeared, and that he was quite well. He attributed his relief to the free use of Poland water.

There are many cases like the one I have just quoted, and the termination is equally satisfactory, but there are some whose history runs very much like the following:

A lady, 45 years of age, whom I saw in October, 1894, had been complaining for some years with peculiar slippings about the joints, creakings and manifestations that were regarded as rheumatic. On the 15th. of June preceding she felt sharp pain in the right knee near the ligamentum patellæ. It stiffened up a bit, and she tried to walk the lameness off; she did not know of any special injury that she had. While in the Adirondacks during that summer, the use of the limb caused much pain, and Dr. Trudeau used the cautery, finally applying a plaster-of-Paris bandage in slight flexion. This gave her a little more relief, but at the time of my visit there was much swelling, the skin was glossy, and there was a decided limp, but there was no bony enlargement, and she could extend easily to 170° and flex to 150°. I found a little crepitation in both knees, and made out a case of subacute rheumatic arthritis with some periarthritis. The treatment was antirheumatic, a moderate amount of protection was given to the joint, and occasional counterirritation. At the end of two months her husband was not satisfied with the result, and Dr. Janeway was called in consultation. He called it rheumatoid arthritis, explained the roughened condition of the synovial sac by the term fibrillation of the cartilages. The consultation produced a wholesome effect on the patient, who was of a nervous temperament, and the treatment was continued. In February, 1895, the knee was in a much better condition. There was still some crepitation felt on movement, and along the shin bone was a mild grade of psoriasis. She went abroad shortly after this time, and on January 17th., 1897, her husband reported that he took her to some bath establishment where active and passive movements were employed by a masseur; finally one day a rather sharp flexion was made, and some adhesions were broken up with an audible click. From that time she had very little trouble, discarded the braces and was regarded as restored.

In some instances there is enough fluid in the joint to justify aspiration, especially when the fluid proves rebellious to other treatment. A gentleman, 30 years of age, came under my care in July, 1896; had been for a long time a visitor at the various hot springs throughout the country on account of hereditary gout. I aspirated his knee on one or two occasions, sent him to Carlsbad, in 1898, and to Glenwood Springs in the summer of the same year; heard nothing more until the spring of 1901, when I found him in a private hospital in New York, after an operation for appendicitis. He showed with great glee how free from disease was his knee, and was positive that the Glenwood Springs had completed the cure.

I desire to call your attention to a severe type of rheumatic knee which is attended with deformity and which yields to forcible correction, and I should like to tell you, if I could, how to distinguish the cases that are amenable to relief and those that are not. The rheumatic joints that are complicated by periarthritis involving the soft parts are all, in my judgment, amenable to relief, while those that are complicated by bony deposits about the joints, known as arthritis deformans, are very difficult of management. I am well aware that this disease is not regarded by many clinicians and pathologists as rheumatic, yet I confess that the line of demarcation is not always so well drawn. After a little observation, reinforced by an X-ray, a hard and fast diagnosis can be made. In the early stages, before the periosteal thickening can be recognized, one is obliged to suspend judgment.

In August, 1891, a lady, 50 years of age, appealed to me for relief from a deformed knee, the subject of a good deal of periarticular swelling. Twenty years prior to this date she had sprained this knee while stepping out of a carriage, but it was three months before she was obliged to take to her bed, where she remained for three or four months. At this time one or two other joints were involved. Twelve or 14 years later, she sprained this knee again, the exacerbation lasting several weeks, and 10 months prior to the date of my visit it was sprained the third time and she was on crutches. She was stout, but apparently free from any nervous disease. My record shows the usual thickening, change in contour, limitation of movement, exquisite tenderness, etc., etc. The right ankle was, in a measure, involved, and I had no difficulty in making a diagnosis. It took her just fifteen months to decide upon the treatment I advised. In the meantime she had been a little better and worse. The treatment which I adopted was a double inclined plane with weight and pulley, the cautery, potassium iodide, finally plaster-of-Paris; later a splint, when she was able to walk. The case was most obstinate, but finally yielded, and at the end of five or six years she was perfectly restored without any impairment of function. For the past four years she has been engaged in missionary work in the tenement house district, climbing all kinds of stairs, exposed to all kinds of weather, and there has been no relapse. I reported her case in full at a meeting of the Practitioners' Society in February, 1900.

A case which proved almost as obstinate and yet as satisfactory was in the person of the wife of an army officer, on whom treatment was begun in April, 1894. The left knee was so much involved that it looked very much like a sarcomatous knee, and but for the presence of the subacute arthritis in the other knee, I should have made this diagnosis. After the swelling subsided and I was able to get her about on a brace and crutches, I relied for complete resolution on skin-fitting plaster-of-Paris bandages, renewed every 6 or 8 weeks. It was indeed gratifying to find on every occasion a marked diminution in the size of the knee, a larger range of motion, and when all infiltration had subsided, I then resorted to convalescent treatment with a perfect restoration of function, ability to walk without lameness, in other words—a cure.

When the arthritis involves several joints in both upper and lower extremities, it is possible to reduce deformity and get the patient on his feet. If relapses are apt to occur, the subsequent management becomes exceedingly difficult.

I have in mind at present a case in a lady 28 years of age, who presented deformity of both knees, both ankles and both elbows, as well as the wrists. The hot air treatment had been employed without material benefit, and she had despaired of ever leaving her wheeled chair. The history is the usual one. Under an anesthetic, in October, 1898, I brought both knees from a position of sharp flexion down to 180°, and applied plaster of Paris. Opiates were necessary to relieve her pain, and at the end of a month I dispensed with the plaster. It required very little apparatus to maintain the good position obtained. Massage was employed with questionable value. Finally, I resorted to a mode of correcting the deformity of the ankles which proved highly successful. This was the employment of as much force as she could stand without an anesthetic, followed by skin-fitting plaster of Paris, to be followed in two or three weeks by a repetition of this procedure. In the spring of 1900 she was walking quite easily without assistance, and continued to improve up to the fall of 1900, when mechanical treatment was no longer necessary. I was called again the 10th of January present year on account of a pretty sharp attack involving the left knee and the right elbow. Since I had seen her last the friends had urged upon her the necessity of having constitutional treatment, saying it is all very well to get rid of deformity and get on one's feet, but rheumatism must be combated by internal medication. I found that she had been getting too much of this, that the massage had been too vigorous, and that the joints had been taxed too heavily, so that rest was again necessary. The exacerbation had been relieved at

the time I left the city, and I have no hesitation in making a good prognosis.

In striking contrast with the cases just narrated, is that of one occurring in a lady, 35 years of age, who gave a similar history, but as complication, an excessively irritable spine, supplemented by great mental strain and neurotrophic changes in the skin and subcutaneous tissue about the joints. I resorted to gradual correction of the deformity, extending over a period of two months. At the time she left the hospital, January, 1891, she could flex both knees to 90° and was walking with a little assistance. I insisted on a liberal amount of milk, cod-liver oil and an occasional course of potassium iodide. Good reports came from time to time, and at the end of 6 months she was able to discontinue the apparatus. Ten years later she referred a patient from her part of the country, and the report came that she herself was almost helpless, that nearly all of her joints were affected, and that she went about in a wheeled chair.

An old sea captain 64 years of age from Port Jefferson, L. I., was similarly affected in 1889. His deformity was corrected under ether in January, 1890, and he was finally put on his feet. I heard nothing further from him until January, 1901, when an old friend reported that he had become entirely helpless.

Closely allied to rheumatism is a sharp attack of arthritis, developed from exposure to cold. Occasionally there is a crepitation in the other knee, but never in a sharp attack. In writing this paper, I have before me reports of a number of cases, from which it is difficult to make a proper selection.

Take as a very good example that occurring in a man, 42 years of age, seen by me in January 1897. The history was that seven weeks before he was chilled a little, and on the following day had some fever; the third day complained of pain in his knee. His physician was already treating him at this time for eczema. The day following this pain in his knee he had a little pain in his left shoulder, but it was evanescent. The knee became rapidly worse, there was great swelling and deformity, and the infiltration seemed phlegmonous in character. At the time of my visit I could detect no fluctuation. The knee was held flexed at an angle of 135° and was very sensitive. I applied a skin-fitting plaster-of-Paris bandage at once, and this gave relief. By renewing the plaster every 2 or 3 weeks, I succeeded in getting the limb quite straight, and in April there was a small range of motion. In June, 1897, I removed the plaster, and found the contour of the knee very nearly restored, a small range of motion, and freedom from pain on handling it. The hot air treatment was now employed, supplemented by massage. He was soon going about on a brace, but there was no increase in the range of motion. In July he went to Clifton Springs and returned August 23rd, after a full course of baths. There was at this time no motion whatever in the knee, he declining any attempts of motion under an anesthetic and took, I believe, a course of treatment at the Zander Institute. From December, 1897, up to the present time, I have seen him going about the city with his knee absolutely stiff, and he told me on the 10th, of February, that, while he had no motion whatever, he was entirely free from pain and discomfort. A lady, 31 years of age, with similar history, submitted to brisement forcé on 2 or 3 occasions, suffering most intensely after every operation, and finally abandoned all treatment in 1899.

Several could be added to these of like results. I could present the notes of six or eight, in which the superheated air has been employed for weeks at a time without any benefit whatever. On the other hand, I could present a few in which a little benefit has followed closely upon this method of treatment, but in which the results have not been permanent.

Interesting from a diagnostic point may be presented notes of a lady about 30 years of age, whose mother is a patient of mine at present, and suffers from the typical chronic articular rheumatism, with recurring synovitis. This lady, 5 years ago, dating from October, 1899, while bathing, was conscious of a strain in her left knee. She was lame for a day or two, but rubbing seemed to bring relief, and she was quite well for 3 or 4 months. From that time to the present, however, she has been lame, especially after the ordinary use of the limb. If, for instance, she walks four or five blocks, she is quite lame and drags her leg a good deal. On one or two occasions she has had pain in her elbows, and the other knee has been affected. On my examination I found a marked crepitation as she flexed the knee, like that of rice bodies rolling over each other. This condition existed in the other knee as well, but not to so marked an extent. The comparative measurements were practically the same. As I forcibly extended the right knee, the unaffected one, she was able to hold the leg extended quite steadily. This procedure in the left limb showed marked loss of power in the quadriceps femoris, while the flexors on one side were quite as strong as those on the other. Under the use of an apparatus she was able to walk longer distances, but she was never willing to admit that the relief was satisfactory. The potassium iodide was not borne well by the stomach, while massage and active exercises gave only a moderate amount of relief. In the latter part of 1900 she was married, moved to Boston, and in the early part of 1901 consulted Dr. Goldthwaite, who wrote me, in response to a letter, that Mrs. ——— had lateral sclerosis, which was manifested by the spastic condition of the muscles below the knee on the left side. This gave her a peculiar gait, and it was because of this that she went to him. After examining her and feeling that this was probably the trouble he referred her to Dr. Walton, one of Boston's best neurologists, and the diagnosis was confirmed by him. I am free to confess that this was quite a surprise, because I was unable to account for the other joint lesions on the hypothesis of a sclerosis of the lateral column on one side of the cord.

I am unwilling to dismiss this branch of the subject without a reference to gonorrheal rheumatism which can be made out usually from the history of the case, and which presents really signs not differing materially from those found in the other forms of rheumatism.

A man, 37 years of age, came under my observation in May, 1897. Following a gonorrheal attack about a year previously, he had pains in his wrists, in his hands a week or two later, and in his lower limbs two weeks subsequently. He was taken to the Hot Springs of Arkansas on a stretcher, was fed on the potassium iodide, and took 35 baths; was relieved of pain, but the stiffness remained. After a course of treatment with the hot air and active and passive movements, there was a little increase in the range of motion, but, when I saw him last, in August of that year, he was able to walk about with as little difficulty as a small range of motion in the knees would permit.

As illustrating surgical procedures in a case of gonorrheal rheumatism, I beg to present some notes of a case that interested me very much:

A gentleman, 25 years of age, in April, 1900, was referred to me by Dr. Cabot, of Boston. The letter he sent stated that the patient had had a very long siege of trouble in the knees, originally started by a urethral infection, and both knees swelled up and became chronically enlarged with fluid. A colleague had, on two occasions, aspirated both knees under ether, and had washed them out with strong antiseptics; the operations were reported to have no good result. Dr. Cabot did the same thing through a trocar, washing both knees with a 1-20 solution of carbolic acid. This worked a cure in the right knee, but in the left the fluid reaccumulated in spite of all that could be done; some time later he opened the knee joint, swabbed it out and removed some fibrinous lymph, and washed it out again with a 1-20 solution of carbolic acid. The joint cavity was much smaller after this operation, but still contained fluid. He reopened the knee, and again wiped it out very carefully, and washed it as before. At this operation there was a sort of projecting ridge of bone and cartilage around the edge of the articulating cartilage of the femur. When the leg was straightened, this ridge was shut in under the articulation of the tibia. This ridge was carefully trimmed off with a chisel, leaving a smooth surface. The doctor further stated that dry heat was applied to the knee for a

long time, in the hope of bringing the inflammation to a standstill, but without effect.

During the past 2 years I have had this gentleman under observation, wearing a splint with a strapping to the parts, under my instructions. In October, 1900, after a game of golf, and while at dinner, his knee became stiff, and he was unable to straighten it. He consulted me the next day, and I succeeded in replacing what seemed to be a semilunar cartilage. He has had no recurrence of this, and at present writing goes most of the time without his brace and has very nearly the full range of motion in his knee.

The paper, gentlemen, has already exceeded the limits intended, and I shall be obliged to forego the discussion of the semilunar cartilage, notes of which are sufficiently abundant to make an extended paper of itself. I shall be obliged to omit a discussion of neurosis of the knee, a very tempting phase of this subject, and one that can be classed among the more common lesions of the joint. Bursitis, sub- and prepatellary, offers a fruitful topic for discussion, as well as slipping, or, subluxated patella. I had also prepared notes on miscellaneous lesions about the joint; had intended to pass in brief review sarcomata involving the joint, but I must desist for fear of abusing the courtesy so kindly extended.

If this disjointed paper will assist one in recognizing the common rheumatic affections of the knee and in differentiating these from the graver forms of knee joint diseases, I shall feel in a measure satisfied. If it will assist you in managing the ordinary peri-articular lesions, in recognizing the time when rest and protection should be employed, and in determining when motion is best for the knee, I shall again feel that the evening has not been spent in vain, but I do regret my inability to present some points on the semilunar cartilage. This little body is so easily displaced, is productive of so much harm to the knee, and when its proper status is recognized, is so easy of management, that I trust I shall have an opportunity on another occasion of presenting this phase of the subject.

Traumatic Rupture of the Liver and Spleen.—A clinic by Mauclaire is reported in the *Bulletin Medical*, (September 18, 1901, 15me. Année, No. 741. A boy of 18 was shown, who fell a distance of 16 feet, landing upon his back. It was not until 48 hours later that tympany and pain about the liver were noted. There was slight fever, and the pulse was 108, but traumatic jaundice was absent. There was evident internal hemorrhage, and laparotomy confirmed this. The pelvis held two liters of blood. The liver showed a long perpendicular tear and several transverse ruptures, by "contrecoup." In spite of tamponing and drainage, he died on the second day after operation. The diagnosis is not always easy; the prognosis is always grave. The complications of rupture of the liver are primary or secondary hemorrhage, peritonitis, biliary abscess, etc. The treatment is laparotomy always, with sutures, pressure, ligatures, tamponing, cauterization, or gelatinized serum, to control the hemorrhage. All of Mauclaire's three cases died. The next case presented was a man who had been kicked in the left side by his horse. There were dyspnea, tympany, small pulse, etc., with probable internal hemorrhage. This was again confirmed by laparotomy. The spleen was found ruptured. The patient recovered after tamponing. He was excessively hungry after the operation. While the diagnosis is easy in such cases, the prognosis is grave. The treatment consists of compression and tamponing, sutures, ligatures, and possibly splenectomy. Mauclaire concludes that while our technique in rupture of the liver is not yet ideal, 50% of the cases with ruptured spleen have recovered. [M. O.]

THE KIDNEY COMPLICATIONS OF TYPHOID FEVER.*

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The kidney complications of typhoid fever include (1) albuminuria; (2) acute nephritis: (3) hemorrhagic nephritis; (4) suppurative nephritis; (5) pre-existing chronic nephritis; (6) hematuria.

1. *Albuminuria.* Albumin occurs in the urine of a large percentage of typhoid fever patients. Curshmann says 15 to 20 per cent., Murchison 28 per cent., Jürgensen and Griesinger 33 per cent., Goth 4[illegible] per cent., Osler 74 per cent.

In 17,653 collected cases in which the proper information is given, we find it occurring in 5164 cases, or 29 per cent. Curshmann says it varies in different epidemics, that of Hamburg, '86-'89, showing it in only 10.7 per cent.

Early it is merely a febrile albuminuria, later, if large in quantity, it is both febrile and toxemic. It may appear during the first few days, but usually during the second week. It is serum albumin and serum globulin, rarely peptones. The presence of a few hyaline casts, a few leukocytes, and a few epithelial cells is common in febrile albuminuria. In Osler's series of 829 cases 74 per cent. contained albumin and 47 per cent. contained casts, though but 4.2 per cent. had actual nephritis. If the amount of albumin begins to exceed ¼ to½ per cent., nephritis is to be expected, and if granular, fatty, epithelial or blood casts appear the proof is absolute.

The albumin usually disappears early—in 75 per cent. of cases inside of two weeks, and in 94 per cent. in less than three weeks—but it has been known to persist not only during convalescence but even for years without any definite signs of nephritis. In such cases the urine is normal in amount, has the normal specific gravity, and may contain a few hyaline casts and leukocytes but never red bloodcells or other casts. Febrile albuminuria usually increases during prolonged fever or during relapses, yet Schmidt records 561 cases with 40 relapses and no case had albumin, Steinthal 45 relapses without kidney complications. The sooner it appears the longer it lasts, and the greater the quantity the more serious is its presence. Its very late appearance or a sudden increase is a bad prognostic sign, for that means that it is not only febrile but toxic. In 303 cases of febrile albuminuria of typhoid 107 or 27.2 per cent. died.

2. *Acute Nephritis.* Acute nephritis as a complication of typhoid occurs with varying frequency. Curshmann finds it in 1 per cent., Weil 3 per cent., Osler 4.2 per cent., Mason 8.8 per cent., and Rostoski in 10.7 per cent. of cases. In 15,508 typhoid cases with statistics we find it occurring in 470 or 3 per cent. In 3038 post mortems in persons dying of typhoid definite acute nephritis was found in 6 per cent.

It is usually an acute parenchymatous nephritis and may be hemorrhagic. Cases of interstitial, combined and suppurative nephritis are reported. Not only the character of the urine during life but the

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post mortem findings show the preponderance of the parenchymatous variety. The urine of the acute nephritis is scanty, of high specific gravity, contains much albumin and many leukocytes, red bloodcells and hyaline, granular, epithelial and blood casts. Liebermeister and Delafield report cases found at post mortem of even advanced degenerative changes in the kidneys in typhoid fever in which the urine during life showed neither albumin nor casts. On the other hand, cases of typhoid are reported in which during life the urine contained both albumin and casts of nephritis, and yet the autopsy showed only a renal congestion.

Acute nephritis may occur at any time during the course of the disease or may appear only during convalescence. It is peculiar in that edema is very rare, occurring in only 2 per cent. of the cases. Edema without albuminuria is noted by Griesinger in adults. Uremia occurs with about the same frequency as edema. If the patient recovers the acute nephritis of typhoid usually disappears in a fortnight. It may last as long as two or three months, but its persistence as a chronic nephritis is extremely rare. Curshmann knows of only one such case in a series of 5600. Freundlich reports one case, Schwarz saw one case become chronic and the patient died of the nephritis four years after the typhoid. Osler and Liebermeister do not remember seeing any case. Its rarity is shown by the fact that in our series of over 35,000 cases it is recorded but three times.

Generally the appearance of nephritis in typhoid fever is of bad prognostic significance, as it means either intense intoxication or impaired resistance. Curshmann says 50 per cent. of all cases die. Of the 476 cases of acute nephritis complicating typhoid collected by us the mortality was 54 per cent.

3. *Hemorrhagic Nephritis.* There appears to be no sharp line defining ordinary acute nephritis from the hemorrhagic except the larger quantity of blood in the latter form. In 52 of the 476 cases collected the nephritis was hemorrhagic in character. This form of nephritis tends strongly to uremia and gives a large death rate. Forty-six of the 52 cases collected died, a mortality of 88 per cent.

Amat first described the so-called renal typhoid of nephrotyphoid. In renal typhoid the kidney symptoms are early and pronounced, the intestinal slight and later in appearance. Amat's twelve cases as reported seem to come naturally under the head of typhoid complicated by hemorrhagic nephritis and they are so regarded by many authorities. It is doubtful if renal typhoid as a distinct entity has any existence.

4. *Suppurative Nephritis.*—Cases with necrotic areas and actual abscess formation are recorded a number of times. The typhoid bacilli are found in the pus areas. It is suggested that the abscesses may at times also be due to an ascending infection. The lymphomatous nephritis of Wagner and others is probably nothing more than an early stage of the suppurative form. The only peculiarity of the urine in such cases may be the presence of large numbers of multinuclear leukocytes—inflammation elsewhere in the genito-urinary tract not existing.

5. *Pre-existing Chronic Nephritis.* Where chronic nephritis exists and typhoid fever occurs, the prognosis is very bad. Of 26 cases recorded 24 died—92 per cent. Of the two cases that recovered one had dropsy. Neither showed uremia.

6. *Hematuria.* Duckworth reports a case of hematuria in typhoid in which at post mortem the kidneys were only congested. A case of Sorel's at post mortem showed the kidneys intact and the cause of the hemorrhage was not explained. Eichhorst reports three and Alexander two cases of hematuria, all of which recovered.

In children albuminuria is common. Acute parenchymatous nephritis is as frequent as in adults, and prone to occur if the typhoid has been preceded by other infectious fevers, especially scarlet fever. Edema is rarer in children than in adults, but cases with both edema and uremia have been reported. Edema without albuminuria has been reported, but such cases may be due to hydremia, especially if late in the course of the disease.

CASE 1.—Mrs. N., aet. 35, housewife, never had scarlet fever, diphtheria, or typhoid fever. For about a month preceding the middle of March had been feeling ill, had no appetite, was easily tired, and began to have headache. March 17, 1901, she sought medical aid for intense headache and red vision. The urine at this time was free from any casts, but contained a slight trace of albumin. She went to bed and remained there four weeks with an attack of typhoid extremely mild, as far as the usual symptoms were concerned. There was moderate fever, headache, very few spots, constipated bowels, positive Widal reaction several times, and the urine gave diazo reaction. At the end of the first week in bed the urine began to contain hyaline and granular casts as well as albumin, but was normal in amount and specific gravity. Slight puffiness under the eyes, absolute anorexia, repeated forcible vomiting, alternate constipation and diarrhea, muscular tremors and marked emaciation appeared. On April 23 she got around again, the urine remaining as before. For a month she tried to keep about the house, though against advice, as her pulse was seldom below 120. On May 21 she had to take to her bed again and went through much the same series of fever and kidney symptoms. It was not until July 15 that she was finally able to be up, the urine still containing albumin ¼% and hyaline casts. September 11, 1901, the urine still contains a few hyaline casts, but no albumin, and the patient is fast regaining her weight and strength. This is probably a case in which the kidney trouble was almost coincident with the typhoid, there being no reason to suspect an old nephritis.

CASE 2.—H. A., male, aet. 26, had pneumonia, and at twelve years severe scarlet fever. Four brothers and sisters were sick at the same time, and two had middle ear disease as a result. One has since died of sinus and jugular thrombus. Three years ago he was rejected by an insurance company because of kidney disease. The middle of May, 1901, he developed a sharp attack of typhoid which lasted in all seven weeks. From the first he had albumin ¼ to ½%, and hyaline, granular, fatty and waxy casts. Throughout the attack this condition persisted, but the urine remained about normal as to quantity and specific gravity, which was a good prognostic sign. He made a good recovery, gained fifty-three pounds in six weeks, and September 17, 1901, the urine examination was acid, 1018, no albumin, and but few hyaline casts. This is a case of old nephritis which recovered.

Cases of Typhoid	Albuminuria	Acute Nephritis	Hemorrhagic Nephritis	Pre-existing Chronic Nephritis	Suppurative Nephritis	Edema.	Uremia	Deaths in cases with Nephritis.	Autopsies.	
25	20	5				4		1	1	Geier.—Diss. [illegible] Nephritis und Albuminurie im Abdominaltyphus des Kindes.
1		1								Henoch.—Vorlesungen über Kinderkrankheiten, '87, p. 7[illegible]
1		1						1	1	Kohlstock.—Virchow Hirsch Jahresbericht, '87, p. [illegible]
296		6						2	23	Montmollin.—Diss. [illegible] Nancy, '85.
1576		60		3				15		Mason.—Bost. [illegible] Surg. J., '92, CXXVI, 529.
129		21			2			7		Hewetson.—Johns Hopkins Hosp. Reports.
1		1						1		Blumer.
829	616	35	2							Osler.—Johns Hopkins Hospital Reports.
2000		121					1		2000	Holscher.—Münch. med. Woch., '91, XXXVIII, p. 1[illegible]
3800		1		1				2		Hare.—Monograph, 1898.
1900	633									Liebermeister.—Ziemssen's Handbuch der spec. Path. und Therapie, 1874, vol. II, p. 1.
2							2	2		Immermann.—Basle Hosp. Rep., 1872.
600				1				1	326	Griesinger.—Virchow's Handbuch der spec. Path. und Ther., '64, vol. II, p. 2.
5988	1 77			1				7		Murchison.—Continued Fevers, 3rd Ed., '84.
871				8				3	62	Sorel.—Soc. Méd. des Hôp. de Paris, '89, VI, 224.
1305		many								Delafield.—Med. Record, '83, XXIV, 533.
240				1				1	250	Hoffmann.—Verletzung der Organe beim Abdominaltyphus, 1870.
3687	393	32						16		Schultz.—Jahresbericht Hamburger staats-Krankenanstalt, '89.
26	26	26						18		Vogel.—Klin. Untersuchungen über den Typhus, 1870.
19	5									Wunderlich.—Archiv. der physiol. Heilkunde, '57, 177.
88	29					1				Finger.—Prager Vierteljahrschrift, 1847, III, 27.
256	186	32	1		1			25	26	Hubener.—Diss. [illegible] Albuminurie bei Infectionskrankheiten, Berlin, '92.
382	93							1		Homberger.—Berl. Kl. Woch., '81, XVIII, 277.
1		1				1				Thomas.—Gerhardt's Handbuch der Kinderkrankheiten, '78, IV, part 2, 278.
12		12				12				Rilliet.—Maladies des Enfants, 1839, II.
12			12			1	2	10		Amat.—Dissert. 1878. Paris.
5		5						5		Legroux and Hanot.—Arch. Gén. de Méd., 1876, XXVIII, 641.
63		1				1		2		Vallon.—Zeit. der k. k. Ges. Aerzte zu Wien, '57, 201.
1		1					1			Robert and Gaucher.—Rev. d. Méd., '81, I, 409.
5		5					5			Bouardet and Thoinot.—La Pleure Typhoïde, 1895.
102	12	3								Glaesser.—Deutsche med. Woch., '85, XI, 180.
606				1		1		1		Beetz.—D. Arch. f. klin. Med., 7 anv. 76, XVI and XVII.
1			1							Duckworth.—St. Bartholomew's Hospital Rep., '85, XXI, 105.
1000		12						1	1	Bartels.—Ziemssen's Handbuch der spec. Path. und Ther., IX, part 1.
300		12				2			300	Buhl.—Quoted by Bartels.
1			1					1		Greenhow.—Lancet, '80, I, 148.
2		2					2	1		Ranault.—Arch. d. Physiol., '81, VIII, 104.
1420				4				4		Betke.—Deutsche Klinik, 1870.
156				2				2		Riegel.—D. Archiv. f. klin. Med., '72, IX, 170.
200		3	1	1		1		7		Wagner.—D. Archiv. f. klin. Med., '80, XXV, 347.
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75	12							9		Handford.—Lancet, '88, I, 826.
217	157	18						10		Mygge.—Norsk. Mag. f. Lægev., '87, XV, No. 10.
342	174	3							37	Zienetz.—Wien. med. Woch., '96, XLVI, p. 97.
393		6						6		Alexander.—[illegible] Zeitschr., '87, IX, 229.
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228	119	14	2					3		Freundlich.—D. Arch. f. klin. Med., '83, XXXIV, 412.
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2		1		1						Talley.

VALUE OF THE JUSTUS TEST WITH REPORT OF CASES.

By HENRY TUCKER, M. D.,
of Philadelphia.
Demonstrator of Genito-Urinary Diseases, Jefferson Medical College; Assistant Surgeon, Genito-Urinary Department, Jefferson Medical College Hospital.

History.—This test, first described by Dr. Jacob Justus, an assistant in Schwimmer's clinic at Budapest (1), is based upon the fact that mercury given either by subcutaneous or intravenous injection, or by inunction, will cause a diminution in the hemoglobin of the blood.

In the healthy or nonsyphilitic individual nature rapidly replaces this loss, but in syphilitics the loss will not be immediately compensated, so that at an examination made twenty-four hours after giving the drug, it will be found that a fall of from 10 to 20% in the hemoglobin has occurred.

The reaction was observed by Justus in over three hundred cases of syphilis, while negative results were obtained in a large number of control cases. The reaction further occurred in all untreated cases of secondary, tertiary and congenital syphilis, and in thirteen out of sixteen cases of initial lesion with inguinal adenitis. Latent and subsiding cases

1 Justus.—Virchow's Archives, Vol. 140, p. 91, 1895, and Virchow's Archives, Vol. 148, p. 33, 1897.

did not give a characteristic reaction; neither was any effect noted when the drug was administered by the mouth.

Cabot and Mertens (2) reported seven cases of active syphilis and three cases of passive syphilis to which the test was applied. In the seven active syphilitics there was an average reduction of 21% following the inunction, while in the inactive cases there was practically no alteration in the hemoglobin.

Of thirty-three control cases of other diseases, a reduction was noted in but two:—one, a case of chlorosis, and the other a case of tertian malaria in which there was a fall of 10%, although this was mitigated by a typical malarial chill occurring shortly after the inunction. In none of the active cases was there the slightest question regarding the diagnosis.

Brown and Dale (3) reported thirteen cases of active syphilis, of which five showed a loss of greater than 5%, four of less than 5% and four a slight increase. D. H. Jones (4) applied the test to thirty-five cases of syphilis and eighteen control cases. The first series comprised seventeen active cases not under treatment, one patient with active symptoms under treatment, two latent cases, eight initial lesions with adenitis, and seven initial lesions without adenitis.

Of the seventeen active syphilitics, thirteen responded and four were negative; of these four, three had characteristic lesions with existing chancre or a recent history of chancre, while the fourth showed a mucous patch and sore throat, but no history of chancre. The one active under treatment and the two latent failed to react.

Of the eight cases of chancre with adenitis, two were positive and six failed to react. Of the seven cases of chancre without glandular enlargement, one was positive and six negative. The eighteen controls all gave negative results. Christian and Foerster (5) reported twenty-nine cases in which the test was used with the following results.

Reduction was noted in sixteen, no change in six, and an increase in seven. Of the sixteen, a fall of 10% or over was found in eight; this comprised three cases of active syphilis in the secondary stage, in which the signs of the disease were unmistakable, two cases prior to the appearance of the eruption and one case of late secondary without eruption, but with typical nocturnal bone pains. The reaction also occurred in two cases of undoubted chancroid, but in six cases of active syphilis no change was noted. The only control case to react was one of sexual neurasthenia, which gave a reduction of 18%.

The following cases were examined at the Genito-Urinary clinic of the Jefferson Hospital:

CASE I.—R. H. B.: aet. 19. October 10th., 1900.

Present Condition.—Probably a chancroid, of four weeks' duration, located on the prepuce in the middorsal line; it is a small circular punched-out ulcer with scanty serous secretion, and shows a slightly indurated base; incubation period unknown.

Hemoglobin before inunction 95%.
" after " 93%.

Subsequent History.—Jan. 5th., 1901. The lesion has healed, no scar being visible, and the case shows no signs of systemic infection.

Case II.—J. G.: aet. 38. October 12th., 1900.

Present Condition.—Initial lesion, situated on the frenum; the ulcer is irregularly shaped, has undermined edges, scanty purulent discharge, marked induration, and is accompanied by indolent buboes of both groins; period of incubation not known.

Hemoglobin before inunction 90%.
" after " 93%.

Subsequent History.—On November 20th. patient returned with the lesion almost healed; no secondaries have as yet arisen.

Case III.—J. E.: aet. 21. October 19th., 1900.

Present Condition.—Multiple chancroids in the coronary sulcus together with a profuse sanguinopurulent urethral discharge; marked preputial edema, with tight phimosis requiring a dorsal incision for its relief.

Hemoglobin before inunction 83%.
" after " 70%.

Subsequent History.—One month later the venereal ulcers were found to be entirely healed and the patient showed no evidence of secondary involvement.

CASE IV.—N. B.: aet. 20. October 20th., 1900.

Present Condition.—Ulcerated herpes on the glans penis.

Hemoglobin before inunction 85%.
" after " 80%.

Subsequent History.—The patient was re-examined on November 20th., and nothing found.

CASE V.—J. D.: aet. 27. October 25th., 1900.

Present Condition.—Mixed infection: there are multiple ragged, punched-out ulcers scattered over the glans and reflected layer of the prepuce, with profuse purulent blood-stained discharge, and presenting slightly indurated bases.

Hemoglobin before inunction 90%.
" after " 96%.

Subsequent History.—February 14th., 1901. The ulcers have healed, but slight induration persists, and the patient also presents a general faint roseola accompanied by enlargement of the inguinal, epitrochlear, and post-cervical lymphatics, and the constitutional symptoms of syphilis.

CASE VI.—J. P.: aet. 23. October 27th., 1900.

Present Condition.—Initial lesion, presenting the appearance of a small, dry indurated papule, located on the glans; the top of the papule is covered with small scales of desquamation; both inguinal chains show enlargement.

Hemoglobin before inunction 90%.
" after " 80%.

Subsequent History.—December 3rd., 1900. There is a profuse eruption of small macules scattered over chest, back, and thighs, appearing to a lesser degree on the forehead and exterior surfaces of the forearms.

CASE VII.—E. A. S.: aet 17. October 29th., 1900.

Present Condition.—Multiple chancroids: the ulcers consist of two small, nonindurated, shallow sores, with a seropurulent discharge, situated on the dorsal aspect of the penis; inguinal glands uniformly enlarged.

Hemoglobin before inunction 87%.
" after " 85%.

Subsequent History.—November 17th. Both ulcers have healed and there is no evidence of constitutional infection.

CASE VIII.—F. W. E.: aet. 41. October 29th., 1900.

Present Condition.—Initial lesion appearing as a small punched-out, indurated ulcer with a scanty serous secretion; it is situated upon the dorsum of the penis, and developed after an incubation period of about 30 days; inguinal glands not as yet noticeably involved.

Hemoglobin before inunction 86%.
" after " 68%.

Subsequent History.—December 17th. Patient's general health has greatly improved, the local lesion has almost healed, and there are as yet no evidences of general infection.

CASE IX.—N. T. B.: aet. 21. October 30th., 1900.

2. Boston Med. and Surg. Journal, April 4, 1901, p. 373, Vol. 140.
3. Cincinnati Lancet-Clinic, March 24, 1900, Vol 44, p. 261.
4. N. Y. Med. Jour., April 7, 1900.
5. University Med. Magazine, No. 1900.

Present Condition.—Ulcerated herpes, two in number, located in the coronary sulcus near the frenum.

Hemoglobin before inunction 87%.
" after " 90%.

Subsequent History.—November 8th. The glands of both groins show enlargement with local signs of inflammation. December 26th. Complete recovery.

CASE X.—A. F.: aet 13. October 30th., 1900.

Present Condition.—Initial lesion on the reflected layer of the prepuce. Patient gives history of forced intercourse three weeks prior to appearance of lesion. Examination reveals a tight inflammatory phimosis, a profuse sanguinopurulent discharge, and an area of induration about the size of a dime located within the prepuce, in the middorsal line, half-an-inch from the free margin; there are indolent buboes of both groins, as well as epitrochlear and postcervical glandular enlargement.

Hemoglobin before inunction 87%.
" after " 68%.

Subsequent History.—Three weeks later the patient developed a profuse maculopapular eruption.

CASE XI.—E. H.: aet. 19. October 30th., 1900.

Present Condition.—Single chancroid, elevated, one-half-an-inch in diameter, markedly indurated, floor covered with exuberant granulation, and secreting a rich creamy pus, located on the under surface of the prepuce; slight tender enlargement of glands on both sides.

Hemoglobin before inunction 63%.
" after " 70%.

Subsequent History.—December 9th. The ulcer is healed and the patient is in good health.

Case XII.—D. B.: aet. 34. November 5th., 1900.

Present Condition.—Chancroid located in the coronary sulcus, presenting ragged irregular edges, granular floor, and profuse bloodstained purulent discharge; inguinal glands not involved.

Hemoglobin before inunction 85%.
" after " 68%.

Subsequent History.—January 2nd. 1901. Lesion healed and no secondary manifestations apparent.

CASE XIII.—P. V.: aet. 27. November 6th., 1900.

Present Condition.—Single chancroid, small punched-out ulcer with slight yellowish discharge, situated upon the reflected layer of the foreskin and accompanied by inguinal adenitis.

Hemoglobin before inunction 93%.
" after " 88%.

Subsequent History.—December 19th. No manifestations of syphilis.

CASE XIV.—C. K.: aet. 40. November 9th., 1900.

Present Condition.—Initial lesion appearing as a dark brownish parchment-like spot situated on the glans penis; coincident painless enlargement of the inguinal glands.

Hemoglobin before inunction 87%.
" after " 70%.

Subsequent History.—December 28th. A scattered but well-defined maculopapular eruption has developed.

CASE XV.—J. K.: aet. 41. November 13th., 1900.

Present Condition.—Initial lesion characterized by the simultaneous appearance of two small ulcers in the coronary sulcus; these were rapidly complicated by phagedena, so that at the time of the patient's visit the coronary sulcus, glans, and portion of the prepuce presented the appearance of a ragged, brawny ulceration; the discharge was profuse and sanguinopurulent; the inguinal glands were enlarged and painful.

Hemoglobin before inunction 80%.
" after " 70%.

Subsequent History.—November 20th. Faint macular exanthem over lower thoracic region with mucous patches on the tongue.

CASE XVI.—R. T. B.: aet. 29. November 13th., 1900.

Present Condition.—Initial lesion of the meatus with indolent buboes. Seven weeks' duration.

Hemoglobin before inunction 70%.
" after " 80%.

Subsequent History.—On November 23rd. a mucus patch developed on the right tonsil with involvement of the cervical lymphatics.

CASE XVII.—F. C.: aet. 23. November 20th., 1900.

Present Condition.—Initial lesion as a small, round, dark red, desquamating papule in the coronary sulcus, with coincident painless enlargement of the inguinal lymphatics.

Hemoglobin before inunction 84%.
" after " 84%.

Subsequent History.—December 17th. Erythematous pharyngitis with marked asthenia and nocturnal pains.

CASE XVIII.—F. K.: aet. 23. November 23rd., 1900.

Present Condition.—Herpes, 3 in number on glans penis.

Hemoglobin before inunction 92%.
" after " 93%.

Subsequent History.—One months later patient enjoys good health.

CASE XIX.—R. McA.: aet. 43. November 30th., 1900.

Present Condition.—Initial lesion appearing as a small spot of parchment-like induration, reddish in color and situated near the meatus; the inguinal chains show enlargements about the size of marrowfat peas.

Hemoglobin before inunction 87%.
" after " 80%.

Subsequent History.—December 24. Lesion healed and no secondaries have as yet arisen.

CASE XX.—J. D.: aet. 19. December 11th., 1900.

Present Condition.—Initial lesion appearing 60 days after intercourse, as a typical Hunterian chancre; inguinal and epitrochlear glands show enlargement.

Hemoglobin before inunction 95%.
" after " 90%.

Subsequent History.—December 24th. A faint scarlatinal blush is found on the body when exposed to change of temperature; patient also complains of malaise and nocturnal headache.

CASE XXI.—E. B.: aet 27. December 28th., 1900.

Present Condition.—Initial lesion presenting appearance of a small, shallow, faintly indurated ulcer on the reflection of the prepuce; it is accompanied by inguinal adenopathy.

Hemoglobin before inunction 81%.
" after " 85%.

Subsequent History.—January 14th., 1901. A general roseolar eruption has appeared.

CASE XXII.—J. McC.: aet. 22. December 29th., 1900.

Present Condition.—Initial lesion situated just within the urethra; discharge slight and mucoid in character; no glandular enlargement.

Hemoglobin before inunction 88%.
" after " 80%.

Subsequent History.—January 18th., 1901. There is a faint erythematous eruption over chest and abdomen.

CASE XXIII.—H. M.: aet. 53. January 4th., 1901.

Present Condition.—Chancroid one-half inch in diameter, and having an elevated indurated base covered with exuberant granulation; a profuse blood-stained discharge; suppurating buboes of both groins.

Hemoglobin before inunction 92%.
" after " 80%.

Subsequent History.—February 2nd. The lesion has almost healed and there are no evidences of syphilis.

CASE XXIV.—E. J.: aet. 22. February 25th., 1901.

Present Condition.—Pustulo-crustaceous syphilide of 6 weeks duration, found on arms, thighs, and back. The patient has just returned from a cruise on a sailing vessel, and has had [illegible] treatment.

Hemoglobin before inunction 80%.
" after " 80%.

CASE XXV.—C. H. R.: aet. 30. March 5th., 1901.

Present Condition.—Genito-urinary and pulmonary tuberculosis. Patient has had both testicles removed for tuberculosis, and at present has beginning involvement of right apex and extensive involvement of the prostate, seminal vesicles, and bladder.

Hemoglobin before inunction 70%.
" after " 70%.

CASE XXVI.—F. E. aet 24. February 28th., 1901.

Present Condition.—Possible tuberculous seminal vesiculitis with extensive tuberculous involvement of both apices, and beginning cavity formation.

Hemoglobin before inunction 63%.
" after " 70%.

CASE XXVII.—L. P.: aet. 30. March 5th., 1901.

Present Condition.—Tuberculous epididymitis with incipient tuberculosis involving both apices.

Hemoglobin before inunction 95%.
" after " 80%.

Case number.	Diagnosis.	Hemoglobin before inunction.	Hemoglobin after inunction.	Loss.	Gain.	Result of test.
I.	Chancroid	95	93	2		positive.
II.	Initial lesion	90	93		3	negative.
III.	Chancroids, multiple	83	70	13		negative.
IV.	Herpes, ulcerated	85	80	5		positive.
V.	Mixed infection	90	96		6	negative.
VI.	Initial lesion	90	80	10		positive.
VII.	Chancroids, multiple	87	85	2		positive.
VIII.	Initial lesion	86	68	18		positive.
IX.	Herpes, ulcerated	87	90		3	positive.
X.	Initial lesion	87	68	19		positive.
XI.	Chancroid	63	70		7	positive.
XII.	Chancroid	85	68	17		negative.
XIII.	Chancroid	93	83	10		negative.
XIV.	Initial lesion	87	70	17		positive.
XV.	Initial lesion	89	70	19		positive.
XVI.	Initial lesion	70	80		10	negative.
XVII.	Initial lesion	84	84			negative.
XVIII.	Herpes	92	93		1	positive.
XIX.	Initial lesion	87	80	7		negative.
XX.	Initial lesion	95	90	5		negative.
XXI.	Initial lesion	81	95		14	negative.
XXII.	Initial lesion	98	89	9		negative.
XXIII.	Chancroid	92	89	3		negative.
XXIV.	Pustulocrustaceous syphilide	80	80			negative.
XXV.	Pulmonary and G. U. tuberculosis	70	73		3	positive.
XXVI.	Pulmonary and G. U. tuberculosis	65	50	15		negative.
XXVII.	Incipient pulmonary and G. U. tuberculosis	95	80	15		negative.

SUMMARY:

	No. of cases.	Pos.	Neg.	Per cent. positive.
Initial lesion	13	5	8	38%.
Chancroid	7	4	3	57%.
Herpes	3	3		100%.
G. U. tuberculosis	3	1	2	33%.
Pustulocrustaceous syphilide	1		1	0%.

Technique.—After the first examination of the hemoglobin, all the cases were given an inunction of one dram of mercurial ointment, and were re-examined within from twenty-two to thirty hours subsequent to the administration of the drug.

The hemometer of von Fleischl was employed in the first few cases of the series after which the hemoglobinometer devised by Dr. Arthur Dare was substituted, on account of its greater accuracy.

I am now firmly convinced, as the accompanying table shows, that Justus' test has no practical value in the differential diagnosis of venereal ulcers, since the reaction occurs with an almost equal degree of frequency in the nonsyphilitic conditions with which syphilis may occasionally be confused.

THE JUSTUS TEST FOR SYPHILIS, WITH REPORT OF CASES.*

By WILLIAM E. HUGER, JR., M. D., **

of Charleston, S. C.

In the latter part of 1895, Justus announced a blood reaction after a mercurial inunction, peculiar to primary syphilis. He claimed that the hemoglobin taken at the end of twenty-four hours after a vigorous inunction showed a drop of from ten per cent. to twenty per cent. below that taken just previous to the rubbing in of the mercury. There was then a gradual rise and within a few days the hemoglobin percentage was higher than before the inunction. This test, he said, only held good before the advent of secondary symptoms, and was found only in syphilis. He attributed the reaction to the destructive effect of the mercury on some of the already weakened red bloodcorpuscles.

Every one hoped that at last the time had come when the differential diagnosis between the chancre and chancroid could be made beyond a doubt. Justus observed the reaction in three hundred cases. Unfortunately there has been comparatively little published on the subject since the original paper. Perhaps the rather discouraging views given out by those who have investigated the subject dampened the enthusiasm at first aroused. Besides, probably many undertook the experiment, but not being able to confirm Justus' statements, gave up the work as useless. Cabot, in the fourth edition of his admirable work on the examination of the blood, reviews the subject briefly. He says that in nine cases of active syphilis and in a *case of chlorosis* he found the reaction present, in three inactive cases and in thirty-five control cases it was absent. Brown and Dale, after studying thirteen cases, considered the test unreliable and of little practical value. Jones examined seventeen cases of active syphilis, thirteen of which gave positive results. Ayres got a reaction in only five out of nineteen cases of chancre.

During the summer of 1900 I applied the Justus test to several cases in the Genito-Urinary Department of the Johns Hopkins Hospital Dispensary, but out of the 35 examined only 16 returned until I could gain a positive or negative diagnosis of syphilis. The publication of my results is due to an article on blood by Dr. Thos. R. Brown, of Baltimore, in which he urges the report of more cases of this test. Hence this small contribution.

In each case I used the v. Fleischl hemoglobinometer, taking the greatest care to cleanse and thoroughly dry both the pipette and chambers and to be as certain as possible that the same amount of blood was in the pipette and the same amount of clear water, and blood and water in their respective chambers each time. In addition, to further avoid error, I had a disinterested person skilled in the use of the hemoglobinometer to confirm my estimate and when a difference of 5 per cent. or more existed

*Read [illegible] meeting of the Medical Society of South Carolina, Charleston, S. C., Jan. 2, 1902.

** We [illegible] to have to announce that Dr. Huger died [illegible] fever on March 28th. (Editor Philadelphia Medical Journal.)

between our estimate, a third party was employed. Then the decision of the majority or their average ruled.

I used two drams of a 50 per cent. mercurial ointment which was thoroughly rubbed into the groin by the patient himself, but under my supervision. Just before this rubbing-in process the hemoglobin was taken and again at the end of twenty-four hours another estimate was made.

CASES.—CHANCRES.

J. W. L., brushmaker, white.
Chancre (diagnosis confirmed by later secondaries).
Hemoglobin before inunction 90%.
Hemoglobin 24 hours after inunction 75%.
W. C., laborer, colored.
Chancre (diagnosis confirmed by later secondaries).
Hemoglobin before inunction 85%.
Hemoglobin 24 hours after inunction 75%.
W. S., laborer, white.
Chancre (diagnosis confirmed by later secondaries).
Hemoglobin before inunction 85%.
Hemoglobin 24 hours after inunction 75%.
G. S., laborer, colored.
Chancre (diagnosis confirmed by later secondaries).
Hemoglobin before inunction 80%.
Hemoglobin 24 hours after inunction 80%.
J. B. G., laborer, colored.
Chancre (diagnosis confirmed by later secondaries).
Hemoglobin before inunction 85%.
Hemoglobin 24 hours after inunction 85%.
F. T., laborer, colored.
Chancre (diagnosis confirmed by later secondaries).
Hemoglobin before inunction 90%.
Hemoglobin 24 hours after inunction 90%.

CHANCROIDS.

J. V., laborer, white.
Chancroid diagnosis confirmed. (No secondaries, 2 mos. later).
Hemoglobin before inunction 95%.
Hemoglobin 24 hours after inunction 85%.
F. W., laborer, white.
Chancroid diagnosis confirmed. (No secondaries, 2 mos. later).
Hemoglobin before inunction 95%.
Hemoglobin 24 hours after inunction 90%.
N. J., laborer, colored.
Chancroid diagnosis confirmed. (No secondaries, 2 mos. later).
Hemoglobin before inunction 85%.
Hemoglobin 24 hours after inunction 85%.

CHANCRE WITH SECONDARIES.

A. S., laborer, white.
Chancre (with general macular eruption present).
Hemoglobin before inunction 90%.
Hemoglobin 24 hours after 90%.
G. F., laborer, colored.
Chancre (with mucous patches in mouth).
Hemoglobin before inunction 90%.
Hemoglobin 24 hours after inunction 85%.
G. R., laborer, colored.
Macular eruption (chancre healed).
Hemoglobin before inunction 85%.
Hemoglobin 24 hours after inunction 85%.
W. C., laborer, white.
Chancre (with general macular eruption present).
Hemoglobin before inunction 80%.
Hemoglobin 24 hours after inunction 80%.

CONTROL CASES.

J. G., laborer, colored.
Neurasthenia sexualis.
Hemoglobin before inunction 85%.
Hemoglobin 24 hours after inunction 85%.
C. D., laborer, white.
Neurasthenia sexualis.
Hemoglobin before inunction 85%.
Hemoglobin 24 hours after inunction 85%.
C. B., laborer, white.
Herpes genitalis.
Hemoglobin before inunction 85%.
Hemoglobin 24 hours after inunction 85%.

SUMMARY.

Chancres, 6 cases:	
positive	3
negative	3
Chancroids, 3 cases:	
positive	1
negative	1
(drop of only 5%) doubtful	1
Chancres (with secondaries) 4 cases:	
positive	0
negative	3
(drop of only 5%) doubtful	1
Control cases, 3 cases:	
positive	0
negative	3
Total,	16

CONCLUSION.

The figures speak for themselves and need very little comment. The number of cases which I report is very few, but there are enough negative results in the group of chancres to show that the test is wholly unreliable, and, moreover, the one positive result among the chancroids detracts even more, because the failure to put a syphilitic on mercurial treatment will soon be proven a mistake, but to condemn a nonsyphilitic to years of, to say the least, unpleasant treatment, and a life-long belief that he has had and perhaps still has, the disease, is unpardonable.

LA PRESSE MEDICALE.

January 9, 1902. (No. 2.)

1. The Reaction of the Lymph-Glands in Children. MARCEL LABBE and GEORGE BERTIN.
2. The Technique of Massage. M. MARCHAIS.
3. Prochownik's Diet in the Prophylaxis of Dystocia. R. ROMME.

1.—All the diseases of childhood are accompanied by some reaction of the lymphglands. That the latter are actively functionating in childhood is shown by the relative lymphocytosis found upon examining the blood. Leukocytosis is more marked in a child with an infectious disease than when it occurs in an adult. The **lymph-glands are enlarged** in typhoid fever, scarlet fever, measles, rötheln, diphtheria, erysipelas, pertussis, and pneumonia. Chronically enlarged bronchial glands often remain after the acute infection has run its course. Besides, all skin infections may cause swelling of the nearby glands, with symptoms which are sometimes called glandular fever. Prolonged irritation, bacteria, syphilis, and tuberculosis also cause chronic enlargement of the lymphglands. Especially predisposed to this are those children with a scrofulous or lymphatic temperament. Micropolyadenopathy is found only in children. Adenoids, tonsillitis, appendicitis, anemia, enlarged spleen, etc., are found with this condition. The lymphglands are easily affected because they are active during childhood. They decrease the severity of the infectious diseases in children, and their swelling is cured with recovery from the disease which caused their enlargement. [M. O.]

2.—Marchais describes the **technique of massage.** The muscles must be completely relaxed, the skin must be in good condition, and then stroking, friction, kneading, or slapping may be performed. These four movements constitute massage. Diagrams illustrate them. Besides, voluntary movements are indicated and graded exercises, in many cases. [M. O.]

3.—**To prevent dystocia** in women with moderately contracted pelvis, Prochownik gives roast or boiled meat without gravy, fish, green vegetables, salad, cheese, butter, little bread and from 300 to 400 grams of light wine daily, during the last 3 months of pregnancy. No water, soup, potatoes, cereals, beer, or sugar are allowed. Bokelmann recently reported three cases successfully treated upon this diet alone. It is especially adapted to women who have had previous trouble because of the size of the fetus, and in primiparæ over 30 years of age. Romme recommends this régime when dystocia of little gravity is expected. [M. O.]

AN INVESTIGATION OF SOLANUM CAROLINENSE, WITH REFERENCE TO ITS SPECIAL VALUE IN THE TREATMENT OF EPILEPSY.*—Continued from Page 803.

By M. CLAYTON THRUSH, Ph. M., M. D.,
of Philadelphia.
Resident Physician, Presbyterian Hospital, Philadelphia.

Case No.	Name	Sex.	Age.	Occupation	Type of Disease	Average frequency of attacks	Duration of disease prior to treatment	Length of Treatment	Result obtained
1	A. C.	Female	15	School-girl	Grand mal [illegible]	1 a week	4 years	2 months	Lessened severity of attacks and reduced the number to 2 a week.
2	H. W.	Female	15	School-girl	Hystero-epilepsy	2 a week	1 year	2 months	Hysterical and epileptic manifestations greatly improved. No attacks for 4 weeks previous to dismissal.
3	A. M.	Female	43	Shoe-operator	Grand mal [illegible]	2 a day to 1 in 2 weeks	12 years	4 months	Two attacks in 2 months, no attack in last two months of treatment.
4	M. K.	Female	42	Dressmaker	Hereditary epilepsy. Grand mal	1 a month, status epilepticus	All her life, possibly longer	2 months	No improvement. (Had been previously treated for several years without benefit).
5	L. G.	Female	46	Housewife	Nocturnal epilepsy	Associated with menstrual periods before or after	5 years	4 months	No attack since treatment was instituted.
6	L. H.	Male	12	School boy	Nocturnal epilepsy grand mal with possible internal hydrocephalus	1 in 5 months to 2 a day, more frequent recently	7 years	4 months	3 attacks in first 2 months. No attacks since then.
7	C. M.	Male	13	School-boy	Petit mal, nocturnal and exaggerated when in supine position	Past month 1–10 daily	7 years	3 months	7 days after treatment was commenced 4 attacks, 6 weeks later 3 attacks. No attacks since.
8	H. R.	Male	16	Clerk	Nocturnal epilepsy. Grand mal	One a month	4 years	3 months	2 weeks after treatment was commenced 1 attack. None since this time.
9	S. F.	Female	58	Housewife	Petit mal	3 a day to 2 a week	6 years	2½ months	Reduced severity but not frequency of attacks.
10	F. M.	Female	10	School-girl	Nocturnal epilepsy. Grand mal and Petit mal	1 to 2 a week	All her life. Hereditary history	3½ months	Attacks not lessened in frequency, but absence of grand mal. General condition greatly improved.
11	B. B.	Female	13	School-girl	Grand mal	2 a week	One year	3 weeks	No attack since treatment was commenced.
12	K. R.	Female	21	Housewife	Grand mal and Petit mal	1 in 2 weeks	15 months	2 months	No attack since treatment was instituted.
13	S. R.	Female	17	School-girl (Sister to No. 12)	Grand mal	3 a month	4 years	2 months	Length of individual attacks lessened from 10 minutes to 2 minutes. Frequency unaffected.
14	A. L.	Male	9	School-boy	Grand mal and Petit mal	One a week	6 years	2 months	No grand mal and 5 attacks of petit mal in 7 weeks.
15	E. M.	Female	7	School-girl	Nocturnal epilepsy	One each night	6 months	2 months	No attacks during the past month.
16	N. J.	Male	10	School-boy	Grand mal	One attack daily	6 years	1 month	Frequency reduced to 5 attacks in 3 weeks and attacks much less severe.

*This table was inadvertently omitted from Dr. Thrush's article in last week's number of the JOURNAL.

Cervical Actinomycosis.—Ferraton reports an interesting case of cervical actinomycosis in a soldier, aged 20, with a small tumor on the right side of his neck. This had not been noticed until it reached the size of a hen's egg. The skin was adherent and red, and occasional pains were felt. As it increased, torticollis developed, and later ulceration with swelling of the neighboring glands which followed a similar course, until the entire right side of his neck was swollen and ulcerated. A yellow seropurulent liquid escaped, containing tiny grains which, on bacteriological examination, showed the typical filaments of actinomycosis. The cervical glands on the other side were but little enlarged. There were also marked dental caries and some enlargement of the right tonsil. The treatment consisted of the removal of the carious teeth, mouth washes, gargles, and a boric acid dressing externally. Internally potassium iodide was given in large doses, as much as 4 gm. daily. The fistula persisted for some time, but eventually ceased discharging. He left the hospital with leave of absence granted for two months, four months after he had first noted the swelling upon the right side of his neck. (*Archives de Medecine et de Pharmacie Militaires*, September, 1901). [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ending May 3rd., 1902.

SMALLPOX—United States.

			Cases.	Deaths.
COLORADO:	Los Angeles.	Apr. 12-19.	3	
	San Francisco.	Apr. 13-20.	3	
CALIFORNIA:	Denver.	Apr. 12-19.	1	
ILLINOIS:	Belleville.	Apr. 19-26.	2	
	Chicago.	Apr. 19-26.	13	
	Freeport.	Apr. 19-26.	1	
	Galesburg.	Apr. 19-26.	1	
INDIANA:	Evansville.	Apr. 19-26.	1	
	Indianapolis.	Apr. 19-26.	16	
	Terre Haute.	Apr. 19-26.	4	
KANSAS:	Wichita.	Apr. 19-26.	3	
KENTUCKY:	Covington.	Apr. 20-27.	16	
	Lexington.	Apr. 19-26.	2	
LOUISIANA:	New Orleans.	Apr. 19-26.	1	
MARYLAND:	Baltimore.	Apr. 19-26.	1	
MASSACHUSETTS:	Boston.	Apr. 19-26.	51	3
	Brockton.	Apr. 19-26.	1	
	Brookline.	Apr. 19-26.	2	
	Cambridge.	Apr. 19-26.	2	
	Everett.	Apr. 19-26.	3	
	Fall River.	Apr. 19-26.	2	
	Fitchburg.	Apr. 19-26.	1	
	Malden.	Apr. 19-26.	1	
	Medford.	Apr. 19-26.	1	
	New Bedford.	Apr. 19-26.	3	
	Newton.	Apr. 19-26.	4	
	Somerville.	Apr. 19-26.	3	
MICHIGAN:	Detroit.	Apr. 19-26.	5	
	Ludington.	Apr. 19-26.	3	
MISSOURI:	St. Louis.	Apr. 14-27.	83	2
MONTANA:	Butte.	Apr. 20-27.	5	
NEBRASKA:	Omaha.	Apr. 19-26.	45	
NEW JERSEY:	Camden.	Apr. 19-26.	3	
	Hudson County, including Jersey City	Apr. 6-27.	107	13
	Plainfield.	Apr. 19-26.	1	
NEW YORK:	Buffalo.	Mar.27-Apr.30	21	
	New York.	Apr. 19-26.	36	11
	Yonkers.	Apr. 18-25.	1	
OHIO:	Cincinnati.	Apr. 18-25.	12	
	Cleveland.	Apr. 19-26.	2	1
	Dayton.	Apr. 19-26.	2	
PENNSYLVANIA:	Columbia.	Apr. 21-28.	4	
	Erie.	Apr. 19-26.	2	
	Philadelphia.	Apr. 19-26.	31	6
	Scranton.	Apr. 19-26.	6	
RHODE ISLAND:	Providence.	Apr. 19-26.	2	
TENNESSEE:	Memphis.	Apr. 19-26.	14	2
UTAH:	Salt Lake City.	Apr. 19-26.	1	
WASHINGTON:	Tacoma.	Apr. 13-26.	3	
WISCONSIN:	Green Bay.	Apr. 20-27.	6	
	Janesville.	Apr. 19-26.	1	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	Apr. 5-12.	8	
BARBADOS:		Apr. 12.	5	
BELGIUM:	Antwerp.	Apr. 5-12.	9	
CANADA:	Quebec.	Apr. 12-19.	9	1
	Winnipeg.	Mar. 9-Apr. 19	18	
CHINA:	Hongkong.	Mar. 8-22.	7	7
COLOMBIA:	Panama.	Apr. 21.	Present.	
FRANCE:	Rheims.	Mar. 31-Apr. 6.	5	3
GIBRALTAR:		Apr. 6-13.	3	
GREAT BRITAIN:	London.	Apr. 5-12.	1	
	Edinburgh.	Apr. 5-12.	1	
	Glasgow.	Apr. 11-18.	11	1
	London.	Apr. 5-12.	274	73
GREECE:	Athens.	Apr. 5-12.	1	
INDIA:	Bombay.	Mar. 25-Apr. 1.	19	
	Karachi.	Mar. 23-30.	5	3
ITALY:	Palermo.	Apr. 5-12.	4	1
MEXICO:	Vera Cruz.	Apr. 12-19.	5	2
RUSSIA:	Moscow.	Mar.29-Apr. 5	14	3
	Odessa.	Apr. 5-12.	3	
	Warsaw.	Mar. 29-Apr. 5	2	
SPAIN:	Corunna.	Apr. 5-12.	1	
URUGUAY:	Montevideo.	Mar. 8-15.	71	7
	Montevideo.	Mar. 22-29.	70	3

YELLOW FEVER.

MEXICO:	Vera Cruz.	Apr. 12-19.	12	5
VENEZUELA:	Puerto Cabello.	Feb. 8-15.	1	1

CHOLERA.

CHINA:	Canton.	Mar. 19. Present. 2 deaths among Europeans.		
	Hongkong.	Mar. 8-22.	23	19
INDIA:	Bombay.	Mar. 25-Apr. 1.	3	3

PLAGUE—Foreign.

CHINA:	Canton.	Apr. 24. Malignant outbreak.		
	Hongkong.	Mar. 8-22.	1	1
INDIA:	Bombay.	Mar. 25-Apr. 1.	99	99
	Karachi.	Mar. 23-Apr. 30	119	92
ZANZIBAR:	Nairobi.	Mar. 29.	29	5

CENTRALBLATT FUER INNERE MEDICIN.

February 1, 1902.

New Investigations Concerning the Early Diagnosis of Typhoid Fever. Preliminary Communication.

ROMOLO POLLACO and EDUARD GEMELLI.

The authors briefly note the previous work that has been done on the investigation of the typhoid spots for typhoid bacilli, and then describe **their results from studying fifty patients. Positive results were obtained in every case.** The anatomical result, the clinical course, or the later occurrence of the Widal reaction, showed the correctness of the diagnosis. They insist that it is very important to inoculate some of the tissue substance from the roseolae; hence, in making their inoculations they used the "vaccinostyle Maréchal." They also state that fluid cultures should be used, solid culture media usually remaining negative. They have always made cultures from as many as two spots, and often from more. They consider that the typhoid bacillus is always present in the spots, and that this is a rapid and satisfactory method of making a diagnosis. They are now investigating the reason for the presence of the typhoid bacilli in the spots. They do not agree with Neufeld that it is the result of embolism. [D. L. E.]

February 8, 1902.

Leukolytic Serum Obtained From a Case of Lymphatic Leukemia. Preliminary Communication.

M FRANKE.

The patient was admitted with all the signs of lymphatic leukemia. The leukocyte count was 392,500. The small mononuclear cells constituted 78 per cent. of the total leukocytes; the large mononuclears, 17 per cent.; the polynuclear neutrophiles, 4 per cent.; and the transitional forms, 1 per cent. **A packet of glands** was extirpated from the axilla, washed in salt solution, ground into a thick mass with water, diluted with salt solution, strained and **injected into the peritoneal cavities of rabbits.** Five injections altogether were given. The animals were then bled to death, and their blood serum was tested with the blood of the patient under the microscope. The result was that the **leukocytes became abnormally transparent,** their edges became very irregular, and they finally seemed to be merely shadows or to vanish entirely, with the exception of a finely granular mass. These changes involved the small forms of the leukocytes much more markedly and quickly than the polynuclears and other large cells. The blood alone did not show the same changes under the same circumstances, nor did it show these changes when the bloodserum of a normal rabbit was added to it. The plan of trying the effect of this leukolytic serum in the treatment of the patient was considered, but he was so ill that it was given up. The author has in view the idea of determining whether sarcoma, when used in the same way, will not produce a serum which will destroy sarcoma cells. [D. L. E.]

The Angiospasmodic Disease.—In the *Bulletin Médical*, (December 25, 1901), Hirtz describes a condition in which vascular spasms occur in any of the vessels of the body, causing symptoms which he groups together under the name of the angiospasmodic disease. He reports a number of cases occurring in several members of one family, gouty and neurasthenic, with attacks of pseudo-angina pectoris, pseudoglaucoma, migraine, Raynaud's disease, apoplexy, etc., depending upon the vessels in which the spasms occur. It is frequently found in smokers, tea-drinkers, with arteriosclerosis, chronic lead poisoning, alcoholism, etc. The prognosis varies with the location and duration of the angiospasm. Often spasm of the pharynx, esophagus or pylorus co-exists. The prophylaxis consists in good hygiene and the prevention of any intoxication which might predispose to vascular spasm. In the treatment Hirtz advises alkalies, antispasmodics, iodides in small doses, valerian, amyl nitrite, etc., and the cure at Vichy or Carlsbad. [M. O.]

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Administrative Problems in Sanitation.—Our present issue contains a paper by Dr. William C. Woodward, Health Officer of the District of Columbia, dealing with some problems in municipal sanitation from an executive standpoint. Dr. Woodward speaks with authority and his paper discusses in a searching, practical way the difficulties of accomplishing what sanitary science demands. The importance of the problem is well recognized. The herding together of many thousands of people into cities is fraught with many features which are likely to be detrimental to health and to life. In addition to the question of the mere comfort of the individual, the public health of the future must to a very great degree depends upon proper hygiene and sanitation. Nuisances must be abated, infectious diseases carefully isolated, and epidemics prevented. Strict regulations must be enforced governing the proper inspection of the public food supply, and the interests of the people guarded by surrounding them both at home and in the workshop with the proper amount of wholesome air and sunlight. Dr. Woodward admits that there is much to be said on both sides of the question as to whether the present tendency of doing away with the old-fashioned Boards of Health, and substituting for them one responsible, executive head, is a wise tendency. The advantage of the single executive officer rather than a board, composed of several members, is, as Dr. Woodward remarks, chiefly in promptness and decisiveness of action and definite location of responsibility; but he goes on to say that this advantage applies only to the administrative work of such an office and that, from a legislative standpoint, a proper appreciation of all sides of every question involved is most important. Such qualifications are more likely to be found in a body of men than in a single officer. We have often felt that there is another serious feature which may militate against the manifest advantages of a single health officer. As to the manner of their appointments, politics, as a rule, enters largely, and this being the case in the unfortunate event of a single improper head being chosen, the administration of public health work would be greatly interfered with; while in a board of several members, granting that one or two of them might not be the men for the positions, the action of the entire Board would in the majority of cases be sound. Dr. Woodward's paper deals with the difficulty of securing proper inspectors on account of the fact that such occupations are poorly paid and the tenure of office is insecure. This is probably the most serious drawback in the administration of municipal sanitation, and the questions to which it gives rise are admirably considered by Dr. Woodward and are by no means easy of solution. Nor, indeed, are many of the problems which are presented in the necessary adoption of the recommendations of science to the requirements of law and custom. The reading of Dr. Woodward's paper impresses us deeply with the many difficulties which beset a Health Officer in the discharge of his duties. Having but little to suggest in the way of solving these perplexities, we are nevertheless glad to have had them presented, and we are convinced that, were these difficulties more generally recognized, fewer criticisms would be heard of the shortcomings of municipal sanitary administration.

Sprayed Fruit as a Source of Poisoning.—Any one familiar with current agricultural literature will be impressed with the extensive use of poisonous solutions for spraying plants to destroy fungi and insects. The enemies of the agriculturist are legion and the harm to valuable crops enormous. A great deal of patient and painstaking work has been done in biological laboratories of late years in ferreting out the life-history of parasites and devising means of extermination. The sanitarian cannot be wholly indifferent to the fact that in many cases the treatment is the liberal use of solutions of arsenic or copper compounds.

The danger from this source is a subject of discussion in a recent bulletin of the Ohio Experiment Station, the particular point being the spraying of grapes by solutions containing copper. The conclusions of the investigator are that, when grapes are sprayed in accordance with the directions of the

station, no deleterious results will follow. Indeed, well-sprayed grapes are sought by many users because of better quality, that is, freedom from rot. Of the analyses made, the largest amount of copper was 0.4 mg. to 100 g. (about 1-40 of a grain to the pound). This amount was larger than that found in samples sent to the station by disinterested parties.

Investigation was also made as to the liability of jelly made from such grapes to contain copper. Some grapes which had been condemned as improperly sprayed were selected. These contained about 1-20 of a grain of copper to the pound. The fruit and stems were cooked together and a jelly obtained. 100 g. of this contained 0.18 mg. of copper, that is, less than ¼ of the amount in the original material. It appears, therefore, that much of it remains in the vegetable substance. The jelly was eaten by two of the station staff without apparent harm.

It seems, therefore, reasonable to assume that no serious harm will result from the intelligent spraying of grapes with copper solution. It must be borne in mind, however, that copper is far less dangerous than arsenic and more likely to form insoluble compounds with proteid matters. Thus, the copper sulphate used for coloring peas passes in large part into a form that is not easily digestible. Arsenical preparations used as sprays will need watching, but so far even this method has not been the cause of serious results.

Cholera in the Philippine Islands.—The United States Marine-Hospital Service has just published an official report from Dr. J. C. Perry, Chief Quarantine officer, on the introduction of cholera into the Philippine Islands. Surgeon Perry thinks the disease was introduced by vegetables imported from Canton, China. Manila is the greatest vegetable market in the Orient, as it imports great quantities of green vegetables, such as cabbage, celery, lettuce and cauliflower, from the Canton districts. If the existence of the disease in China had been known sooner, it is probable that its importation into Manila could have been prevented. As soon as possible after it was known, quarantine was declared against Hong Kong and Amoy.

The earlier cases were among the natives almost exclusively, and especially among some of them living in extremely filthy shacks. The diagnosis was confirmed by bacteriological tests, and vigorous means were adopted to combat the disease. The property in the affected district was appraised and burned, and the number of cases then began to diminish.

Surgeon Perry gives an interesting account of the sanitary methods adopted. They appear to have been most thorough, and in accord with the vigorous measures which the United States Government adopts everywhere in its new island possessions for the control of infectious diseases. His account was written on March 30th.; so, of course, it does not bring the record nearly up to date. But it inspires the reader with a sense of confidence that everything would be done to eradicate the disease in the Philippines, and keep it out of the United States.

It is certainly a source of satisfaction to feel that the sanitation of the world is being done more and more thoroughly every year, and that our own Government is taking a hand in it. We have established a very good record so far.

The Disaster in Martinique.—This year will be remembered for all time as having witnessed one of the most appalling calamities recorded in history. The destruction of Pompeii, which for centuries has remained as the type for all such disasters; and the great earthquake at Lisbon in the 18th. century, have probably both been surpassed by the horrors of the volcanic eruption in the island of Martinique. It is said that Pompeii lies under twenty feet of volcanic ash; but whether the doomed city of St. Pierre has been so completely buried is doubtful. The number of lives lost in the latter, however, has probably been greater. At Lisbon the number of deaths has usually been stated as between 30,000 and 40,000. This number may be surpassed by this twentieth century horror.

The members of the medical profession will note with satisfaction the prompt action of the United States Government in sending aid to the stricken island. On Monday the President asked Congress for an appropriation of $500,000 for the benefit of the survivors. An appropriation of $200,000 was passed at once. This seems like benevolence on a large scale, but much more than this sum will be needed. Moreover, not only money, but men and women will be wanted in that desolated spot. Disease and privation will yet add their quota to the dead. It seems to us that the island of Martinique is at present a great field for the doctor and the trained nurse, and we trust many of them will be found anxious and willing to go there on what may be the greatest missionary enterprise of their lives.

The Liability of Hospitals for Damages.—At the recent session of the New York Legislature the following bill was introduced by Mr. Grady, and was very properly defeated.

"No hospital incorporated under the laws of this State,

sustained in whole or in part by charitable contributions or endowments, shall be liable for the neglect, carelessness, want of skill, or for the malicious acts of any of its officers, agents or employees in the management of, or in the care or treatment of, any of the patients or inmates of such hospital.

"2. It shall not be lawful for any such hospital to make or enter into any agreement whereby liability shall be incurred for such neglect, carelessness, want of skill, or malicious acts, and any such agreement shall be void.

"3. Nothing herein contained shall be so construed as to impair any remedy, under existing laws, which any person may have against any officer, agent or employee of any such hospital for any wrongful act or omission in the course of his official conduct or employment.

"4. This act shall take effect immediately."

This bill, it is believed, was inspired by the recent experience of St. Vincent's Hospital, which has been mulcted in large damages in a suit brought against it by Miss Ward. We have commented on Miss Ward's case a number of times in these columns. After many and varied fortunes in the courts, the case, we believe, has been finally decided. The suit was founded on alleged negligence on the part of her nurse, by which Miss Ward sustained a severe burn from a hot water bag while she was under the influence of an anesthetic. Miss Ward was a private "pay" patient.

We have simply to say here that this bill of Mr. Grady's seems to us to have been exceedingly ill-advised. We believe that hospitals which take "pay" patients should be held to their responsibilities, and we are not surprised, but on the contrary gratified, that a majority of the New York legislators thought so, too. The attempt to saddle all a hospital's responsibility on its medical and nursing staff is rather too brazen.

The Popular Abuse of the Defence of Insanity.—The tragic death of a popular novelist cannot be discussed as a mere commonplace event. It must needs be interpreted by the newspapers as a crime out of the ordinary. The murder of Paul Leicester Ford by his brother demands some euphemistic treatment when it is narrated in cold print; and, consequently, in less than forty-eight hours after it is committed, we find the newspaper scribes fitting the murderer out with a very handsome diagnosis of insanity. We regard it as fortunate that the issue in this case can never be tried in court; and we are reminded to say that the defence of insanity is never trumped up so promptly and so unjustifiably as by the newspapers and the public at large in the cause of some interesting criminal whom they may wish to excuse.

We have no opinion to express about the murderer of poor Ford, for we know nothing about him. Our point is simply this, that the newspapers also know nothing about him, and that, when they jump to the conclusion that he was insane, they are doing the very thing of which they are sometimes so fond of accusing medical experts—they are manufacturing a defence for him.

The defence of insanity is, in fact, never so much abused as by the public and by the newspapers. Medical experts, possessed of even a slight degree of conscience and knowledge, must stand aghast at the recklessness with which a newspaper writer can make a snap diagnosis of insanity without ever having seen the criminal or even having seen an authentic account of his life.

This **Journal** would like to see some sanity introduced into the discussion of this whole subject of criminal insanity, but we are assured that the way to do it is not to leap to the conclusion that because a man commits a particularly horrifying crime, therefore he is insane. It is not the medical profession, but the lay press that needs more caution and conservatism.

Sentimental Pathology.—The lamented death of Admiral Sampson illustrates the fact that the life of the individual is only as long as the life of his blood-vessels. This has come to be a rather trite medical aphorism. The so-called softening of the brain, with hemorrhage, is simply a necrosis of cerebral tissue, caused by an interrupted blood supply, which in turn is caused by thickening and obstruction of the cerebral arteries. In the case of this distinguished naval commander it was natural, perhaps, for the public to see in his death a possible result of the mental perturbation, the worry and chagrin, to which unfortunately he had recently been subjected; and yet we can see no valid reason for such an interpretation. Such a death as that of Admiral Sampson is a purely physical affair. We can imagine no degree of worry that could cause arterial sclerosis. This lesion occurs in all sorts and conditions of men and women. It is of slow onset and gradual progress, and is due to vitochemical changes in the blood and tissues.

We are all the creatures of our physical constitution, even more than of our moral environment. This "materialistic" doctrine is not popular with sentimentalists, but it is in accord with physiological facts. Admiral Sampson's death would probably have resulted in precisely the way it did, even if the Spanish war had never been waged, or the naval battle of Santiago had not been destined to be fought with even more ardor on the land than it had been on the sea.

Child Labor in New Jersey.—This is a strange tale that comes out of New Jersey. According to

the *Outlook*, the factory laws are being violated in that state most flagrantly. At a recent meeting of the Consumers League of New Jersey, held in Jersey City last week, the President of the Bottle-Blowers' Union showed photographs of children of six or seven years of age working in the glass factories. The law of the state forbids the employment of children under twelve years. This is two years less than in Massachusetts, and one year less than in Pennsylvania. As Mr. Hayes of the Bottle-Blowers' Union said, this employment of very young children is not defensible even on economic grounds, for the work they do could be done just as well by inexpensive machinery.

The viciousness of this whole business is easily seen when the true cause of it is known. The ill-paid labor of little children is cheaper than the labor of improved machinery; hence, the manufacturer, on the one hand, and the parents, on the other, conspire against childhood. If this were to continue, it would act just as cheap labor acts in some parts of Europe—it would keep out machinery. At the same time an incalculable injury would be done to these poor little ones.

It seems that child labor is being used (and abused) more and more in this country. In South Carolina it is employed in the cotton mills at a very tender age, and the politicians and manufacturers are in league to maintain the system. But surely in states which have proper laws—like New Jersey and Pennsylvania—there is no excuse if these are allowed to be broken. Governor Murphy, of New Jersey, has just rebuked the factory inspectors, and they seemed to need it.

Quackery and the Missionaries.—The progress of scientific medicine in a very new country, like some parts of America; or in a very old country, like the whole of China, is beset with many difficulties. Not the least among these is the tendency to quackery in such countries. We have often wondered how this might be in China—where scientific medicine is still largely in the hands of the missionaries. It is unfortunately a failing of the clergy sometimes to gravitate toward quackery. In a strange and distant land, like China, we should fear that this natural failing might become a besetting sin.

In a recent number of the *China Medical Missionary Journal*, there is an interesting paper by Philip B. Cousland, M. D., C. M. The author says that "the Chinese have a craze for dabbling in medicine," and he thinks that this craze should be discouraged. "Western medicine" is evidently at a premium in China, owing to the skillful way it is practised by the medical missionaries. The wily Chinese, seeing this, naturally want to trade in it. These Celestials are thrifty and shrewd at trade; and so they come to the missionary hospitals and want to buy western medicines. Their object, of course, is to peddle them around, and to palm themselves off as having a western medical education. In such ways the abuse and deterioration of scientific medicine might readily be brought about.

Mr. Cousland has some very sensible remarks on the subject. He does not trade with such folks. The medical missionaries have evidently a great field in China, but they evidently have also a great responsibility. Their prime motive, of course, is a religious one. They aim to convert the heathen, and with this aim they seek to treat his diseases. But we believe that they are a conscientiously alert body of medical practitioners, and are not likely to permit "Western medicine" to lose any of its prestige by degenerating into a species of native quackery. The *China Medical Missionary Journal* in this number is, as usual, quite full of interesting matter.

Hematoporphyrinuria.—The baleful results of the administration of excessive quantities of sulphonal are shown by the reports that appear from time to time in the medical journals of cases of hematoporphyrinuria. The article by Dr. Tyson and Dr. Croftan, which appears in the present number of this Journal, and in which an additional case is reported, is particularly valuable on account of the calculations showing the enormous amount of hemoglobin that may be destroyed in these cases. That one-seventeenth of the total quantity of hemoglobin in the blood may be destroyed in twenty-four hours is enough to lead us to consider whether it might not be better to discontinue the use of sulphonal altogether, than take the risk of producing even a moderate destruction of any of the blood constituents.

The Muscular Factors in Ankle-Clonus.—It has usually been assumed that both the gastrocnemius and soleus muscles are concerned in the mechanism of ankle-clonus. This symptom is so commonly sought for and observed in diseases of the nervous system, that it is somewhat remarkable that it has not been more carefully analyzed. We have now the very eminent authority of Dr. S. Weir Mitchell, (*Journal of Nervous and Mental Disease*, May, 1902) that the soleus muscle alone is the active agent in the production of this clonus. In a case of trauma of the spinal cord, recently observed, Dr. Mitchell found that the very remarkable clonus present was caused by the action of the soleus alone. This observation he verified by the study of other

cases and by the clonus that can often be excited in the normal person.

Dr. Mitchell's explanation of this fact is ingenious, and also illustrative of the accuracy with which he has from long experience learned to study the minutiæ of nervous diseases. He finds this explanation in the anatomical differences of the two muscles. Thus, the gastrocnemius has its origin on the femur; the soleus, on the tibia. If the leg is flexed on the thigh, the gastrocnemius, being attached to the femur, is too relaxed to give rise to clonus; but the soleus, being attached to the tibia, is not relaxed, and may be jerked sufficiently by forced dorsiflexion of the foot on the leg to respond by a clonic movement. Dr. Mitchell states that if the leg, however, is put in extreme passive extension on the thigh, the pull made thus on the common tendon of the two muscles is so great that it prevents either muscle being jerked sharply enough to occasion clonus. This latter fact, it seems to us, may require still further confirmation.

Dr. Mitchell rather depreciates the importance of this newly observed feature of ankle-clonus, and yet it seems to us that it might be of value in some studies of nervous diseases. At least, it is well to know it.

The Lachrymal Reflex.—The present age in neurology might be called the Age of Reflexes. There is apparent great industry in discovering and describing new reflexes. As these sometimes have distinct diagnostic value, it is not to be wondered at that the neurologists want to add as many of them as possible to their stock of knowledge. Unfortunately, some of the newly discovered reflexes are found to be either old friends masquerading in a new name, or new acquaintances of dubious utility.

Neither of these is so in the case of the interesting lachrymal reflex, which is described in this number of the Journal by Dr. William G. Spiller. If it shall prove that this is a constant quantity in the differentiation of organic from hysterical affections, it will win a permanent place in our text-books.

The Relation of Uric Acid to Disease.—Probably no subject has given rise to more discussion in the last two or three years than has the relation of uric acid to disease. On the one side there are clinicians who claim that not only gout, but a dozen other diseased conditions are due to uric acid, and on the other side there are chemists who claim that investigation has failed to advance any adequate proof of this relation. Now there is undoubtedly some relation between the group of conditions which were called by Charcot the rheumatic diathesis, but it is exceedingly doubtful whether uric acid, and not some infectious or at least toxic principle, is at the bottom of it. Dr. David L. Edsall, in his valuable paper published in a recent number of this **Journal**, has discussed this subject from the standpoint of the chemist, and that he reaches such negative conclusions is due largely to the inadequacy of our methods for studying metabolism. At least it is of advantage to know that upon this subject we are probably on the wrong tack; for this knowledge will serve to stimulate our researches in other directions. Dr. Edsall's paper is a particularly satisfactory summary of the subject to date.

Current Comment.

TO THE MEDICAL PROFESSION OF THE UNITED STATES:

The necessity for a thorough organization of the medical profession was never more urgent than at the present moment, nor has the appreciation of this necessity ever been more keenly felt than at this time.

The American Medical Association, which will hold its fifty-third annual session at Saratoga on June 10, 1902, being the only national representative association of the medical profession in the United States, is entitled to and claims the earnest support of every medical practitioner who has at heart the highest and best interests of the profession. An organized profession represented in this great central body with affiliated and influential state and territorial associations extending through their subdivisions into all districts or counties, is the only real guarantee of the protection of the public health and of the medical profession. The enactment and enforcement of rigid medical laws; the establishment of reciprocity or interstate comity by which a uniform standard of requirements for the practice of medicine in the various states, which, without any sacrifice of the very highest requirements, would permit a physician, having gone before a competent board in one state, to practise in another without being subjected to a second examination; the establishment of a National Department of Public Health; the support of the medical staff of the United States Army in their effort to maintain their rights; to prevent unjust restrictions upon animal experimentation which has proved to be one of the most important methods of research and of the most lasting benefit to humanity, can be accomplished in no other way than by thorough organization of the profession in the American Medical Association.

JOHN A. WYETH, M. D., President.

A SNAP DIAGNOSIS.

He was insane. Most will believe this. It is both the charitable and natural explanation. Facts look that way. Nothing but insanity could have led a man to the double crime, murder and suicide, by which Malcolm W. Ford ended the life of his brother, Paul Leicester Ford, and his own. The man's years had been long irregular. He had put his hand to many things and failed in all. What the physicians call the "family history" was dubious. There had been eccentricity in the generation before. Bitter family quarrels had come. He had been disinherited. No regular life seemed possible. Infirmities of temper and other infirmities cut all the cords of life for him. He had no regular calling. He was a disowned son. He was a divorced man. He kept no post long. He worked into no regular place. He was always quarreling with his engagements, his wages and his work. Years brought no steadiness. Big, strong powerful, often in training, he was just

entering the years when the irregularities of youth begin to poison the activities of middle age. He had no standards but those of the athletic arena. He needed money. He asked for it. He was schooled to the sweeping physical rush with which he had broken more than one record and won more than one prize. The money was denied. His head grew dizzy with the desire of winning at all hazards and brooking no denial. He killed his brother and he slew himself.—*The Philadelphia Press.*

A CONUNDRUM.

The **Philadelphia Medical Journal** discusses at length the question whether a telephone conversation between doctor and patient should count as a house visit by the former or an office visit by the latter. This is almost as good a conundrum as that pertaining to the motherhood of the chicken, the hen that laid the egg or the hen that hatched it.
—*Boston Morning Herald.*

THE PROBLEM ANSWERED.

We must admit to seeing no insuperable difficulty in the weighty problem. It is not what the patient receives but what the physician bestows that forms the basis of his charge. The 3 factors, as we understand it, that enter into the problem of the physician's remuneration, are: (1) The special skill and knowledge brought to bear; (2) the responsibility involved; and (3) the time and labor involved in bringing the two former into action. Now, the first 2 are constant factors, more or less, so far as the when, how, and where are concerned. It is on the last only that any modification of the fee must depend. That being so, a telephone consultation is obviously an office consultation, and if the responsibility is to some slight extent increased by giving an opinion *in absentia*, the benefit derived is doubtless so much the less from the lack of that personal confidence—inspiring influence that always accompanies the presence of the trusted medical adviser. On that point, therefore, physician and patient may do well to cry quits.—*The N. Y. Medical Journal.*

Correspondence.

A TEST FOR SYPHILIS.

By Max Schott, M. D., New York.

To the Editor of the **Philadelphia Medical Journal:**

In view of the unfavorable reports in the **Philadelphia Medical Journal**, of May 10th., 1902, concerning the Justus test for the presence of lues, I wish to call attention to the fact that latent syphilis may be rendered active at will by trauma intentionally applied to the oral mucous surface of a doubtful case.

In spite of the various signs given in text-books to enable us to differentiate between a chancre and a chancroid, we are never certain, from the mere appearance of a sore, whether or not we have to deal with the initial lesion of syphilis, and almost invariably we reserve specific treatment until secondary manifestations make their appearance. But, if within a reasonable period after the primary sore these secondary symptoms do not present themselves, we infer backward that it had been "only a chancroid," and syphilis is positively excluded. But this is very often not true, and it is questionable whether it is ever true, for, is it not possible that, on account of the mildness of the infection, or from want of sufficient irritation, a case of true syphilis becomes latent immediately after the primary ulcer has run its course? In our neurological clinics it is a matter of every day occurrence to find cases of grave nervous disease, systemic and otherwise, of distinctly luetic etiology, in which there is either no history whatever of any previous syphilitic infection, or in which there has been "only a chancroid, just a pimple," or an abrasion, without any secondary stage. About 2 years ago I treated a man for a sore on his penis, which, although not typical of either, appeared rather like a chancre than a chancroid. The sore healed in about 3 weeks, and no secondary symptoms appeared within several months thereafter. I was satisfied then that what had looked so very much like a chancre was only a chancroid in the end. A year later, however, the same man comes to my office, assuring me that he had been in good health all this time, and even now felt perfectly well except for a slight inconvenience which amounted to this: Two days before, a small part of one of his upper molars, which was decayed, broke off while he was eating, leaving a rough edge which, during the act of mastication or speech, would play against the inner surface of the cheek and thus annoy him. Upon inspection of his buccal mucous membrane, exactly on the spot with which the rough edge of the broken tooth came in contact, I discovered an oblong, nearly oval, papule of a dirty yellowish color with sharply definite borders, in short, a typical syphilitic patch, not to be mistaken for anything else. I at once instituted specific treatment, and after one week's mercurial inunctions the mucous patch had healed. I then caused another patch to appear on the side of his tongue by scratching it with the point of a needle, likewise on the mucous membrane of his lower lip by applying to it tincture of iodine. The patch usually appears within 36-48 hours after the insult to the mucous membrane. Although this patient never showed any other evidence of lues, I intend to keep him under intermittent acute syphilitic treatment, until I shall no longer be able to bring out the characteristic patch by the application of trauma to his oral mucous membrane. For where there is no syphilis, no amount of irritation can bring forth a syphilitic patch.

Now, if this man's molar had not happened to break off, his case would never have been suspected, unless in later life some grave tertiary trouble would develop. Again, if the accident to his tooth had occurred at the time of, or shortly after, the initial lesion, there would have been no doubt about the luetic nature of the case from the start, and proper treatment could have been begun in time. But then, why wait for an accident to render latent syphilis active, if we can accomplish the same end at will?

Reviews.

The Climates and Baths of Great Britain, being the report of a Committee of the Royal Medical and Chirurgical Society of London. C. Theodore Williams, M. D., Chairman. P. Horton Smith, M. D., Secretary. Volume II. The Climates of London and the Central and Northern Portions of England, together with those of Wales and Ireland. London. Macmillan & Co., Limited. New York: The Macmillan Company. 1902. Price in cloth, 12s. 6d. net.

This second volume of the climates and baths of Great Britain and Ireland completes the work undertaken by the Committee of the Royal Medical and Chirurgical Society in 1889. In it will be found reports on the climate of the districts of England and Wales not included in the first volume. These embrace the East Counties and Coast, from the Thames to the Tweed, the Midlands the Lake District and Northwest Coast, North and South Wales and Ireland. We are informed that the climates of Scotland have been omitted on account of the failure of the committee to secure the necessary local co-operation. The subjects have been arranged on the same plan as Volume I. and for the purpose of uniformity and comparison the meteorology of the same series of years has been investigated, 1880-1890. The population of the towns, as well as all collateral information, has been brought fully up to date, the census reports of 1901 being given. The labors of the Committee in producing a work of this extensive character must have been great indeed, and the profession generally owe a debt to these gentlemen for the very satisfactory manner in which the work has been accomplished. We find in this volume accurate statistical data describing in detail the climatic conditions, meteorological observations, population, a list of the diseases prevalent in the

various districts, the adaptability of these districts as health resorts, and tables of mortality, besides a tremendous fund of knowledge of the most minute and far-reaching kind. An index is provided which is particularly well prepared and the work will be found of great value not only to those who are interested in the climate and locations described, but to medical men having in contemplation a work of similar sort. A number of maps are included, some of them colored, showing the elevations, various boundaries and the rainfalls, as well as a map of isothermals, showing the mean temperature of the British Isles in January and July. The volume is a monument to the industry and discrimination of the Committee of the Royal Medical and Chirurgical Society, and we extend to Dr. C. T. Williams, its distinguished chairman, and his 21 earnest co-workers our congratulations upon its completion. It would not be fitting to conclude a review of this noteworthy volume without also congratulating Macmillan & Company, the publishers, for the extremely satisfactory manner in which this difficult piece of bookmaking, with its multiple tables, etc., has been accomplished. [T. L. C.]

Diagnostico De La Fiebre Amarilla. By Dr. Joaquin L. Duenas. Habana, 1901.

This valuable little book has been prepared by an author thoroughly familiar with his subject. He states that, as far as he knows, there is not in medical literature a book which deals particularly with the diagnosis of yellow fever, and it has been his desire to supply this want. For this purpose he has drawn extensively upon the literature and utilized to the full his own experience. The book commences with a chapter upon the difficulties of the diagnosis, then one upon the principles upon which the diagnosis is based, then a long chapter upon the symptoms, which are treated individually, and which commences with the much disputed facies, then icterus, the skin, the digestive organs, the nervous symptoms, the temperature and the urine, upon the examination of which latter he lays great stress. Then follow two long chapters upon the differential diagnosis of the disease, the two comprising more than half the book, and, finally, an extensive chapter upon the diagnosis of the disease in the native Cuban. Dr. Duenas has merely had occasion to add a brief note to one of these chapters, upon the relation of the mosquito to the etiology of yellow fever, and in doing this he takes particular pains—and we are glad to see that he does—to recall the work performed by Finley upon this question. Back in the 80's Finley's statements were received with ridicule, and yet if we are to believe the results of experiments performed, we fear rather recklessly as regards human life, by the American military surgeons in the island of Cuba, his views had the misfortune to be so much in advance of those held by his contemporaries that the latter could not appreciate them. Altogether, it is an excellent little book and deserves translation if only for the benefit of the army and navy surgeons who will be compelled to serve in the tropics. [J. S.]

The International Medical Annual. A Year Book of Treatment and Practitioner's Index. 1902. Twentieth Year. New York. E. B. Treat & Co., 241-243 West 23rd St. Chicago, 199 Clark St. Price, 3.00 in cloth.

The International Medical Annual, of which this issue of 1902 marks the twentieth year, follows the general scope of its predecessors which has proven so generally acceptable to the medical public. The work contains a veritable fund of information outside the scope of a year book, but the articles are well written and the whole work is judiciously edited. We are not able to speak with especial praise of the Introductory to the dictionary of Materia Medica and Therapeutics, but this article itself, one of avowed difficulties because of the fact that it must deal with so many of the newer, and, for the most part, untried remedies, has been handled with admirable discrimination. The section devoted to the study of the toxins and antitoxins contributed by Dr. William Murrell, of London, and Dr. Joseph McFarland, of Philadelphia, is commendable, as is the Dictionary of Medicine and Surgery from the pens of a number of distinguished contributors. A special article of excellence, but which to our mind is scarcely in place in a work of this sort, is devoted to the correction of errors of refraction and accommodation. This is contributed by Dr. A. St. Clair Buxton, and, while it is of a somewhat elementary nature, the subject is well presented. The best portion of the work, in our opinion, is that devoted to the advances in sanitary science, in the year 1901, by Dr. Joseph Priestley, of London. A general criticism of the work would not be complete without alluding to the fact that a number of the references date back to the year 1889, while the volume is supposed to be a review of medical literature for 1901. The vast majority of works of this character are open to a similar criticism. We believe that they would all prove of greater value if only the references for the current year were included in each year's issue. A large number of excellent illustrations, many of them colored, are given, as well as charts and diagrams, and they all assist in the general usefulness of the volume to the practitioner. We know of no similar work in which a greater amount of helpful material is included and a consultation of its pages upon any subject within the domain of medicine or surgery will reveal the fact clearly that as a work of general reference it will be consulted freely and with satisfaction by its large circle of readers. [T. L. C.]

The Practical Medicine Series of Year-Books. Vol. IV. Gynecology. Edited by Emilius C. Dudley, A. M., M. D., Professor of Gynecology of Northwestern University Medical School, etc., with the collaboration of William Healy, A. B., M. D., March, 1902, Chicago. The Year-Book Publishers. Pages 212. Price, $1.25.

The purpose of the editors of this book has been to summarize the most noteworthy contributions to gynecology made during the past 18 months. Examination of the material presented shows that the field has been very thoroughly covered, and, in addition, where it was deemed necessary, brief editorial comments have been introduced. It is to be regretted that there have not been more criticisms inserted than are to be found, since it is by such comments, aside from personal experience, that one can the more readily arrive at an estimate of the value of a proposed new plan of treatment. It is interesting to note that during the time covered by the material contained in the book there has occurred a revival of interest in plastic gynecological surgery, including the repair of injury to the cervix uteri, to the vaginal walls, and to the perineum. Numerous illustrations are inserted throughout the work, and special mention should be made of those illustrating the new procedures in the major abdominal operations. We agree with the editor in his statement that conservative operations on the Fallopian tubes are still *sub judice*, and also that the question of safety in medullary narcosis seems still far from being solved. The book is a convenient and comprehensive résumé of the entire subject of recent gynecology and renders easy of access the recent literature of the subject. [W. A. N. D.]

The Roentgen Rays in Medical Work. By David Walsh, M. D. Edin. Physician Western Skin Hospital, London, W. Late Hon. Sec. Röntgen Society, London. Part I. **Apparatus and Methods,** re-written by **Lewis Jones,** M. D. Cantab., F. R. C. P. Medical Officer in Charge of the Electrical Department of St. Bartholomew's Hospital. Part II **Medical and Surgical** (brought up to date with an appendix). Third Edition. New York. William Wood & Company. MDCCCCII.

The third edition of this well-known work has been greatly enlarged. Part 1 on Electrical Apparatus and Methods has been contributed by Dr. Lewis Jones, and his exposition of the subject is remarkably clear, concise and satisfactory. A sufficient number of illustrations have been included to elucidate greatly the text, and the introductory portions, as well as the part devoted to technique, will be found practically helpful. A medical and surgical ap-

pendix from the pen of Dr Walsh has brought the subject matter of this portion of the volume entirely up to date A large number of half-tone reproductions of radiographs are given, and they have been chosen with judgment The entire field of application of Röntgen rays to medicine and surgery has been covered in a systematic and thoroughly acceptable manner. The publishers, Messrs. William Wood & Company, of New York, are to be congratulated upon the high class typography of the volume, and, as we have stated above, the illustrations are unusually well collected and executed. [T. L. C.]

Infiammazioni E Tumori. By Dott. Secreti Enrico. Rome, 1902.

Dr. Secreti Enrico has taken pains to collect a number of cases of inflammatory and neoplastic conditions of the sphenoidal sinuses to which he prefixes a description of the anatomy and physiology of these fossæ, and to which he appends a description of all the various operations that have been devised in order to render the fossæ accessible to surgical measures. One hundred and thirty-eight articles are cited in the literature.

The book is an excellent illustration of the advantage of publishing long articles in monograph form instead of dragging them through several numbers of some medical journal. [J. S.]

The Value of the Different Leukocytes in Disease.—Calmette discusses the different varieties of leukocytes found in disease in the blood and in serous effusions, in the *Bulletin Medical* (October 9, 1901, No. 80). A relative mononuclear leukocytosis is found in the blood in chronic diseases, as leukemia, pertussis, sarcomatosis, tuberculosis, syphilis, malaria, smallpox, varioloid, varicella, and the mineral poisons. Polynuclear leukocytes predominate in acute affections, as measles, scarlatina, polymorphous erythema, articular rheumatism, gonorrhea, and typhoid fever. Eosinophilic leukocytes occur in diseases which have a tendency to recover, as Duhring's disease, pemphigus, eczema, psoriasis, and urticaria. Turck's cells, plasma cells, and poikilocytes occur in grave infections, as in smallpox and leukemia. Antitoxin injections always determine a polynuclear leukocytosis. The effusions of acute pleurisy contain many polynuclear leukocytes; if tubercular, only mononuclear leukocytes and lymphocytes; in heart or kidney disease, very few leukocytes. The pericarditis of renal disease contains polynuclear leukocytes; of tuberculosis, lymphocytes. Inflammatory ascites contains polynuclear leukocytes; tuberculous, mononuclear leukocytes and lymphocytes. Synovitis due to rheumatism, gonorrhea or the infectious diseases, contains polynuclear leukocytes; tubercular synovitis shows lymphocytes, unless cauterization or injections have been used. Tuberculous meningitis shows almost exclusively lymphocytes; cerebro-spinal meningitis, polynuclear leukocytes. No leukocytes are seen in tetanus and meningismus. Chronic diseases of the nervous system cause lymphocytosis (tabes, general paralysis, syphilitic meningitis, etc.), while the insanities, polyneuritis, and tumors cause no leukocytosis. Secondary infection may change these conditions, however. [M. O.]

An Epidemic of Beri-Beri.—The epidemic of beri-beri in 1900 at Diégo-Saurez, Senegal, is fully described by de Schuttelaere in the *Archives de Medecine et de Pharmacie Militaires*, December, 1901. 180 persons were attacked, with 37 deaths. Some cases were dry, others moist, and others mixed, in type. When death followed, it occurred by asphyxia in every case, and there was no albuminuria. As the native soldiers went about bare-footed, it was most probable that the microbe entered through wounds in the feet. When rice was excluded from the diet, no more cases appeared. Convalescence was in all cases prolonged. The etiological relation of rice, which has been kept for a long time before being used as food, to the epidemic seems now well established. De Schuttelaere advises giving meat, fat, and oil to the native soldier, and suppressing rice whenever beri-beri is feared or even suspected.

[M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

American Orthopedic Association.—The sixteenth annual meeting will be held at the Hotel Walton, Philadelphia, June 5 to 7. The president of this association is Dr. H. A. Wilson, professor at Jefferson Medical College. The vice-presidents are Drs. W. J. Taylor and G. G. Davis, the secretary is Dr. John Ridlon, and the treasurer, Dr. E. D. Brackett. On the evening of June 5, a demonstration of plaster-of-Paris bandages will be given in the amphitheatre of Jefferson Medical College.

Scarlet Fever.—The epidemic of scarlet fever in the southern section of Philadelphia continues, 29 new cases having been reported during the past week in the Thirty-sixth ward. A total of 90 cases with 4 deaths was reported as compared with 103 cases and 7 deaths during the previous week. Scarlet fever is also epidemic at Lansford, near Tamaqua, where 3 deaths are already reported.

Medical School Commencements.—The commencement exercises of the Medico-Chirurgical College will occur at the Academy of Music, May 24. Jefferson Medical College will hold its commencement at the same place, May 29. The University of Pennsylvania Medical School has announced the commencement exercises for June 18, also at the Academy of Music, Philadelphia.

The Treatment of the Insane.—The superintendent of the Philadelphia Hospital recently reported, before the special legislative committee now investigating the condition of insane patients in institutions ,that there were 1444 persons in the insane department of the Philadelphia Hospital, 773 of whom were women. No patient is admitted to the insane wards until after treatment in the detention wards. The capacity of the insane department is between 900 and 1000. Insanity existed in the family of 60% of the inmates; 10% of the cases were traceable to alcohol, leaving 30% due to all other causes. He suggested the enactment of a more rigid marriage law.

Society Meetings Next Week.—The following societies will hold meetings next week at the College of Physicians, Philadelphia, at 8.15 P. M.: Wednesday evening, May 21, Section on Otology, and Thursday evening, May 22, Pathological Society.

Death of Dr. Richardson.—Dr. Ida E. Richardson died at her home in Philadelphia, May 9, following a surgical operation performed some months ago. Dr. Richardson was born in 1845 and was graduated from the Women's Medical College in 1879. She made a specialty of gynecology limiting her practice absolutely to women and children. She was for a time instructor in medicine at the Women's Medical College, Philadelphia.

SOUTHERN STATES.

American Gastro-Enterological Association.—At the fifth annual meeting held in Washington May 1 the following officers were elected for the ensuing year: Dr. J. C. Hemmeter, Baltimore, president; Dr. W. D. Booker, Baltimore, and Dr. S. J. Meltzer, New York, vice-presidents; Dr. Chas. D. Aaron, Detroit, secretary and treasurer.

Johns Hopkins Medical School.—Dr. Robert Lee Randolph, associate professor of ophthalmology and otology in Johns Hopkins University Medical School has recently been awarded the Boylston Prize by Harvard University.

The Smallpox in Wilmington.—The Board of Health of Wilmington has figured out the cost of handling the recent outbreak of smallpox in the city at $4050. There were 57 patients, but no deaths.

Government Hospital for the Insane.—Dr. G. L. Magruder, a graduate of Georgetown University, a practising physician in Washington for 30 years, has been appointed to the vacancy on the board of visitors to succeed the late Dr. W. W. Johnston.

McKinley's Physicians. An item is to be inserted in the Urgent Deficiency bill now under consideration by the House Committee on Appropriation, to provide for the appropriation of $50,000 to defray the expenses attending the death and burial of the late President. It is understood that $30,000 of this amount shall go to the physicians, the remainder being used to defray the funeral expenses.

CANADA.

(From our Special Correspondent).

Two New Sanatoria for Consumptives.—One result of the recent conference held at Ottawa by the Canadian Association for the Prevention of Tuberculosis is the announcement that 2 new sanatoria will shortly be built near Ottawa and Montreal. The former will be erected entirely at the expense of the newly-elected President of the Association, Mr. W. C. Edwards, M. P., and the other will be the gift of the eminent Montreal philanthropist, Sir William MacDonald.

The New Chairs for Laval University.—As the result of an appeal to the old scholars of Laval University, Quebec, contributions for the establishment of new chairs on the occasion of the Jubilee, in June, are pouring in, and it is likely that several new professorships will be founded. Five hundred physicians from the United States, Canada and France, all of French extraction, are expected to attend the Jubilee services.

Barring Diseased Immigrants.—The Canadian Government is likely to adopt the procedure of the United States Immigration Department and bar undesirable immigrants from landing at Canadian ports. The House of Commons now has legislation before it amending the Immigration Act, which will empower the Governor-in-Council to prohibit, by order or proclamation, the landing, except for a specified time, and then for medical treatment alone, of all diseased immigrants. The Governments of the United States and Canada should join hands in the matter, so that these undesirable classes of immigrants could be effectually barred from both.

An Honor.—Dr. R. A. Reeve, dean of the Medical Faculty of Toronto University, will receive the honorary degree of LL.D. at the June convocation of that institution.

Montreal Civic Hospital.—While it was definitely announced a few weeks ago that the question of a new hospital for contagious diseases for Montreal had been ultimately settled, it is now quite apparent that matters are not going smoothly. Archbishop Bruchesi has refused for his people a single hospital; and now there is a proposition before the City Council to the effect that the Notre Dame Hospital and the Royal Victoria Hospital should erect smallpox pavilions and receive a stated sum per annum for the care of smallpox patients. The Council is divided in the matter.

American Association of Physicians.—Dr. James Stewart, professor of medicine and of clinical medicine at McGill University Medical School, has been elected president of the American Association of Physicians.

MISCELLANY.

The Plague in India.—Although the advent of the hot weather has somewhat diminished the occurrence of the plague in India, there are still about 14,000 deaths weekly in the Punjab. The squirrels at Hassan, Mysore, caught the disease and have been completely wiped out. Both Delhi and Simla are free from the disease.—It is announced that 8 specially trained Japanese physicians have recently been engaged for the purpose of combating the plague at Hong Kong.

Cholera in the Philippines.—Another case of cholera has occurred on board the United States army transport *Warren*. The ship and her passengers will be detained in quarantine an additional 5 days. The *Warren* has already been quarantined for cholera for over 10 days. Up to May 13 there have been 960 cases and 769 deaths from cholera in Manila, while the provinces report 2888 cases and 2092 deaths from the disease. It is reported that 11 men in the Eighth U. S. Infantry Regiment have cholera. The Marine-Hospital report, dated May 10, contains the first statement of the probable cause of cholera in the Philippines. Dr. Perry, surgeon in charge, believes that cholera had existed in Canton for some time before its presence was reported, and during that period vegetables from Canton were brought to Manila. The report adds that everything was at a standstill for a few days after the outbreak, due to rigorous regulations, but that, at the time the report was forwarded, trains were running and boats were leaving after their five days' quarantine. The report shows that in the first 9 days after discovery there were 77 cases among the natives, 6 among the Chinese and one European. In the same period there were 65 deaths.

Chocolate for Milk.—Reinach has made a series of experiments upon children of 6 and 9 months, with chocolate. He found that the fat was well absorbed, and that a very small proportion of it reappeared in the feces. The children increased very rapidly in weight. The indications for the use of chocolate are acid dyspepsia, fat dyspepsia, chronic enteritis, cases in which the body weight does not increase with normal rapidity upon ordinary diet, and in rachitic and scrofulous children.

Germs in Street Cars.—While the average adult should inspire 396 cubic inches of fresh air a minute, this is impossible in the street cars of to-day. A New York sanitary engineer found as much as 26.2 parts of carbonic acid gas per 10,000 volumes of air in the trolley cars in New York City. This is to some extent due to insufficient heating of the cars, the windows being in winter necessarily tightly shut. The cocoanut husk mats on the floors of the cars have been examined, single fibers 1½ inches long holding from 3,000,000 to 4,000,000 bacteria. And yet this air compares favorably with that found on many railroads. In the Mont Cenis Tunnel the air contains 107 parts of carbonic acid; in cars in the Mersey Tunnel in England, 26.4; in an electric car in the new Boston subway, 24.97; and in the Metropolitan Railway Tunnel in London, 89.4 parts per 10,000 volumes.

Notes.—Sydney, Australia, reports that the bubonic plague is not communicable between individuals. Rats, mosquitoes and vermin alone convey it.—The Osaka (Japan) police have raided the house of an old woman who has for 30 years carried on a trade in charred human skulls, which the ignorant believed to be a specific against consumption and other diseases.—More people have died from colds than were ever killed in battle.—Between 21 and 30 a man is ill 5½ days a year on an average; and between 30 and 40, 7 days. In the next 10 years he loses 11 days annually; and between 50 and 60, 30 days. —Japan's average rainfall is 145 inches, 5 times that of England.—The wasp, like the bee and almost every other insect, is infested with parasites. Wasps have been captured which had 2 or 3 dozen parasites clinging to their bodies.—The earliest known reference to insanity is found in Egyptian papyrus of the fifteenth century B. C. —The average duration of marriages in England is 28 years; in France and Germany, 26; Norway, 24; Russia, 30. —Cancer accounts for 302 deaths in every 10,000 in this country.—Vesuvius has taken to emitting vapor saturated with hydrochloric acid, which, falling as "rain," has done grave damage to vegetation.—Analysts say that butter is the most nutritious article of diet, closely followed by bacon.—Ginseng to the value of about $800,000 is exported to Hong Kong every year from this country. It is used as a medicine and stimulant.—It is a remarkable fact that few savages have ever been known to stammer.—For the year ending July 31, 1901, the mortality in Bombay city was 102.25 per 1000, the total deaths having been 79,350.

Obituary.—Dr. Thomas F. Riegel, at Philadelphia, Pa., May 6, aged 22 years.—Dr. Henry Damkroeger, at San Francisco, Cal., May 6, aged 37 years.—Dr. Pierson J. Pratt, at Glen Echo, Md., May 2, aged 27 years.—Dr. L H.. Vaughan, at Amelia county, Va., May 6, aged 59 years.—Dr. Lansdown Pennock, at Ridley Park, Pa., May 7, aged 60 years.—Dr. Edward Laurance Feehan, at St. Louis, Mo., May 8.—Dr. George Stewart, at Washington, D. C., May 9.—Dr. Andrew G. Grinnan, at Madison county, Va., May 9, aged 75 years.—Dr. William Houston Boderhamer, at New Rochelle, N. Y., May 10, aged 62 years.—Surgeon John Brooke, at Radnor, Pa., May 12, aged 72 years.—Dr. James F. Finney, at New Orleans, La., May 2, aged 54 years.—Dr. Charles Abner, at Nyack, N. Y., May 1, aged 63 years.—Dr. Joseph Asbury Tarkington, at Greensburg, Ind., May 1.

GREAT BRITAIN, ETC.

The Treatment of Leprosy.—Of the 11 cases of leprosy in New South Wales, January 1, 1901, 5 were natives of European descent, one was a European native of Fiji, one American, one Javanese, one native of Tanna, and 2 Chinese, states Dr. Ashburton Thompson in his report on leprosy in New South Wales. Since 1883, 69 lepers have been received at the Little Bay Lazaret; 34 of these were Chinese. Intramuscular injections of mercury per-

chloride had but little effect on the disease. It only seemed to make them feel better and more cheerful. Temperature and weight curves of the patients during this treatment accompany the report.

An Appointment.—Major Ronald Ross, well known on account of his work upon malaria, has been appointed director of the General Institute of Preventive Medicine at Chelsea, London.

Human and Bovine Tuberculosis.—The Royal Agricultural Society of England appointed a special committee to supervise some important experiments as to the possibility of infecting bovine animals with tuberculosis material from human subjects. In the case of a cow, the human bacilli had multiplied in her body and had indicated a manifestly diseased condition. In the cases of calves, also, reactions to tuberculin, after the attempt to infect with human bacilli, would appear to indicate that infection had actually taken place. In the case of the cow, recovery was not complete 6 months after infection. The experiments indicated that the risk of cattle becoming affected naturally from consumptive human beings must be very slight. The Royal Society, however, does not feel justified in drawing any conclusions as to the risk of infection in the opposite direction, namely, from cattle to man.

Experiments on Disinfectants.—Experiments have recently been undertaken upon disinfectants for the London County Council. According to the summary presented by the Council's medical officer, typhoid bacilli were destroyed by carbolic acid (1-5), potassium permanganate and bichloride (1-1000); by formalin and sulphur dioxide. Anthrax bacilli and spores were only destroyed by bichloride of mercury, and this, with carbolic acid, alone killed tubercle bacilli. It should be noted that neither formalin nor sulphur dioxide gave satisfactory results in the disinfection of wood or cloth containing tubercle bacilli.

CONTINENTAL EUROPE.

The Cost of Plague in Odessa.—The few cases of plague which occurred in Odessa cost the city over 20,000 roubles (10,000 dollars), of which 3,655 roubles were spent on disinfectants, 1,166 roubles on apparatus, 1,000 roubles on antiplague serum, and 989 roubles on cleaning, etc. It would not be amiss for our enlightened San Francisco to learn a lesson from "barbaric" Russia.

A Case of Quintuplets.—In the village of Malisheff Log, Russia, a peasant woman, 33 years old, was delivered of 5 children, 3 boys and 2 girls. One of the boys was stillborn, while the others remained in perfect health.

Russki Vratch

Malaria in Corsica.—The commission appointed to investigate the means of preventing malaria in Corsica has recently presented its report. This states that all persons who have previously suffered, and inhabitants of very unhealthy places, should take quinine in the beginning of the summer. When fever occurs, the administration of quinine must be thorough and prolonged. Quinine should be given to the poor, especially to children, and should be sold in all small towns at low prices. The destruction of the mosquito is not practicable in large marshes, petroleum is advised near houses, and small ponds should be stocked with fish. Shrubbery should not be planted near the houses, which should be protected by netting. Veils should be worn at night. The commission believes that quinine holds the first place, in Corsica, in the prophylaxis of malaria, mechanical protection against mosquitoes second, and the destruction of larvæ, third.

A Case of Early Dentition.—Dr. Zelenski reported, before the Kherson Medical Society, the case of a syphilitic infant in whom the first tooth appeared at the end of the first month; 7 weeks later a second tooth appeared on the lower jaw.

Fighting Tuberculosis.—The fight against tuberculosis is being carried on vigorously in Paris. The Society for the Prevention of Tuberculosis has obtained permission to have printed on the back of all paper used for prescriptions in the Paris hospitals a detailed description of the symptoms and treatment of tuberculosis. It is hoped always to keep before the poor of the city, especially those suffering from illness, the dangers of the dread disease.

Obituary.—The death is announced of Dr. R. M. Bruzelius, professor of pathology and therapeutics at Stockholm.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

April 26, 1902. (No. 2156.)

1. Vaccination and Common Sense. T. D. ACLAND.
2. Contract Medical Attendance upon Sick Clubs. H. LANGLEY BROWNE.
3. Observations on "Caisson Disease" and its Prevention. A. H. MUIR MACMORRAN.
4. Cocaine Intoxication and its Demoralizing Effects. KAILAS CHUNDER BOSE.
5. A Note on the Application of Litholapaxy or Lithotrity to Stone in the Bladder in the Canine Species. R. HARRISON.
6. Two Cases of Acute Intestinal Obstruction Successfully Treated with Quicksilver. J. McKEAN HARRISON.
7. A Note on the Infantile Mortality from Tuberculous Meningitis and Tabes Mesenterica. HUBERT ARMSTRONG.

1.—Acland delivered an address to the subscribers to the Hospital Saturday Fund on **vaccination and common sense.** He has been able to convince himself that vaccination is the most efficient and the least harmful of all weapons that have been devised for fighting smallpox, and that there is no known substitute for it. In the address he discusses the statements that have been made by those opposed to vaccination, the manner in which the extent of protection that vaccination gives against smallpox has been decided, the efficiency of revaccination, the mortality and smallpox incidence among those who have been vaccinated and those who have not been vaccinated, and among those who have been revaccinated and among those who have not been revaccinated. [J. M. S.]

3.—During the construction of the Greenwich Footway Tunnel compressed air was used for tunneling a little less than 13 months. The inspections of the various gangs of workmen, both on going on and coming off duty, were scrupulously carried out. One hundred and twenty-two men were examined, of whom 17 were rejected after the first examination and 6 were rejected subsequently. To make the work still safer, various experiments were made to reduce the amount of carbonic acid gas in the caisson as far as possible. There were 15 cases of sickness not due to compressed air, and the health of the men was generally very good, except for 1 or 2 weeks during the completion of concreting in the caisson, when almost all of the men suffered from nasopharyngeal and bronchial catarrh. During this time there were 3 slight cases of **Caisson disease** as compared with 6 cases for the remainder of the period. The small number of cases is to be attributed to the purity of the air, the uniform temperature and the good health of the workmen. In the course of the examinations of the men it was discovered that a large proportion of those who had previously worked in compressed air had a much lower pulse-rate than the newer hands, and that they did not perspire so freely while at work. Several men, who had worked in compressed air for over 12 months, had a pulse-rate averaging 80 per minute immediately after work. They also showed a deviation from the normal heart sounds, usually in the pulmonary area and often in the aortic area. In 3 or 4 of these men the heart sounds became absolutely normal after they had been at work in compressed air 2 or 3 days. This bears out the already well-known fact that the best and most speedy remedy for a person suffering from caisson disease is to put him back into a medical lock where he can be subjected to compressed air. It must not be supposed, however, that such a proceeding is to be followed in the case of an old compressed air workman who exhibits such symptoms. Macmorran believes that the disease is due to an interference with the interchange of gases in the lungs in such a way that the pressure of the air breathed diminishes the elimination of carbon dioxide from the body and interferes also with the elimination of other waste products. He also believes that there is a hyperemia of the deeper tissues. In the treatment of the condition he recommends the use of nerve sedatives, such as ammonium bromide which he has found superior to opium. In severe cases of pain cannabis indica gives

great relief. Potassium nitrate, potassium acetate, and ammonium acetate are useful in the convalescent stage and may be given from the first with good results. The best treatment is the medical lock into which a purified air should be pumped until the pain is relieved and then the pressure should be gradually reduced. The histories of 3 cases are given. [J. M. S.]

4.—Cocaine hydrochlorate is very extensively used as an intoxicant in Calcutta. Inebriates say that the hilarity that it produces is almost instantaneous, and that it is followed by no deleterious results. The drug is generally taken in the form of tablets or powder and chewed with betel leaves and slaked lime. The first symptom experienced is loss of sensation in the tongue and lips, followed by dryness of the mouth and fauces. The approach of the so-called hilarity is accompanied by a feeling of heaviness in the head, throbbing of the arteries in the neck and palpitation of the heart; perspiration soon appears on the forehead and neck and the height of intoxication is marked by coldness of the finger-tips and dilation of the pupils. This stage lasts from 30 to 45 minutes, after which the victim longs for a fresh dose and, unless he gets it, he feels lifeless and dejected. This depression of spirits is more imaginary than real. The use of the drug produces insomnia and anorexia, which is soon followed by dyspepsia and diarrhea. The dyspepsia of a cocaine inebriate is very obstinate, and does not yield readily to treatment. The prolonged use of the drug brings on some deafness; the quantity of urine is diminished; delusions and hallucinations often occur and cause dejection and dread: and, in some cases, acute mania develops. Bose reports 10 cases of **cocaine intoxication**, an analysis of which indicates that the action of the drug upon the nerve centers is at first slightly stimulant. This effect lasts from 15 to 20 minutes and is then followed by a feeling of depression which gradually passes into lethargy and inertia. The action of the drug upon the heart and vascular system is depressing. Loss of appetite and failure of digestive power is marked, and emaciation results from want of nutrition. The only remedy for the condition lies in locking the inebriates in asylums and stopping the cocaine altogether. He advises the adoption of stringent measures for the control of the sale of the drug. [J. M. S.]

6.—Harrison reports 2 cases of **intestinal obstruction successfully treated with quicksilver.** In the first case, a man of 60 years, operation was refused, and ½ lb. of mercury was administered on the ninth day. In the second case, a man of 80 years, operation was considered inadvisable because of the patient's age, and the same dose of quicksilver was given on the third day. The symptoms were typical in each case, and were promptly relieved by the mercury. In neither instance did the drug produce an increase of abdominal pain, nor were there any other symptoms of mercurialism. [F. T. S.]

7.—Text-books are fairly unanimous in stating that **tuberculous meningitis** is comparatively rare under the age of one year. Armstrong has examined the statistics of the Registrar-General and finds that, during the years 1898 and 1899, approximately 3/10 of all cases occurred in the first year, and that something like half as many again occurred in the second age period. The deaths from **tabes mesenterica** show a larger percentage below the age of 2 years.

[J. M. S.]

LANCET.

April 26, 1902.

1. The Milroy Lectures on the Etiology of Typhoid Fever and its Prevention. Lecture III. W. H. CORFIELD.
2. Goulstonian Lectures on Some Abnormal Psychical Conditions in Children. Lecture III. GEORGE F. STILL.
3. On Some Points in the Treatment of Puerperal Eclampsia. G. ERNEST HERMAN.
4. Smallpox Hospitals and the Spread of Infection. JOHN C. THRESH.
5. A Case of Subcutaneous Myiasis. EDWARD B. HECTOR.
6. The Spontaneous Cure of Senile Cataract. SYDNEY STEPHENSON.
7. A Case of Placenta Previa. A. W. LEMARCHAND.

1.—Abstract will appear when article is concluded.

2.—In the third lecture **on some abnormal psychical conditions in children**, Still points out that there are cases in which periods of defective moral control alternate with periods in which no such defect is present, or the exaggerations of this defect occur as a manifestation of permanent derangement. He relates the history of a case to illustrate this form of defective moral control. He also groups these cases of recurring loss of moral control into the following: (1) Morbid failure in development of moral control: (a) congenital limitation of capacity for moral control; and (b) arrest of moral development by disease in infancy. (2) Morbid loss of already acquired moral control: (a) in relation to physical disease; permanent or temporary loss of moral control; and (b) apart from physical disease; permanent, temporary, or recurring loss of moral control. The author directs attention to the etiology of these psychical conditions referring to the family history; stigmata of degeneration; and associated mental and nervous diseases. He contends that morbid effect of moral control is usually associated with apparently normal intellect. [F. J. K.]

3.—Herman calls attention to some points in the **treatment of puerperal eclampsia.** He remarks that in the treatment of eclampsia it has been for many years stated that it is important quickly to empty the uterus. This idea is endorsed by many of the obstetric writers, both old and young. Herman questions the efficacy of this method in many instances. He remarks that, if the patient is recovering, as evidenced by cessation of fits, less depth of coma, and re-establishment of the secretion of urine, it may be safe to give a favorable prognosis and not terminate the labor. But early in the case, when the patient has one, or even a few, fits, and is in coma, with almost suppressed urine, but the temperature is not very high or the pulse very rapid, it is not possible to say whether she will recover or die. In such cases it may become advisable to empty the uterus. Herman also doubts whether it is true that the fits cease when the uterus is emptied. Of 185 cases, in which the fits began during labor, in only 62 did they cease with delivery. Other statistics go to prove that in a very large percentage of the cases rapid delivery of the fetus does not procure cessation of the fits . Emptying the uterus is not, therefore, a certain means of checking eclamptic seizures; when the uterus is empty, the fits often continue; in most cases they get better, in some they get worse. If rapid delivery were the one thing needful in eclampsia, if it were the fact that emptying the uterus at once caused the fits to cease, Cesarean section, whether by the usual method or by the method recommended by Dührssen, would unquestionably be the proper treatment. No other method is so prompt. Of 19 cases, reported by Döderlein, of patients suffering from eclampsia, who were delivered by Cesarean section, good results were obtained in 12 cases, and in 7 the patients were not benefited. [W. A. N. D.]

4.—Thresh discusses the subject of **smallpox hospitals and the spread of infection.** In the *Lancet* of February 22, 1902, the author pointed out that most of the primary cases of smallpox in the thinly populated district included in the Orsett Union were due to the spread of this infection from smallpox ships of the Metropolitan Asylum Board which are anchored in the Thames opposite Purfleet. The infection, he thinks, was conveyed through the air. In this article he discusses various modes of infection, and he inclines to the view that the air-borne theory of infection has been greatly underestimated. He describes the epidemic which occurred in the Orsett district, which he thinks was largely due to the floating hospitals. His investigations have led to the following conclusions: (1) That amongst the cases which occurred in Purfleet, both in the present and preceding epidemic, there was a large proportion which could not be traced to pre-existing cases. (2) That all the usual factors tending to produce epidemic prevalence of smallpox were present in the Orsett Union with the addition (save in the case of Purfleet) of an unusually large proportion of unvaccinated children under 10 years of age. (3) That none of these usual factors are capable of explaining the peculiar distribution of the disease during the epidemics investigated. (4) That all the results point to some central continuous focus of infection corresponding exactly in position with the smallpox ships. (5) That most careful inquiry fails to

show any means whereby this continuous flow of infection can occur except on the hypothesis that it is air-borne. He suggests that smallpox patients should be isolated on a large scale in permanent administrative buildings. He argues against the use of tents for the isolation of patients.

[F. J. K.]

5.—Hector reports **a case of subcutaneous myiasis.** The patient, a boy, 6½ years of age, had been in good health until the symptoms presented themselves. The patient came under the care of the author in November, 1901, when he complained of a hard tender swelling on the back of his neck. There was no abrasion or injury of the skin. After a few days this swelling disappeared. On December 12th. the boy's father showed the author a maggot which he had taken from a boil on the boy's head. On the following day the parotid gland was swollen and inflamed. On the 16th., a second larva was squeezed out of the boil, and, on the 17th., a painful swelling developed over the right mastoid process. Three days later a larva was removed from this mass. Another swelling developed on the 22nd., over the left temple, from which a larva was squeezed, and finally, on the 30th., a fifth maggot was removed from a swelling over the outer angle of the right eye. The patient's general health was not greatly impaired. Considerable glandular enlargement accompanies the swellings. The author thinks there was probably an original point of insertion of the ova from which the larvæ migrated. [F. J. K.]

6.—Stephenson reports **a case of senile cataract** with spontaneous cure which occurred in a woman, 55 years of age. [F. J. K.]

7.—Lemarchand reports a case of **central placenta previa** occurring in a woman, 30 years of age. The child was still-born, about 6 months advanced. The patient made an uninterrupted recovery. [W. A. N. D.]

MEDICAL RECORD.

May 10, 1902.

1. Remarks on Arteriosclerosis. I. ADLER.
2. The Indications for Nephrectomy. With Report of Three Cases. JOSEPH WIENER.
3. Resection of the Cervical Sympathetic in Glaucoma: Its Present Status. WILBUR B. MARPLE.

1.—I. Adler discusses **arteriosclerosis.** This condition may begin in the smallest vessels and it is without exception associated with indurative processes of the tissues and organs. It may begin as a purely local process, as in the heart, kidneys and brain, and gradually become generalized. It is by no means always a disease of advanced age, but it may make its appearance at any period of life, even in infancy and childhood. It is possible that **chemical change** may be an important factor in its etiology and we recognize at present, besides the senile forms of the disease, arteriosclerotic conditions produced by various toxic influences. Hereditary disposition is not an infrequent etiological factor. According as the different vascular territories are primarily, or more prominently, affected, several clinical types of arteriosclerotic disease may be distinguished but these types are not absolutely fixed and permanent, and may merge one into the other, for the process is largely progressive. Thus we have the **cardiac,** the **renal** and the **cerebral** types of arteriosclerosis. Adler mentions particularly the **gastro-intestinal** type (including under this heading the **liver** and **pancreas**). The treatment is largely symptomatic. The systematic use of the iodides is of great value. As a prophylactic measure and a possible means of arresting the progress of the disease **diet plays an important role.** [T. L. C.]

2.—Joseph Wiener presents the **indications for the surgical removal of the kidney.** For convenience he divides these indications into 3 classes according to the age of the patient: (1) **During infancy;** (2) **during adolescence;** (3) **during adult life.** The diagnosis of the surgical diseases of the kidneys is made from (1) The history of the case; (2) the examination of the abdomen with, and without, anesthesia; (3) **examination of the urine both** from the bladder and the ureter; (4) examination of the bladder and ureters by the cystoscope and by ureteral catheter; (5) examination by the X rays; and (6) exploratory examination of the bladder, kidney or ureter. The functionating capacity of the remaining kidney must be determined carefully. The indications for **nephrectomy during infancy** are considered under **congenital malformations and new growths.** The indications for nephrectomy during adolescence consist, in the majority of cases, in the presence of a **pyelonephritis** or of a **septic nephritis** of **hematogenous origin** following in the wake of one of the **acute infectious diseases.** The indications for nephrectomy during adult life fall into 4 classes: (1) **Hydronephrosis;** (2) **pyelonephritis** and **pyonephrosis;** (3) **tuberculosis;** (4) **malignant growths.** These conditions are described in detail and illustrative cases are cited. [T.L.C.]

3.—W. P. Marple inquires into the present status of **resection of the cervical sympathetic ganglia in glaucoma.** His conclusions are that the operation is a safe procedure in the hands of a skilful surgeon. While the material is not yet sufficient to reach a positive conclusion as to the permanence of its effect, it is nevertheless established that some of the glaucomatous cases have been improved for some months by resection: in others the conditions apparently remained stationary. The results have varied and one cannot yet be sure in what cases the operation should be performed. No harmful results appear to have followed in any case. A considerable number of favorable results have been reported in **chronic irritation** or in **inflammatory** as well as in **simple glaucoma** in which the pain is abolished. This measure **does not replace iridectomy,** but may possibly supplement the latter in case this is refused or has already resulted disastrously in the other eye or is contra-indicated as in hemorrhagic glaucoma, dacryocystitis, etc. [T. L. C.]

MEDICAL NEWS.

May 10, 1902. (Vol. 89, No. 19.)

1. On Adrenalin Glycosuria and Allied Forms of Glycosuria Due to the Action of Reducing Substances and Other Poisons on the Cells of the Pancreas. C. A. HERTER.
2. Sudden Death in Aortic Stenosis with Report of Two Cases, One Complicated with an Aneurysmatic Like Dilatation of the Aorta at Its Root and Marked Stenosis of this Vessel Beyond the Dilatation. JAMES M. ANDERS.
3. Remarks on the Diagnosis of Pregnancy in Early Months. CHARLES JEWETT.
4. Empyema of the Gall-Bladder. LUCIUS W. HOTCHKISS.
5. The Surgery of Gall-Stones. JOSEPH A. BLAKE.

1. C. A. Herter in his experiments on dogs found that the administration of **adrenalin chloride** is generally followed by the appearance in the urine of sugar in variable quantities. Subcutaneous injections yield only small degrees of glycosuria when 10 c.c. of the drug are given to a dog, weighing 15 kilos. This small quantity of the sugar is explained by the fact that the adrenalin is largely excreted before entering the circulation. Large percentages can be produced by the use of larger doses. In intravenous injections a larger excretion of sugar follows when about the same dose is given. When administered by the peritoneal cavity still larger amounts are excreted. By the mouth, adrenalin apparently has no effect in ordinary doses. If a considerable degree of dilution is practised as in case of intraperitoneal injection, the excretion of sugar is comparatively small. Within certain limits the quantity of sugar excreted appears proportional to the dose of adrenalin given, but this relationship has not yet been carefully studied. The glycosuria after moderate intraperitoneal doses lasts usually somewhat less than 24 hours. Generally it is at its height within a few hours after administration. The total amount of sugar is usually not more than a few grains. The explanation of this unexpectedly small output of sugar lies in the rapid decline of the glycosuria after the first few hours. The rapid increase in the blood-pressure

after injection is marked. After a period of starvation combined with the administration of phloridzin the excretion of sugar induced by adrenalin is very small. In 20 minutes, after an ordinary dose is given, the animal becomes excited and restless which lasts for about an hour, followed by a period of prostration. The following day the appetite is lost; on the second day the animal begins to eat and the signs of prostration are no longer noticeable. [T. M. T.]

2.—J. M. Anders gives Burke's **anatomical and clinical arrangement of diminution in the caliber of the aorta:** (1) Anatomical changes in the (a) heart, a left-sided hypertrophy, to which may subsequently be added dilatation of the left ventricle and auricle, signs of chronic pulmonary congestion, hypertrophy and, perhaps, dilatation of the right ventricle; (b) in the arteries, an arteriosclerosis in young subjects as an expression of long-continued elevation of bloodpressure; (2) clinical appearance. Paleness of face, a feeling of oppression in the chest, cough with catarrhal expectoration, signs of dilatation, hypertrophy and insufficiency, expansion of the boundaries of the lungs, chronic bronchitis, increased weakness of the right ventricle, enlargement of the liver, albuminuria, general edema. In women this condition leads to a primary or even a pernicious anemia. In men we have a picture of actual cardiac disease. [T. M. T.]

4.—L. W. Hotchkiss divides cases of **purulent cholecystitis** as follows: (1) Acute cholecystitis in a relatively healthy bladder. In this form there is usually a large stone in the vesical neck. The walls of the bladder are thickened and the exudate therein is muddy or purulent. (2) Acute cholecystitis in an already contracted gall-bladder, which has been frequently the seat of inflammatory attacks. In this class the cystic duct is generally obliterated, there are numerous adhesions, and the exudate is generally small in amount and slimy or purulent in character. (3) Empyema of the gall-bladder. Stone in the cystic duct. Pus in the bladder cavity. Adhesions. These cases are either the result of an acute serous cystitis or are from the first acute empyemas. The first group of cases, which is quite frequently seen, gives rise to well-marked acute cholecystitis and fairly characteristic objective signs. In the second group the tumor is often not palpable on account of its situation, high up beneath the liver. In the third group the symptoms in the beginning are the same as in group one. Later the fever may be wanting. In the first division the treatment is more or less prolonged drainage which has generally proved effectual and is the measure clearly indicated. In the second group the indications for operation are none the less clear, though oftener longer delayed, perhaps on account of the difficulty of early diagnosis in the absence of a tender and palpable tumor. In the third division incision and drainage are clearly indicated. [T. M. T.]

5.—J. A. Blake gives the conditions in which **cholecystectomy** is indicated as the operation of choice: (1) Gangrene of the gall-bladder and suppurative inflammations endangering its vitality; (2) neoplasms of the gall-bladder; (3) injuries of the gall-bladder; (4) permanent obstructions of the cystic duct. He also gives the conditions in which it is not so imperatively indicated: (a) Contracted gall-bladder which cannot be attached to the parietal peritoneum for drainage; (b) calculi impacted in the cystic duct which cannot be removed except by incising the duct. Cholecystectomy should not be performed in cases in which drainage is indicative, namely: (1) When there is uncertainty as to the potency of the common duct; (2) suppurative cholecystitis without sloughing (3) cholangitis; (4) when the duct is sutured after choledochotomy and the gall-bladder can be easily and safely drained; (5) it should not be attempted in cases in which prolongation of the operation would lessen the patient's chances as when jaundice or bleeding are present, or there is impairment of vitality by disease, age or condition. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

May 10, 1902. (Vol. LXXV, No. 19.)

1. A New Study of Mitral Obstruction, with Illustrative Cases. THOMAS E. SATTERTHWAITE.
2. Toxic Dosage in the Treatment of Some Nervous Disorders. WILLIAM C. KRAUSS.
3. Technique of the Operation and Result of Tendon Transplantation at the Hospital for the Ruptured and Crippled. V. R. GIBNEY.
4. Neurological Questions in the Operation of Tendon Transplantation. JOSEPH COLLINS.

1.—In T. E. Satterthwaite's article on **the study of mitral obstruction,** the conclusions reached are: (1) Mitral obstruction is usually fatal before the age of 40 is reached. (2) Females are little more prone to it than males. (3) There is apt to be a marked contrast between a strong cardiac impulse and a feeble radial pulse. (4) The true presystolic murmur occurred in 15% of the author's cases. It comes and goes, but is usually inaudible in the last stage. (5) It is apt to have a loud rasping or sawing quality, but may be "gushing" or "whirring; it may also be faint or inaudible. (6) In about 40% there is some sort of diastolic murmur. (7) These murmurs are best heard over a rather limited area, somewhat oval in form, having for its center an area between the fourth left interspace, inside the nipple and the apex, and extending an inch or so to the right or the left; occasionally this murmur is heard best as low as the fifth, sixth or even seventh left space; more rarely it is heard as high as the second left rib. (8) In 10% to 35% there is a thrill over this area. (9) The first sound at the apex is short and abrupt. (10) The second pulmonary sound at the base is usually intensified. (11) Occasionally a murmur with the second sound over the base is heard over the left auricular appendix. (12) At first there is hypertrophy of the left ventricle; then atrophy of it, with hypertrophy of the left auricle; then follow dilatation and hypertrophy of the right heart. (13) Mitral insufficiency must to some extent accompany mitral obstruction. (14) In distinguishing the presystolic murmur of mitral obstruction from the Flint murmur of aortic insufficiency, we should rely on the "long heart" and the strong impulse, or the "Corrigan" of insufficiency, rather than auscultatory signs. [T. M. T.]

2.—W. C. Krauss believes that better results would be had in some nervous disorders if the drugs used would be pushed to their maximum doses rather than kept to the minimum. Especially is this true in some cases of brain syphilis. The ordinary dose of hydrargyri chloridum corrosivum is 1/20 to 1/10. The author believes that in the above condition the dose should be one to 2 grains daily, hypodermically. In regard to Fowler's solution the usual dose is 5 drops increased one drop a day. He advises it increased from 30 to 60 minims 3 times a day to get the best results. Also nux vomica, which is given in 10-grain doses, should be increased to 30 minims, or even more, 3 times a day. The use of nitroglycerine in neuralgic or neurotic troubles is recommended, the dose 1/100 of a grain 3 times a day, to be increased from 30 to 50 tablets daily. Atropine and hyoscine can be given in hourly doses, 1/100 of the former and 1/200 of the latter. [T. M. T.]

3.—Gibney, out of 92 patients operated upon, succeeded in tracing and getting the final results in 67. Good results were obtained in 34%; fair in 45%; negative in 21%. In looking over the table we find in equinovarus 16 cases: good 4, fair 9, negative 3. Equinus, 5 cases; good 1, fair 4. Equinovalgus, 22 cases; good 10, fair 9, negative 3. Calcaneovalgus, 10 cases; good 6, fair 3, negative 1. Pure valgus, 2 cases; good 1, fair 1. Calcaneus, 1 case; fair result. Dangle-leg, 5 cases; negative 5. Drop-wrist, 6 cases; good 1, fair 3, negative 2. [T. M. T.]

4.—J. Collins believes from the results of **tendon transplantation** that the field of its applicability is wider than most of us have supposed. He advises us to encourage the surgeon to utilize it, not only in the deformities of infantile palsies, but in similar deformities of cerebral spastic hemiplegias and possibly also in spinal traumatic spastic palsies. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 8, 1902.

1. The Patrol Ambulance an Adjunct to the Ambulance Service in Cities; a Substitute Therefor in Towns. FRANCIS D. DONOGHUE.
2. Therapeutics and the Drug Manufacturer. BRACE W. LOOMIS.

1.—Francis D. Donoghue discusses the **patrol ambulance** as an adjunct to the ambulance service in cities, and calls attention to the development of first aid work which has been accomplished by the combined efforts of the Massachusetts Emergency and Hygiene Association and the Police Department of Boston. [M. R. D.]

2.—Brace W. Loomis considers **therapeutics** and the drug manufacturer. He considers the essentials of a sound therapeutic method to be embraced by the following: (1) Keeping in mind the tendency of self limitations of pathological processes and the possibility of cure as a result of natural forces; never prescribe a remedy that will interfere with, or upset the conservative efforts of, the organism. (2) Keep the problem of treatment as simple as possible by the exhibition of few remedies, well selected. (3) Bear in mind the possibility of aggravating existing pathological conditions introducing new ones, by injudicious or too heroic methods of treatment. (4) Remember that the benefit to be expected from remedies is generally offset or neutralized when a large number of remedies is exhibited at the same time. (5) Try to remove the cause—this presupposes a careful study of the case, rather than a hasty prescription for this, that or the other symptom. (6) Do not forget that most medicines are two-edged swords—if the medicine does no good it is likely to do harm. (7) Prescribe for conditions, not diseases. (8) When necessary, hit hard, but not too often. (9) Watch constantly for symptoms that may be the result of remedies prescribed for the relief of other symptoms. In order to become a therapeutist in the broad meaning of the term, years of experiment and observation at the bedside, in the consulting room, dispensary and hospital wards, are necessary. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

May 10, 1902.

1. Lesions of the Conus Medullaris and Cauda Equina, etc. BERTRAM W. SIPPY.
2. Plastic Surgery, with Cases, etc. C. E. RUTH.
3. A New Dry Surgical Dressing. ALBERT C. BARNS and HERMAN HIRE.
4. New Method of Anchoring the Kidney, etc. BYRON B. DAVIS.
5. The Work of the Digestive Glands (Pawlow), etc. FRANZ A. R. JUNG.
6. A Voluntary Board of National Examiners. WILLIAM L. RODMAN.
7. The Neurologist's Art. JOSEPH COLLINS.
8. An Analysis of Fifty-two Cases of Tetanus Following Vaccinia, etc. ROBERT N. WILLSON.

1.—Sippy writes on **spinal localization** with reference to lesions of the conus medullaris and cauda equina. He gives a report of a number of cases and directs attention to the differential diagnosis between lesions of the cauda equina and conus medullaris. He contends that there should be no difficulty in recognizing disease of the cauda equina. Disease of the cauda develops slowly, except when due to trauma, and produces symptoms characteristic of root disease. Upon moving the lower extremities, the patient experiences pain, which later becomes spontaneous and persistent with exacerbations. When uniform compression of the cauda exists, anesthesia begins. The bladder and rectum symptoms usually appear before anesthesia becomes pronounced. The extent of muscular weakness depends upon the degree of pressure on the motor fibers; it is usually present when pain becomes a pronounced symptom. Loss of muscular tone accompanies the paralysis. Exaggerated reflexes may be found at an early examination; later they diminish and finally become lost. Atrophies develop and electrical reactions may be disturbed. Decubitus has been observed. When there are no local signs present relative to the spine to aid in locating the lesion it is fair to presume that the upper limit of the lesion is just above the exit of the highest nerve that is disturbed in its function. On the other hand, disease of the conus is characterized by motor and sensory symptoms which are likely to begin rapidly. Sensation may not be disturbed alike for all qualities. The touch sense is less seriously disturbed than the pain and temperature sense. Severe pain is absent unless the conus lesion exerts an influence on the caudal fibers. Decubitus is more common in caudal disease. Absence of pain speaks directly for conus lesion. He points out that the differential diagnosis of the 2 conditions is of great importance, as disease of the cauda equina may be amenable to surgical treatment. [F. J. K.]

2.—C. E. Ruth **reports** and **presents photographs** of a number of cases in which **plastic operations** were done with good results. [J. H. G.]

4.—Byron B. Davis describes an operation for **anchoring the kidney** which he has employed successfully in one case. The method consists in first splitting the capsule and dissecting it back, then separating a portion of the quadratus lumborum about the size of the little finger from the body of the muscle, but without detaching either extremity. This strip of muscle is then placed between the flaps of the capsule, which are sutured over it. This operation fixes the kidney by means of a living anchorage. The author has discovered that Baldwin has already employed a method similar to this, but he practised it without the knowledge of Baldwin's work. [J. H. G.]

5.—Jung contributes an article **on the work of the digestive glands** and estimation of pepsin digestion by modern instruments of precision. He draws the following conclusions: (1) The normal values for the pepsin digestion are, according to Mett's method, 5.5 to 5.9 mm. (2) With Mett's method, subacidity and anacidity have lower values than normal or superacidity (1.9 mm.) is the average. They do not reach the average values of superacidity. The diminution of pepsinogen does not run proportional with that of HCl. Even with a deficiency of HCl, the value of pepsin can be higher than that of mild subacidity. (4) Superacidity, generally speaking, has high and highest values of pepsin, yet there are cases of unusually high HCl figures with disproportionately low pepsin values. This points distinctly to a pepsin question. Large quantities of HCl after a Boas test-breakfast do not always include a free secretion of pepsin. (5) According to the method of Hammerschlag, 60 seems to be the normal figure of pepsin secretion. With Hammerschlag's method in opposition to Mett's the values of sub- and anacidity reach the average of that of superacidity. The average values approach each other more with Hammerschlag's method.

5.5 superacidity: 1.9 subacidity Mett.
60 superacidity: 45 subacidity Hammerschlag.

(7) Besides with Hammerschlag's, we see no proportion of the HCl diminution and the pepsin secretion in cases of subacidity. (8) The methods of Hammerschlag and Mett show the same proportions in 66% of the cases. In 5 cases out of 15 the 2 methods give different results. In cases 6 and 23 it is a question of normal and superacidity. Hammerschlag's figures do not correspond to the high millimeter readings, but only show medium values. On the other hand, cases 32, 13, and 14 have proportionately high Hammerschlag figures with low millimeter values. The corresponding HCl values are subnormal. In other words, in all those cases in which Mett's method differs from Hammerschlag's, the former seems to approach closer to the values of HCl. Generally speaking, this may be considered as an advantage of Mett's methods. (10) It will be necessary in the future to examine not only sub- and anacid juices for their digestive strength, but also superacid juices which heretofore were considered as having *ipso* good digestive capacity. [F. J. K.]

6. See **Philadelphia Medical Journal**, May 10, [page].

7.—Collins discusses **the neurologist's art.** He states that nervous diseases, organic and functional, yield quite as readily to therapeutic measures as the majority of functional and organic diseases. The neurologist's art may be said to consist of the following: (1) in recognizing that the vast majority of diseases that he encounters can be influenced by treatment. (2) In having in his mind when face to face with disease whose course he desires to influence favorably, a clear picture of the pathological process

constituting the basis of the disease. (3) In appreciating that the successful treatment of nervous diseases requires the most scrupulous attention to detail in the application of measures that experience has shown to be of value. (4) In utilizing judgment and skill in the selection and application of measures that have been found useful, empirically and experimentally. (5) And, finally, in realizing from the outset that a disease or disturbance of function which is either the expression of a prenatal defect, or of many years' duration, cannot be overcome in a few weeks, or even a few months, of treatment, even though the hand that administers it be both masterful and magical.

[F. J. K.]

8.—Willson has analyzed 52 **cases of tetanus** following vaccinia, and deduces the following conclusions: Infection has taken place in most, if not all, cases at the site of the vaccination. We have found that the exact time of infection and the exact means are impossible of absolute and scientific proof; and that the grouping of a large number of cases in a certain locality, and following the use of a certain production of vaccine virus, would tend at first sight to speak for primary infection, carried in with, or by means of, the vaccine virus into the system. On the other hand, we find that a secondary infection, and one occurring, as a rule, about the time of the acme of the vaccinia, is indicated by the otherwise discordant chronic incubation period and acute symptoms, by the almost uniformly fatal termination, by the severity of the course of the disease, by the millions of normal vaccinations with the same virus, by the simultaneous deaths from tetanus known to be due to other causes, by the diminution in the number of such cases now that continued aseptic care is more generally exercised, by the fact that in every case, in which particulars are known, overabundant opportunity was offered for such secondary infection, and, finally, and most important, by the absolute failure of all bacteriological and inoculation experiments on the lower animals and man to indicate the presence of the tetanus micro-organisms or their toxin in the virus. There is neither time nor space to admit of a discussion of the nature of the tetanus itself, or its treatment, except to note the fact that out of 13 patients treated with antitoxin 10 died and 3 recovered (mortality 76.9%). In all of these cases the usual treatment was employed in conjunction with the serum. Seven patients recovered under the customary routine of chloral, bromides, opium, cocaine, and more rarely physostigma; and 32 died (mortality, without antitoxin, 82%). Of the entire number 11 recovered and 41 died (mortality, 78.8%). It would certainly seem as if the glycerinized virus, as well as the vicious influence of the shield, was disposed to present a more extensive ulcerative surface and a greater tendency to sloughing than the dried virus, or the arm-to-arm method. The latter is to-day an impossibility on account of the ever-spreading syphilization of the masses. But if it eventually proves true that, as time goes on, glycerinized virus opens a better avenue to the tetanus germ than the less cleanly, but safer, dried point, we will have to beat a retreat until we discover a substitute for the glycerine that does not carry its disadvantages. Our whole series of cases seems to prove that the infection is one that depends somewhat upon the susceptibility of the person. Otherwise it must needs be a much more frequent disease. Also that the tetanus micro-organism or its spores must frequently be present upon the skin, and ready to take advantage of an opportunity of entrance. How much more likely this must be the case when the patient is uncleanly, or lives or plays in the street, garden, or stable, needs hardly a word to direct the attention. [F. J. K.]

AMERICAN MEDICINE.

May 10, 1902.

1. On Adrenalin Glycosuria and other Forms of Glycosuria, etc. C. A. HERTER.
2. A New Species of Hookworm (Uncinaria Americana) Parasitic in Man. CH. WARDELL STILES.
3. Two Cases of Cancer of the Rectum Operated on by Murphy's Method. WILMER KRUSEN.
4. A Case of Tuberculous Salpingitis from which the Tubercle Bacillus was Grown.
   HOWARD S. DITTRICK.
5. Report of a Case of Carcinoma of the Cecum, etc.
   EUGENE A SMITH.
6. Palmar Reflex. JOHN H. W. RHEIN.

1.— See *Medical News*, May 10, 1902.

2.—Ch. W. Stiles describes a new species of **hookworm** (*uncinaria Americana*) parasitic in man. The new parasite appears to be a member of the group for which Molin proposed the generic name of **monodontus.** Stiles states it is clear that there are 2 species of hookworms which contribute to the disease uncinariasis in man. *U. duodenalis* is known to be an old-world form, and the indications are that it has been introduced into this country. *U. Americana* is known to occur in Texas, Virginia and Porto Rico and this wide distribution shows very clearly that in the new world we have a special, heretofore undescribed, parasite which causes **uncinariasis.** This further indicates very strongly the correctness of the view that uncinariasis is endemic in the Southern states, though it is rarely recognized. [T. L. C.]

3.—Wilmer Krusen reports 2 cases of **cancer of the rectum operated on by Murphy's method.** Both patients recovered. He quotes Murphy's summary of the advantages of the operation. [T. L. C.]

4.—Howard S. Dittrick reports a case of **tuberculous salpingitis from which the tubercle bacillus was grown.** In this case it was possible to demonstrate the presence of the organism in the tissues of the Fallopian tube, to make cultures of this organism and to reproduce the same disease in a guinea-pig which had been inoculated with the bacilli from the primary lesion. [T. L. C.]

5.—E. A. Smith reports a case of **carcinoma of the cecum** and a case of **rupture of the sigmoid** treated by **intestinal anastomosis.** He believes that the operation is indicated in cancer, stricture, or other disease producing obstruction of the bowel in the sigmoid and ileocecal region. In a great measure this would **render colostomy unnecessary** either through extirpation of the diseased area, or by short circuiting the disease if inoperable. In gunshot wounds of the intestines with many perforations, in rupture of the intestines; in fact in all conditions requiring anastomosis when the circulation is dubious at the site of the bowel disease, the operation may be favorably employed. [T. L. C.]

REVUE DE MEDECINE.

January 10, 1902. (21 me. Année. No. 1).

1. Contribution to the Study of Neuropathic Accidents of Indigestion. CH. FERE.
2. Scleroderma Without Arteritis, Intercurrent Influenza, Gangrene of Varied Origin. D. GOLDSCHMIDT.
3. The Diseases seen at the Children's Hospital of Paris (Doubtful Ward) from March 1 to September 1, 1900.
   BACALOGLU.
4. Studies on Tuberculosis and Its Bacillus, New Etiology of this Disease and a Practical Solution of Antituberculous Vaccination. J. FERRAN.
5. Concerning the Method of Action of Alcohol on the Economy in Acute Alcoholism: Alcohol as a Toxic Agent and as a Dehydrant. CH. VALENTINO.
6. Note on a New Method for Testing for Sugar by Nitropropiole Tablets. FR. de GEBHARDT.

1.—All gastro-intestinal disorders may have a reflex influence on the nervous system which responds by disorders of motion, of sensation, of emotion, of intelligence and of will. The reciprocal influence of the condition of the nervous system upon the digestive tract is not less well-known. If dyspepsia favors neuropathy, neuropathy also favors dyspepsia and the interchange of influence is often seen in the same patient. Indigestion is a frequent symptom in the course of such **nervous diseases** as locomotor ataxia, general paralysis, migraine and epilepsy. Irregularity in

the time of eating, insufficient mastication, the ingestion of too much food or of improper food, the introduction of too large quantities of liquid or of fluid that is too cold may result in a dyspeptic attack. Fatigue, nervous shock, intense sensory excitation, odors, smoke, high temperature, emotions and traumatisms are also factors in the production of indigestion. In old people, indigestion is capable of producing apoplexy by modifying arterial pressure; it may produce congestions that may be followed by transitory hemiplegia; it may produce inconquerable insomnia, cephalalgia and true comatose states. Féré reports the histories of 8 cases that illustrate these points.

[J. M. S.]

2.—Goldschmidt reports the case of a woman, aged 30 years, who presented multiple arthropathies associated with amyloid degeneration of the kidneys and a moderate gangrene of the fingers of one upper extremity, with a perfectly normal vascular system. The gangrene was considered to be due to an intoxication producing the lesions of scleroderma. After an attack of influenza, the patient presented a rapid gangrene of one foot, due to the influenzal intoxication. The existence of gangrene in this subject produced by two different intoxications is of interest. Recently it has been suggested that scleroderma is due to exophthalmic goiter; but Goldschmidt found the thyroid gland of his patient normal. The microscopical examination of the skin, obtained at the autopsy, showed that the peripheral nervous and the vascular systems had undergone no alteration in relation with the sclerodermic transformations and that the proliferation of the connective tissue was the predominant change. The precise origin of this connective tissue proliferation is unknown except that it was probably dependent upon some toxic substance. [J. M. S.]

3.—Bacaloglu describes the ward in the Children's Hospital of Paris in which doubtful cases of infectious diseases are retained until the diagnosis is decided upon. The ward, which is known as the Henri-Roger ward, is situated near the principal entrance to the hospital. It is of rectangular form and is divided into 20 separate rooms. Each room is open above and is separated from the central corridor and from the adjacent rooms by high glass partitions. These partitions are supported by bases of wood which are 5 cm. from the floor. Thus the air circulates freely above and below each room. The child finds himself with his comrades, whom he can see and with whom he is even able to talk; but all direct communication is impossible. The ward is heated in winter by 2 registers. In each room there is a bed, a table and 2 chairs, all of which are made of iron, so that, after the patient has left the floor, the walls and the furniture may be cleaned with a 1-20 solution of carbolic acid. Playthings are sterilized by boiling water. The linen is marked for each room and when it is soiled it is sterilized by steam. But in order to realize a perfect antisepsis it is necessary that the personnelle of the ward should be impressed with the importance of these prophylactic measures. On admission, the child is bathed and his effects are disinfected. In order to examine him, the physician or the nurse puts on an apron which belongs to the room. When the examination is finished the hands are dipped in a 1-1000 solution of mercury oxycyanide, the gown is removed and the hands are again washed. The same precautions are taken for the parents when they make their visits. The paper contains accounts of cases of infectious diseases in which the diagnosis was not clear, so that the patient was observed in this ward for doubtful cases.

[J. M. S.]

4.—Ferran contributes a paper on tuberculosis and its bacillus which was begun in the December number of *Revue de Medecine* and is concluded in the present number. We publish the conclusions of the author and call attention to the note, which the editors have seen fit to print as a foot-note after the title of the paper, to the effect that they are not responsible for the ideas published. The prophylaxis of tuberculosis by means of a vaccine, and its cure by serumtherapy have failed because of insufficient knowledge of the bacillus that produces it and of its toxins. A bacillus, which the author calls a tuberculogenous bacillus, always exists in abundance in the sputum of tuberculous patients with the tubercle bacillus and sometimes before that organism makes its appearance. This organism is easy to isolate and cultivate. It does not possess the chromatic reactions of the bacillus discovered by Koch, since the dilute mineral acids decolorize it easily when it has been stained by Ziehl's solution. There are several varieties or races of this new micro-organism some of which, when they are cultivated, produce a dialysable substance which has the odor of human semen and which has the reactions which Poehl attributes to spermine. If this substance is added to a 1-1000 solution of chloride of gold, it is reduced to a powder of violet color when powdered magnesium is added. The avidity of this new micro-organism for oxygen is so great that it reduces hemoglobin energetically and, when cultivated with the tetanus bacillus, allows the latter organism to grow and to produce a tetanotoxin without the necessity of placing the medium, into which the organisms have been inoculated, in a vacuum. In other respects the organism has the form and the chemical functions of the bacillus coli communis. Virulent cultures, injected under the skin of a guinea-pig, in doses of from 1 .5 to ½ cc., produce an extensive hemorrhagic edema which results in death in from 24 to 48 hours. In inoculating the fluid of this edema in doses of from 4 to 5 drops into a series of animals, the series ends by being interrupted, which proves that the preformed toxin in the artificial cultures is the principal cause of the rapidly fatal effects produced in the first animals in the series. When the dose of the culture injected is insufficient to produce these rapidly fatal effects, the edema becomes absorbed or is converted into a core, which becomes loosened, leaving an ulcer, which heals rapidly. The guinea-pigs that escape the first effects of this virus become cachectic, more or less quickly, and die. At autopsy, they present an intense parenchymatous or interstitial inflammation localized particularly in the spleen, the liver and the lungs. When this phlegmasia is of slight intensity, so that the guinea-pigs live for 3 months or more, the autopsy shows a crop of more or less discrete tubercles which originate in the inflamed tissues. This development of tubercles is never found without being preceded by the pretuberculous inflammation above mentioned. This order of events is so constant that the following law may be formulated: Without the pretuberculous inflammation there is no possibility of tuberculosis. The bacillus inoculated has been isolated from the blood and sometimes from the inflamed tissues of the guinea-pigs. The subcutaneous inoculation of the inflamed tissue deprived of the tubercles, results in a passing cachexia only. The subcutaneous inoculation of the pulp of the tubercles obtained by the inoculation of this bacillus produces a typical and fatal tuberculosis which may be reproduced in indefinite series. The animal inoculated last in such a series presents the tubercle bacillus in its tissues as a result of the transformation of the bacillus first inoculated. Identical results, with the exception of intense inflammation at the point of the inoculation, cutaneous chancre and adenitis, have been obtained by inoculating sputum from a tuberculous lung, from which the tubercle bacillus has been removed, or the cerebrospinal fluid, also deprived of the bacillus of Koch, from children suffering from tuberculous meningitis. The bacillus coli communis isolated from the feces of dogs presents the characters of the new tuberculogenous bacillus, isolated from tuberculous sputum. This bacillus, inoculated in pure culture into guinea-pigs one or more times, according to its virulence, kills by producing the visceral inflammations above described and tuberculosis. The bacillus coli communis from man and from the cat, recently isolated and cultivated, produces the same effects. When the cultures are not sufficiently virulent it is necessary to make repeated injections. These colon bacilli also transform themselves into the tubercle bacillus after the inoculation in series of the tubercles which they produce. The tuberculogenous action of these bacilli becomes exhausted when they are cultivated in series in artificial media. Spontaneous pulmonary tuberculosis in man presents an identical evolution to that produced by the new bacillus, as numerous cases of death due to the pretuberculous inflammation prove. Frequently, the inflammatory process is so intense and extensive and, on the contrary, the tuberculous focus is so small that this inflammatory process is alone capable of explaining the death of these patients. The new bacillus which the author calls phthisiogenic on account of its cachectic action, or spermigenic, on account of its property of producing spermine, is, in his opinion, the true agent of the diffusion of tuberculosis. The conditions of existence of the new bacillus, of growing out of the incubator and on any

of the ordinary culture media, better explains the great diffusibility of tuberculosis than those of the classical bacillus, which, as is well-known, is very particular concerning the nature of the culture medium or of the temperature at which it grows. The bacillus of Koch, cultivated in series, in appropriate media and in conditions which are not carefully watched, ends by losing its property agglutination and its resistance to the decolorizing action of dilute mineral acids when it is stained by Ziehl's solution. It is then definitely converted into a bacillus identical with the new tuberculogenous bacillus isolated from the sputum. The bacillus of Koch is the same as the phthisiogenic or spermigenic bacillus or a colon bacillus that has acquired a special virulence and is concealed by the fatty acids upon which its characteristic chromatic reaction depends. All these bacilli are agglutinated by the serum of tuberculous patients or by that of animals hyperimmunized to them. The injection of dead cultures of the phthisiogenic or spermigenic bacillus easily confers immunity to pretuberculous inflammation and, since tubercles cannot develop without this inflammation, guinea-pigs immunized by these cultures are immunized against the tuberculosis that the inoculation of the new tuberculogenous bacillus produces. In the tissues affected with the pretuberculous inflammation, the phthisiogenic bacillus finds the conditions that cause it to produce a new toxin, which by causing a coagulation necrosis produces the tubercle and determines, more or less promptly, the transformation of the same phthisiogenous bacillus into the bacillus of Koch. The immunity conferred against the pretuberculous inflammation does not protect in a direct manner against the tuberculogenous action of the bacillus of Koch. If this immunity opposes itself to the development of the tuberculosis produced by the phthisiogenous bacillus and to the transformation of this bacillus into the bacillus of Koch, it is because the development of the pretuberculous inflammation having been prevented, the phthisiogenous bacillus cannot produce the coagulating toxin that results in the production of a tubercle. Therefore, it has no opportunity of changing itself into the bacillus of Koch, which is the prototype of the bacilli possessing an immediate tuberculizing action, because it manufactures both an inflammatory and a coagulating toxin. Guinea-pigs immunized against tuberculosis produced by the phthisiogenic bacillus become tuberculous as do the nonimmunized control animals when they are inoculated with the bacillus of Koch or with an emulsion of tuberculous tissue or casseous pus. The toxins produced by the bacillus of Koch in artificial cultures do not correspond to those that it produces in the infected organism. The true tuberculotoxin does not exist in the free state and this is why it is not easy to obtain an antituberculous serum by the inoculation of toxins isolated from the bacillus of Koch or its cultures. The ferment that produces tubercles is produced only by the bacillus under the action of the leukocytes, by virtue of a special stimulus, which they exercise proportionately, to its production. This ferment fixes itself upon the protoplasm of these cells which it coagulates and kills. In order to obtain a truly antituberculous serum it is necessary, then, to immunize the animals with tuberculous pus, taking care beforehand to destroy the living bacilli that this pus contains. The serum obtained in this manner positively contains the tuberculous antitoxin, but it is of a difficult action because it also contains the leukotoxin corresponding to the species of dead leukocytes that have been injected. [J. M. S.]

5.—**Alcohol** may act on the organism (1) as a fluid, (2) **as a toxic substance and** (3) **as a dehydrant.** Its action as a fluid is seen when large quantities of fluid are introduced, in which alcohol is present in small quantities, such as beer. It then produces increased bloodpressure which, in turn, results in acute dilatation of the heart. This action is favored by the physiological action of alcohol on the cardiac fiber. The investigations of Rabuteau, in 1870, and of Dujardin-Beaumetz and Audigé, in 1879, showed that all alcohol is toxic and that, other things being equal, the greater the number of CH_2 groups in an alcohol, the more toxic it would be. The dehydrating action of alcohol is well-known, but the notion of its role in the etiology of acute alcoholism is of recent date. Valentino records several experiments on the action of alcohol and he concludes that it is a convulsive poison endowed further with an energetic dehydrating property. Drunkenness is the result of the toxic property and coma is the result of the dehydrating property. The popular belief that it makes no difference whether alcohol is drunk with or without water, since the amount of alcohol is the same in either case, is not tenable. It is much more dangerous to drink alcohol without water than to drink it well diluted. [J. M. S.]

6.—In 1880 Baeyer demonstrated the fact that **orthonitrophenylpropiolic acid is reduced by glucose.** Since then, tablets containing this acid in combination with sodium carbonate have been put on the market. In order to test for sugar in the urine one of these tablets is dissolved in 10 cc. of water and 10 drops of the suspected urine are added. If sugar is present, the solution becomes indigo blue in color, due to the formation of indigo from the orthonitrophenylpropiolic acid by the action of sugar and heat in the presence of sodium carbonate. The reaction is not given by bile pigments, uric acid, albumin, blood or phosphates. de Gebhardt has also examined the urine of patients who have been taking benzoic acid, chloral, guaiacol carbonate, iodine, rhubarb, salicylic acid and turpentine, but has failed to find the reaction. Creatinine does not give the reaction. [J. M. S.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

December 31, 1901. (No. 53).

1. The Significance of the Descent of the Testicle for Surgical Pathology. R. GOEBELL.
2. An Epidemic of Edematous Catarrh Caused by the Koch-Weeks Bacillus. C. MARKUS.
3. A Case of Prolapse of the Urethra in a 5 Year Old Girl. BENTE.
4. Two Cases of Urticaria Produced by the Bird-Mite (Dermanyssus Avium). W. HEINICKE.
5. The Isodynamic Law. H. von HOESSLIN.

1.—Göbell discusses the mechanism of the **descent of the testicle.** He calls attention to the fact that there are two descents, one at the third month, then a slight ascent, and finally a second descent occurring at the end of the sixth and the beginning of the seventh months. The various factors producing these descents are of course principally the gubernaculum, but as this only reaches to the symphysis, the other forces which complete the descent are intra-abdominal pressure, the peritoneal liquid and, after birth, respiration and gravity. Under certain circumstances the descent of the testicle may leave abnormal conditions, or may be incomplete or imperfect. If the vaginal process remains open, hydrocele occurs; if intestines pass into it, hernia arises, or both conditions may occur. Göbell then enumerates the various anomalies in the descent and notes that in some of these hydroceles and herniæ may occur. [J. S.]

2.—Markus has investigated the eyes of 1928 school-children and found that 9% of them suffered from abundant development of the follicles in a practically normal mucous membrane. Three per cent. in abundant development of the follicles in markedly reddened mucous membranes; 6% with catarrhal conjunctivitis without the development of the follicles, and 5% with catarrhal conjunctivitis in an acute stage with a secretion of pus. One and two-tenths per cent. had trachoma, and 1.2% showed suspicious changes. In the higher schools the proportion of disease of the conjunctiva was somewhat greater than the lower schools, but trachoma was not found. The interesting feature in these investigations was the frequency of the **catarrhal conjunctivitis** with secretion of pus. This was produced by the **Koch-Weeks bacillus** and characterized by edema of the lids, pallor with enlargement of the conjunctiva, frequently subconjunctival hemorrhage and a thick stringy secretion of pus. Membrane did not occur. The course was from 3 to 4 weeks when treated. A few cases recovered sooner, and some of the severe cases lasted for a longer time. The important feature in the treatment is to get rid of the pus secreted, as this is the medium of contagion. The Koch-Weeks bacillus was found in more than 60 cases. These bacilli are very small, very thin and

resemble the influenza bacillus. They are decolorized by Gram, and vary somewhat in size. They are difficult to cultivate and the cultures die very promptly. They grow best upon cultures smeared with human blood. They were found in many cases of trachoma, and possibly the 2 diseases have some relation. [J. S.]

3.—The patient, a girl of 5½ years, had had bleeding from the genitalia. She was apparently perfectly healthy, and upon examination a dark red moist tumor, about the size of a pigeon's egg, was found in the region of the clitoris. A small opening in the center readily permitted the entrance of a catheter through which clear urine flowed. A diagnosis of **complete prolapse of the urethra** was made. The supposititious causes were severe cough and straining during defecation. The treatment consisted of relief of the cough and constipation, and in reposition of the tumor, cauterizing with nitrate of silver. [J. S.]

4.—Heinicke reports the cases of 2 women who were suddenly attacked by urticaria bullosa with intense itching. This recovered very promptly. The following night, however, it was worse and the patients complained of pricking sensations resembling the bites of insects, and a feeling as if something were crawling over the skin. In fact on one occasion one of the patients saw a small gray insect. These were not found upon the skin, but an examination discovered numerous insects in the underclothing that were unquestionably **bird-mites.** These contained red bloodcells in their bodies. The source was a nest of swallows, the young of which were infected with these parasites. They usually remained concealed during the day and only sought a victim in the nighttime. [J. S.]

5.—von Hösslin complains that his article upon the relation of cells to their nutriment, and especially the effort required of the cell-substance to break up and assimilate various nutritive substances, has not been sufficiently noticed in the literature. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

February 10, 1902. (39 Jahrgang. No. 6.)

1. Acute Nephritis with Marked Albuminuria Early in Syphilis. ERICH HOFFMANN.
2. The Morphology of Pleural Effusion. ALFRED WOLFF.
3. Certain Peculiarities in the Ear Diseases of Children. B. BAGINSKY.
4. Circular Incision in the Thigh for Varicose Ulcer. C. WENZEL.
5. The Elevation of Temperature Following Slight Exertion in Tubercular Patients is Fever. A. OTT.

2.—In an interesting review of **the composition of pleural effusions,** Wolff states that conclusions may be drawn as to whether the effusion is tubercular or infectious. For when one-half or more of the liquid consists of lymphocytes, it is probably tubercular. A tubercular effusion also shows polynuclear leukocytes at first; sometimes with bacilli which cannot be cultivated. Lymphocytosis occurs gradually. Punctures should be made once a week and the exudate examined. Lymphocytes must be distinguished from degenerated polynuclear forms and pseudo-lymphocytes. Epithelial cells, while rarely seen, may have degenerated so that they resemble Ehrlich's large mononuclear cells. Widal, however, considers these mononuclear leukocytes, since they have frequently been found in pleural effusions. In acute, infectious pleurisy, polynuclear and epithelial cells are in the majority. [M. O.]

3.—Complications of the **infectious diseases commonly affect the ear in childhood.** For the petrous portion of the temporal bone is more easily injured in its undeveloped state. Its resisting power is less than that of adult bone. The petrosquamous fissure is still open, as is the subarcuate hiatus, leading into the brain. The Eustachian tubes are shorter, broader and more horizontal than in adults. Through this, infection may spread to the ear from the nose or throat, which action is influenced by the presence of adenoid tissue in the pharynx. Besides, a child's nervous system is easily and quickly excited; and toxalbumins in the blood rapidly reach the ear. The pharynx of a child is irritated by very slight stimuli. The commonest disease of the ear in childhood is acute otitis media. With this, symptoms of meningitis are especially frequent. The diseases of the external ear are of little importance. Those of the internal ear, on the contrary, are rare and severe, especially inflammation of the labyrinth. According to some observers, this is a symptom of meningitis, but Baginsky belives it to be true labyrinthine otitis, which is often followed by deafness. The fact that otitis in a child may rapidly become dangerous should never be forgotten, for treatment is necessary at once. [M. O.]

4.—Wenzel has performed 26 **circular incisions** of the thigh and leg **for varicose ulcers.** He makes the incision above the ulcer, divides all veins, ligates and excises portions of them, and then closes the incision. This procedure has invariably been successful, no further varicose veins appearing. After reviewing the literature, he gives the technique of his operation in detail. In 2 weeks the patients are out of bed, and in 4 weeks they are well. The operation is easy and not dangerous. It is only contraindicated when the deep veins are or may be impervious. [M. O.]

5.—Ott's experiments show that, while the temperature of tubercular patients in the mouth and rectum are identical when in the house, **after slight exercise out of doors the rectal temperature shows a slight increase and that in the mouth a slight decrease.** That this rise of temperature in the rectum after exertion is fever, as was first shown by Penzoldt, is proved by the occurrence of albumosuria in 7[illegible] of these patients. Such patients should not take even that much exercise, for the resulting fever shows that the exertion is too great. [M. O.]

ANNALS OF SURGERY.

January, 1902.

1. The Cause of "Stitch Abscesses" and their Prevention. Sterilization of the Skin Prior to Operation by Inunctions of Oleate of Mercury. A. E. MAYLARD.
2. Report of 6 Cases of Penetrating Wounds of the Abdomen Submitted to Abdominal Section, with Statistical Tables of 152 Cases thus Operated on at the Charity Hospital, in New Orleans, La. E. D. FENNER.
3. The Technic of Gall Bladder and Duct Operations. S. J. MIXTER.
4. Intussusception of Meckel's Diverticulum. J. M. WAINWRIGHT.
5. Mechanical versus Suture Methods for Intestinal Approximation. J. FRANK.
6. The Symptomatology, Diagnosis and Treatment of Carcinomata of the Cecum, with a Report of 2 Cases. C. G. CUMSTON and A. VANDERVEER.
7. Elbow Fractures in Children. Fractures of the Lower End of the Humerus: Lesions and End Results, and their Bearing on Treatment. F. J. COTTON.

1.—Maylard's method of preventing **stitch abscesses** is as follows: Cleanse the skin in the usual way with soap and water and rub into the skin of the operative field hydrated lanolin oleate of mercury (20%). A piece of lint smeared with the ointment covers the skin until the second inunction 12 hours later; the lint is then reapplied until the time of operating, when the superfluous ointment is rubbed off with sterile gauze. Chemical examination of the salivary tissues failed to discover any evidences of mercury; bacteriological examination proved a material diminution in the number of microorganisms present; and clinically the value of the method seems proved, 6 out of 70 cases showing some degree of inflammation. [F. T. S.]

2.—Of the 152 operations for penetrating wounds of the abdomen which Fenner tabulates, 113 were for gunshot wounds and 39 for stab wounds. The mortality of the gunshot cases was 69.9%, that of the stab cases 23.07%. Of

the 105 cases which showed, upon exploration, some visceral injury, 70.47% died. [F. T. S.]

3.—Mixter expresses the opinion that surgeons should not wear rubber gloves in **operations upon the biliary apparatus**, because so much depends upon the sense of touch. He incises through the outer part of the rectus parallel to its fibers, carrying the cut through the muscle transversely should more room be needed. In most cases it is impossible to determine beforehand just what operation may be necessary. All adhesions should be thoroughly separated and the zone of interference surrounded with gauze. Stones in the gall bladder are easily detected; small stones in the common and even in the cystic duct, and still more often in the hepatic duct, may easily escape the careless or hasty operator. The best method of exploration consists in passing the forefinger of the left hand through the foramen of Winslow, thus palpating the duct, artery and vein between the finger and thumb. If the gall bladder is to be opened, it is first secured by passing 2 ligatures through the walls and then aspirating its contents. The bladder is next incised between the 2 ligatures and the gall stones or pus removed by scoop, curette, forceps, or syringe. Drainage should be employed in all cases, a glass tube with a flaring end being tied into the bladder with a heavy silk ligature; a rubber tube is attached to the end of the glass tube outside the body, and the bile or pus is carried through the unsoiled dressing into a bottle hung below the bed. Cholecystectomy is performed by dividing the peritoneum between the liver and gall bladder and isolating the bladder by blunt dissection until the cystic duct is reached, which is tied and severed beyond the ligature. In the ordinary case Mayo's method of dissecting out the mucous membrane possesses no advantages over total extirpation. Common duct operations are among the most difficult and dangerous of all surgical procedures. The structures are deep, of great importance, and easily wounded. Stones here situated may be removed either through the enlarged cystic duct, the incised common duct, the incised duodenum, or by crushing, a most unsatisfactory procedure. Mixter favors drainage rather than suture when the common duct has been opened. [F. T. S.]

4.—Wainwright reports a case of intestinal obstruction due to an intussusception Meckel's diverticulum, occurring in a girl of 17 years. The symptoms of obstruction came on suddenly after a mild intestinal disorder of 4 days' duration. Three feet from the ileocecal valve there was an intussusception about 3 inches long; after reduction a diverticulum about one inch in length and somewhat less in diameter was found inverted into the bowel and forming the apex of the intussusception; it was reduced and excised. Recovery followed. [F. T. S.]

5.—Frank states that with no other method can be obtained all the excellent qualities in such an ingenious combination as with the mechanical devices of the **Murphy button** type: that none of the suture methods can show such a low mortality; that the perfect holding together of the intestinal ends throughout their entire circumference with the button or bone coupler, obviating the danger of leakage, has been demonstrated by von Chlumski, who subjected all methods to the hydraulic pressure test, and demonstrated the inferiority of all suture methods; and that, for end-to-end approximation, the button and coupler are the only devices that will achieve their greatest triumph, for it is in this operation that the suture methods yield the largest mortality. [F. T. S.]

6.—To be abstracted when concluded.

7.—To be abstracted when concluded.

WIENER KLINISCHE WOCHENSCHRIFT.

February 6, 1902. (XV Jahrgang, No. 6.)

1. Osteoplastic Trephining of the Skull for Brain Tumor. GUSSENBAUER.
2. The Fate of Diphtheria Bacilli in the Alimentary Canal. JULIUS SUESSWEIN.
3. The Study of Hydrophobia. ANTON KRC[illegible]Z.
4. A Case of Bilocular Hydrocele. JOHANN FUCHS.

2.—**Diphtheria bacilli** have been found in the lungs, liver, spleen, kidneys, bronchial glands, central nervous system, cerebrospinal fluid, blood, bile and urine. Out of 146 diphtheria autopsies performed by Kolisko, at the St. Anna Kinderspital in Vienna, but four cases showed gastric diphtheria. But one of these was found since the introduction of antitoxin. Susswein examined the gastric contents in 8 cases of diphtheria immediately after death, in 4 of whom diphtheria bacilli were found, and in two of them they were cultivated. They were never found in the contents of the jejunum, nor in 15 cases whose feces were carefully investigated. That these bacilli are only found in the stomach shows the bactericidal action of the gastric juice. Examination of the stomach contents of 5 children with diphtheria shows that, though the acidity is less than in well individuals, the gastric juice in most cases has enough power to destroy bacteria. No free hydrochloric acid was discovered in any case. Bile, too, generally destroys bacteria. Even if diphtheria bacilli withstand these destructive juices long enough to reach the intestines alive, their virulence is weakened. [M. O.]

3.—Krokiewicz reports an interesting case of **hydrophobia** in a girl of 20, who became ill 10 weeks after having been bitten by a strange dog. She was eight months pregnant at that time. After 5 days of typical symptoms, she died suddenly. Rabbits were inoculated intradurally with bits of the spinal cords of the patient and fetus. As the former individual died of rabies in 2 weeks and the latter showed no symptoms, but remained well, it seems most probable that hydrophobia is not transmitted from the mother to the fetus in utero. The literature is cited. [M. O.]

4.—Fuchs reports a case of **bilocular hydrocele** in a man of 54. During an attack of rheumatism, 7 years before, the left side of his scrotum swelled. This swelling has been punctured every year since, and increased in size after each puncture. The swelling reached the umbilicus. An oblique incision was made below Poupart's ligament and the hydrocele sac was dissected out, as in the radical cure for hernia. Silver wire was used for suturing. This bilocular hydrocele contained 2 liters of fluid. The rheumatism was the probable cause of the condition, but its increase in size was due to frequent puncture. The meagre literature of the subject is fully quoted. [M. O.]

BOLNITSCHNAIA GAZETA BOTKINA.

February 6, 1902. (Vol. XIII, No. 6.)

1. A Contribution to the Morphology of the Internal Secretion of Some Glands. L. V. SOBOLEFF.
2. The Scientific Principles Underlying Hospital Régime and the Acting Legislation Concerning the Civil Hospitals in Russia. S. S. VIRSALADZE.
3. The Principles and the Mode of Participation of the *Zemstvos* in the Restriction of Epidemics. N. I. TESIAKOFF.

1.—Soboleff presents a preliminary report of some animal experiments undertaken with a view of solving the problem of **internal glandular secretion.** The general plan of the experiments was based on the hypothesis that, if the glands possess both internal and external secretion, the ligation of the efferent ducts will produce atrophy of the cells, producing the latter, while the cells producing the former will remain in *statu quo*. Of course, there was also the possibility that the same cells produce both internal and external secretion. To determine these points, the author tied the ducts and at the expiration of a given time made an histological study of the glands. His experiments on the pancreatic gland led him to the conclusion that **the islands of Langerhans have to do with the internal secretion.** Similarly, the ligation of the bile duct led to a series of changes both atrophic and hypertrophic in character. The ligation of the vas deferens and the oviduct, with the transplantation of the ovary under the skin, brought about retrogressive changes, but no conclusion could be drawn as to the internal secretion in these glands. Altogether, the author considers his experiments too few to be of any practical value, nor is he at all certain that his method of attacking the problem is correct. [A. R.]

Society Reports.

THE AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS.

Sixteenth annual meeting, Atlantic City, N. J., April 29 and 30, 1902.

First day, Dr. William T. Belfield, Chicago, president, in the chair.

Dr. John P. Bryson, St. Louis, described the **technique of prostatectomy.** After preliminary preparations, a broad grooved staff is introduced and a permeal incision made, opening the urethra in front of the apex of the prostate. The knife is pushed back to incise the ring at the apex of the prostate. One finger in the wound and another in the rectum permits bimanual examination of the prostate. A blunt instrument is passed into the urethra, incising the most prominent part of the prostate. After the lobe has been loosened with the finger, care must be taken not to remove too much of the sides or any of the roof of the urethra in detaching it. The hypertrophied lateral lobe is then removed with lithotomy forceps. This is repeated on the opposite side, after which a median posterior segment remains. This is felt as a pedunculated intravesical projection, or a growth *en cellarette*, and is brought down without disturbing the fibrous ring at the vesical outlet. The more the detached mass is rolled downward, the less mucous membrane is removed. The bladder is irrigated with hot saline solution until oozing ceases. The floor and sides of the urethra will be found intact, the latter hanging loosely against the outer wall or sides of the cavity from which the growths have been removed.

Dr. Charles H. Chetwood, New York, read a paper on the **surgical relief of prostatic hypertrophy.** He concluded that palliative measures should not be persisted in, when they failed to produce and maintain an abatement of symptoms after reasonable duration. Infection of the bladder is not sufficient cause for operation, unless palliative measures have failed to subdue inflammatory conditions. Recurring infection of the bladder or ascending infection of the kidney is sufficient to warrant operative interference. There is a growing tendency toward early operation. Most cases can be reached through a perineal incision. Operation upon the prostate includes removal of the obstructed area and depressing the bladder, opening into the prostate, so that the *bas-fond* may be properly drained. The obstructing area of the hypertrophied gland can be satisfactorily removed through a perineal opening by galvanocaustic incisions. Perineal galvanoprostatotomy is preferable to the Bottini operation, on account of its greater accuracy and lower mortality.

Dr. H. H. Morton, Brooklyn, N. Y., performed the **Bottini operation** on a man of 78, with tenesmus, frequent and painful urination. There was complete retention of urine, the prostate was 1½ inches in diameter, and cystoscopic examination showed an enlarged middle lobe and trabeculated bladder. Bottini's operation was performed, 3 incisions being made, from 2-3 cm. long. A month after operation he urinated 6 times daily and 4 times during the night. Death ensued 54 days after operation. Examination of the bladder showed that it was contracted, contained pus and had small necrotic areas scattered about its surface. The cause of death was probably cystitis, greatly aggravated by operation. The reduction of the prostate following Bottini's operation probably results from sloughing. The obstruction to urination was relieved by a single incision through the posterior median lobe of the prostate. He also reported a **prostatectomy** performed on a man of 62, suffering from retention of urine, due to prostatic enlargement. Previously a false passage had been made into the prostate. External urethrotomy without a guide was performed. As urination was impossible, prostatectomy was performed. Suprapubic cystotomy was done to depress and hold the prostate. Three tumors, from ½ to 1½ inches in diameter, were enucleated without difficulty, and no hemorrhage followed the operation. Drainage was established through perineal and suprapubic tubes. In 3 days sepsis developed and death ensued 10 days after operation. The autopsy showed wound infection.

Dr. C. L. Gibson, New York, presented the specimen of **removal of the 3 lobes of the prostate by suprapubic cystotomy.** A man of 62 gave a history of increasing urinary obstruction for 6 years. Examination per rectum revealed considerable enlargement of both lateral lobes. There was moderate cystitis. The vesical mucous membrane was incised over the urethral orifice and the prostate was removed *en masse*. He added a perineal *boutonnier* for drainage. On the fourth day the man died without particular manifestations. An autopsy was not allowed.

Dr. Bransford Lewis, St. Louis, read a paper on **the use of the cautery on the prostate through a perineal opening**, by Dr. W. N. Wishard, Indianapolis. Dr. Eugene Fuller, New York, had performed 12 perineal prostatectomies with but one death, from delirium tremens. The oldest patient was 81, and his condition was complicated by a mulberry calculus which had to be removed by the suprapubic route. Another patient had tuberculosis of one lung, and spinal anesthesia was administered successfully. He died 8 months after operation from general tuberculosis. Dr. F. S. Watson, Boston, said that 2/3 of the cases of **prostatic enlargement** would be found within reach of the finger after a perineal incision through the urethra. An elaborate armamentarium was not necessary, since the finger easily removed the gland. Dr. George Chismore, San Francisco, had had an opportunity of observing the work of Dr. Goodfellow, San Francisco, whose method he described. Especial importance was laid upon placing the patient in a position with the thighs strongly flexed upon the chest. He reported 8 cases, all severe, occurring in old men, 2 of them over 80 years of age. Of this number 2 died. In one of these was an encysted calculus, and a suprapubic opening was necessary to remove it, although it was not large.

Dr. Bransford Lewis, St. Louis, in a paper on **the operative treatment of hypertrophied prostate**, said that operators were inclined to follow routine procedures rather than base their operative treatment on the special condition found in each individual case. He believes that the proper selection of the operative procedure was of great importance in attaining successful results. It was evident that no one operative procedure could possibly fit all cases and that the operation should be selected according to the case at hand rather than the personal inclination of the operator. The conditions favorable for the suprapubic route were general enlargement of the prostate, with extreme intravesical projection of the median or lateral lobes, diminishing their accessibility from the perineum; and marked pedunculation of the intravesical tumors, with absence of obstruction from other sources. Those favorable for the perineal route were general hypertrophy involving the lateral lobes, without extreme intravesical projection, large or very thick bar formation, severe compression of the urethra between massive lateral lobes, excessive development of the prostate in the direction of the rectum, and most cases in which the patient is in good general condition not too old and without special indication for other procedures. Those favorable for the Bottini operation were cases of extreme debility or of extreme age, unable to stand one of the severer operations, cases of bar or median possible obstruction of not too great dimensions, complete collar formation; and, Horwitz says, it should be employed, as a prophylactic against further obstructive tendency, at the beginning of catheter life. Dr. F. L. Sturgis, New York, said that the removal of the prostate

and ejaculatory ducts prevented the flow of prostatic secretion so essential to the vitality of spermatazoa and therefore tended to render the male sterile. On this account he preferred some partial operation, like the Bottini. Dr. Fuller, New York, said that if one had 100 cases of **prostatic enlargement**, 75 would offer something new. In cases with a troublesome hernia, if the bladder was opened and drainage instituted, the tenesmus and straining cease and the hernia often disappears. Dr. F. T. Brown, New York, believed the **cystoscope** to be unsatisfactory in determining what was to be met by operation. If there was an excuse for making a suprapubic opening, he believed such an opening should be made to learn the nature of the trouble. Dr. H. H. Young, Baltimore, considered the **Bottini operation** of great value. He had had 19 patients, over 70 years old, and 3, over 80 years old, without a single death, with good results in all but 2. Dr. Belfield, Chicago, said that nothing was known regarding the etiology of this condition. Some of the most violent cases of prostatism occur in those who have no prostates at all. He thought the importance of enlargement of the prostate as a cause of the trouble was overestimated. Dr. James Bell, Montreal, read a note upon **the detection of stone in the kidney by skiagraph**, showing photographs of a case in which the skiagraph had demonstrated a stone with perfect satisfaction.

Dr. Francis S. Watson, Boston, then made a preliminary report on **the value of the phloridzin test in determining the functional capacity of the kidneys.**

THE ASSOCIATION OF AMERICAN PHYSICIANS.

(Continued from page 833.)

SECOND DAY, MORNING.

Richard C. Cabot, of Boston, read a paper entitled **the prognosis of pleural effusion.** He has studied the subsequent histories of 300 cases of serous pleuritis, all of which had been tapped. In none of them was there evidence of tuberculosis at the time of tapping. He has been able to follow 152 cases; of these 21 were in sound health from 15 to 21 years later; 23 were in sound health 10 to 15 years later; and 36 were in good health from 5 to 10 years later; a total of 80. At the end of 4 years, 14 were in sound health; at the end of 3 years, 7; and at the end of 2 years, 16; a total of 37. Twenty-three patients developed tuberculosis after the pleurisy and 14 died of other diseases. Eighty per cent. of cases of uncomplicated pleurisy have remained well for 5 years or more. Demonstrable tuberculosis developed later in 15% of these. The type of tuberculosis found in these cases was mild and of slow course, although rapid tuberculosis sometimes occurred. Of the patients who remained well after 5 years or more only 25% had a tuberculous family history. Sixty-six and two-thirds per cent. of those who subsequently developed tuberculosis had a tuberculous family history. The outlook, therefore, is bright after pleuritis, provided there is no family history of tuberculosis. It has been the experience of the author that accumulation of the fluid after tapping is rare. William Osler, of Baltimore, said that it would be reassuring for each one to take these figures home to his private practice. Thomas Harris, of Manchester, England, said that, in England, the statistics were more unfavorable than those presented by the reader of the paper. In England, the effect of pleurisy is regarded very seriously by the large insurance companies. Cabot's figures, however, would indicate that the outlook for the patient is good. A. Jacobi, of New York, said that patients of advanced years frequently present remnants of old pleuritis at autopsy without clinical evidence during life, and this fact would seem to indicate that the prognosis is not so unfavorable as was formerly supposed. Victor C. Vaughan, of Ann Arbor, asked if the 148 patients whose histories the author had not been able to trace, were not, in all probability, dead. Cabot said he thought that not all of the 148 cases not followed had died, because among the cases that he had been able to follow the deaths were about as numerous as the instances of survival. He found, out of 1000 autopsies, that 25% of the subjects had pleural lesions without clinical history.

C. S. Withington, of Boston, read a paper entitled **a clinical study of cases of empyema based on the bacteriological findings in the exudate.** Empyema is due, in the majority of cases, to the streptococcus or the pneumococcus. In adults those cases in which the streptococcus is found in the pus give the best prognosis. During the last 5 years there had been 135 cases in the Boston City Hospital, of which 40, or 29%, had died in the hospital. In making the diagnosis of the micro-organismal cause of the condition the pus was drawn into a sterile test-tube through a cannula. A pure culture of streptococcus was found in 35 cases, of which 9 died; the diplococcus lanceolatus was found in pure culture in 28 cases, of which 8 died, showing a less mortality in the cases of pure streptococcus infection. Pus that contained the staphylococcus gave rise to a higher mortality than that which contained the diplococcus. In 95 or 100 cases, pneumonia preceded the empyema, which developed on an average of 25 days after the resolution of the consolidated lung. Many pneumonias are secondary to septic diseases, such as tuberculosis, typhoid fever, appendicitis, tonsillitis, orchitis, actinomycosis and purpura hemorrhagica. All of the patients were operated upon except 20, and of these latter 10 died and 10 recovered. The operation was usually done in the posterior axillary line. In 2 cases of empyema following typhoid fever the pus did not contain the bacillus typhosus, but a pure culture of streptococcus. In a third case the bacillus typhosus was found in pure culture in the exudate. When empyema ruptures into a bronchus, the outlook is usually unfavorable. Some of the cases were complicated by subdiaphragmatic abscess. Although empyema is, in the majority of cases, the result of pneumonia, the variety of organism found does not indicate the type of the pneumonia. When the streptococcus reaches the pleura from a suppurative condition outside of the chest, it is usually of a high degree of virulence. William H. Welch, of Baltimore, said that it is often difficult to determine whether the pus of an empyema was formed by the action of the streptococcus or of the pneumococcus, because both organisms may grow in short chains. On this account, careful cultural and morphological examination is often necessary. T. Mitchell Prudden, of New York, also referred to the difficulty of distinguishing the streptococcus from the pneumococcus. Henry Koplik, of New York, said that the tubercle bacillus is occasionally found in streptococcus empyema. In children 90% of cases of empyema are metapneumonic. William Osler, of Baltimore, asked if the author had noticed any evidence of the increase of empyema after pneumonia during the past 10 years. It had been stated that the number of cases had increased and that the bacillus of influenza was responsible for the increase. Withington said that the diagnosis in his cases had been made after culture, and not from cover-slip preparations. He said that there was no question but that the number of cases of empyema had increased during the past few years.

M. Howard Fussell and David Riesman, of Philadelphia, read a paper entitled **spontaneous nontubercular pneumothorax.** Spontaneous pneumothorax in a healthy individual is a pneumothorax occurring without physical signs to account for the perforation. Tuberculosis is recognized as the most common cause of pneumothorax, and it had been thought that such cases in apparently healthy individual were due to the presence of tuberculous bronchial glands. It is possible, however, that the condition might occur in a perfectly healthy patient. One of the cases reported by the authors was in a woman, aged 21 years, in whom there was no tuberculous history. The patient had sudden pain with dyspnea on the left side of the chest at night. There was dulness over the entire left side and the heart was displaced to the right. Tapping brought only air and was followed by the prompt disappearance of all symptoms. The second case occurred in the person of a man who had no family history of tuberculosis and in whom there were no physical signs. This patient complained of pain in the right side, slight dyspnea and weakness. He recovered and is now perfectly well. In the literature there are 56 cases that belong to this class of spontaneous nontuberculous pneumothorax. Females constitute 2% of the cases. It usually occurs in young adults and its cause is not known. The symptoms are often very slight; dyspnea is usually present and is urgent at the beginning, but soon disappears except on exertion. Fever is variable, but is usually present during the first 24 hours. As the air in the thorax disappears the tympany persists at

the base longer than at the apex. The coin sound is not always present and, indeed, it may occur in other conditions. Metallic tinkling is not always due to the presence of fluid. The opening into the pleural cavity is usually closed or is valvular. The authors referred to a case of pneumothorax due to a primary growth of the pleura, that shows that we should be careful of the diagnosis of the cause in some of the cases. Aspiration is a safe and certain source of relief and should be done. The prognosis is good. F. P. Kinnicutt, of New York, said that he had seen a similar case in a healthy young adult, the patient recovered and remained well. He had always thought that a localized tuberculosis was the cause of these cases. S. Solis-Cohen, of Philadelphia, said that he had seen the man reported by Fussell and Riesman, and that he was not yet sure that tuberculosis was not present in him. He thinks that we are always justified in suspecting lung disease in such cases. He said that he had elicited the coin test in a case of tuberculous cavity. F. C. Shattuck, of Boston, said that in his opinion neither recovery nor remaining well is sufficient evidence of the absence of tuberculosis in such cases. He thought that tuberculosis was probably always in the background. The latency and innocuousness of the tuberculous process, however, is being gradually recognized. E. G. Janeway, of New York, said that he had seen several cases of spontaneous pneumothorax. It is difficult to determine the etiology of the condition. He is of the opinion that emphysematous blebs beneath adhesions may give way after exertion and produce the disease in some patients. It is very possible that a lung lesion may exist even when it cannot be demonstrated. G. L. Peabody, of New York, referred to a case of pneumothorax following coughing in a patient with esophageal stricture. He is of the opinion that tuberculosis is usually present. J. W. Brannan, of New York, referred to 2 cases. William Osler, of Baltimore, referred to a similar case in which tuberculin gave no reaction. The physical signs in the early stages are deceptive and in some cases the chest may be absolutely flat. Frank Billings, of Chicago, said that he had seen a similar case in the person of a physician in whom it was thought that the signs might have been caused by a rupture of the diaphragm. Fussell admitted that the majority of cases of pneumothorax were tuberculous in origin. But he still thinks that there is a group composed of purely spontaneous cases.

A. R. Edwards, of Chicago, read a paper entitled **report of a case of pernicious anemia in which there were signs of aneurysm.** The patient was a man who had pernicious anemia, and in whom there was an expansile pulsation on the left side of the chest over which a systolic murmur was heard. It was thought that the pulsation was due to aneurysm. At autopsy, the aorta was found to be very atheromatous, but there was no aneurysm. The pulsation was abdominal as well as thoracic and was possibly due to adhesions around the lower portion of the left lung and the spleen, which transmitted the unusually active pulsations of the aorta. G. L. Peabody, of New York, said that he did not think that the adhesions had caused the pulsation, because so many cases in which adhesions occur present no such phenomenon. A. Jacobi, of New York, said that he had seen splenic and hepatic aneurysm produce such a pulsation. LaFleur, of Montreal, referred to a similar case. S. Solis-Cohen, of Philadelphia, referred to the value of the X-rays in excluding aneurysm in such a case. F. C. Shattuck, of Boston, also referred to a case of pulsation without aneurysm.

J. B. Herrick, of Chicago, read a paper entitled **healed ulcerative endocarditis.** A priori, we might expect occasional recovery in ulcerative endocarditis, for recovery is seen in not a few cases of other forms of septicemia and pyemia, even though they are severe. Clinical observation shows occasional recovery. Post mortem findings indicate the possibility of healing of the valvular lesion. He has seen a case in a child of 3 years, in which he considers that a pneumococcic endocarditis was recovered from, leaving a permanent leak in the mitral valve. The lesions produced by the streptococcus and the pneumococcus are not so severe as those in which the staphylococcus is present. The patients may die from septicemia or from mechanical causes. In the latter instances, the ulcers are found healed and the vegetations cause the symptoms ending in death. The author has seen 3 cases of healed endocarditis that came to autopsy after a number of years. The blood should be examined in cases of acute endocarditis, in order to determine the organism that is causing the disease and then, if the pneumococcus or the streptococcus is found, the prognosis will not be quite so grave and the treatment may be more thoroughly carried out with more hope of success. William S. Thayer, of Baltimore, showed the chart of a patient who had had acute endocarditis from which she was now convalescent. The patient was a woman, aged 30 years. The fever was very irregular, there were delirium, irregular pulse, and aortic insufficiency. The latter condition will be permanent. F. P. Kinnicutt, of New York, referred to a case of acute endocarditis of the aortic and mitral valves following gonorrhea. The patient recovered and is living at present, 2 years after the disease, with evidence of aortic and mitral insufficiency. E. G. Janeway, of New York, reported a case of acute endocarditis in which the patient recovered with pulmonary insufficiency. The disease was due to the gonococcus. He also reported a case of typhoid fever, during the course of which symptoms developed, including a systolic murmur, that were thought to be due to acute endocarditis. The murmur was a functional one, however. He called attention to the fact that it is possible that a functional murmur may be mistaken for an organic murmur. F. C. Shattuck, of Boston, said that he thought he had seen 2 cases of acute endocarditis recover, one after the use of antistreptococcus serum. A. Jacobi, of New York, said that many cases of acute endocarditis occur in children, and that he has seen such cases recover. He said that it is easier to make a mistake in diagnosis in an adult than it is in a child, because heart lesions in children are organic in the majority of cases. William Osler, of Baltimore, said that in cases in which the endocarditis recurs the condition is very likely to terminate favorably.

Alfred Stengel and W. H. Stanton, of Philadelphia, read a paper entitled **the condition of the heart in pregnancy.** The study is based on 26 cases which were studied both before and after labor. The authors demonstrated diagrams to show that the supposed hypertrophy of the heart is in most instances spurious and due simply to the dislocation of the apex. The apex returns to its normal position after delivery to a point corresponding to the middle of nipple below the diaphragm. It there is tympany after delivery the return of the apex to its normal position is not so rapid nor complete. The heart is usually dilated on the right side and the conus arteriosus is also dilated. Therefore these portions of the organ do not return to the normal rapidly. At some time a murmur is heard in many cases; usually over the dilated right ventricle or conus arteriosus. The blood pressure, both before and after delivery, is practically the same in all cases. The dislocation of the apex is due to upward pressure of the diaphragm. W. H. Fussell of Philadelphia, said that he was surprised to hear of the large number of cardiac murmurs after delivery. He had not had this experience in his work.

Francis P. Kinnicutt, of New York, read a paper entitled **a case of pancreatic lithiasis with the recovery of the characteristic calculi from the stools followed by an attack of cholelithiasis a year later with the passage of characteristic calculi.** There are 6 cases on record in which pancreatic calculi were recovered from the stools. To these the author adds one case that he has observed himself. The patient was a woman aged 42 years who complained of pain in the back between the scapulæ, nausea, vomiting and diarrhea, but no jaundice. Several attacks occurred, and in January, 1901, after such an attack, 6 small stones were passed in the stools which, on chemical examination, were found to have originated in the pancreas. The stones were composed of calcium carbonate and calcium phosphate without cholesterin. She has had similar attacks since during which she has passed calculi and detritus. Later the patient passed stones that were of undoubted biliary origin. She has had no glycosuria, there was normal fat absorption. The differential diagnosis between pancreatic lithiasis and cholelithiasis is difficult. The subjective symptoms are not characteristic. The presence of undigested muscle fibers and of fat in the stools are not pathognomonic of pancreatic disease. The insufficient splitting up of fat into fatty acids and soaps in the intestines, on the other hand is a significant and unmistakable indication of the pancreatic lesion. How-

ever, attacks of epigastric pain accompanied by the occurrence of undigested muscle fibers in the stools and glycosuria should lead the physician to suspect pancreatic disease. E. G. Janeway, of New York, referred to the similarity of the attacks of pain which occurred when the patient whose case was reported passed pancreatic and biliary calculi.

Solomon Solis-Cohen of Philadelphia, read a paper entitled **a further contribution to the subject of vasomotor ataxia.** The author has found frequently cases that present symptoms of vasomotor ataxia. The condition is one of essential instability of the controlling apparatus of the vasomotor nervous system as a large factor in the defective reaction of the individual toward environmental changes, so that persons of the type described exhibit, upon slight excitation, physical, chemical or psychical phenomena which in other persons require causes of greater moment. These phenomena depend upon irregular and sometimes widely distributed contractions and dilations of the capillaries and the smaller bloodvessels, and may be divided into 3 classes: (1) Those dependent upon excessive relaxation or paresis of the vessels often with concomitant impairment of cardiac inhibition. (2) Those dependent upon excessive constriction of vessels usually with disturbance of cardiac inhibition also, but sometimes without definite cardiac phenomena clinically demonstrable; (3) those in which phenomena of the 2 opposite groups are commingled. The third group is the more common. Graves's disease presents an extreme type of the phenomena of excessive vascular relaxation with paresis of cardiac inhibition. Its exciting causes are various, and its toxicopathological mechanism undetermined. Raynaud's disease presents an excessive type of vascular constriction, and of it the same may be said concerning undetermined exciting causes and toxicopathological mechanism. Between these 2 extremes are many varieties differing much in severity and locality of symptoms; simple urticaria; angioneurotic edema; migraine of the spastic type and migraine of the paretic type; anomalous eruptions of various kind; true idiosyncrasies; hay fever; tendencies to hemorrhages from various organs; minute cutaneous angiomata; paroxysmal tachycardia; and other more or less closely related phenomena. There are many vague and ill-defined conditions arising in response to any one of a number of different stimuli, among which temperature, weather, endogenous and ectogenous toxins and emotion are most prominent. Hysteria, neurasthenia and epilepsy bear close but as yet undetermined relations to the condition, which may be predominant or apparently insignificant in their semeiology. Essential vasomotor ataxia is usually a congenital condition affecting in different ways, several members of one family. At times it seems to be acquired in sequence to disease or accident. He referred to several illustrative cases. Morton Prince, of Boston, said that he thought the phenomena frequently made the nucleus of symptoms in functional diseases. He thinks they are perversions of normal physiological functions. He thinks the phenomena are similar to those that he has already described as association neuroses. B. Sachs, of New York, said that he could not see the advantage of collecting all the vasomotor ataxias in one group, since we should be more interested in separating the various diseases constituting the group. He thought it would be more advantageous to study the anatomical changes in each condition. A. Jacobi, of New York, referred to the case of a woman who was suffering from exophthalmic goiter following fright. Cohen said that we must know something of psychical causes before we can apply psychical therapeutics. Therefore, there is a place in medicine for philosophical studies.

Henry Jackson, of Boston, read a paper entitled **intestinal hemorrhage; its relation to duodenal ulcer.** Clinically, pathologically and certainly from a therapeutic standpoint, duodenal ulcer may be considered as closely allied to gastric ulcer. He reports 7 autopsies in which duodenal ulcer was found. Four of the patients died of perforation. In 2 the ulcer was of little importance as an etiological factor. In one, death was due to hemorrhage. In none of the cases was a definite diagnosis made, and in none was such a diagnosis possible, even in the light of the post mortem examination. He has found no disadvantage in the administration of salt solution, but, on the other hand, has found its administration very advantageous in the treatment of the hemorrhage. Perforation is more common in ulcer of the duodenum than it is in ulcer of the stomach. On the other hand, hemorrhage is more common in ulcer of the stomach than it is in ulcer of the duodenum. F. P. Kinnicutt, of New York, said that he also had had good results following the use of salt solution in such cases. William H. Thomson, of New York, said that in his opinion symptoms of ulcer in a male would indicate peptic ulcer of the duodenum; on the other hand, the symptoms of ulcer in a female would lead him to suspect ulcer of the stomach. He said that the phenomena brought out by palpation in cases of duodenal ulcer are different from those obtained in cases of gastric ulcer. E. G. Janeway, of New York, referred to 2 cases of duodenal ulcer, one in a woman and one in a man. Both cases were associated with dilation of the stomach and hematemesis; but more blood was passed from the bowel than was vomited.

SECOND DAY, AFTERNOON.

F. C. Shattuck, of Boston, read a paper entitled the **prognosis and treatment of tuberculous peritonitis based on the Massachusetts General Hospital's experience for the past 10 years.** The termination of tuberculous peritonitis is often favorable when the case is subjected to surgical treatment, even when other organs are involved. The disease may also be treated by purely medical means, and by tapping. Between the years 1889 and 1900, 98 cases of tuberculous peritonitis were treated in the Massachusetts General Hospital. The end-result was known in 57. In 20 cases there was a family history of tuberculosis, and in 8 cases there had been an antecedent pleurisy. In 63 cases fluid was present in the peritoneal cavity. Tuberculin was injected in 13 cases, of which 8 gave a positive reaction, 3 gave a negative reaction and 2 were not satisfactory. About one-half of the cases occurred between the ages of 15 and 20 years. The prognosis is good in 57 . Of the 57 cases above referred to, 29 died, 27 from tuberculous peritonitis or one of its complications. Twenty-eight of the patients are now living and show no evidence of the return of the disease. Of the cases treated with purely medical means, 2/3 died. Of the cases treated with purely surgical methods, 2/3 recovered. Medical treatment consisted of diet and hygiene and is warranted for a time, provided the abdomen is tapped often enough to produce comfort. After from 6 weeks to 2 months of this kind of treatment, surgical measures should be employed. James Tyson, of Philadelphia, reported the case of a girl who was treated by incision and drainage, and who is now well, 15 months after the operation. He thinks that there is no use in temporizing with medical treatment. He referred to a second case in which tuberculous peritonitis was found after death in a subject that during life was thought to have cirrhosis of the liver with ascites. He thinks that every case of cirrhosis of the liver with ascites should be tested with tuberculin. J. W. Brannan, of New York, said that his experience at Bellevue Hospital confirmed the conclusion of Shattuck. I. N. Danforth, of Chicago, reported the case of a girl of 18 years, who recovered from tuberculous peritonitis and who remains well after 5 years. Frank Billings, of Chicago, said that he would divide cases of tuberculous peritonitis into 3 classes: (1) Those with serous or serofibrinous exudate with a focus; (2) those in which there was tubercular infiltration of the glands and of the peritoneal surface accompanied by a mixed exudate, and (3) those in which there were nodules with adhesions, the fibrous form. Surgical treatment is applicable to cases of the first class. In the cases of the second and third classes surgical treatment is usually followed by death. In these cases there is as much hope of recovery under purely medical treatment as there is under surgical treatment. S. J. Meltzer, of New York, spoke of a case of tuberculous peritonitis which was cured after celiotomy. The symptoms resembled those of appendicitis. Operation was advised, because tuberculous peritonitis was suspected, because the patient had suffered from serous pleuritis a year before. William S. Halsted, of Baltimore, said that the results of operation in cases of tuberculous peritonitis at Johns Hopkins Hospital confirmed the conclusions of Shattuck. It had been the experience at the Johns Hopkins Hospital that surgical treatment had resulted in improvement in some of the cases belonging to the second and third classes of Billings. He approves of the use of tuberculin and says that he has not seen a case in which that

substance failed to give a reaction when the disease was proved to be tuberculosis. Victor C. Vaughan, of Ann Arbor, said that operation for tuberculous peritonitis had proved that tuberculous lesions may heal. He had inoculated rabbits in the peritoneum with bacillus tuberculosis. Later he had done a laparotomy and convinced himself that tubercles were present. He then sewed up the abdominal wall without other manipulation. Later, when he had killed these animals, no lesions had been found in many cases. A. Jacobi, of New York, said that as long as tuberculosis is local it is apt to heal and there is good prospect for the recovery of the patient. If, on the other hand, tuberculosis is disseminated, there is little hope for either medical men or surgeons. If there are no signs of irritation, he would call the condition tuberculosis of the peritoneum. If, on the other hand, fever and ascites are present, he would call the condition tuberculous peritonitis. He is of the opinion that celiotomy is done too frequently, and, after listening to Abbott's paper yesterday, he felt that there was some question as to whether some cases, diagnosed tuberculous peritonitis, were not cases of false tuberculosis. Shattuck spoke of several cases that belong to the second and third classes of Billings that had recovered. He agrees that much depends upon the extent of the disease, but that it is not an absolute indication. He referred to a case of disseminated tuberculosis which recovered and remained well for 8 years.

James Ewing, of New York, read a paper entitled **a pathological study of 30 cases of smallpox.** He divides smallpox into the following classes: (1) Primary hemorrhagic smallpox; (2) secondary hemorrhagic smallpox; (3) confluent or conglomerate smallpox, and (4) discrete smallpox. Among these cases he had seen a case of secondary hemorrhagic smallpox in a bleeder, a case of discrete smallpox in a new-born infant who presented lesions at the time of birth, a case in which the eruption came out in 2 crops and a case of scanty discrete smallpox complicated by a scarlatiniform eruption. The trachea usually presents the most serious lesions. Sometimes the lesions in the trachea and bronchi antedate or are more extensive than those on the skin and are more active in producing death. He had seen 3 cases of endocarditis in subjects dead from the disease. In his series of autopsies the liver usually showed acute degeneration, the kidneys showed acute degeneration and microscopic hemorrhages. In the hemorrhagic cases, blood was effused into the pelvis of the kidney, but in the other cases the pelvis was not involved. The esophagus and stomach often present ulcerations and there was hypoplasia of the lymphatic structures with hemorrhages into the bone marrow. He had seen 3 cases of focal lesions in the testicle. He then described the histological characteristics of the lesions, which were congestion and involvement of epithelial tissues. A high proportion of lymphocytes and myelocytes accompanying a leukocytosis is almost pathognomonic of smallpox. On bacteriological examination he was not able to find protozoa. Vaccine bodies were always present, streptococci were always present, there was usually a fine bacillus found and many minute bodies resembling bacteria. In cultures, the streptococcus was obtained from the heart's blood in all cases and this organism was more numerous the later the autopsy was made after death. He has found the streptococcus in the skin in 90% of the cases and concludes that it is invariably present. Inoculation experiments were negative except in monkeys. He does not believe that the streptococcus is the cause of the disease, although he found it in all stages and in all lesions. The short bacillus gave no result on inoculation. The author exhibited a number of specimens illustrating the points made in his paper. William T. Councilman presented an exhibit of the **anatomical lesions of smallpox** for Magrath and Brinckerhoff, of Boston. The results of this study were about the same as those obtained by Ewing. He referred to the extensive destruction of polymorphonuclear leukocytes in the blood, which was often extreme, only 5% of these cells being found in some cases. The polymorphonuclear leukocytes are replaced by large basic mononuclear leukocytes. Death from smallpox is usually due to secondary infection, and he thinks that the smallpox virus acts by paralyzing the resistance of the patient. He has not succeeded in finding the etiological factor. He does not believe that the vaccine bodies are red bloodcorpuscles but he does not know what they are. He believes that the various micro-organisms that have been isolated up to the present time are secondary and are responsible for the death of the patient.

William H. Park, of New York, read a paper entitled **some experiments on the nature of vaccine virus.** He had attempted to produce vaccinia in calves by inoculation with smallpox, but without result either when the virus was inoculated into the calf directly from man or through the monkey. In some cases he succeeded in producing a few discrete papules a long time after the inoculation and on a part of the udder away from the incision and he thinks that these may have developed from accidental infection in the vaccine laboratory. He found that chicken-pox could not be inoculated into the monkey, and he thought, therefore, that, in doubtful cases, the monkey might be used to differentiate this disease and smallpox. He used a filter to see whether crushed vaccine would pass through. But he had obtained no definite result although in some cases the [illegible] took.

Morton Prince, of Boston, read a paper entitled **a case of osteitis deformans and one of hyperostosis cranii.** The first patient was a woman, aged 44 years, who complained of pain about the head. Deformities occurred without the knowledge of the patient, although nearly all the bones in her body were diseased. The patient had a systolic heart murmur and secondary anemia. The author is inclined to believe that hyperostosis cranii is of the same nature as osteitis deformans. He thought that the osteo-arthritic cases were also possibly manifestations of the same disease. He is inclined to believe that the disease is caused by some lesion in the central nervous system. M. H. Fussell, of Philadelphia, reported a case of osteitis deformans which will be published in a future number of the **Philadelphia Medical Journal.**

G. G. Sears, of Boston, read a paper entitled **some clinical manifestations of hepatic cirrhosis in the light of 78 autopsies.** He reported 78 cases of hepatic cirrhosis that came to autopsy. He classified them according to the amount of fibrous tissue present. Alcohol is the most important etiological factor. Hepatic cirrhosis, in the large majority of cases, is an expression of systemic poisoning. Splenic tumor and dilated veins are due to portal obstruction primarily, but they are also due to the general action of the toxic substance. Jaundice and hemorrhage occur when fibrosis is well advanced. Ascites is a late symptom. Degenerative changes frequently occur in the heart and in the vascular system. A high grade of cirrhosis may not interfere with the activities of the patient, provided tapping is employed to keep down the amount of ascites. Operative measures are never justifiable in the presence of jaundice or hemorrhage, but when the heart and kidneys are intact, they may be tried. Therefore, operation is only justifiable in a small number of cases. Tapping is the better operation and often gives most satisfactory results.

Frank Billings, of Chicago, read a paper entitled **clinical manifestations of the early stages of cirrhosis of the liver.** The author reported 34 cases of [illegible]. Alcohol was found to be an important etiological factor. The patients usually complain of some form of gastro-intestinal disturbance. Hemorrhoids were not common. Muscular rheumatism was a very common complaint, arthritis deformans and neurasthenia were also common. The spleen was enlarged in 4 cases only. The symptoms of the condition depend upon portal obstruction and general intoxication. In the treatment of the condition the author advises a diet that is free from meat, tea, coffee and alcohol. As medical measures the bowels should be kept free by the use of saline, as hot water before breakfast. It is not necessary to use digestive ferments at all, although hydrochloric acid is always valuable. The use of strontium chloride as suggested by Kossel has been found advantageous, because of its action in preventing the formation of fibrous tissue. F. A. Packard, of Philadelphia, referred to a paper that he had published on the surgical treatment of cirrhosis of the liver, and he said that he may [illegible] but he did not believe that conclusions at that time were justified. Patients with cirrhosis of the liver are [illegible] toxemia. The urine should be examined for urea excretion and other means should be taken to determine the functional activity of the kidneys. I. N. Danforth, of Chicago, agreed with Packard concerning the necessity for examining the urine as to the condition of the urea excretion. He is of the opinion that the kidneys are nearly al-

ways involved in cases of cirrhosis of the liver and thinks that diuretics are always indicated. A. H. Smith, of New York, referred to a case of hepatic cirrhosis with a large quantity of ascitic fluid in which the patient remained well for 7 years after tapping and stopping his use of alcohol. When the fluid reappeared, potassium iodide removed it. C. A. Herter, of New York, said he thought the fact that the toxic feature of the disease accounts for death should not deter us from attempting operations for the improvement of the hepatic circulation. In cirrhosis of the liver the organ is able to carry on some very complicated synthetic processes, such as converting ammonium carbonate into urea. A Jacobi, of New York, said that it was his opinion that the patients die from the large amount of serum that they lose in the ascites. The loss of this serum is what it is attempted to prevent by operations for improving the hepatic circulation.

C. A. Herter, of New York, read a paper entitled, **experimental glycosuria from adrenalin chloride and its relation to other forms of glycosuria dependent on the action of reducing substances on the cells of the pancreas.** The author believes that many and probably most forms of glycosuria and diabetes are due to the action of substances or conditions that interfere with normal oxidation in the cells of the pancreas. This generalization has been reached from a study of the glycosuria that follows the application of adrenalin chloride to the cells of the pancreas. When this substance is administered to animals under conditions that require its contact in unaltered form with the cells of the pancreas, a glycosuria of a transitory character results, associated with a slight or considerable increase in the glucose in the blood. This experimental glycosuria is most pronounced when the adrenalin is painted on the pancreas, and it can be shown that, when similar applications are made to other organs, as the liver and spleen, there is either no glycosuria or this is slight in degree. Experiments have been devised and executed that show whenever adrenalin chloride, which is a powerful reducing agent, undergoes oxidation, that it is deprived both of its bloodpressure raising action and of its ability to cause glycosuria. This fact suggests that the glycosuria following the use of adrenalin is intimately connected with its reducing action upon the cells of the pancreas. Extended experimental inquiry brought to light the striking fact that substances possessing strong reducing power are capable of inducing glycosuria when applied to the pancreas directly. Thus sulphurous acid, ammonium sulphide, carbon monoxide, benzyl alcohol, hydroxlamine, pyridin and piperidin are all capable of inducing a considerable glycosuria, whereas sodium chloride, chlorine water, bromine water, sodium hydroxide, hydrochloric acid and ammonia alum, applied under similar conditions, have either no effect at all in producing glycosuria or cause only the most insignificant excretion of glucose. An observation of great interest in that potassium cyanide in small doses causes glycosuria, when applied to the pancreas but not when introduced elsewhere. Since this poison deprives cells of their capacity to take up oxygen, its ability to induce glycosuria is a strong corroboration of the view here presented of the nature of glycosuria from reducing agents. The glycosuria of aurenalin is different from that of phloridzin, because in the latter there is a direct action on the kidney which thereby reduces the glucose in the blood, increasing that in the urine. After making sections of the pancreas and applying the reducing substance to isolated portions of the gland, the sugar appeared in the urine even when the substance is applied to only $\frac{1}{10}$ of the gland. These observations explain the glycosuria of asphyxia of illuminating gas poisoning. Diabetes mellitus is very possibly produced by the occurrence in the body of large amounts of reducing substances. S. J. Meltzer, of New York, pointed out other lines along which the study of this subject might extend. A. C. Cushny, of Ann Arbor, referred to the glycosuria produced by operation and by anesthesia, and said that it would be necessary to eliminate these factors from the experiments. Herter said that he could exclude operation and anesthetic glycosuria. There is something in the adrenalin which is not a ferment that acts upon the pancreas.

J. G. Adami reported a **case of carcinomatoid tumor of the adrenals which exhibited sarcomatous metastasis** for P. G. Wooley, of Montreal. Sections of the tumors were exhibited.

The following papers were read by title: **The Action of Metals on Bacteria and on Toxins,** by F. E. Novy, of Ann Arbor; **A Diagramatic Comparison of Types of Bacillus Diphtheriæ in Well Persons and Clinical Cases,** by F. F. Wesbrook, of Minneapolis; **Report of a Case of Lymphatic Leukemia,** by D. D. Stewart, of Philadelphia; **The Pathology of Pernicious Anemia, with Special Reference to the Changes in the Hemolymph Glands,** by A. S. Warthin, of Ann Arbor; **Mitosis in Circulating Blood,** by George Dock, of Ann Arbor; **A Case of Cerebral Hemorrhage and Nephritis,** by R. T. Edes, of Boston; **Two Cases of Supposed Gastric Perforation in Which no Explanation of the symptoms was found at operation,** by A.H. Smith, of New York; **Tuberculous Pericarditis, with Remarks Upon Paracentesis and Incision,** by Beverly Robinson, of New York; **Drainage in Chronic Intestinal Catarrh, Its Importance and Technique,** by Norman Bridge, of Los Angeles; **The Results of Trauma of the Pancreas,** by C. G. Stockton, of Buffalo; **A Case of Cystic Degeneration of the Kidneys,** by I. N. Danforth, of Chicago; **A Case of Trichiniasis Illustrating the Importance of Examinations of the Blood in Febrile Conditions,** by E. G. Cutler; **A Comparison Between the Fluoroscopic and Radiographic Examination in a Case of Dextrocardia,** by F. H. Williams, of Boston.

The following officers were elected for the ensuing year: President, James Stewart, of Montreal; vice-president, William T. Councilman, of Boston; secretary, Henry Hun, of Albany; treasurer, J. P. Crozer Griffith, of Philadelphia; recorder, S. Solis-Cohen, of Philadelphia; councillors, Charles G. Stockton, of Buffalo, and Walter Reed, of Washington. [J. M. S.]

NEW YORK OBSTETRICAL SOCIETY.

...eeting held April 8, Dr. Malcolm McLean in the chair.

Dr. H. C. Taylor presented a **retroperitoneal echinococcus cyst.** An echinococcus cyst of the omentum was removed in May, 1896. In August, an echinococcus cyst of the spleen was removed, 8 ounces of daughter cysts being evacuated, with a discharge from the wound for some months afterward. The sinus subsequently closed. In September, 1900, another tumor developed, which was found behind the peritoneum to the right of the rectum, entirely independent of the uterus and its appendages. Dr. Taylor also presented a specimen of **tubal abortion with the fetus in the unruptured membranes.** The patient, a woman of 32, had one child, 12 years ago, and no miscarriages. Four days after menstruation, hemorrhage began again, continuing 2 weeks. She had no pain, and was positive that she had been and was still pregnant. The uterus was slightly enlarged. The diagnosis of early miscarriage was made and the uterus curetted. Ultimately the diagnosis of ectopic pregnancy was made. A second operation showed the right ovary enlarged and cystic, the right tube unruptured, its outer end distended and occupied by the fetal sac, which was partly in the tube and partly against the pelvic wall. Dr. LeRoy Broun recalled 2 such cases, reported at a meeting of the Woman's Hospital Society by Dr. Aspell and Dr. Baker, of Boston. Dr. J. L. Morrill thought it very rare to find a case of ectopic gestation with the sac unruptured.

Dr. E. H. Grandin presented a **vesical calculus** removed a few weeks before by vaginal cystotomy. Dr. Grandin also presented a specimen removed from the mesentery of the jejunum. It might be a degenerated mesenteric gland, or a dermoid or other cyst of the mesentery. The specimen was sent to the official pathologist for his opinion. Dr. Grandin thought that, in the vast majority of cases, calculi that are formed in the bladder have nuclei. Dr. Broun remarked that he had removed one from the urethra which entirely blocked it, opening the urethra to accomplish removal of the calculus. Dr. S. W. Bandler thought this mesenteric cyst might be a dermoid cyst, a cholesteatoma.

Dr. A. Brothers presented specimens from 3 recent cases of **early ectopic gestation,** with their case-histories. Dr. Brothers accentuated the fact that the largest hemor-

rhages seen in early cases of ectopic gestation may not come from rupture, but from the outgrowth of chorionic villi. Dr. McLean asked whether the hemorrhage came from the contiguous vessels of the tube. Dr. Bandler had seen several cases in which it was macroscopically impossible to understand how so much blood could have entered the peritoneal cavity.

Dr. A. H. Ely read a paper on **colon bacillus infection of the female genital and urinary systems.** He reported cases in which colon bacilli had been the cause, directly or indirectly, of the pathology. The virulence of the colon bacillus infection depends upon associated pyogenic organisms. When other pyogenic organisms have disappeared, the colon bacillus will remain as the organism which produces an intractable type of disease. Many of the cases which are designated as auto-infection, sapremia and septic intoxication may be due to infection by the colon bacillus. These cases are observed in celiotomy wounds, especially when the intestine has been injured. The form of infection may be mild or severe, colon bacilli being associated with streptococci and staphylococci, the colon bacilli playing the chief role, causing fatal peritonitis and nephritis, hepatic or subphrenic abscesses. He reports 3 cases of severe infection, with cystitis, pyelonephritis, colitis, appendicitis, subphrenic abscess, and general septic infection. Nephrotomy and laparotomy were performed. One patient died. He concluded that there exists as much necessity for thoroughly cleansing the rectum and colon as the field of operation, especially when operation is performed per vaginam; that, in all cases of election, the routine treatment of mild mercurial catharsis followed by salines and irrigation of the colon with salt or boracic acid solution should be employed; and that best results can be obtained when the intestines receive the minimum degree of injury, when for fear of hernia too small incisions are made to permit of operation by sight rather than touch. Dr. J. R. Goffe did not think it had been established absolutely that the colon bacilli were the mischievous invaders here to the exclusion of others. He found that, when they occurred with the staphylococci and the streptococci, great havoc was wrought. The question arises whether a destructive process is due to colon bacilli or streptococci. Dr. Brothers stated that he had had a series of pus cases, upon whom he had operated, examined microscopically, and those cases in which colon bacilli were found were much in the minority.

THE AMERICAN GASTRO-ENTEROLOGICAL ASSOCIATION.

Fifth annual meeting, Washington, D. C., May 1, 1902.

Morning session. After the president, Dr. J. C. Hemmeter, had read the annual address, Dr. Max Einhorn read a paper on **the state of the gastric mucosa in pathological conditions of the stomach.** He exhibited micrographs of specimens of gastric mucous membrane under various conditions. The secretory functional disturbances of the stomach, if they last long, produce lesions of the mucosa. The diagnosis of carcinoma of the stomach may, under especially favorable conditions, be made from a piece of gastric mucosa, if epithelial cells have directly invaded the glandular substance. Therapeutically, attention must be directed principally toward the improvement of the general condition. Dr. Hemmeter considered this a very valuable paper. With an associate, he was fortunate enough to have had 3 cases. They removed pieces from the cardiac end of the stomach, noting the locality and the origin.

Dr. G. W. McCaskey then read a paper on **the electrical reaction of the gastro-intestinal musculature and its therapeutic value.** Dr. Meltzer said that, by introducing one electrode into the stomach and the other into the colon, this strong current is sufficient to produce contraction of the muscle under the skin, but not as far as the spinal cord. Dr. Einhorn thought, when Dr. Meltzer said he applied 2 electric currents and did not find any contraction, that the reverse was the case. The mucous membrane presents very little resistance. With one electrode in the stomach and another outside, we can measure exactly the resistance which intervenes.

Dr. C. W. Stiles, of the Department of Animal Industry, Washington, then took up the **classification of tapeworms,** presenting some very interesting specimens. The intestinal form, *uncinaria Americana*, is very destructive, killing fully 50% of the sheep in Texas. 17% of seal pups died from the parasite, known as the hoopworm. Other animals have been infected with great loss. The American form is the *uncinaria Americana*, the European form *un-*

Dr. Meltzner then read a paper on the **contraction of the ileopsoas muscle as an aid in the diagnosis of the contents of the iliac fossa.**

Afternoon session. Dr. A. Rose read a paper on **gastroptosis, the cause of symptoms erroneously attributed to nephroptosis.** He referred to a case in which the kidney was attached to the bladder. Sometimes in cases of heart disease it is more important to examine the abdomen than to ascertain the auscultatory symptoms. Gastroptosis is more often overlooked than diagnosticated. Dr. Einhorn believed that a splashing sound could be produced in a normal abdomen. The stomach is not a wall, but an elastic organ. By shaking the fluid in it, we have a means of finding its position. If we find that a splashing sound can be produced in the region of the navel and farther down, and none above, this shows adhesions. If we can produce a splashing sound way down to the pubes, the stomach is dilated. Dr. McCloskey said that the whole subject of the abdominal viscera is very complicated. There were 2 things which seemed fundamental, metabolism and innervation. He thought that, if by any possibility one could get proper nutrition, it would first be necessary to overcome the weakened condition of this organ. Dr. [illegible] reported the case of a man who had wasted 40 pounds. His stomach reached a little below the navel, and the right kidney was in the fourth degree of displacement. During treatment he gained 40 pounds. A year later his stomach reached to the navel and the right kidney could only be found with deep inspirations. This shows how foolish it would have been to have operated for floating kidney. Dr. McCaskey said that the heart, in cases of gastroptosis, dilates and remains so until general malnutrition is overcome.

Dr. F. H. Murdoch discussed **orthoform in the diagnosis** of gastric ulcer, reporting 2 cases treated successfully. Eight grains, given in powder, will relieve pain. Orthoform is the only remedy which enables us to diagnosticate gastric ulcer. The president asked whether orthoform decomposed hydrochloric acid. Dr. Murdoch said it did not in this case. Dr. Sawyer thoroughly indorsed the use of orthoform. Dr. McCaskey relies entirely on bismuth. Dr. Murdoch had a case of gastric ulcer in which he stopped orthoform, giving the regulation treatment with large doses of bismuth.

Dr. Harry Adler spoke upon the relation between **pernicious anemia and achylia gastrica,** reporting the following case. A woman of 45, white, married, with no history of alcoholism or lues, with good habits of eating, drinking, and sleeping, remained in good health until the birth of the second child, when she had puerperal mania. Fever, jaundice and vomiting occurred until the skin became a yellow in color. The stomach contents showed an absence of free and combined hydrochloric acid. Examination of the blood gave 3,000,000 red bloodcorpuscles. She improved afterward on arsenic, and left the hospital [illegible] months later with red bloodcells almost a million. She returned in 3 weeks suffering from ascites, and died shortly afterwards. Dr. Einhorn had 4 cases of pernicious anemia. In 3 of them he found the gastric juice present; they were typical cases

of pernicious anemia, ending fatally. Dr. McCaskey believed achylia gastrica could produce pernicious anemia, but some special vulnerability is required besides. He believes that Hunter's statement is correct and that pernicious anemia is a hemolytic process.

Dr. J. A. Lichty spoke on the **etiology of mucous colitis.** Patients suffering from this condition are generally neurotic, the neurosis being secondary to mucous colitis. There is probably a mechanical hypostasis. In 21 cases of mucous colitis (17 females, 4 males), he found ptosis in 16. At least 80% of cases of mucous colitis have ptosis of the abdominal viscera. In some cases there were right movable kidney, appendicitis, general prolapse of the organs, producing decided interference of circulation. Dr. Hemmeter considered these investigations of great interest as tending toward discovering whether anything pathological passes from the blood through the mucosa into the intestines, and whether these substances can set up such an irritation as to cause that type of membranous enteritis.

Dr. J. P. Sawyer reported 4 cases showing the **treatment of hypertrophic stenosis of the pylorus with oil.** In 2 cases hematemesis was observed and in all stenosing gastritis had been excluded. Loss of weight and diminished urinary excretion had brought up the question of operation, before proceeding to which the use of oil, as suggested by Cohnheim, was tried with gain in weight, increased amount of urine, and resumption of usual activity. The oil was administered in various ways and doses, success being apparently due to the lubrication of the membrane or protection of it against food and not to the direct sedative action of the oil. This seemed so pronounced that the writer had made use of the oil as a protection in irritable stomachs with satisfactory results, in acid gastritis, gastrosuccorrhea, chronic ulcer, and erosions in which superacidity was found. The use of oil, even if not permanently successful, might cause improvement.

Dr. Charles D. Aaron read a paper on **enteroptosis and pregnancy.** Pregnancy causes marked improvement in these cases, which by proper treatment can be made permanent. He found pregnancy to be a cure for enteroptosis, reporting the case of a woman of 32, emaciated, who taught school before marriage. On account of bronchitis she had gone South; headache, pain and sleeplessness followed, with the loss of 15 pounds. Physical examination showed enteroptosis. Conception followed and all symptoms disppeared. After delivery, a firm binder was applied to the abdomen. In 8 weeks she was allowed to get up for an hour a day and no former symptoms returned. She is now entirely well.

TWENTIETH GERMAN CONGRESS ON INTERNAL MEDICINE.

(Continued from page 833.)

Wiesbaden, April 15-18, 1902.

Fleiner, Heidelberg, discussed the **treatment of gastric ulcer,** reviewing in full the history of the subject. As there is no specific treatment, it is the duty of the physician to assist spontaneous recovery as far as possible, preventing all disturbances to the natural process of the healing of the ulceration. The stomach should be kept empty, and muscular contraction should be assisted, since the ulcer must become smaller and filled with granulation tissue. This takes at least 4 weeks of absolute rest. During the first few days all nourishment should be given by the rectum, then absolute milk diet, and after 4 weeks some meat. Only 2 weeks later should mixed diet be allowed. Even after that, all irritating food should be prohibited. The use of baths and mineral waters in the after-treatment of gastric ulcer is discountenanced. Upon such treatment 75% of all cases recover. Failure to recover may be due to faults of the patient, individual peculiarity, fibrous walls of the ulcer, remnants of food in the ulcer, moderate muscular contractibility, deeply situated stomach, aerophagia, etc. Recurrence frequently occurs. The older the ulcer, the more difficult is the healing, and the greater the danger of hemorrhage and perforation. In washing out the stomach for removing food, but little liquid and little pressure should be used. Nitrate of silver, applied to the ulcer in solution, stops pain, reduces hyperacidity and stimulates granulation. Kussmaul recommends bismuth, (10 gm.), which causes the disappearance of all pain. For dispensary patients, an alkaline mineral water is advised before taking the bismuth. Spontaneous healing of the ulcer often causes scars which may necessitate surgical intervention. High-grade pyloric stenosis is recognized by decreased diuresis and loss of flesh, following the diminished absorption of nourishment. The possibility of spontaneous recovery becomes less when the ulcer is near the pylorus, thus preventing contraction of the pyloric musculature, stagnation and dilatation following. Out of 3 such cases operated upon early, 2 have recovered. Tetany occurred in 8 cases, 5 of which were operated upon, with 3 recoveries. Perigastric adhesions may also indicate operation. Surgery, however, has effected but little in this respect. When perforation occurs, operation is undertaken in spite of previous unfavorable results. His experience in the Heidelberg surgical clinic was then given in detail, gastro-enterostomy alone giving good results. After the operation wound heals, internal treatment for the gastric ulcer is indicated.

SECOND SESSION.

Discussion upon the **diagnosis and treatment of gastric ulcer.** Leo, Bonn, uses the stomach tube for estimating the hyperacidity, and, when stagnation of the gastric contents exists, for washing out the stomach. Pariser, Homburg, considers a dorsal point of pressure a constant and valuable symptom of fresh ulceration. Minkowski, Cologne, calls attention to the fact that hemorrhage may occur with gall stones or from the rupture of an aneurysm of the aorta into the stomach or esophagus. Sahli, Berne, states that gastro-enterostomy is indicated in anatomical, but not in functional, stenosis of the pylorus. Internal treatment should begin early; rest in bed is essential; while operation becomes necessary, should perforation occur. Strauss, Berlin, considers rectal examination for metastases, and radiography of the mediastinal glands important in the differential diagnosis between gastric ulcer and cancer. von Schrötter, sr., Vienna, states that enlarged supraclavicular lymphglands are very suspicious of cancer. Bial, Kissingen; Ageron, Rumpel, and Lenhartz, Hamburg; Schultze, Bonn; and von Mering, Halle, took part in the discussion.

von Leyden, Berlin, then demonstrated the **parasite of cancer.** He reviewed the statistics and theories of cancer. von Hansemann's theory of cell anaplasia is insufficient, and he opposes Ribbert's theory, because the parasite not only does not destroy the cells, but causes an increase in the cells. Botanists noted the similarity between cabbage hernia and human carcinoma 20 years ago, as Woronin and Labaschin have shown. Besides, the constant irritation of a living body alone can explain the continued growth of cancer cells. Symptoms of cancer resemble those of an infectious disease. Cancer has been transmitted from animal to animal by inoculation; and it is probably contagious in man. He then fully described the intracellular parasite which he has observed. This resembles a bird's eyes, and is only found in fresh specimens. He has also noted sporulation forms, for which degenerated cells cannot be mistaken. He had seen gastric cancer follow the ingestion of cancer juice. Naunyn, Strassburg, had also seen a physician die of gastric cancer 3 months after having, by mistake, swallowed the gastric contents removed from a patient with cancer of the stomach.

(To be continued.)

Special Article.

A CRITICISM OF EHRLICH'S THEORY OF IMMUNITY.

The theory of immunity propounded by Ehrlich, in which he explains its occurrence by the supposition of the existence in the cell and, under certain circumstances, the excessive production by the cell, of substances which unite with a neutralizing toxin, is so strikingly original and has been supported by such ingenious experiments that in recent times it may fairly be said to have pushed aside all other theories of immunity. Briefly stated, that theory presupposes the existence in the organism of certain chemical substances, probably very complex, which are capable of forming nonpathogenic chemical compounds with the poison. The formation of these compounds stimulates the protoplasm of the cells to the formation of similar bodies in excess. These are cast off and, dissolved in the blood, circulate through the body. In the blood they unite at once with any toxin that may be introduced into the body and prevent all manifestations of disease. As they have no physiological activity, their destruction by union with toxins produces no symptoms. Such bodies are known as "Seitenketten" or lateral chains. Of course, it is necessary to presuppose the existence of numerous lateral chains, substances in the protoplasm of the cells, each adapted to some particular poison; so that, when that poison is introduced into the organism, only the particular lateral chains specially capable of uniting with it and inhibiting its activity are produced in excess: therefore immunity is specific. Criticism may be of two kinds: constructive and destructive. In the absence of a better theory of immunity, bacteriologists and physiologists have hesitated to attack Ehrlich's views. As, however, if a theory is demonstrably wrong, it is desirable that this should be recognized at once, should Ehrlich's views be inconsistent with the data acquired by observation, destructive criticism should not be withheld, and Gruber (*Münchener med. Wochenschrift*, No. 12, 1901), believing that these theories are not in accordance with the experimental evidence, has subjected them to a very sharp analysis. He calls attention to the following established facts: First, that a neutral mixture of snake toxin and antitoxin heated to 68° C. becomes again toxic. This was explained by supposing that the antitoxin which irritates the living cells to defend themselves, is destroyed by the heat; or that the chemical combinations are so loose that they do not interfere with the efficiency of the toxin molecule when it is broken up. It was then observed that the amount of antitoxin necessary to neutralize an attenuated toxin was the same as that required to neutralize a toxin of full virulence. This gave rise to the introduction of a great variety of technical terms. The toxin was supposed to consist of numerous atom complexes, some of which were toxic and some of which had an affinity for the antitoxin. The latter were called the haptophores, and the former the toxophores. There is a persistent but very gradual tendency in all toxic solutions for the toxophores gradually to disintegrate, whilst the haptophores remain unchanged, and when this process is complete the term toxoid is applied to the solution. Toxoid solutions may produce edema and paresis, but not the specific symptoms of the intoxication. Such solutions also contain toxons, substances which have less affinity for the antitoxin than the toxoids and toxins themselves. Gruber contends that we are not justified in assuming that the activity of the toxic solution is diminished by a gradual alteration of its molecules. Rather, he thinks, it is equally satisfactory to maintain that it is due to the formation of combinations between the toxic molecules and other substances in the liquid which inhibit their action without destroying them. There are certain facts about the toxins which remove them from the domain of ordinary chemical substances: Their extremely poisonous character; the fact that after injection a certain incubation period occurs before the symptoms are developed; their rapid disappearance from the blood when injected into animals; their absence from tissues specifically affected by them, as for example the brain and spinal cord. The last fact seems in favor of Ehrlich's theory. He asserted that the toxin united with the lateral chains in the central nervous system, and his statements were further supported by Wassermann, who showed that a mixture of the central nervous system and tetanus toxin lost its poisonous effects. But Behring has shown that a partially neutralized mixture of toxin and brain substance requires as much antitoxin to neutralize it completely as the pure toxin does. Therefore there is no reason for believing that the tetanus toxin unites with the lateral chains in the central nervous system. And other experiments have shown that in many susceptible animals no neutralization whatever occurs in the mixture of tetanus toxin and central nervous substance. It appears doubtful then if incubation is a sign of peculiar physiological activity, because it has been shown that in tetanus at least it depends upon the slowness with which the nervous system absorbs the toxin from the blood, and the period can be reduced to a few minutes by direct intracerebral inoculation. Gruber therefore believes that facts which would prove a substantial basis for Ehrlich's theory do not exist, and it seems more likely that the formation of antitoxin is to be looked upon as a secretion with the object of replacing some essential substance, a secretion which may be stimulated by over-doses of toxin. And, curiously enough, there is some reason to believe that this secretion may take place in some part of the body far removed from that in which the toxin is active. Thus, in some animals the secretion of antitoxin may continue, whilst all the ordinary manifestations of tetanus are present. Moreover, in some nonsusceptible animals antitoxin may be formed very readily as a result of injection of numerous doses of toxin. And even these animals can often be readily killed by an intracerebral injection of a minimal dose of toxin.

It must be said that Gruber's objections to Ehrlich's theories are not all valid. Many of them depend upon the observations of single men, and almost all these observations are apparently of an extraordinary nature. Nevertheless, if, as he seems

to have shown, the antitoxin is formed in other than the susceptible tisssues of the body, there are strong reasons for believing that it is not brought about solely by the irritating action of the toxin upon the protoplasm. At any rate, his article subserves a useful purpose in that it calls our attention to the fact that there are some things among the toxins and antitoxins apparently not entirely in consonance with the theories of Dr. Paul Ehrlich.

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

January 16, 1902.

1. On the Connection Between General Diseases and Diseases of the Eye-Grounds. M. LITTEN.
2. The Results of Vital Staining of the Blood. H. ROSIN and C. BIBERGEIL.
3. On the Cause of the Abnormal Growths in Cabbages. (Plasmodiaphora Brassica Woronin). FEINBERG.
4. On the Parasitic Etiology of Carcinoma. D. v. HANSEMANN.
5. On Plague. (Continuation). W. KOLLE and E. MARTINI.
6. On the Sequels of Dysentery. (Conclusion). HAASLER.

1.—Litten goes into a somewhat extensive discussion of the physical signs which he first reported in 1879. At that time he drew attention to some very **peculiar changes in the eye-grounds which occurred in cases of sepsis.** They consist in white spots, of roundish or oval shape, which are always situated in the immediate neighborhood of the papilla, and never in that of the macula lutea. They are never arranged in the netlike form that is seen in Bright's disease. They are usually associated with numerous hemorrhages. He at first thought these definitely indicated that the case in which they occurred was an absolutely fatal one; subsequent investigations, however, have convinced him that Hernheiser was right in saying that death does not occur in all cases, and that the spots are observed in but from 30 to 40% of the cases of sepsis. They are, therefore, of no prognostic value; but, from a diagnostic standpoint, when present, Litten considers them of the utmost value, and believes that they **indicate general septic conditions or malignant endocarditis.** Cases in which doubt arises as to the nature of the disease, even when spots similar to these have been found, certainly belong to extreme exceptions; and, while in one or 2 instances he has found spots closely similar to these, he considers such cases so rare as not greatly to interfere with their diagnostic value. As to their nature, he considers them to be due to a lymph exudation, and coagulation of this exudate. [D. L. E.]

2.—The method which the authors used consisted in **placing a thin smear of stain on the coverglass, and then spreading blood on the coverglass in a thin smear.** The coverglass was then at once examined (as in examining a hanging drop), with a concave slide; it was made airtight with paraffine. By this method, they examined blood fresh and living, and claim that they can follow the different periods of its death. When properly prepared, these specimens will remain for days—perhaps almost a week—without any notable change, except in the bloodplates. The leukocytes can be observed even after 48 hours to be in marked ameboid movement. The authors insist that they observed **ameboid movements in lymphocytes** also. They likewise observed ameboid movements in all white cells, including the lymphocytes. In the bloodplaques they observed a very refractive inner substance, marked off from the outer substance, the outline of it being very irregular. In severe anemias they often observed a very rapid destruction of the red cells, resulting from an abnormal degree of hemolysis. They then discuss their results in staining with methlyene blue. (To be continued). [D. L. E.]

3.—The study was undertaken because of the **similarity between this disease of plants and carcinoma in human beings,** and because parasites are known to exist in the former. The author insists, however, that differences must be admitted to be present; in particular, that spores cannot be present in human tumors, while they are found in enormous numbers in the plant disease. He notes that he finds cells which are stuffed full of spores, cells which contain fully grown amebae, and other cells which show transition forms from the spores to the plasmodia. The nucleus of the fullgrown ameba consists of a nuclear body and, surrounding this, a clear, unstained zone, which is sharply defined from the plasma. The author strongly emphasizes this form of the nucleus. He also notes that in all unicellular organisms which he has studied, he has found the same characteristics of the nucleus, and describes a similar appearance in a malarial plasmodium. [D. L. E.]

5.—Plague serum has some distinct curative influence in mice with cultures of very slight virulence. The authors, however, consider that it is absolutely impossible to draw any conclusions as to the effect upon human beings, from the study of the plague serum in animals; for the infection in human beings is almost always extremely virulent. Agglutination with the plague serum is an absolutely specific process. The authors were unable to find any agglutination with any other organisms than plague bacilli. They were also unable to find any agglutination of plague bacilli in experiments with the serum of 38 persons who were partly healthy and partly subjects of tuberculosis. They regularly found marked positive agglutination in the serum of animals injected with the plague bacilli. [D. L. E.]

6.—Haasler states that in 2 cases with liver abscess the cause of death was bleeding from the intestines, and he believes it must be recognized that there is a **close relation between intestinal hemorrhage and liver abscess.** It should be remembered that hemorrhage is common in other liver diseases. In these cases icterus was absent. Abscess of the spleen was found twice. In 2 cases there were infarcts of the kidneys; in one, of the femoral artery; in the other, of both brachial arteries. In these cases changes in the heart valves and in the endocardium were not discovered; but in all of them, with one exception, severe disease of the lungs was present, and the embolus probably came from this source. Haasler insists upon the **frequency of disease of the lungs as a complication of dysentery.** In discussing the treatment, he states that in the stage of ulceration flushing of the intestine should be carried out with the greatest care, if undertaken at all. When pleuritic complications arise, one should think of a subphrenic source of the pus. In 3 of the author's cases there was such a source: **twice, liver abscess; once, splenic abscess.** Dysenteric abscesses of the liver or spleen can only rarely be treated satisfactorily by surgical means, because of their situation and multiplicity. The frequent involvement of the appendix and the region about the appendix may often lead to appendicitis after the primary disease has been cured. Cardiac and renal complications are comparatively rare.

A Case of Bradycardia with Apoplectiform, Epileptic, and Syncopal Attacks.—Marcel Labbé reports the case of a woman of 57, who had had attacks of dyspnea upon exertion all her life. She was always exceedingly nervous, having attacks of syncope from emotion. The attacks began with nausea, and then she either became unconscious or had a convulsion, without biting her tongue. Her pulse varies from 20 to 30 a minute, and is of low tension but regular. A capillary pulse is plainly visible under the finger nails. A systolic murmur is heard, most intense over the pulmonary area, while the second sound is reduplicated, and a faint diastolic murmur is audible. Ammonium valerianate alone had any effect upon her nervousness. Labbé believes that this is a case of probable congenital communication between the two ventricles. The bradycardia shows no relation to the amount of arteriosclerosis. As the attacks are decidedly bulbar in character, Labbé thinks that they may be due to a disturbance of the bulbar circulation caused by the cardiac condition. (*Bulletins et Memoires de la Société Médicale des Hopitaux de Paris*, July 25, 1901, No. 26). [M. O.]

A Substitute for Cover-Glasses.—Pranter (*Zeitschr. f. wissenschaftliche Mikroscopie*, Vol. XVIII, No. 2) suggests the use of gelatine paper instead of the expensive and fragile cover-glasses. The gelatine is insoluble in strong alcohol, ether, cloroform, benzine, xylol and fatty and ethereal oils. It, therefore, will answer all purposes, except when water, glycerine or alkalies are used. [A. R.]

Original Articles.

A CASE OF HEMATOPORPHYRINURIA.*

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The patient was first seen December 7, 1901, with Dr. A. McAlister, of Camden, N. J. She is a widow, aged 50, the mother of three children, and had always been well till about seven years ago, when she was found to have a uterine fibroid which was successfully removed a little later. Since then, too, she has been in fair health, although through the entire period she had been taking as a hypnotic twenty to sixty grains nightly of sulphonal, more frequently the larger quantity. Her children reported that they had observed no symptoms of failing strength until the last few months, and these were not pronounced. They were, however, aware that for some months the urine had been of an unusually dark color.

On Friday, November 29, she sent for Dr. McAlister, complaining of very severe pain across the upper part of the abdomen, so severe as to require hypodermic injections of morphine of which, at first, she received two a day. Under this treatment there seemed to be no abatement of her symptoms which included constipation. Dr. McAlister had, however, secured one or two unsatisfactory actions of the bowels. Within forty-eight hours previous to our visit her abdomen became markedly tympanitic, assuming a hemispherical shape something like that characterizing advanced pregnancy.

At the time of the first visit she was found in bed with dry tongue and appearance of stupor, but still easily aroused and ready to carry on quite a train of conversation if encouraged to talk about herself. The pulse was feeble, about 106, the breathing rate corresponding. The normal liver dulness was obscured by extreme tympany. There was some dark-hued urine at hand, but as it was evening it was impossible to distinguish tints of color and it was rather hastily regarded as a bile-stained urine. Placing this fact alongside of the apparently diminished size of the liver, it was thought to be a case of acute yellow atrophy. By daylight, however, the color of the urine proved to be a port-wine red, and on further examination was found to contain a trace of albumin and a small number of pale granular and epithelial casts. Hematoporphyrinuria was immediately suspected.

Sulphonal was introduced into practice as a hypnotic in 1888, and about 100 cases of hematoporphyrinuria from sulphonal poisoning have been reported since that time. A careful study of many of the case-reports shows that in the majority of instances the passage of very dark or of abnormally pigmented urine was considered sufficient evidence of the existence of hematoporphyrinuria; only in a small minority of the cases was the substance isolated from the urine and chemically identified.

The recognition of the hematoporphyrin is not difficult. An exact method available for quantitative determinations will be described below; for clinical purposes the following is sufficient:

Barium mixture, (consisting of one part of saturated nitrate of barium solution and two parts of concentrated baryta water) is added to the specimen of urine; a precipitate forms, containing the bulk of the hematoporphyrin and of other pigments that may be contained in the urine; the barium precipitate is filtered off, washed and extracted with dilute hydrochloric acid alcohol. If hematoporphyrin is present, this extract will be of a reddish or a pinkish hue and will show fluorescence; if heated on the water bath, the alcoholic solution will turn much darker.

If necessary, a spectroscopic examination of the solution may be made that will reveal certain typical features, viz: A narrow absorption band between C and D in the yellow, and a second, broader band between D and E, between the yellow and the green. If the solution is alkalized, four absorption bands will appear, one between C and D, two between D and E, and a fourth very dark band between b and F, i. e. between the green and the blue of the spectrum. All these features are quite typical and characteristic for hematoporphyrin.

Four specimens of the urine were analyzed representing the total quantity voided in 24 hours on the four days after the administration of the drug was stopped. The first specimen was of a dark port-wine color, the second one was not quite so dark, the third one was light red, and the fourth was essentially normal in color.

The quantities voided were normal (1500 cc., 1420, 1400, 1500). The specific gravity fluctuated between 1018 and 1022 and was, therefore, normal. The reaction was slightly acid in all four specimens.

The first two specimens contained traces of albumin and a small number of pale granular, hyaline and epithelial casts. The second two contained no albumin.

None of the samples contained bilepigment, bile-acids, urobilin, indican, or sugar. Hemoglobin or other derivatives of hemoglobin excepting hematoporphyrin were not detected. The presence of hematoporphyrin was determined by the above method with the aid of spectroscopical tests. The fourth specimen contained only minimal traces of hematoporphyrin.

A quantitative test of the hematoporphyrin contained in the first three urines was made as follows:

One hundred cubic centimeters of the urine were alkalized with a dilute sodium carbonate solution and precipitated with calcium chloride, again alkalized with sodium carbonate and the precipitate filtered off. The filtrate was yellowish-brown and showed no spectroscopical bands; the precipitate was colored dark red. The latter was repeatedly washed with distilled water until the filtrate was free from chlorine, then washed with absolute alcohol and finally extracted with warm dilute hydrochloric acid alcohol. From the pink alcoholic solution the pigment was precipitated with water and the solution neutralized with dilute ammonia. The flocculent precipitate was collected on a filter and washed with distilled water until the filtrate no longer gave chlorine reactions;

*Read at the seventeenth annual meeting of the Association of American Physicians.

then it was washed with absolute alcohol and ether, dessicated over concentrated sulphuric acid *in vacuo* and, finally, dried at 115°C. In this way *0.406gm.* of a brown amorphous powder were obtained.

In order to determine how much of this substance was organic, i. e. pigment, and how much inorganic, *0.3815gm.* were heated in a crucible until a constant weight was obtained; there remained *0.2747gm* of inorganic residue. The *0.3845gm* of powder, therefore, contained *0.1098gm* of hematoporphyrin or 25.9%. *One hundred cubic centimeters of urine, therefore, contained 0.105gm of hematoporphyrin.*

One hundred cubic centimeters of the *second* contained *0.0714gm* of hematoporphyrin; 100 cc. of the *third* sample contained *0.006gm* of hematoporphyrin.

Computed for the total quantity of urine, it was found that *specimen I contained 1.85gm of hematoporphyrin, specimen II, 1.013gm and specimen III 0.098gm of hematoporphyrin.*

These figures enable us to estimate the amount of blood pigment that was destroyed in 24 hours in order to furnish these amounts of urinary pigment. Hematoporphyrin has the same empiric formula as bilirubin (C_{32} H_{36} N_4 O_6). According to Nencki and Sieber, (quoted from Salkowski) a given quantity of bilirubin (or of hematoporphyrin) corresponds approximately to an equal quantity of hematin (C_{32} H_{32} N_4 O_4 Fe, *plus* $2H_2O$ *minus* Fe). As hematin contains 9% of iron and hemoglobin only 0.42% of iron, 1.63 gm. of hematoporphyrin (sample I) are derived from 35. 1 gm of hemoglobin.

This is a comparatively large quantity of blood pigment, for an adult individual of an average weight of from 60 to 70 kilograms contains about 600 gm. of hemoglobin (Salkowski.) It will be seen, therefore, that *in this case about one-seventeenth of the hemoglobin was destroyed and wasted in the urine during 24 hours in the form of hematoporphyrin.*

We can well understand how such a loss of blood pigment sustained for a prolonged period of time must lead to severe degrees of anemia.

In our case happily the administration of sulphonal was stopped in good time so that the loss was inhibited, a regeneration of the blood could occur and the patient recovered.

POLYHYDRAMNIOS; ITS DIFFERENTIAL DIAGNOSIS AND TREATMENT, WITH THE REPORT OF CASES.

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The following cases, occurring recently, illustrate the clinical history, diagnosis and treatment of this condition:

CASE 1.—Seen in consultation with Dr. Loeb. A multipara, aged 40. Mother died of heart disease, father of dysentery. She had born a number of children without dystocia; gave no history of puerperal septic infection, but stated that during the present pregnancy her appetite had been poor and she had suffered much from enlargement of the abdomen, dyspnea and inability to sleep. On examination, the abdomen was greatly distended, fetal heart sounds could not be heard, ballottement could not be obtained, no presenting part could be felt, but by palpation a hard body could be indistinctly outlined within the womb. The patient was admitted to the Jefferson Maternity. Her dyspnea increased so rapidly and her general condition was so poor that interference was imperative.

On examination, the internal os was tightly closed. Under antiseptic precautions, McLean's bag was introduced into the cervix, but two hours after its introduction the patient pulled it out, causing a tear in the cervix, from which considerable blood was lost. An hour afterward the patient's condition demanded that the uterus be emptied as speedily as possible. She was accordingly placed upon a table, a broad bandage laid across the abdomen to assistants, who pulled downward and backward upon the bandage, making continuous and firm pressure. The membranes were then ruptured and eleven quarts of amniotic fluid gradually escaped, the fingers plugging up the cervix to prevent the rapid flow of fluid. As the fluid escaped, the pressure upon the abdomen was increased, the fetus turned transversely and was delivered by podalic version. The patient was controlled by partial anesthesia, the placenta removed, the uterus thoroughly douched with creolin 1% and packed with iodoform gauze. The patient received one pint of saline fluid by intravenous transfusion. Strychnine and ergot were given freely and the patient rallied well from the delivery. A large pad was placed above the uterus and the abdomen was firmly bandaged by a many-tailed abdominal binder. The patient made an uninterrupted recovery.

Although the fetus moved after birth, it did not breathe. Its cranium was abnormally shaped, the occipital bone having completely developed, while other portions of the cranium were markedly deficient. Upon autopsy the thoracic and abdominal viscera were normal. A small quantity of unorganized gray matter took the place of the brain. No cerebrum was present. The spinal cord was rudimentary in development, its membranous covering being absent.

CASE 2.—Multipara, aged 31, was sent to the Jefferson Hospital for the removal of a cystic tumor and referred to me at the the Maternity. The patient's father died of phthisis. She had had seven children: the first was delivered by forceps, the others spontaneously. During previous pregnancies, her general health had been excellent; she had no nausea and could do her housework during the entire time. During the present pregnancy, her general health had been excessively poor. Early in pregnancy she had much nausea, and lately the abdomen had enlarged so rapidly that she could not lie down, and suffered greatly from dyspnea. She menstruated last in October, and was 5 months advanced in pregnancy. The abdomen had been larger than normal throughout the entire pregnancy, but distension had been especially rapid for the last six or eight weeks. Urine: deep amber, specific gravity, 1028; acid; urea, 1.8%; no microscopical debris. Blood: Red bloodcells, 4,500,000; white cells, 4,800; hemoglobin, 65%; color index, .68.

On examination, the abdomen was uniformly enlarged, the distension being so great as to embarrass respiration seriously. Over the center of the abdomen dulness was heard upon percussion with moderate tympany over the transverse, ascending and descending colon. No fetal parts could be felt by palpation, nor could heart sounds be heard. The thoracic organs were normal, with the exception of a few rales over the bronchial tubes and a disturbed action of the heart. Upon vaginal examination the pelvic floor was elastic and the cervix had been lacerated in former labors. The finger could be readily carried through the cervix and against the membranes, which were not tense. A body giving the sensation of a small fetal head dropped against the finger upon introduction, and ballottement could be very distinctly obtained with an appreciable interval of time between the first and second impact of the presenting part. A diagnosis of rapidly increasing polyhydramnios was made and the patient readily agreed to the termination of pregnancy.

The patient was antiseptically prepared for operation, and the membranes were ruptured at 12.40 P. M. on the following day. About 2 gallons of fluid were allowed to escape gradually, when the presenting part was allowed to come against the cervix to check the flow of fluid. Compression was made over the abdomen during the removal of the fluid, and a many-tailed abdominal binder was afterward applied. Labor pains soon followed the removal of the fluid, at about 3 o'clock a male child was expelled,

and 10 minutes later a second male fetus within its amniotic sac. There was one chorion, but two amnions. Both cords were attached to the same placenta, which was abnormally large, very thick and with its tissues in a condition of apparent coagulation. The cord of the first child born was remarkable for large and tortuous veins, while its jelly was granular in appearance with areas of cystic degeneration. This cord had a lateral attachment to the placenta, 20 centimeters distant from the attachment of the other cord. The entire specimen was at once sent to the pathological laboratory of the Jefferson College, where complete examination of the specimen was made as follows:

PATHOLOGICAL REPORT.—Placenta and two male fetuses.

There is a single ovoidal placenta which, when spread out, measures 29x18 cm. The end to which the larger fetus is attached is somewhat the larger; the cord of the larger fetus possesses a marginal attachment; that of the smaller fetus is 2 cm. from the free margin of the placenta. The placenta on the side of the larger fetus has a maximum thickness of 2 cm. and is on the whole thicker as well as larger than the opposite end.

The amnion surrounding the larger fetus is evidently much thickened and quite opaque. The opacity is not uniform, but at no point is the membrane so clear or thin as the amnion covering the smaller fetus. While the membrane is, as a whole, thicker and more opaque, the opacity shows a notable intensification in two ways: (1) There is a mottling or flecking formed by rather whitish or grayish white dots, for the most part 2 to 5 mm. in diameter, although a few are larger. These dots are quite opaque in their centers but at the margins fade off more or less gradually to the opacity of the remainder of the membrane. (2) In addition to the flecked opacity there is an equally marked, though less abundant, striation by rather regular bands that interlace in different directions, forming a sort of net-work. These bands vary in width from 1 to 4 or 5 mm. Many of these bands run in a more or less tortuous manner and at the ends either gradually thinned and were lost or split into branches that united with other similar branches or merged into the membrane.

The amnion of the smaller fetus showed nothing noteworthy.

The larger fetus, the amniotic sac of which is abnormal, measures 30 cm. in length and weighs 550 gm. The umbilical cord is 29 cm. in length, irregular in its contour, being bossed or tuberous as a result of lateral sacculations. The jelly is unusually translucent and the contained vessels can be seen throughout the major part of the cord. The vessels are dark, extremely tortuous and irregularly dilated.

The cord is much thicker than the cord of the other fetus, possessing a transverse diameter that varies between one and two cm.

The smaller fetus is 27 cm. in length and weighs 365 gm. It is very much more cyanosed than the other; the cord possesses a maximum transverse diameter of 0.6 cm. There is very little twisting of the cord and it seems flat. It is not nearly so translucent as the other and the vessels are not tortuous.

Both fetuses were examined with care, but no visceral abnormality could be detected. The serous cavities of the larger fetus contained possibly a little more fluid than normal, certainly more than the same cavities in the smaller fetus, and there was a suggestion of subcutaneous edema, but it was not marked. A careful examination failed to disclose any gross lesion involving the vascular system of either fetus.

Blocks from a number of points in the placenta, parts of both cords and both amnions, were fixed in Bensley's solution, washed in water, dehydrated, infiltrated, sectioned and the sections stained by approved laboratory methods.

Histology: Cord of the smaller fetus on transverse section was at some points but a thin band, in other sections ovoidal and in still others stellate, having three points in each of which was a vessel; the star-like points were rounded and measured from 1.5 to 2 mm. in width.

Microscopically the cord was surrounded completely by the layers of the amnion. The ectodermal cells were very distinct and clear and several layers were present. The basement layer consisted of small cuboidal cells that took the stain more deeply than those of the upper layers. The cells of the upper layers were comparatively large and polygonal in shape. The nuclei in all stained well and were large and prominent. The tissue immediately beneath the cells was denser than that nearer the center. Just beneath this dense layer were small masses that took the eosin quite deeply. These formed an irregular area almost around the cord. They were apparently bundles of fibrous connective tissue extending longitudinally. No nuclei were visible in these areas.

The middle of the cord consisted of both embryonic and fully developed connective tissue. The latter seemed to predominate and was prominent, especially in the neighborhood of the vessels. Between these and the periphery the cells were more stellate in type though not of the youngest form. The intercellular spaces were almost entirely filled with a hyaline, faintly acidophilic substance quite free from granules.

The vessels were well developed. The umbilical vein and one artery contained clotted blood. The other artery was free from cells. The stromal tissue was condensed around the periphery of the vessels forming an adventitia. The cells of this tissue were spindle-shaped. The involuntary muscle fibers of the media were well developed; in one of the arteries the media was clearly in excess. In this vessel the intima was greatly thickened, the thickening being more conspicuous on one side than the other, leading to the appearance of nodular thickening of the structure. The extra laminæ were of coarsely fibrillated tissue, containing but few cellular elements. Stains for elastica yielded no satisfactory reaction. The wall of the vein did not show in any of the sections examined any noteworthy abnormality.

Besides these openings a fourth was noted. This was slit-like on transverse section resembling an excavation point—situated midway between the two arteries, and had neither muscular nor adventitial coat, although the surrounding tissue was somewhat condensed. The lining consisted of 2 or 3 layers of squamous cells. This opening was not present in all sections, and apparently occurs here and there in the cord and is not a continuous cavity.

Cord of the larger fetus: After fixation this cord at the point sectioned was 1 cm. in its long diameter and 0.8 cm. in the other. The ectodermal cells covering the cord were flatter, smaller and less distinct than in the previous cord, and the stromal tissue not far advanced in development. There was little fully developed connective tissue even in the region of the vessels. Neither was there an adventitia as in the above cord. The stellate cells were large and quite numerous and possessed many processes and, although there was considerable intercellular substance, the intercellular spaces were numerous and quite large. They were especially well marked towards the periphery. The stellate cells seemed to be younger than those of the previous section. On the whole the appearance outside of the vessels was very much like an irregular network. Some spaces were exceedingly large and appeared as though they might have been distended by some fluid, the picture being that of an extremely edematous tissue.

One artery and the vein showed no abnormality. The remaining artery showed a notable thickening of the intima, nodular in character similar to, but more marked than, that already described in the other cord. Next to the abnormal artery and between this structure and the vein was a small group of cells apparently identical with those covering the cord; the outermost of this group were somewhat flattened and concentrically arranged while those occupying the center were irregularly grouped. The appearance was suggestive of that resulting from incomplete closure of a canal.

The amnion of the larger fetus was opaque and unusually thick. Microscopically in surface view it showed thick bands of tissue running in various directions. These bands were quite dense and contained many reddish-staining nuclei, many of these resembling those of nonstriated muscle fiber. They were not noticed in slides of the normal amnion. Between these bands the spaces were filled with cells large and small that took the stain fairly well. These cells varied considerably in size and showed a granular protoplasm. They were projected upon the bands also

The tissue between the cells took the stains lightly and seemed finely granular and nearly homogeneous.

Upon section the membrane showed a covering of large irregular cells (ectodermal) arranged in several layers. At some points but two layers of these cells were present, while in other areas irregularly piled cells without lamination were grouped on the surface of the membrane. From their grouping and number it is reasonable to assume that the flecking observed in the gross specimen was due to the accumulation of cells here mentioned. The nuclei of these cells showed prominently and the protoplasm stained but faintly. The nuclei were granular and were, no doubt, the structures described as cells in the description of the surface view of the amnion. The cell margin was not clearly visible either on surface view or on section. The tissue beneath appeared easily separable into layers and in these the nuclei were abundant and prominent; they were rodshaped, oval or round. In the bands already referred to the resemblance to involuntary muscle fibers was pronounced. The specimens studied seemed to be chiefly sections of the dense bands. On the side opposite to the ectodermal cells was noted a single layer of flat squamous cells. The nuclei were darkly stained and distinct, slender and on section rodshaped in structure. They were smaller than the nuclei in the middle part of the membrane.

The placenta was for the most part apparently normal. Sections from a number of points showed no abnormality except that on the fetal surface there was a massing of cells quite like that described as present on the cord. In the superficial part of the chorion above the villi one occasionly observed groups of lymphoid cells sometimes alone and at other points mixed with larger cell elements resembling those of the syncytium. Some of the arteries near the area of cord implantation showed obliterate changes similar to those already described as present in the diseased trunks. The villi were well developed and the intervillous spaces filled with blood. The cells covering the villi as well as the villous matrix were apparently normal.

The mother made an uninterrupted recovery.

CASE 3.—A primipara was seen at the request of her physician who was ill. There was a family history of tuberculosis, and the patient was not an especially strong woman, but had been better than usual in general health during her pregnancy. Between the second and third months of gestation, she had been greatly frightened by a lightning-stroke which injured property very near her dwelling. She had completed nine months of gestation, and had been much annoyed by pressure symptoms on the right side and in the right thigh. She thought that the child had recently descended low in the pelvis.

On examination her pelvis was of average size. The fundus of the uterus was a hand's breadth above the umbilicus, the tissues above the uterus were much distended, the back of the fetus was upon the left side, its heart sounds left anterior at the pelvic brim and not loud. The head could not be distinctly made out by palpation. On vaginal examination the cervix was very little dilated and but little shortened. A small presenting part (the head) was at the pelvic brim scarcely engaged. The patient had very slight and annoying intermittent uterine contractions, but no positive labor pains. She was given bromides to secure sleep. On the following day, regular uterine contractions occurred with slow dilatation, a small presenting part remaining high up and movable. The amniotic liquid was evidently in excess. When the membranes ruptured, the fetal head at once descended to the pelvic floor, where progress ceased. As the patient was highly nervous, and becoming exhausted, she was delivered by forceps under ether. When the head was born, on inserting the finger to feel for the umbilical cord, the finger passed into the spinal canal through an opening in the lower cervical and upper dorsal region. The child, a male, weighing 5½ pounds, was readily extracted. It breathed feebly, and lived about 10 minutes. While the cranium, although small in size, was well formed, the arches of the vertebræ were lacking in the lower cervical and upper dorsal regions and a meningocele was present. The child was otherwise well developed. The placenta was removed entire by hand, was larger and thicker than it should have been in proportion to the size of the child, but presented no evident anomaly in its vessels. The cord was excessively long and wound in a perfect spiral from left to right. A slight laceration of the pelvic floor and perineum was immediately closed. Precautions were taken to prevent hemorrhage by the use of a hot intra-uterine lysol douche followed by packing with iodoform gauze. The patient was stimulated freely and made an uninterrupted recovery.

Upon inquiry no history could be obtained of the occurrence of malformation or deformity in either the family of the patient or that of her husband. The fright in the early portion of pregnancy was the only abnormality which could be found in the case.

CASE 4.—Primipara, white, aged 18. Mother died in confinement and cause not stated. Pelvis narrowed at the lower portion, expanded at the brim symmetrically; the urine normal, the patient fairly well nourished and suffered little during pregnancy. Complained of pain in the right upper portion of the abdomen, dyspnea and sleeplessness. On examination, abdominal distension marked, fetus could not be outlined, nor could fetal heart sounds be distinctly heard; the patient's lower limbs were considerably swollen, her heart action labored. The patient complained of indefinite pains for several days, when the os was found fully dilated. The patient was given tincture of nux vomica and ergot, the membranes were ruptured and compression applied to the abdomen. When the membranes ruptured, the head immediately engaged, the child decided and was allowed to emerge from the body of the mother gradually.

The placenta was removed, the uterus douched and packed with gauze. The mother made an uninterrupted recovery. The fetus gasped, but did not breathe; its heart beat persisted for three-quarters of an hour, in spite of respiratory failure. Upon autopsy, general dropsy was found, and in the abdomen and pericardium a large quantity of fluid. The lungs were edematous, the kidneys showed atrophy of the pyramids and the liver was softened and enlarged. The cord was shorter than the average, the placenta boggy, light in color, large and friable. The decidua was much roughened, resembling a fibrinous exudate.

CASE 5.—Multipara, with moderate quantity of fluid. Dilatation well advanced, but pains inefficient because of overdistension of the uterus. Made patient sit on a bucket, punctured membranes and allowed several quarts of fluid to escape. Gave quinine and ergot. The child was speedily delivered; it failed to nourish properly, and died in ten days with symptoms of intestinal obstruction.

The literature upon the pathology of hydramnios is so extensive that it permits but brief reference to the most recent. By hydramnios or polyhydramnios is meant the presence of more than two pints of amniotic liquid at full term. This quantity may be as large as seven gallons in a human species. In an animal 135 liters have been present. We know little regarding the composition of the amniotic liquid. Certain drugs have been found in this liquid, sugar is occasionally present, the quantity of urea contained in it varies; in some cases it is stained by meconium, while in other cases it contains abundant leukocytes and may even resemble diluted pus.

The pathology of hydramnios still awaits complete explanation. The old statement of Guillemet (*Thèse Paris*, 1876), that hydramnios has no pathological anatomy, is largely true. No constant changes attend this condition. The placenta may be larger than usual, boggy, dropsical and infiltrated. In case two, the vasa propria beneath the amnion were distinctly enlarged, to which attention has been called by Jungbluth (*Archiv für Gynäkologie*, Band 4, page 554, 1872). The amnion and chorion may be thickened or may not be altered. Viti (Bull. de Soc. tra. i cult. d. sc. med. in Siena, III, 196-200; 225-228, 1885) found the epithelial layer of the amnion intersected by large fissures, and subepithelial fibers freely exposed, the protoplasm of the cells granulated, with fatty degeneration. He experimented upon the passage of fluids through the

arteries and veins into the placenta by injecting different fluids, and found that seven times the quantity of fluid escaped through the veins that escaped through the arteries. Any fetal condition causing venous engorgement tends to produce polyhydramnios, and this condition, so far as the fetus is concerned, has been likened to the dropsy of adult life caused by disease of the heart or liver. In some cases the formation of irritating (lymphagogue) substances causes polyhydramnios, as shown by Opitz (*Centralbl. f. Gynäkologie*, p. 553, 1898).

A natural theory has been that the liquor amnii is fetal urine and that polyhydramnios indicates increased renal action, but in some cases the kidneys show no lesions, the urethra may be occluded or absent, and even the kidneys may be absent and still polyhydramnios be present. Bar (*Thèse Paris*, 1881) has well stated the older theories, none of which explain all of the phenomena present. Case three of this paper illustrates one theory for polyhydramnios, that the fluid is an excessive secretion from the cerebrospinal canal of the fetus. In this case, the open canal and meningocele give strength to this supposition. Where polyhydramnios follows a blow or fall, flaky deposits are sometimes seen on the surface of the amnion and have been supposed to result from the traumatism preceding labor. It seems reasonable to suppose that lymph can pass freely through the stomata of the amnion. In twins, one fetal sac may contain excessive fluid while the other does not, as was seen in case two of this paper.

While we may not explain adequately by one theory the occurrence of polyhydramnios, we may remember, as Ballantyne (Manual of Antenatal Pathology, 1902) has stated, that the relative conditions existing in polyhydramnios are those normally occurring in early fetal life. At the fourth month of gestation, the amniotic liquid weighs more than the fetus or the placenta and membranes. Through conditions which affect embryonal and fetal development this early relationship between the fetus and its hydrosphere continues after the fifth month. It is observed clinically that acute polyhydramnios begins at about the fifth month of gestation.

We may look to pathological chemistry for further knowledge upon this subject. By cryoscopy Resinelli (*Annali di Ostetrica e Ginecologia*, No. 23, p. 1029, 1901) has investigated the osmotic pressure of the maternal and fetal blood and of the liquor amnii by taking the differential of their freezing-points. This pressure is less in the maternal and fetal blood at birth than in the nonpregnant adult, and it is constantly less in the liquor amnii than in the maternal or fetal blood. In twin pregnancies the freezing point of the liquor amnii of one fetus may differ from that of the other. Polyhydramnios is one of many conditions for which bacteriology presents no solution, but which requires increased knowledge of physiological and pathological chemistry.

The diagnosis of polyhydramnios is important and at times difficult. If the amniotic liquid is accumulating but slowly, haste is not imperative, and in mild cases it may not be necessary to interfere [illegible] if the fluid is increasing rapidly and the patient's general health and comfort are suffering, pregnancy must terminate. The diagnosis of pregnancy is made difficult by the fact that fetal heart sounds cannot be appreciated in advanced cases, nor can the body of the fetus be felt. Pregnancy must be diagnosticated by the changes in the mammary glands and from the history rather than from the usual and positive signs of gestation.

The differential diagnosis between polyhydramnios and abdominal dropsy may be made as follows: In abdominal dropsy, the abdomen is flattened and distended laterally, its dull area changing with the position of the patient. There is no evidence of intermittent uterine contractions, which can often be elicited in cases of polyhydramnios. In abdominal dropsy there is often some cause, as disease of the heart or liver or kidneys, to account for the effusion.

The differential diagnosis between ectopic gestation and polyhydramnios is made by the excessive distention which is not present in ectopic gestation, by the absence of the characteristic pain and shock which are observed in ectopic gestation, and by the history of the case. It must, however, be remembered that ectopic gestation may be complicated by polyhydramnios in its early stages.

In the case of an ovarian cyst there is usually a history of longer illness, the swelling having been unilateral at first. The intermittent hardening of the abdominal tumor is absent and careful bimanual examination reveals the uterus but little enlarged at one side of the tumor. Encysted dropsy or localized tubercular peritonitis might be impossible of differential diagnosis from polyhydramnios.

When the fact of pregnancy is made out, there comes the second diagnosis between pregnancy and polyhydramnios, or pregnancy and ascites, ovarian cyst, plural pregnancy, an hydatid mole, a very large child or a malformed fetus. In the hydatid mole, the pear-shaped uterus has little fluctuation and there is a history of repeated discharge of blood. In the presence of a large fetus or large and malformed fetus the heart can usually be found, fluctuation and ballottement are absent and careful palpation will reveal the child. Palpation and auscultation will usually give warning of twin pregnancy, and yet, after the most careful examination, twin-pregnancy may be mistaken for polyhydramnios, or the contrary be true. When an ovarian cyst complicates pregnancy, it will be difficult to outline two tumors, and sometimes a positive diagnosis cannot be made. Ectopic gestation must always be kept in mind as a complicating element in these cases.

When polyhydramnios is associated with twin-pregnancy or with ascites, or with an ovarian cyst, or occurs in an ectopic gestation sac, it is often impossible to make a positive diagnosis. When labor begins and the cervix dilates, a diagnosis may be established.

In these and other cases two points have been noticed which are anomalous and without satisfactory explanation. One would naturally expect in the presence of a large quantity of amniotic liquid that the tension of the liquid within the bag of wa-

ters would be considerably increased and that the membranes would feel tense when the finger was placed against them. We have not found this to be the case, but, on the contrary, that the membranes remain relaxed and that the amniotic liquid had apparently very little tension, although the quantity of fluid might be large. Under these conditions, one would also expect shortening of the cervix and premature obliteration of the cervix; on the contrary, in our observation this does not occur until active labor actually begins. These conditions are misleading and sometimes throw doubt upon the diagnosis.

The treatment of polyhydramnios by the administration of drugs is without known value.

When the quantity of fluid is but slightly in excess and is not increasing rapidly, and the patient's general health remains good, the condition need not be interrupted. In the presence of rapidly increasing distention with large quantity of fluid and interference with the patient's general condition, pregnancy must be terminated. This must be done under thorough antisepsis by dilating the cervix sufficiently to introduce the finger, by puncturing the membranes and allowing a portion of the contained fluid to escape. In allowing fluid to escape, care must be taken to use the fetus as a valve preventing the immediate removal of the fluid. It is usually unnecessary to employ an anesthetic for the rupture of the membranes. The patient is put in an available position, one or two fingers inserted within the cervix, and the membranes are separated from the wall of the uterus as far as possible. Under the guidance of the finger, a pair of closed uterine dressing forceps is gently thrust into the sac and the blades opened sufficiently to permit the introduction of the finger. A portion of the fluid is allowed to escape gradually, the finger acting as a plug until the operator feels the presenting part closing firmly down against the cervix. Then the finger is removed and the amniotic liquid allowed to drain very slowly. The maintenance of firm pressure over the abdomen is most valuable in these cases. Not only is the uterus made to contract, but the patient is saved the severe shock which is often seen when a large body is removed from the abdomen suddenly. Pressure may be applied by a many-tailed abdominal binder, pinned securely, or during the escape of the fluid by a bandage placed across the abdomen and drawn inward by two assistants. With the latter, pressure can be varied in accordance with the needs of the case. After a part of the fluid has been removed, the patient must be kept under immediate observation. The uterus often acts suddenly in these cases, labor may be precipitate, followed by relaxation and hemorrhage. Abnormal presentations are not infrequent, as illustrated in the case of transverse presentation described. No effort should be made to hasten labor in the interests of the child, because the fetus is so often deformed and nonviable that the mother should be exposed to no risk on its account. The placenta may separate suddenly at the latter part of labor, or may require manual removal. After the child is expelled, the uterus must be prevented from relaxing by manual compression, massage, the complete removal of the placenta and membranes, irrigation with hot antiseptic fluid, tamponing with gauze and the hypodermic use of strychnine, ergot and other stimulants, if necessary.

When a positive diagnosis cannot be made, abdominal section is justifiable to complete a diagnosis and to deal with any condition requiring removal. The uterus should not be evacuated. In a case reported by Skirving (Edinburgh Hospital Reports, vi, 387, 1900) the abdomen was opened on a mistaken diagnosis of ovarian cyst and the condition found to be polyhydramnios. The abdomen was closed, the amniotic liquid slowly disappeared and the patient went to full term and was normally delivered of a healthy, well-formed child. Such a case indicates the possibility of absorption of the excessive quantity of liquid.

Although polyhydramnios itself is nonmalignant, it has a considerable mortality-rate which is not definitely stated. Excessive distention of the uterus predisposes to relaxation and hemorrhage. Even if the fetus be not malformed, it may assume an unnatural position, and presentation upon the escape of the fluid, and be exposed to unusual danger. The mother may develop sudden shock when the fluid is evacuated, and death from cardiac syncope may occur soon after labor. The deterioration in the patient's general health, which usually accompanies this condition, makes her more than usually susceptible to puerperal septic infection. There is every reason for thorough, prompt and skilful treatment of these cases.

DIABETES INSIPIDUS, TWIN PREGNANCY, POLYHYDRAMNIOS AND POST PARTUM HEMORRHAGE.

By GEORGE DE TARNOWSKY, M. D.,
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The relative infrequency of diabetes insipidus and its present unsatisfactory and entirely empirical treatment, prompt me to report the following case, hoping thereby to revive some interest in this baffling malady. The patient first came under my observation while Interne in Mercy Hospital, Chicago, Dr. de Lee being the attending obstetrician. Case History.

A. P., servant girl, unmarried, age 17, entered Mercy Hospital October 8, 1901, and was assigned to the obstetrical ward. Family History: Patient has been an orphan since early childhood, and only remembers that her mother died of pulmonary tuberculosis; she has a sister and 2 brothers living and in apparently good health.

Personal History: Patient was born in Chicago, of Swedish parents: servant girl during past 3 years. Habits somewhat irregular. Appetite and thirst are excessive, and patient is troubled with frequent urination. Menses began at the age of 14; have been irregular ever since, patient often skipping one or two periods.

Previous Illnesses: Usual diseases of childhood. When five years old patient had what her doctor diagnosed as diabetes; she was bedridden for several months, and since that time has continually suffered from excessive hunger and thirst, accompanied by polyuria. Patient has no recollection of ever having received a head injury of any kind, although repeatedly questioned on that point.

Obstetrical History: Date of last menstruation, May 8, 1901. Patient states that, a few days prior to entering the hospital, her abdomen became quite suddenly distended.

She had, in fact, been in doubt as to her condition until her employer noted the altered contour of her waist.

Status Praesens: Patient is a bright-looking blonde, of medium height, rather obese. The complexion is "pasty." Eyes negative. Skin very harsh and dry. Pulse and temperature normal. Thoracic viscera negative. The abdominal tumor extends up as high as a point midway between the umbilicus and the ensiform cartilage. The upper part of the tumor has the consistency of a pregnant uterus; the hypogastric region is "boggy" (edema). Palpation and auscultation, though repeatedly practised, give negative results. The vulva presents the usual signs of pregnancy. The cervix is partly effaced, os patulous, admitting one finger; the pelvic inlet is filled with a resilient mass; there is no edema of the extremities.

Urine analysis (single specimen). Reaction alkaline, specific gravity 1004. Color pale straw and clear, urea 0.2%, chlorides diminished. Sulphates and phosphates normal, slight amount of albumin present, no sugar. Microscopically many red and white bloodcorpuscles are seen, but no casts

Blood Examination: Reds, 3,656,000; whites, 11,800; hemoglobin, 68%; color index, 0.8%.

Patient has a ravenous appetite and drinks frequently. She has to rise four to six times every night to urinate.

Two days after admission patient suddenly began to complain of labor pains; she was hurriedly prepared and taken to the lying-in room. Vaginal examination showed complete effacement and partial dilatation of the cervix, with bag of waters protruding at the vulva. While making the examination, the bag of waters ruptured, and between three and four quarts of amniotic fluid were discharged, followed immediately by the expulsion of a five months' fetus; five minutes later a second bag of waters ruptured spontaneously and about 2 quarts of amniotic fluid were again discharged, followed by a second fetus. They both lived about fifteen minutes. The cords were clamped and severed, the uterus massaged vigorously and ergot in teaspoonful doses given twice at fifteen-minute intervals. Hemorrhage was quite profuse and persistent, and, after massaging for half an hour and attempting a Crédé expression with no results, it was deemed advisable to introduce the hand into the uterus and remove the placentæ. The incomplete dilatation of the cervix made it impossible to introduce the entire hand, but with the index and middle fingers of one hand in the uterus and compression from above with the other hand, both placentæ were delivered after 30 minutes' effort. It was noted that the placentæ were entirely separate from each other. Their removal was promptly followed by uterine contractions and cessation of hemorrhage. The vagina was then thoroughly washed out with bichloride 1-2000, and patient returned to her bed. The puerperium was absolutely normal.

Delivery caused no change in the quality or quantity of the urine, except that the albumin disappeared in 2 days. Repeated urine analysis showed a specific gravity of 1003 to 1005, no albumin or sugar, and a daily excretion of from 6080 to 10,500 cc. Patient left the hospital November 5, 1901, and has been under my constant observation ever since. Her general health is excellent; obesity has increased during the past two months. Appetite is still ravenous and patient now drinks 8-10 liters of water during the day, besides the contents of a 2 liter pitcher which she is in the habit of placing at her bedside every night. The urine voided now varies between 10 and 12 liters. Treatment has given negative results so far, valerianate of zinc and codeine having been tried. For purely experimental purposes the patient was once urged to limit her daily allowance of water; after a 3 days' trial she resumed her old habits, stating that the thirst was unbearable and had to be quenched.

The literature concerning diabetes insipidus viewed from an obstetrical point of view, is extremely meagre. Mathews Duncan[1], reported two cases that came under his observation, and reviewed the literature on the subject. Vinay[2] details the histories of two obstetrical cases complicated by diabetes insipidus, and states that they are the first ones reported in France. In "medical facts and observations" (1792), quoted by Duncan, mention is made of a curious case of congenital polydipsia and polyuria. "A French girl, three years old, drank two pails of water a day, and was eventually driven from home by the ill treatment she received in consequence of this expensive habit. When she was twenty-two, a cobbler, unaware of her propensity, married her. He found that his earnings did not suffice to keep her in water, much that he was fain to collect and liquefy snow and ice for her use. She drank four pails a day, of which the price was twelve sous (12 cents). She bore him eleven children. In the presence of a medical commission she drank fourteen quarts of water within ten hours and voided ten quarts of a nearly colorless urine." One of Duncan's cases miscarried at the seventh month, but he failed to state whether or not she had polyhydramnios. His second case and both of Vinay's had normal labors at term.

Definition:—By diabetes insipidus is meant a chronic affection characterized by the passage of large quantities of normal urine (Osler). Continental writers do not, as a rule, conform to this definition in their writings. The French, especially Demange[3], divide diabetes insipidus into two main groups; (a) azoturia, (diabète azoturique), in which there is excessive urea excretion; (b) hydruria or essential polyuria (diabète hydrurique), characterized by normal or diminished urea excretion. Demange also states, that, clinically, azoturia resembles diabetes mellitus, except that there is no glycosuria, whereas in hydruria the symptomatology is less clearly marked and the patients are less debilitated. A clear case of diabetes mellitus is described in an Italian Journal[4], under the heading "diabetes insipidus of renal origin." Gerhardt[5], groups all cases of chronic polyuria under the one heading of diabetes insipidus.

Etiology:—The nature of the disease is unknown (Osler). Head injuries and nontraumatic brain lesions are among the commoner etiological factors. (44 cases reported, of which one of Duncan's hysteria, (22 cases); heredity, (21 cases); violent emotions (both of Vinay's cases); acute febrile diseases, alcoholic excesses, cold and insolation have all been considered responsible for a few cases. There are 33 cases reported without etiological antecedents. The disease is a relatively rare one: 55 cases out of 113,600 patients in the Berlin Charité (Gerhardt); 7 cases out of 35,942 patients, (Eichhorst); 2 cases out of 150,000 patients, (Osler). The vast majority occur between the ages of 10 and 40. Males are more frequently attacked than females: 29 to 10, Neuffer, 102 to 27, Stuerner (Gerhardt). Lumsden[6], after reporting two cases, both due to head injuries, quotes Osler, saying in substance: "The most reasonable view is that it results from a vasomotor disturbance of the renal vessels due to local, central or functional irritation of Bernhard's center in the medulla."

Morbid Anatomy:—The following lesions have been found: Tuberculosis of the base of the brain (Roberts, Dickinson), sarcoma of the region of the

sella turcica, (Fazio); gumma or gliosarcoma near the fourth ventricle (Ralfe, Mosler), etc. Mechanical lesions, such as congestion and hypertrophy of the kidneys and bladder, and dilatation of the ureters are common.

Symptoms:—The cardinal signs are polyuria and polydipsia, with absence of abnormal elements in the urine. The daily excretion of urine is usually less than the quantity of fluid taken, but McIlraith[7], found the contrary to be true in the 3 cases he reported; it varies within wide limits; one of Lumsden's patients drank as much as twenty-two liters of water in one day and voided as much as eighteen liters of urine. The specific gravity varies between 1001 and 1010. Abnormal constituents are rare. Polydipsia is constant and imperative; patients deprived of their daily allowance complain bitterly, and often resort to stratagem or violence in order to quench their thirst. Strubell[8], reports the case of a man who drank 1400 cc. of his own urine. The investigations of Falk, Parkes and Neuschle, quoted by Demange, have shown that polyuria persists even on a dry diet. Polyphagia is not a common symptom, the appetite being usually normal. The general health may remain unimpaired for years. Voss[9], reports the case of a girl suffering from diabetes insipidus and adipositas universalis; my own case seems to be tending in the same direction. James Hendrie Lloyd[10] and others have reported cases associated with paralysis of the sixth nerve. Immunity to alcohol would seem to be common. The skin is dry and harsh; Strauss, quoted by Demange, has shown that there is decreased cutaneous perspiration. Constipation is the rule due to a diminished secretion of gastro-intestinal juices.

Treatment:—No single remedy or line of treatment has given uniform results. In brief, the malady has been treated on the following lines of therapy: (1) By nerve sedatives, (2) by depletants, (3) by vasoconstrictors, (4) by vasodilators, (5) by analgesics, (6) by provoking vicarious elimination of fluids through the lungs and skin. Residence in high altitudes, breathing exercises, massage etc. are recommended by Davis[12]. (7) By electricity. Clubbe[13] obtained good results by faradism. Regarding the dangers of pregnancy in such cases, nothing has been written. Of Duncan's cases, one miscarried at the seventh month; the other suffered from headache and vomiting, but labor was normal and these symptoms soon disappeared. Both of Vinay's cases died, shortly after delivery, of double embolic pneumonia and pulmonary tuberculosis respectively. He advises such patients not to nurse their infants. Senator, quoted by Demange, says: "Diabetes insipidus sometimes occurs during pregnancy and vanishes after labor; sometimes lasts several years and disappears at the commencement of pregnancy; in other cases pregnancy has no effect whatever on the disease." Duncan[11] collected several cases of diabetes mellitus in which there was polyhydramnios during pregnancy, but no writer has so far, to my knowledge, reported on the coexistence of diabetes insipidus and polyhydramnios. Should more such cases be published, and polyhydramnios be found to be a common complication during pregnancy, they would form a strong argument in the favor of the maternal origin of amniotic dropsy.

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SOME PROBLEMS IN MUNICIPAL SANITATION FROM AN EXECUTIVE STANDPOINT.*

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There are no problems to-day of more importance to the human race than those associated with municipal sanitation. In any case important, their momentous character has become greater and greater with the increase in the size of cities and towns. Nor does the importance of these problems depend merely upon their relation to the comfort and longevity of the individual. The future vitality of the race lies wrapped up in the vitality of the present generation, and the productiveness of the nation is very closely related to the physical stamina of the individuals of which it is composed. The scientific problems connected with the sanitation of cities are much nearer solution than are the administrative. Experiment and logic in the laboratory and library tell what ought to be done and may even suggest how to do it, but when the executive officer comes to act, he encounters at once an established order of things which he cannot ignore or alter. He must adapt the recommendations of science to the requirements of law and custom, and, sometimes, after the adaptation there is but little evidence that science has ever been consulted.

Admitting that the end and aim of municipal sanitation is the conservation of public health, the determination of that form of administration best adapted to secure this end is a matter of prime importance. There is a tendency at present to do away with the old-fashioned Board of Health and to substitute therefor a single officer known as the Commissioner of Health, the Health Officer, or by some similar title. Whether this is a step in the right direction is open to question. Boards of Health are usually vested with authority not only to administer laws, but also to enact them. But when a Health Officer is substituted for a Board of Health, he is not ordinarily granted the legislative power which belonged to it. Such authority remains in the State Legislature or is vested in the City Council.

The great advantage of a single executive over an executive board is promptness and decisiveness of action, and definite location of responsibility. This advantage has reference only to administrative work. From a legislative standpoint these features are not

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so important as are a nice appreciation of all rights involved and a knowledge of the principles of law applicable thereto. Manifestly these qualifications are more likely to be found in a body of men taken from various walks of life than in a single officer. Even, therefore, ignoring the most serious objection to combining in one man executive and legislative functions—that is, that it tends to create an autocrat—there are good reasons why a health officer should not have legislative authority. It may be questioned, however, whether the reservation in the Legislature or the vesting in the muncipal council, of the legislative authority ordinarily delegated to the Board of Health has been conducive of as good results as has the transfer of administrative power to the Health Officer. The formulation and enactment of sanitary regulations require special knowledge and cool and mature deliberation, such as are not often found in large elective assemblies. The special knowledge required for the enactment of these laws is not altogether medical, although chiefly so; it involves matters of engineering, of commerce and manufactures, and of law. The popular assembly may or may not have these. It is very apt to be devoid of the prime requisite, that is, a knowledge of medicine. A popular assembly in enacting legislation relating to public health is likely, too, in time of manifest danger to be controlled by panic, while during periods of quietude lethargy is apt to rule. For these reasons it may be seriously questioned whether a Board of Health, consisting of from five to seven representative citizens, properly compensated for their services, and with secure tenure of office, would not discharge the ordinary legislative functions of a Board of Health better than can a State Legislature or a City Council.

The best organization of a health department depends largely upon the functions with which it is endowed. Usually these group themselves under two headings, inspection service and clerical work. The inspection service is naturally divided along certain lines: General sanitary inspection, food inspection, and inspection and control of contagious diseases. Laboratory work in chemistry and bacteriology is practically a branch of the inspection service. The registration of deaths, births and stillbirths is merely a clerical function. The inspection service and the clerical work should each be under a single officer responsible directly to the chief of the department. Further subdivision of the work will naturally depend upon the size of the department. Single officers in charge of nuisance inspection, food inspection, and inspection and control of contagious diseases are desirable. Whether the laboratory service should be controlled by an officer of the same rank is questionable; the supervision of this work can be effected in this manner or by the officers responsible for the inspection of food and for the management of the contagious disease service. The inspection service is the real working arm of the department, to which the clerical branch is a mere accessory. The clerical work of a health department is in no way peculiar, except in so far as it relates to vital statistics. It is, however, the interpretation of statistics rather than their compilation that is apt to cause difficulty.

In order to secure satisfactory assistance in the clerical branch of a health department, it is essential merely to keep it free from political and social affiliations and to pay living salaries; to make it an organization for the transaction of business and not a mere stepping-stone to social or political recognition. But to obtain proper help in the inspection service is not easy even under those conditions. There are no schools for the education of sanitary inspectors, nor does any line of private work fit a man for service as an inspector. Trained inspectors do not exist, except as they have been created by particular departments of health, and when such men are properly trained they are apt to remain in the service of the department in which they have been educated. In any case, they are not likely to leave the community in which they have been trained, to settle elsewhere, unless inducements can be held out in the way of salary and tenure of office such as do not now ordinarily exist in American cities. Unfortunately, therefore, each department must train its own sanitary inspectors. The development of such officers consumes time and incidentally embarrasses the inspection service. Moreover, the field for employment is so small, tenure of office so uncertain, and compensation so inadequate, as to prevent the men best qualified for the work from undertaking it.

The condition with reference to the inspection of food is not much better. Veterinary surgeons can be had who are more or less competent to inspect dairy farms and live stock and to pass upon the wholesomeness of meat products. They are, however, ordinarily unacquainted with the inspection of marine products and of vegetables. So the hotel steward, who can pass generally upon the grade of food, cannot always determine whether meat is or is not diseased. And, finally, the man who has the necessary technical skill is too often wholly devoid of the tact so essential to the orderly performance of such work. Here, then, as in the sanitary inspection service, the inspectors must be educated in the department and the selection of promising candidates is rendered difficult by the same conditions which render it difficult to procure satisfactory sanitary inspectors.

Trouble in securing competent officers in the contagious disease service and competent chemists and bacteriologists to take charge of the laboratories arises chiefly from the uncertain tenure of office and the inadequacy of compensation. But the fact that a man has the degree of doctor of medicine does not necessarily make him a competent inspector of contagious diseases. He must have a certain aptitude for such work and be a man of more than ordinary ability; even then he must learn by experience how to perform his duties without unnecessary friction. The danger to which those engaged in this work are exposed should entitle them and those dependent upon them to pensions just as much as do the risks

assumed by policemen and firemen entitle them to such benefits.

If it were possible to limit the appointment of inspectors to those who are perfectly adapted to such work, the method of directing and supervising them in the discharge of their duties would not be of so much importance and so difficult as in practice it is found to be. Inspectors as a class are conscientious, energetic, intelligent men, but among them, as in every other class of workers, a careless, incompetent, or morally unfit workman occasionally appears. For some classes of inspectors it is impossible to lay down definite hours; for practically all it is impossible to lay down definite beats. Much depends upon the nature of the service to be performed. While something can be determined as to the amount and character of work done by written reports submitted from day to day, commonly the only thing that compels an inspector to pursue his regular duties within assigned hours and within the district laid down for him is a conscientious regard for duty. An inspector's district is ordinarily so large and his tours through it so erratic—necessarily so, on account of the varying sources of complaints—that he cannot be expected to be at a given place at a given time. Whether in any case service of notice has been properly made or properly omitted, and whether a notice served has been properly complied with when so reported by an inspector, can be ascertained only by further inspection by a superior officer. And the extent to which nuisances exist in a given district, not complained of, and unnoticed by the inspector assigned to that district, can be determined only in a similar manner. The supervision of food inspection is especially difficult, as the dealer is not likely to complain of laxness on the part of the inspector, and the amount of food which each inspector has to examine is so great that, if the sale of any particular piece of bad food is complained of, the inspector cannot necessarily be charged with neglect, because the did not see it in time to prevent its sale. And too often, in cases in which complaint is made of improper conduct on the part of an inspector, whether a sanitary or a food inspector, the matter resolves itself into one of veracity between him and the complainant.

The uniforming of inspectors might accomplish something toward enabling those who are tempted to neglect their official work during official hours to resist temptation. A uniform would at least fix the eyes of the public on them and render it much more likely that neglect and misconduct would be reported. A possible objection to the plan is the feeling which some citizens have with reference to the visits by such inspectors, viz., that they suggest to those who see the inspector's entrance and exit not a mere visit for the purpose of investigation, but rather that the premises are in fact unsanitary; and even the dirtiest citizen may not like his neighbor to know that his shortcomings are matters of official notice. There is less objection, of course, to the uniforming of food inspectors, as it is generally understood that their visits are supervisory only.

How to discipline negligent inspectors and clerks is sometimes an embarrassing question. Incompetent ones should be discharged, but competent men, who are too valuable to be disposed of in that way, occasionally seem to need moral stimuli stronger than mere reprimands. For them, it seems, machinery should be provided for due trial and for meting out just punishment in the way of fines and suspensions for dereliction in the performance of minor duties. So long as the only mode of discipline is by dismissal, so long will discipline not be enforced.

The discovery of a method of securing prompt and accurate returns of births and of contagious diseases is greatly to be desired. It is comparatively easy to secure returns of deaths by preventing the interment of human remains without permits issued by the Health Department; registration of the death is effected by the application for the burial permit. No such method can be applied, however, to returns of births. The fact that a given child is born does not come to the knowledge of the registering officer unless its birth is registered, and the absence of registration does not ordinarily come to the knowledge of the family and of neighbors who are aware of the birth. Some States have endeavored to secure more nearly complete returns of births by compensating the person making such returns, but with what success is not known.

How to secure prompt and accurate returns of contagious diseases is a problem resembling in some respects that of which we have just spoken. When the placarding of premises follows the receipt of report, interested neighbors are apt to bring the case to the attention of the Health Department, if they observe the absence of the customary placard and if they know of the existence of the disease. But it is much easier to conceal a case of contagious disease than it is to conceal a recent addition to the family, and when placarding and quarantine are the consequences of allowing a case to become public there is much more reason for doing so. In cases of diseases which are required to be reported, but in which placarding and quarantine are not required, as for instance typhoid fever, neighbors are more apt to know of the existence of the disease, but are not likely to be informed as to neglect of registration. Records of births and of contagious diseases must be regarded, therefore, merely as indices to the birth-rate and to the prevalence of such diseases, and not as mathematically correct statements of the number of births and of cases of such diseases.

Another obstacle in the way of the enforcement of laws requiring contagious diseases to be reported arises from the difficulty of getting evidence necessary to sustain a criminal prosecution for failure to make the required report. In such a prosecution it is necessary to show beyond a reasonable doubt that the case out of which the prosecution arose was a case of contagious disease, and under some statutes that the attending physician knew it to be such. As the Health Officer ordinarily has no opportunity to examine the patient, it is next to impossible for him to show the nature of the disease from which the patient is suffering. As he is entirely unaware of the innermost workings of the attending physician's

mind, it is, if the physician undertakes to conceal it, next to impossible for the Health Officer to state with corresponding certainty whether such physician did or did not recognize the nature of the malady.

These are some of the executive problems connected with municipal sanitation: the organization of the department; the selection of inspectors; the supervision of the inspection service; the registration of births; and the registration of contagious diseases. They are not all of the unsettled problems connected with such work. Nor are they peculiar to any one city; one place is embarrassed by a poorly organized sanitary department; a second, by failure of the city council to provide sufficient compensation for its inspectors; a third, by the failure of the community to support the contagious disease law; and so on. They have been presented to you not merely to elicit your co-operation in their general solution, but that you may be induced hereafter to suspend judgment against any health officer who may seem not to be doing his full duty until you ascertain whether he has or has not been equipped with the machinery necessary to enable him to do the work assigned to him.

THE IMPORTANCE OF THE LACHRYMAL REFLEX IN THE DIAGNOSIS BETWEEN ORGANIC AND HYSTERICAL ANESTHESIA OF THE FACE.

By WILLIAM G. SPILLER, M. D.,
of Philadelphia.

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By the term lachrymal reflex I refer to the secretion of tears produced reflexly by irritation. This secretion may be caused in different ways. Physiologists teach that it may be produced by direct stimulation of the lachrymal nerve, or of the subcutaneous malar nerve (orbital branch of the superior maxillary nerve), or of the cervical sympathetic; and reflexly by stimulation of the nasal mucous membrane only on the same side. The ordinary secretion in the waking condition is said to be a reflex secretion produced by the stimulation of the anterior surface of the eyeball by the air, or by the evaporation of tears, or by a bright light, the optic in the latter case being the afferent nerve. During coughing and vomiting the secretion of tears is increased partly reflexly, and partly by the outflow being prevented by the expiratory pressure (Landois and Stirling).

In reporting a very extraordinary case of hysteria with rigidity of the iris, in 1899, I said: "Although her scleral conjunctiva was insensitive, and irritation of it did not cause closure of the eyelids, it did produce a flow of tears from the right eye (the anesthetic eye.) This is to me an interesting observation, and would seem to indicate that one form of reflex action was present and the other absent."[1]

An examination of another hysterical patient, recently, in whom the lachrymal reflex was present, although the scleral conjunctiva was anesthetic, caused me to believe that this reflex might be of diagnostic importance. I have examined the work on hysteria by Gilles de la Tourette to see whether he had made any observations on the preservation of the lachrymal reflex in hysterical anesthesia of the conjunctiva, and I have found the following: "Each time that we detected anesthesia of the ocular mucous membrane by direct contact of a piece of paper, for example, the tears were immediately secreted and in the same abundance as in the other eye from the same excitation. This eye having preserved the sensation could be used for comparison. This phenomenon has already been observed by Pitres."[2]

The preservation of the lachrymal reflex in hysterical anesthesia of the conjunctiva has therefore been observed by others before it was observed by me, but I am not aware that any diagnostic importance has been attributed to this phenomenon. It occurred to me that in a case of anesthesia in the distribution of the trigeminal nerve with implication of the conjunctiva and nasal mucous membrane the lachrymal reflex should be much diminished, and that in this diminution we might have a sign of importance in diagnosticating between organic and hysterical anesthesia. A case favorable for a test would be one in which the Gasserian ganglion had been removed and anesthesia had existed a long time in consequence. Such a case is the one operated on by Dr. W. W. Keen, in 1895, and reported in the paper by Keen and Spiller.[3]

Recently I have made another examination of this man, and have not found any diminution in the area of anesthesia reported in 1898. Incidentally I may mention that he has never had any return of pain in his face.

I found that irritation of the nostril was the most satisfactory way of testing the lachrymal reflex. If the nostril on the right side—the anesthetic side—were irritated by a probe placed within it, no increase in the secretion of tears could be seen on either side, but if the left nostril were irritated, the left eye watered freely and the tears flowed over the left lower lid; whereas little or no increase in the lachrymal secretion was noticed on the right side. A small piece of paper placed between the right lower lid and the eyeball and left there for 3 minutes caused very little increase in the lachrymal secretion of either eye, but when the paper was placed in a similar position on the left side and left there the same length of time, the lachrymal secretion was much increased in the left eye, but very slightly, if at all, in the right eye from this irritation of the left eye. The bloodvessels of the right eye were somewhat injected, and yet the lachrymal secretion in the right eye was much less than in the left eye, although such an injection in the left eye would probably have caused a free secretion of tears. This man's right eye is said to be injected every evening but not in the morning. During my entire investigation tears did not collect in sufficient amount to flow over the right lower lid, while they did flow over the left lower lid. There is no doubt that in this case the lachrymal reflex is considerably di-

1. Spiller. The Philadelphia Medical Journal, January 14, 1899.

2. Traité clinique et thérapeutique de l'hystérie, hystérie chez l'homme, hystérie avec stigmates, p. 429.

3. Keen and Spiller. American Journal of the Medical Sciences, Nov., 1898 (Case VI, p. 538).

minished in the anesthetic eye. Through the kindness of Dr. G. G. Davis, I have been enabled to examine another case of removal of the Gasserian ganglion with complete anesthesia in the distribution of the trigeminal nerve, and I have been able to observe a distinct difference in the lachrymal reflex of the two sides in this case also.

I do not believe that these two cases fully establish the importance of the lachrymal reflex in diagnosis, but I report them in the hope that others may have their attention attracted to this subject, and that by the observation of many cases we may be able to determine the diagnostic value of the lachrymal reflex. The presence or absence of this reflex might have been of assistance in a case I have recently seen, in which for some time the diagnosis between hysterical anesthesia of the face and organic anesthesia from a lesion of the pons was difficult; or in such a case as that reported by James Hendrie Lloyd, in which anesthesia of the face and paralysis of the facial muscles existed on the same side, and the anesthesia was believed to be of hysterical nature.[4]

It is held by some that the trigeminus receives secretory fibers for the lachrymal gland from the facialis by means of the petrosus major nerve. It is important, therefore, to know that removal of the Gasserian ganglion has a distinct effect on the secretion of tears. This effect is probably produced in a reflex manner.

The salivary secretion has been found preserved in hysterical anesthesia, but it would be more difficult to employ this reflex than the lachrymal reflex as a test in hemianesthesia of the face.

SOME REASONS FOR CONSIDERING THE VERMIFORM APPENDIX AS A GLAND.

By CLARENCE L. KILLBOURN, M. D.,
of New Haven, Connecticut

The skin has been called the largest gland of the body. If this is true, then the corresponding "internal skin," or mucous membrane of the alimentary canal, is second in size. But the skin may properly be termed the greatest excreting gland, and the alimentary tract the greatest secreting gland. Each has a set of accessory glands. The lungs and kidneys aid the skin in its duty of excretion, while the salivary glands, tonsils, pancreas and liver by adding their secretion aid the alimentary organ in performing its functions—digestion and absorption. It is to this last class, the accessory glands of secretion, that I wish to call attention while considering the vermiform appendix. After this consideration we may not arrive at a clear and definite understanding of all its functions; but in a relative sense considerable argument may be made in favor of placing it in a position amongst the recognized glands. Certainly it must be advanced from its present classification as a functionless structure. It will be the purpose of this paper to draw some comparisons between the appendix and the glands which contribute their productions to the various parts of the digestive tract.

Embryologists have classified the appendix as a rudimentary structure, pointing out the enlarged cecum of herbivora as its homologue. Even if this be true, it does not prevent the organ from exercising a function, although that function be not homologous. Every other rudiment found in the human body has an important function at some period of life. Meckel's diverticulum, which becomes troublesome and useless in after-life, is indispensable as the vitelline duct of the embryo. The thymus, although atrophying in adult life, is of vast importance to the infant. And as the appendix is of no special importance during fetal existence, and as it does not atrophy in adults, we must convince ourselves that it is either of value during the whole period of life, or it is the only exception to nature's rule—a useless structure. The pituitary body was considered, until lately, a rudimentary and functionless piece of tissue, but at present it is an important factor in the pathology of at least one disease, and holds an important position amongst the glands.

The salivary glands, pancreas and liver are all formed in the embryo from hypoblastic diverticulæ. And this is the history of the appendix. It is first seen at the sixth week as a part of a lateral diverticulum which also forms the colon. This is about the time that the diverticulæ are given off anteriorly to form the other glands. These several indentations assume different forms after escaping into the surrounding tissues. The pancreas becomes a gland of the compound racemose variety, the liver takes on a lobulated structure, while the appendix becomes a lymphatic organ. But all are formed from the same epithelium, and each duct is lined with a mucous membrane continuous with that of the intestine.

From an anatomical standpoint the appendix resembles the pancreas and liver only by its being situated adjacent to, but without, the intestinal canal, and connected with it by means of a duct. The points of orifice of these ducts bear an interesting resemblance to each other, however. The common duct which is the outlet of both liver and pancreas opens into the duodenum; the duct of the appendix opens into the cecum. Now the duodenum forms a sort of lock at the junction of stomach and small intestine; at this point there is a distinct change in the process of digestion. And the cecum forms another lock between the small and the large intestine; here there is another distinct change in the treatment of the food, especially its absorption. Each place is peculiarly adapted for the receipt of an outside glandular secretion. The situation of the tonsils is slightly analagous, being at the gateway between the buccal cavity and the pharynx.

On account of some characteristics the appendix is usually thought of as a miniature intestine, and a section under the microscope shows the tissues arranged in a similar manner. There are the internal, mucous, the submucous, the muscular and the external, serous layers. But this is a physiological convenience for the appendix as well as the intestine. The organ is probably not used for absorption, as the small lumen of the canal and the expelling tendency of the muscular mechanism will hard-

4. Lloyd, Journal of Nervous and Mental Disease, January, 1901, p. 27.

ly allow it. The outer coat of peritoneum forms a fold which holds the appendix firmly to the cecum. It has been named the meso-appendix, but in the strict use of the term "mesentery" this is a misnomer. It is simply a ligament holding the appendix in its position against the cecum, just as the peritoneal ligaments of the liver hold that organ to the diaphragm and rectus abdominales, or those of the kidneys hold the renal organs to the posterior abdominal wall. A true mesentery, or any part of the mesentery, is attached at one end to the vertebral column. Yet this wonderful fold of peritoneum acts as a ligament to the intestine. The muscular layer is composed principally of circular fibers, but there are a few longitudinal fibers corresponding to the external muscular coat of the intestine. There is a peristaltic motion caused by the muscular tissue of the appendix, and by virtue of it the secretion is forced into the cecum. In the pancreatic and hepatic ducts there is little muscular tissue and whatever peristaltic action they possess is slight, the glandular pressure being sufficient to force the juices along. Gravity aids both peristalsis and glandular pressure, as is shown by the downward direction of the ducts.

Far more important than either serous or muscular coats is the submucous layer. It forms the greater part of the appendix and is the bulk or body of the whole structure. This predominating tissue is lymphoid in character. Solitary glands are numerous throughout, and the whole layer is an active lymphatic organ. It is lined by a mucous membrane which covers the whole surface of the lymphoid tissue and receives its secretion direct. There are a few follicles penetrating the submucous layer, but the mucous membrane, which also lines the duct, sends no ramifications into the gland substances, as does the duct of the liver or pancreas. Histologically, then, the appendix resembles the tonsil, and a section examined by microscope looks not unlike a tonsil surrounded by a thin muscular coat, and penetrated by a central canal. The appendix may be regarded as an inverted or involuted tonsil. In comparing the minute structure of glands, the pancreas is found to resemble the salivary glands. In location and structure, then, the appendix bears the same relation to the pancreas as the tonsil does to the salivary glands.

The physiology of the appendix has been slighted. It has been deemed unworthy of notice. Probably this is due to the fact that no startling discovery is likely to be made, no wonderful function to be demonstrated. It does not offer the field that the thyroid or adrenal presents. Its function is probably simple, even if important to a certain extent. One or two things suggest themselves, however, with our present, limited understanding.

In herbivora the appendix is replaced by the enlarged, pouch-shaped cecum. The capacity of this organ is great, and within its walls large quantities of food are held and digested, somewhat after the plan of the stomach. It is the principal site of cellulose digestion. Now, in man a certain amount of cellulose is digested, and probably in the large intestine. Although physiologists are inclined to give microbic fermentation the credit, it is barely possible that the secretion of the appendix may in some way be responsible for it.

The contents of the intestines become acid in reaction after passing the cecum, even if distinctly alkaline in the ileum. This is despite the fact that the mucous membrane of the large intestine, and hence the intestinal juice of that region, is alkaline. This is generally accounted for by the fact that fermentation processes are especially active in the colon. It is possible that the appendix has something to do with it. But these are mere conjectures and we will consider something not only feasible but probable.

It has just been mentioned that fermentation is active in the large intestine. An enormous amount of microbic fermentation is constantly going on, as is shown by the hydrogen and marsh-gas generated. Of late a great deal is being written about intestinal sepsis and antisepsis. In specific diseases such as typhoid fever and dysentery the idea is not recent, for therapeutists have long aimed at intestinal antisepsis in combating them. But in the vague cases associated with neuralgias, myalgias, headache, lassitude, slight fever and even lethargy, a great deal of stress is being laid upon the absorption of toxins from the alimentary canal, especially the large intestine. There must be some protection against this condition normally, and I think we find it in the appendix. The germicidal properties of the tonsils and their protection of the pharynx are well realized. And in the appendix we must recognize an organ having a similar structure and capable of doing a similar work in its own territory. Its situation is particularly adapted to act upon the contents of the colon, its secretion being able to act immediately upon the food as it passes through the cecum. Whether this secretion flows constantly or is under the influence of a reflex nervous stimulus cannot be stated. The cases of autotoxemia, just mentioned, are invariably accompanied by constipation and muscular atony of the intestine. These conditions are favorable for microbic activity in this region, and put an unusual strain upon the appendix. When its action is overbalanced there is an absorption of toxins with consequent symptoms. The appendix itself suffers. At first there is an oversecretion, then a catarrhal condition which is followed by hypertrophy and loss of physiological resistance. It is a pathological specimen at this stage. Constipation is a frequent factor in the etiology of appendicitis.

The question will be asked, "why does the body not exhibit symptoms of toxemia after the removal of the appendix?" In the first place, because this toxemia is not often of a serious nature and is usually attributed to another cause, the constipation meanwhile being corrected and the diet regulated. In the second place, because other lymphatic structures such as Peyer's patches take up the work of the appendix. The organ is probably missed, but the loss is not always apparent to the patient or physician. The tonsils may both be removed and the patient improve afterward. He is better than when he had two diseased glands, but still he is never as well as if he had two normal ones in his fauces.

There is a certain class of glands receiving con-

siderable attention at present. These "ductless" glands, of which the thyroid, adrenal and pituitary are examples, bring about changes in the blood or add substances to it which are of vast importance. The so-called "internal secretion" is also a by-product of the liver, pancreas, testicle, ovary and other duct-glands, and has an influence over either the circulatory or nervous system. Probably the appendix has no very important function in this line, although the lymphglands, especially the hemolymph nodes, are attracting the attention of investigators who are showing that their influence upon the blood is considerable. And these minute glands are closely related to the vermiform appendix.

In considering the pathology of the appendix, similarities are noticed toward the diseases of the recognized glands. The common forms of appendicitis are (1) acute obstructive, (2) acute catarrhal and (3) chronic catarrhal. The first includes the more serious cases, the exceedingly rapid ones being known as "fulminating." The cause is a stenosis of the canal due to an enterolith, a plug of mucus or a contraction of the mucous membrane by cicatrix or hypertrophy. The disturbance following stenosis consists in a damming of the secretion, causing a pressure upon the gland substances, resulting in sudden infiltration and hypertrophy. This interferes with the circulation causing either gangrene or a sufficient loss of resistance toward the microbic inhabitants and invaders to allow an active infection. The secretion itself, which is normally germicidal, becomes overwhelmed by the bacteria and furnishes a medium for their growth. There is a decidedly similar condition noticed in the pancreas and liver when the common duct is obstructed by a biliary calculus namely pancreatitis, hepatitis and cholecystitis. Here is found also fatty necrosis of the pancreas similar to the gangrene of the appendix. The primary infection, by the way, is caused by the same microbe—the bacillus coli communis. The bile and pancreatic juice which are normally strong germicides, become culture media for the bacteria. Another similar condition occurs in the salivary glands when a salivary calculus forms in one of the ducts. The gland becomes infiltrated, hypertrophied and finally infected. Abscess formation is the final result as in the other glands. The pancreatic duct in occasionally obstructed by a pancreatic calculus, giving rise to the same sequelae. The biliary calculus has already been mentioned as the cause of stenosis in the cystic and common ducts. The enterolith which so often causes obstructive appendicitis is not, strictly speaking, a calculus, but in many respects resembles one. It has for its nucleus a small bit of fecal matter which has lodged in the canal. This is acted upon by the secretion of the appendix until it assumes an appearance quite similar to a calculus. The formation is not unlike that of other calculi which have a foreign body for a nucleus about which are deposited salts and other constituents of the glandular secretion. The composition of an enterolith is not entirely different from a salivary calculus, calcium phosphate being a constant constituent. One group of the biliary calculi contains a large amount of this salt.

The acute catarrhal cases are the mild ones as well as the recurrent. They are associated with constipation and a condition known clinically as "uric acid diathesis," the name of which signifies nothing pathological, but is recognized by physicians. It exercises an influence over all lymphoid structures, tonsillitis being a common affliction of persons endowed with a gouty tendency. This disease first appears in an acute, perhaps mild form, and recurs frequently. As the trouble becomes chronic, the hypertrophy, which has been transient, becomes permanent. So with the appendix. The first attack, usually provoked by constipation, is followed by a period of quiescence during which the organ again holds its normal condition. After the second or third attack, however, there is probably a constant catarrhal state of the mucous membrane, and later the appendix becomes permanently hypertrophied. In this condition it is a valueless structure, and often dangerous.

There has been no intention conveyed with this paper to simplify the physiology or pathology of the vermiform appendix. The purpose has been to advance the rating of the organ to an equal position held by the tonsils or salivary glands. Its value cannot be compared to that of the liver or pancreas, spleen or thyroid. Nor is it suggested that hereafter the structure be known as the vermiform gland. Furthermore it is not advised that vermiform extract be given a place in the therapy of catarrhal appendicitis. The importance of the organ must not be held so high as to forbid surgical interference even in the recurrent cases of a mild type. The surgeon who removes an appendix in the intercurrent period is punishing a criminal before he has committed a capital crime. As to the penalty for the "first offense," that will always be open to argument.

Since, writing this paper I have read a valuable article by R. J. A. Berry, in "The *Journal of Anatomy and Physiology*," Vol. 35, part 1. It is entitled "The True Cecal Apex, or the Vermiform Appendix; Its Minute and Comparative Anatomy." The study is extensive, including fishes, amphibia, rodents, herbivora, etc. Dr. Barry is at present working upon the physiology of the appendix.

Other papers bearing upon the subject to a certain extent:—

Ruffer, in Quart. Journ. Mic. Sci., Vol. 39, 1896.
Clado, in Compt. Rendu. Soc. de Biologie, April 29, 1892.
Fowler, in Annals of Surgery, January, 1894, Part 13.

The Treatment of Local Tuberculosis.—F. van Langendonck discusses the injection of certain liquids in the treatment of local tuberculosis. (*La Presse Médicale Belge*, September 1, 1901, 53me. Année, No. 35). For this purpose he advises camphorated naphthol and iodoform suspended in ether. The former is to be preferred in abscess, open wounds, etc.; the latter only when the skin remains intact. Camphorated naphthol is absolutely contraindicated in closed tubercular foci, even when suppuration has occurred, as it may produce intoxication by being rapidly absorbed, or it may increase pus formation. Small amounts should be injected at first, increasing until as high as 20 gm. are reached. In closed tubercular abscesses, etc., the pus is first withdrawn, the cavity cleaned, and the ethereal solution of iodoform injected. The ether volatilizes and the iodoform remains. As a maximum dose he uses from 15 to 20 gm. in children, and from 40 to 50 gm. in adults. The case-histories of six out of some forty patients thus treated follow. Recovery followed in from one to three months. [M. O.]

REPORT OF A PRIMARY SARCOMA OF THE SMALL INTESTINE.

By ARTHUR W. BOOTH, M. D.,

of Elmira, N. Y.

Patient, a male, Irish-American, aged thirty-four years. Family history negative regarding tumor, tuberculosis or syphilis.

Occupation, a laborer in a cemetery, where he was in the habit of drinking from a well that was shallow and undoubtedly contaminated by surface drainage. Two years previous to present illness he had typhoid fever. One year following this he first began to complain of vague pain over the left side, especially in the region of the spleen. This pain was variously diagnosed as pleurisy, pleurodynia, gastritis and neuralgia. Treatment directed to these conditions did not relieve him. Ten months following the appearance of this pain he began to have a temperature and was finally admitted to the hospital (*Arnot-Ogden Memorial*, Elmira, N. Y.) with a provisional diagnosis of typhoid fever—presumably a second attack. The temperature curve followed that characteristic of typhoid, there was splenic tenderness, some tympanites, moderate diarrhea, later accompanied by blood. No rose-colored spots, Widal test not made.

At no time during the height of the fever was the case considered alarming. The temperature subsided by lysis at the end of four weeks and the patient appeared to be slowly recovering. At this time the wards were turned over to me and the case first came under my observation. Examination now revealed well-marked emaciation and a progressive anorexia, some nausea with occasional vomiting of stomach contents.

Lungs normal, heart sounds feeble, some tenderness over left hypochondriac area. Urine normal. Blood count; R. B. C. 2,000,000; Hemoglobin 42 per cent. No marked increase of leukocytes. As the emaciation progressed, a well-marked swelling became more and more apparent in the left hypochondriac region, this seemed to enlarge daily and lead to the supposition of a splenic abscess. Exploratory measures were refused and the patient soon died from exhaustion.

Post mortem examination was made six hours after death. The mass recognized before death proved to be a tumor of the small intestine about four feet from the pylorus and located mostly in the left hypochondriac region. There were adhesions to the omentum and adjacent coils. In general outline it was irregularly oval, 18 mm. long and 10 mm. in diameter. A single portion of intestine could be seen entering and leaving the mass. Upon removal of the growth with attached coils, and linear incision throughout its entire length, it appeared to be an overgrowth of the mucous and submucous coats with some involvement of the muscular layer. The peritoneal covering was intact. The mucous coat could be distinguished only for a short distance at either end. The lumen was somewhat larger than the healthy bowel on account of erosion of the mucous coat. This erosion was evidently due to retrograde changes —necrosis and hemorrhage. The tumor tissue of the submucous and muscular coats was firmer and grayish brown in color. Microscopical sections of this portion showed presence of a small round-celled sarcoma. A few mesenteric glands were enlarged. The visceral organs were apparently normal. The entire length of the intestine was opened for evidence of typhoid ulceration of Peyer's patches with negative result. Spleen normal.

Conclusion: Cause of death, primary sarcoma of small intestine.

Duration, probably one year—dating from first appearance of pain in the region of the tumor.

The lumen of the bowel was not constricted; this is the usual rule in sarcomata. Cause of tumor, unknown. The etiology of sarcoma is yet to be determined. In this case one might speculate on the possibility of infection.

The fever preceding death bore a close resemblance to typhoid, although there was no post mortem evidence of infection of Peyer's patches or friable spleen. In this connection, A. McPhedran, Toronto,[1] reports nineteen cases of typhoid without intestinal lesions.

In all probability the fever was due to necrosis of the inner portion of the growth resulting in an autointoxication.

Primary sarcoma of the intestine is rare. J. Collins Warren, Boston,[2] quotes Baltzer who collected fourteen cases of undoubted primary sarcoma of the intestine.

C. Van Zwalenburg, Riverside, Cal.,[3] has collected fifteen cases of resection for intestinal sarcoma. He also contributes to the statistics of the disease.

1. Philadelphia (Monthly) Medical Journal, Oct., 1899.

ASTHENOPIA. GRADUATED TENOTOMY. PRISMS.

By NORBURNE B. JENKINS, M. D.,

of Chicago.

Weakness of the muscles controlling the eyeballs has claimed more attention during the last twenty years than any other subject in ophthalmology. The most important work of oculists, testing the eyes for glasses, has been neglected, while the brightest minds in the profession have given their attention to orthophoria, heterophoria, hyperphoria, esophoria, hyperesophoria, exophoria, hyperexophoria, cyclophoria, etc.

Prisms for exercises, prisms for temporary use and prisms to wear permanently have been tried in every way that experimenting imagination could conceive. Many simple and complicated instruments have been devised for diagnosticating insufficiencies and for giving gymnastics to ocular muscles. Cutting ocular muscles, called graduated tenotomy, was thought to be the solution, but, like prisms, has been largely abandoned.

Results show for themselves. Where treatment has been radical, permanent injury has usually followed; if interference has been slight, little or no good or harm has been done. The benefit, if any, has probably come from rest of the eyes after the operations and during the various treatments rather than from operations and prisms. Barring the gain from rest of the eyes and from mental impression the asthenopia in most operation and prism cases has probably increased, diminished or remained stationary in about the proportion that asthenopia increases, diminishes or remains stationary without treatment. For the most part the interferences have not been great enough to disable the eyes.

Most who have never had any eye trouble, and who read several hours daily with comfort, when examined are found to have insufficiency, often as much as five or six degrees, while two or three degrees may be the rule. Insufficiency can be found in nearly any pair of eyes, even in eyes with proper glasses, glasses which relieve asthenopia, eye tire and pain.

Oculists who have given most attention to testing eyes for glasses have gotten best results in the treatment of insufficiencies. These results are too often credited to the treatment given the ocular muscles. Glasses that come anything like to fitting will often straighten the eye and make the two eyes see as one even in crosseye where deviation is evident and where double vision may exist in an exaggerated

2. Surgical Pathology and Therapeutics. J. C. Warren, Boston, Mass.

3. Journal American Medical Association, March 2, 1901, p. 707.

form. The inevident forms, insufficiencies, if they give trouble, may be proportionately easily relieved.

It is probable that insufficiencies are largely caused by some imperfection in the shape or size of the eyeball or by some weakness or deficiency of the focusing mechanism, if not, then by general weakness which can not be relieved by leading symptom treatment.

Proper glasses usually relieve insufficiency which are especially hard to relieve when complicated by astigmatism, by far the most difficult to fit of all eye imperfections. The better testing the eyes for glasses is understood, the less will the knife and prism be resorted to in insufficiency.

The beginner in ophthalmology is apt to estimate the importance of insufficiency by the number of pages the subject fills in text books, and consequently may not give testing the eyes for glasses the attention it merits. Many with insufficiency complicated by eyeball imperfections have a different pair of spectacles from every oculist whom they consult.

MEDICINSKOIE OBOZRENIE.

Vol. LVII, No. 2, 1902.

1. The Pasteurization of Milk in Infant-Feeding. A. E. GIPPIUS.
2. Perforative Peritonitis in a Newborn. V. P. ZSCHUKOVSKI.
3. The Diagnosis of Rheumatic Affection of the Vertebræ. P. E. SCHWEITSER.
4. Hematemesis in Appendicitis. S. M. TSIPKIN.
5. A New, Accurate and Simple Method of Staining the Malarial Parasite and the Morphological Elements of the Blood with Methylene Blue and Eosin. M. G. SCHEGOLEFF.
6. Congenital Lymphangioma of the Perinephritic Adipose. SAC. M. POKROVSKI.

1.—Gippius emphasizes the superiority of **pasteurized** over boiled milk and cites a number of authorities and personal clinical observations to prove that only **the pasteurized milk is the ideal substitute for mother's milk.** In boiling, the milk undergoes a series of chemical changes which render it more difficult of digestion. His conclusions are: (1) Sterilization and boiling of milk intended for infant-feeding should be replaced by pasteurization. (2) Of all the methods of wholesale pasteurization of milk, pasteurization in closed bottles should be preferred. (3) Domestic pasteurization of milk has important advantages over wholesale pasteurization. (4) Observations for the purpose of estimating the value of one or the other method of infant-feeding are best made not in institutions, but in private practice. (5) Domestic pasteurization of milk gives good results in infant-feeding. (6) Pasteurized milk may be recommended as a dietetic remedy for chronic constipation in children. (7) By means of the author's apparatus for domestic sterilization, the sterilization of the milk may be brought to any desired point for the purpose of regulating the stools of the child. (8) It is desirable that society should encourage the wide application of pasteurization of milk. To the paper is appended a note from the editor giving the description of the author's apparatus. It consists of a small round kettle furnished with a lid through which a thermometer passes. The milk is poured into bottles, the latter placed into the kettle which is filled with water on a level with the milk. The whole is then placed on an oil stove and the water heated to 70°C., when the sterilizer is removed from the stove and placed on a tripod, and a temperature of 60°-70°C. kept up for 2 hours by means of a medium flame of a small oil lamp placed underneath. [A. R.]

2.—Zschukovski reports a case of **perforative peritonitis in an infant, 3 days old.** The autopsy revealed a perforation, the size of a pea, at the junction of the jejunum and ileum. The author ascribes the cause of the ulceration to a strangulation of **Meckel's diverticulum.** [A. R.]

3.—Schweitser writes on **the diagnosis of rheumatic affection of the spine.** He found only a few cases reported in the literature on the subject and ascribes the comparative rarity of the disease to the difficulty of diagnosis. Nevertheless, a diagnosis can be made if special attention be paid to the location and character of the pain. A number of illustrative cases are briefly described. It is noteworthy that in one case (case 3) Kernig's sign was observed. [A. R.]

4.—Tsipkin cites a number of cases gathered from the literature, showing the **relation of hematemesis to appendicitis.** He also reports a case observed by himself. A woman, 61 years old, entered the hospital with symptoms of appendicitis. She gave a history of previous attacks of pain in the abdomen, dyspeptic symptoms and hematemesis. During the present attack the woman suffered from repeated spells of hematemesis and was getting progressively worse until the 49th. day, when she died of perforation and septicemia. **The autopsy showed entire absence of any lesion in the gastric or intestinal mucosa,** thus proving that the hematemesis was the result of **parenchymatous hemorrhages.** In discussing the etiology of the disease, the author considers these hemorrhages as an additional proof of its infectious nature. [A. R.]

5.—Schegoleff **stains the plasmodium malariæ with Reuter's stain,** which he prepares himself by mixing a 1% solution of methylene blue (Höchst) with 0.50% sodium bicarbonate and a saturated watery solution of eosin (B.A. extra Höchst). The eosin solution is added drop by drop to the filtered methylene blue solution, previously heated for 2-3 days on a water bath at a temperature of 60°C. Nocht's reaction is established by shaking the methylene blue solution with ether. Only 6-7 drops of an alcoholic solution of this stain, added to water, are required. In staining, the preparation is dried in the air, fixed in equal parts of alcohol and ether for one hour and placed in the stain for a half hour until a fine film appears on the surface of the stain or a slight red sediment is perceived. The preparation is then dried between filter paper and mounted in balsam without previous washing. If a sediment is deposited on the preparation, it can be removed by rapid washing with absolute alcohol. Stained by this method, the red bloodcorpuscles are stained orange or rose-red, the chromatin nuclear network of the leukocytes a beautiful violet-red, the protoplasm and the granules of the neutrophiles a delicate rose, and the eosinophile granules a marked purple. The protoplasm of the parasites is stained a light blue and the chromatin granules a marked violet-red. The mode of action of the stain, the author explains by the supposition that the formative elements of the tissues or blood produce chemical decomposition of the stain into its component parts, each of which is at once selected by the tissue element for which it has an affinity. [A. R.]

6.—Pokrovski describes a **lymphangioma found on the left kidney of a newborn.** The tumor, somewhat smaller than the kidney, was in close contact to, but had no connection with, the renal capsule. This is the only case of a lymphangioma at this age and location recorded. [A. R.]

Paralysis of the Internal and External Branches of the Spinal Accessory Nerve.—Lermoyez and Laborde report a case of associated paralysis of both the internal and external branches of the right spinal accessory nerve, in a woman of 62. Complete paralysis of the right recurrent laryngeal was found. But there was not right-sided laryngeal hemi-anesthesia. Deglutition was difficult, and incomplete paralysis of the vault of the palate existed. There was, therefore, paralysis of the internal branch of the spinal accessory. But the external branch was also paralyzed, since the sternocleidomastoid and the trapezius muscles on the right side showed paralysis and atrophy. The facial, hypoglossal, and pneumogastric nerves were unaffected. These symptoms were preceded by a right-sided retropharyngeal abscess. This lesion, a neuritis of both branches of the spinal accessory nerve, is very rare, especially without the involvement of the other cranial nerves. (*Bulletins et Memoires de la Societe Medicale des Hopitaux de Paris* July 25, 1901, No. 26). [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ending May 10th., 1902:

SMALLPOX—United States.

			C.	D.
ALABAMA:	Birmingham.	Mar. 1-31.	11	
CALIFORNIA:	San Francisco.	[illegible]	[illegible]	
	Stockton.	Apr. 1-30.	20	
COLORADO	Denver.	[illegible]	[illegible]	
ILLINOIS.	Belleville.	Apr. 26-May 3.	5	
	Chicago.	Apr. 26-May 3.	5	
	Galesburg.	Apr. 26-May 3.	4	
INDIANA	Evansville.	Apr. 26-May 3.	1	
	Indianapolis.	Apr. 26-May 3.	8	
	Muncie.	Apr. 1-30.	3	
	South Bend.	Apr. 26-May 3.	4	
	Terre Haute.	Apr. 26-May 3.	2	
IOWA.	Ottumwa.	Mar. 29-Apr. 26.	18	
KANSAS.	Wichita.	Apr. 26-May 3.	4	
KENTUCKY:	Covington.	[illegible]	[illegible]	
	Lexington.	Apr. 26-May 3.	1	
	Louisville.	Apr. 27.	2	
MAINE.	Portland.	Apr. 26-May 3.		1
MARYLAND.	Baltimore.	Apr. 26-May 3.	1	
MASSACHUSETTS:	Boston.	Apr. 26-May 3.	28	4
	Brockton.	[illegible]	[illegible]	
	Brookline.	Apr. 26-May 3.	1	
	Cambridge.	Apr. 26-May 3.	1	
	Malden.	Apr. 26-May 3.	6	
MICHIGAN:		Apr. 26-29. Present at 110 places.		
	Ludington.	Apr. [illegible]-May 4.	16	
MINNESOTA	Minneapolis.	Mar. 29-Apr. 19.	[illegible]	
	Winona.	Apr. 19-26.	1	
MISSOURI:	St. Louis.	Apr. [illegible]-May 4.	30	2
MONTANA.	Helena.	Apr. 1-30.	4	
NEBRASKA	Omaha.	Apr. 26-May 3.	[illegible]	
NEW JERSEY.	Camden.	Apr. 26-May 3.	4	1
	Newark.	Apr. 26-May 3.	80	
	Plainfield.	Apr. 26-May 3.	6	2
NEW YORK.	New York.	Apr. 26-May 3.	34	11
OHIO:	Cincinnati.	[illegible]	[illegible]	
	Hamilton.	Apr. 27-May 3.	3	
PENNSYLVANIA.	Erie.	Apr. 26-May 3.	10	
	Johnstown.	Apr. 26-May 3.	3	
	Philadelphia.	Apr. 26-May 3.	15	1
	Pittsburg.	Apr. 26-May 3.	16	
RHODE ISLAND.	Providence.	Apr. 26-May 3.	4	
SOUTH CAROLINA	Greenville.	Apr. 10-26.	6	2
TENNESSEE	Memphis.	Apr. 27-May 3.	9	
UTAH:	Salt Lake City.	Apr. 26-May 3.	4	
VERMONT:	Burlington.	Apr. 27-May 3.	2	
	Rutland.	Apr. 27-May 3.	1	
VIRGINIA:	Roanoke.	Apr. 1-30.	11	1
WASHINGTON.	Tacoma.	[illegible]	[illegible]	
WISCONSIN.	Green Bay.	Apr. 27-May 4.	3	
	Janesville.	Apr. 27-May 4.	4	
	Milwaukee.	Apr. 26-29.	9	

SMALLPOX—Foreign.

BRAZIL	Rio de Janeiro.	Mar. 26-Apr. 6.	21	
CANADA:	Hamilton.	Apr. 26-May 3.	1	
	Quebec.	[illegible]	[illegible]	
	Winnipeg.	Apr. 19-26.	8	
CHINA:	Amoy.	Mar. 8-27. Present.		
COLOMBIA:	Panama.	Apr. 26-29.	3	
EGYPT:	Cairo.	Apr. 1-8.	1	
FRANCE:	Paris.	Apr. [illegible]-29.	[illegible]	
	Rheims.	Apr. 6-12.	7	1
	Roubaix.	Mar. 1-31.	1	
GREAT BRITAIN:	Birmingham.	Apr. 12-19.	2	
	Dublin.	Apr. 12-19.	1	
	Dundee.	Apr. 12-19.	1	
	Glasgow.	Apr. 12-19.	7	1
	Leeds.	Apr. 19-26.	1	
	Liverpool.	Apr. 12-19.	[illegible]	
	London.	Apr. 12-19.	28	42
	New Castle on Tyne.	Mar. 30-Apr. 19.	1	
	North Shields.	Mar. 29-Apr. 19.	2	
	Southampton.	Apr. 5-12.	1	
	South Shields.	Mar. 29-Apr. 19.	21	
INDIA:	Bombay.	Apr. 12-19.	[illegible]	
	Calcutta.	Mar. 22-Apr. 19.	25	
	Karachi.	Mar. 29-Apr. 6.	3	
ITALY.	Rome.	Apr. 12. Epidemic.		
	Naples.	Apr. 5-12.	[illegible]	
MEXICO.	City of Mexico.	Apr. 13-27.	3	
	Vera Cruz.	Apr. 19-26.	9	1
RUSSIA:	Moscow.	Apr. 6-12.	7	
	St. Petersburg.	Apr. 6-12.	10	2
SPAIN:	Cartagena.	Apr. 15, Epidemic.		

YELLOW FEVER.

BRAZIL:	Rio de Janeiro.	Apr. 21-28.	5	2
COLOMBIA:	Panama.	Apr. 26.	3	
COSTA RICA	Port Limon.	Mar. 1-31.	3	1
DUTCH GUIANA	Paramaribo.	Apr. 19-26.	2	
MEXICO:	Vera Cruz.	Mar. 16-Apr. 6.	105	

CHOLERA—Insular.

PHILIPPINES.	Manila.	Mar. [illegible]	84	65

CHOLERA—Foreign.

INDIA:	Calcutta.	Mar. 29-Apr. 5.	275	
TURKEY:	Jeddah.	Feb. 28-Mar. 29. Cases [illegible] and [illegible] deaths.		

PLAGUE—United States

CALIFORNIA:	San Francisco.	Apr. 20-27.	1	1

PLAGUE—Insular.

HAWAII:	Honolulu.	Apr. 19.		1

PLAGUE—Foreign.

CHINA:	Pekin.	Apr. 20. Present.		
EGYPT:		Apr. 1-30.-Apr. 7. [illegible] deaths and [illegible] deaths.		
INDIA:	Bombay.	Apr. 1-8.	[illegible]	
	Calcutta.	Mar. 22-Apr. 5.	1229	
	Karachi.	Mar. [illegible]-Apr. 5.	[illegible]	

LA PRESSE MEDICALE.

February 8, 1902. (No. 12.)

1. The Diagnosis of Smallpox. HENRI ROGER.
2. Thyroid Extract and Iodine. ERIQUET.

1.—An epidemic of smallpox has existed in Paris for the past 2 years. The initial symptoms are not characteristic. The diagnosis is not only very difficult but often impossible. One chill occurs, high fever, pain in the back and epigastrium, headache, delirium, vomiting, etc. There is polyuria and occasionally hematuria. Catarrhal symptoms may predominate, resembling influenza. Even measles may be thought of. The eruption appears from the second to fourth days, though premonitory rashes may have appeared before, of any type. After the appearance of the eruption the diagnosis is easier. Deep, shot-like papules first appear, even on the pharynx, where they become pustules early. Measles and varicella must be differentiated from smallpox. Koplik's spots show measles, while the crops of vesicles and the lack of constitutional symptoms show varicella. In some cases of hemorrhagic smallpox, marked purpura is noted in 24 hours, with other hemorrhages. Examination of the blood gives a mononuclear leukocytosis or myelocytosis. The blood in varicella, however, shows a similar condition. The physician should never forget the great contagion of smallpox and should always be on the watch for a case of variola. [M. O]

2.—Since the thyroid gland contains iodine, it has been claimed that the good results from the use of thyroid extract have been due to the iodine in the gland. But thyroid extract has been successful when iodine has failed. Both have given good results in goiter, psoriasis, obesity, and arteriosclerosis; both do harm in exophthalmic goiter. But in obesity iodine has never effected such a reduction in flesh as follows the use of thyroid extract. Chronic iodism, however much resembles thyroidism. These remarks remain but hypotheses, for it has not yet been proved that iodine is the sole cause of the action of thyroid extract. [M. O.]

Secondary Epithelioma of the Ovary Three Years After Enterectomy for Epithelioma of the Small Intestine.—Le Dentu reports a case of secondary epithelioma in a woman of 44 in whom an epithelioma of the small intestine had been removed three years before. She kept well up to two years ago when she noticed a swelling above the left groin. Eight months ago she noticed another tumor, felt higher up on the right side. Both swellings felt nodular, and that on the right side increased markedly in size. The blood count was found to be below normal. Le Dentu diagnosed epithelioma of the ovary. This was found on the right side, where the tumor, ovary, and adhesions were extirpated by laparotomy. There was but one tumor with four lobes, three of which were large [illegible]. The patient rapidly commenced [illegible] of the cancer [illegible] Medicine des Hôpitaux de Paris, July 25, 1901. No. 291. [M. O.]

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See Advertising Page 8.

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Changes in the Marine-Hospital Service.—The Senate passed the Perkins bill, with Senator Spooner's amendments, on May 14. This bill provides that the United States Marine-Hospital Service shall hereafter be known and designated as the Public Health and Marine-Hospital Service of the United States, and the Supervising Surgeon-General and other officers shall hereafter be known respectively as the Surgeon-General, Surgeons, Passed Assistant Surgeons and Assistant Surgeons of that Service. All duties heretofore required by law to be performed by the Marine-Hospital Service are hereafter to be performed by the Public Health and Marine-Hospital Service. Among the many provisions of the bill is one authorizing the President at his discretion to utilize this Service in times of threatened and actual war to such extent and in such manner as shall promote the public interest.

Provisions are also made for the direction of the hygienic laboratories provided by the act of Congress about a year ago. The provisions for laboratory work are among the most important features of this bill, and will tend to give the new Public Health Service increased efficiency and prestige. In fact, the bill aims evidently to create of this new Service a highly efficient scientific body of men. This body of men, with the support of the Government, should in the future be able to control the situation in the public service for the advancement of scientific medicine. We can see in this measure a guarantee for hope that we are to have in this country continued interest on the part of the general government in the advancement of this science. This sort of "paternalism" certainly will meet the approval of the whole medical profession.

Another provision of the bill is in reference to the all-important subject of quarantine. As is well known, the susceptibilities of the various State governments have to be considered in this matter. We judge that considerable jealousy would be excited if the general government were to assume too exclusively the powers of quarantine. The new bill, however, provides adequately for conference between the officers of the Public Health Service and the quarantine officers of the various States. There is no reason why complete harmony should not prevail. The new bill has also a very important provision for securing uniformity of vital statistics in the United States. It authorizes the new Service to prepare and distribute suitable forms for the compilation of such statistics, and these statistics are to be published by the Public Health Service as a part of the *Public Health Reports* issued by it. The President of the United States is given considerable authority in the way of directing and controlling the activity of this important public service. We believe that the bill in all respects is in line with what should be the proper direction of the control of public health in this country, and we believe it will meet with the hearty approval of the vast majority of the profession.

The Mode of Death at Martinique.—An interesting question that arises in the medical mind, on reading the stories of the St. Pierre disaster, is as to the exact cause of death. The newspaper accounts suggest direct burning or overwhelming with the volcanic dust. This material is commonly called ashes, but it is not correctly described by that word; it is usually rocky matter finely divided by explosive action.

A considerable proportion of the deaths might be due to suffocation by noxious gases. Among such would be carbon dioxide, commonly called carbonic acid, and sulphurous acid. The former is not actively poisonous and would not be the cause of death unless present in considerable proportion, but the latter gas is highly irrespirable and even a small proportion will render air so irritating that suffocation must ensue. We have but meagre reports from those who have been near enough to great volcanic eruptions to appreciate the actual conditions. One of the most famous eruptions in history, that of Mt. Vesuvius, in A. D. 79, has been described by the younger Pliny from notes left by his uncle, who lost his life in an effort to rescue a

friend. The narrator states that the death of the elder Pliny was due to fumes of sulphur. Even making allowance for the imperfect identification of chemical substances at that early period, we may safely assume that by such an expression sulphurous acid was indicated, since this gas was undoubtedly familiar; indeed, it is mentioned in the Odyssey as a disinfectant. The Roman writer further adds that the body was untouched by fire.

In some of the recent reports from Martinique specific mention is made of the same suffocating influences. The steamship Roddam escaped through a shower of hot fragments and lost some of her crew by the inhalation of sulphurous gases.

It may be well to note that, when disasters by fire occur in closed spaces, suffocation by carbon monoxide and smoke is likely to occur. In this way persons in the gallery of a theater may be killed without direct injury by fire or by falling timbers. It is probable that instances of this kind have given rise to the notion of death by "swallowing fire," a widespread popular belief.

Volcanoes and Earthquakes from a Medical Standpoint.—Considering their destructive action, it is somewhat remarkable that volcanoes and earthquakes do not cut a greater figure than they do in medical literature. In truth, there is very little written about them, and yet the reason can hardly be that they have little pathological significance. A convulsion of nature on such a stupendous scale that it is capable of killing thirty thousand people in a few minutes, is sufficiently potent as an etiological factor of traumatism and death. We suspect that one reason why medical science is so silent on the subject, is that medical scientists have seen but little of volcanoes and felt but little of earthquakes. Few, if any, of these great catastrophes on the largest scale have happened at such times and places that medical observers could study the effects. Pompeii, Lisbon, Yeddo, Java and Martinique were not any of them within the sphere of scientific medicine.

The *Index-Catalogue* (that refuge of the uninformed) has a very few and meagre references under each of these heads. After the Charleston earthquake, in 1886, several American physicians with characteristic enterprise "wrote it up." We thus owe to Dr. Peyre Porcher and to Dr. Guiteras good descriptions of the accidents and the diseases (especially nervous diseases) that were caused by this catastrophe. Gilles de la Tourette, in his treatise on Hysteria, has not failed to include earthquakes (but not volcanoes) among the causes of the "grand neurosis." It would be a very small earthquake, indeed, that could escape a French neurologist when he was looking for the causes of hysteria. Charcot observed a case of hysterical paraplegia that was caused by an earthquake at Nice in 1887. But Noah Webster, the eminent lexicographer, wrote a paper in 1801 on the connection of Earthquakes with Epidemic Diseases. This was before the time of the small bacillus, which has proved mightier than earthquakes.

One of the most remarkable volcanoes is Santorin, or Thera, in the Aegean Sea near Crete. This was the scene of a violent eruption in 1866; and this eruption—especially with regard to the effects of the emanations upon living beings—was made the subject of special study by Da Corogna, who published a book on it in French in 1867.

Taken altogether, the literature is scanty, although we do not pretend here to have made a very diligent search of it. The recent terrible eruption in Martinique may help, by its effects upon human beings, to clear up the question to what extent volcanoes throw out noxious and inflammable gases.

The Condition of the Posterior Ganglia in Locomotor Ataxia.—Dr. R. G. Rows, in the *Journal of Mental Science* for April, discusses some of the very latest views of the rôle of the posterior root ganglia in the pathology of tabes dorsalis. The whole question is in a very unsettled state, and does not reflect much credit on our neuropathologists with their improved technique and their ability to read the interior of nerve cells like an open book.

According to Rows, the general opinion until recently has been that the initial lesion of tabes was in the cell-bodies in the posterior ganglia. Gowers, however, in his text-book denied that the lesion was there. As recently as 1898 Juliusberger and Meyer, who seem to have investigated the question carefully, said that they found no lesion in the cells of the posterior ganglia in tabes. In August of last year, however, Marinesco published a paper in *La Presse Médicale*, in which he presented some results that seemed to be definite but unimportant.

Marinesco's findings in brief were, that these cells showed destruction of the Nissl bodies, changes in the nucleus, such as diminished volume and diffuse staining, and changes in the volume of the cell-body. Some of these changes, however, such as the shrinking of the cell-body, may have been artefacts. Marinesco had the good sense not to claim too much for his findings, and, indeed, he distinctly pointed out that the same or similar rather insignificant changes were found in other diseases than locomotor ataxia, and that he found nothing that could be considered

distinctive of tabes. Considering the inconstancy of these changes and their slight degree as compared with the intensity of the degeneration of the fibers in the posterior columns of the cord, he could definitely affirm that the degeneration of the posterior columns in locomotor ataxia is not dependent upon an initial lesion in the cells of the posterior root ganglia.

This seems to be about as far as the subject has progressed. It is true that an Italian investigator, Sciuti, of Naples, has written on the subject, but, beyond confirming the opinion just expressed, he contributes nothing except some rather barren speculation. He calls attention to the fact, however, that the fibers of the posterior columns are not the only ones involved in all cases of tabes.

There remains to be mentioned merely the view which attaches primary importance to the lesion in the walls of the bloodvessels. This opinion has been held by various writers, and is in accord with the usually accepted views about gross syphilitic lesions in the nervous system. But it does not decide the question here discussed; it merely transfers it.

An Unusual Cause of Ascites.—The short article by Professor Osler which appears in this issue of the Journal, calls attention to a rare but well authenticated cause of ascites, which, strange to relate, is not noted in many text-books of medicine. Ascites is generally associated in the medical mind with hepatic, cardiac or renal disease, or with tuberculous involvement of the peritoneum, while the other and rarer causes are overlooked. Just why solid or semi-solid tumors of the ovary should be regularly attended with peritoneal effusion, while cystic growths of the same organ and solid tumors of the uterus are not so accompanied, is not as yet open to satisfactory explanation. It is a curious fact, however, that fibromata, myomata, and sarcomata of the ovaries, all painless solid growths, are almost invariably accompanied by ascitic accumulations, which are to be regarded as pathognomonic of these pelvic conditions. In cancer of the ovary alone is ascites by no means a persistent symptom. Risinelli calls attention to the presence of pleuritic effusions as complicating malignant ovarian growths, and states that these effusions are not due to the presence of the tumors, or to changes in the blood, but that they are in reality an evidence of metastasis to the pleura and less frequently of peritoneal irritation transmitted through the diaphragm. This explanation will hardly account for the effusion accompanying nonmalignant tumors and papillary cysts of the ovary which have perforated their capsules. It is an interesting but as yet unexplained symptom that should be noted as almost diagnostic of these rare solid tumors.

Röntgen Therapy.—The accumulated experience of the last few years has proven conclusively the important aid which the X-rays furnish in establishing the diagnosis of many conditions. The method has not been without its ill results and numerous cases of dermatitis have occurred, which, while sometimes attributable to imperfect precautions, have not been in all cases preventable, for there is now a recognized personal idiosyncrasy to be taken into consideration. Dr. Towle, among others, is not in accord with the medical use of the X-rays, especially on account of the fact that there is still a lack of knowledge of their nature, the danger is present of effects histologically similar to inflammation, and there is lack of proof that they possess any bactericidal power. The late Professor Potain presented an argument against their use in the diagnosis of cardiac conditions by expressing the belief that the radiographs possess no additional advantage over the determination obtained by accurate methods of physical diagnosis. He believed that the general employment of the rays in cardiac cases would lead students to be less expert in the routine of physical diagnosis and that, while nothing was to be gained by the use of the rays in this particular field, considerable skill in diagnosis on the part of the physician might very soon be lost. In the last few years irradiation has been suggested as a means of treatment for sarcoma, carcinoma, lupus, tuberculosis and a host of other conditions. A note of warning is necessary because of the tendency to employ the rays in operable cases of malignant tumors. Our brief experience in this field has proven certain facts conclusively, and one of these to be especially remembered is that even when good results are obtained considerable time is necessary, and time lost in operative cases is of great moment. At the present time we may state that irradiation is less certain than the knife, but that, as a palliative measure, especially in inoperable or recurring cases, it offers a decided means of relief. In many such cases remarkable results have been achieved under skillful hands and with the employment of a perfected technique. An especial gain observed quite constantly is the almost instant relief from the distressing pain of these malignant growths from the first irradiation. This in itself indicates a decided field of usefulness, were nothing else achieved. But it is by no means improbable with the development of our knowledge of the rays themselves and their action upon bodily metabolism, that

certain definite indications will be known and practised with good results.

A Proposed Tuberculosis Congress at St. Louis.—A correspondent has submitted to us a scheme for a congress on tuberculosis to be held in conjunction with the World's Fair at St. Louis. We can heartily approve of such a scheme on general principles, but we are not prepared to say that it is practicable. One thing would be absolutely necessary to insure its success—and that is, that it should have the right men back of it. A congress on tuberculosis cannot succeed if it is hastily convened, and is made the means of exploiting a few men who have no claim to be considered authorities. We have already enough and too much of such enterprise. Our correspondent is evidently fully aware of this. We advise him to put himself in communication with the leading experts in the country and see if they feel like, not only endorsing, but also furthering his plan. They are well known, and without them any congress would not be worth the name. If a sufficient number of such experts will signify their willingness to assume control of and responsibility for, such a Congress, this **Journal** will advocate it with all its power. But if there is any doubt on this point, or any chance that such a congress would not be first-class, we should feel compelled to discourage it.

The Death of Dowie's Daughter.—A few days ago the daughter of Dowie, the fanatical agitator of Chicago, perished by fire. As a father this man is entitled to sympathy—which we would be the last to withhold from him—but as a promulgator of false and mischievous doctrines he has met with a terrible awakening. It is reported that the father in the last moments, seeing his daughter dying in his arms, summoned a physician. He has thus recanted in the face of death.

Dowie has for a long time been holding a carnival of ignorance and superstition in Chicago. There is no remedy for such an abuse except an enlightened public opinion, and public opinion in this country is evidently not as yet sufficiently enlightened to put an end to the fantasies of Dowie and of the Christian Scientists. We are by no means sure that this shocking tragedy will have any permanent effect upon these people. Their passion is to declaim against an enlightened and scientific practice of medicine; and the tendency of some of them to fly to this practice as a last resort when hard pressed by disease or accident, seems to have no effect upon their fellows.

What Profiteth it a Man to Treat Croupous Pneumonia?—It was not so many years ago that an article was published based upon the case-records in the Massachusetts General Hospital, in which it was shown that in the course of some 70 years the mortality of croupous pneumonia had remained practically the same, no matter whether the patients were bled or blistered, stimulated or merely allowed to rest quietly, given digitalis, or what not was done for them. More recently Stumpf has analyzed the statistics of 2690 cases that were treated in the general hospital at Amsterdam, from the years 1886 to 1898, and has reached the lame and impotent conclusion that the proportion of deaths in the various classes into which he divides the cases was absolutely independent of the method of treatment. If such studies would only suffice to spare us and the patients the many statistics and abortive treatments that are devised from time to time, we could hail them as benefits to humanity. We fear, however, that the medical profession will be slow to divorce itself from the idea that some day some drug will be found that will destroy the pneumococcus *in situ* without destroying the patient.

A New Bacillus.—In the issue of the **Philadelphia Medical Journal** of May 17 we published, in the Department of Latest Literature, an abstract of a paper that appeared in *Revue de Médecine* for December, 1901, and January, 1902, on Tuberculosis and its Bacillus, by a Spanish observer, J. Ferran. Ferran claims to have found a bacillus in the sputum of tuberculous patients which produces lesions which he terms pretuberculous. This organism, after growing in the tissues for a time, becomes converted into the bacillus tuberculosis. On the other hand, this organism has been found to be identical with the bacillus coli communis as isolated from the feces of the dog. This organism, which he has named the phthisiogenic bacillus, produces, according to the author, a pretuberculous inflammation and then goes on to produce true tubercles. Without this pretuberculous inflammation no true tuberculosis can be formed. We give this notice of the work, which the editors of *Revue de Médecine* state that they are in no way responsible for, because on its face it seems very improbable, but since improbable things are constantly occurring, some note must be taken of it. One of two things seems likely; either the observer has made an important discovery, or else his work was carried on in a very dirty laboratory in an extremely careless manner.

The Vanity of Some Scientists.—We know nothing that surpasses the grim irony of fate that overtook the "scientists" who "examined" Mont Pelée on the day before the eruption in Martinique. According to M. Blowitz, the Paris correspondent of the London *Times*, these gentlemen reported that Mont Pelée was all right, and that the inhabitants of St. Pierre had nothing to fear from the volcano. How they "examined" Mont Pelée we do not know. One might suppose it was done as easily as auscultating a pair of lungs. Considering what the mountain stood for the day before the eruption—its vast size and the tremendous forces that were gathering deep within it—the diagnosis of these pygmies would seem ludicrous enough, if it were only not so tragic. The day after this hopeful prognosis was made, these poor scientists were overwhelmed in a moment and were lost with all the inhabitants of St. Pierre. Perhaps there is a moral in this sad tale for all kinds of scientists.

California has organized a Public Health Association. This is to be a purely scientific body, with no connection with politics or politicians. It will look after public sanitary questions in the State, and we doubt not that it will attend to them without fear or favor. Such a society should prove a blessing to the State of California.

We desire to call the attention of literary workers to the fact that the *Bibliographia Medica* is now being published regularly in Paris. It continues the traditions of the *Index Medicus* (of sacred memory) and should be of service to all laborers with the quill.

Current Comment.

A CANADIAN MUNCHAUSEN.

In the cities of the plains (in the United States) the temperature in July rises for many days in succession to 105 and over. During a summer's residence in Nebraska I painfully remember this period of protracted heat, which was so great that the brick-paved streets exploded with loud detonations, casting the bricks in all directions. There was no breeze, and fortunately, for any movement of the air only served to put in motion the suffocating alkaline dust that whitened on the banks of Salt Creek or was strewn in hot powder on the shores of Salt Lake. . . . In the large cities I have found the conditions quite as distressing. New Orleans is more endurable during the summer than Chicago, and San Francisco is more pleasant than either; but in Boston the humidity of the air renders the heat almost insupportable; while the contiguous resorts on the coast confer in the long run no more permanent ease than does the momentary application of cold to a fresh burn. In New York the heat seems to bring with it an even greater depth of despair. This is partially due to the fact that, in the matter of space, this city is architecturally constructed upon the frugal plan of a chiffoniere. It is nothing more or less than a huge piece of furniture in brick and iron; and serves to indicate the monstrous lengths to which the obsession of American utilitarianism can go. Baltimore and Washington I also found undesirable, and here malarial poison is added to the heat. . . . In July the Washington shopkeepers, to attract trade, fry eggs by breaking the shell and allowing the contents to fall upon the heated asphalt of Pennsylvania avenue.

—*The Canadian Journal of Medicine and Surgery.*

A COLOSSAL MISTAKE.

Now that the fever of enthusiasm caused in the public mind by the announcement of Mr. Rhodes's bequest of two millions for scholarships at Oxford has had time to abate, and the details of his grand educational scheme can be considered in cold blood, it must, we think, be becoming clear even to his most thoroughgoing admirers that it is a colossal mistake. He has left a vast sum of money to increase by a few dozens the annual output of Oxford passmen. Those who know the Oxford passman best must admit that, with all his admirable qualities, athletic and social, he can scarcely be recognized in an intellectual sense as the highest product of civilization.

—*The Practitioner.*

THE OFFICIAL EXPERT.

The official expert has proved such a gigantic failure in France and Germany (as witness the Dreyfus and other cases) that scientists like Virchow are urging a system closely resembling that of the English common law. The sooner physicians recognize that the judge is much more liable to err than their medical brethren and that medical expert disagreement "is a harmonic symphony compared to judicial disagreement," the sooner will the evils of the expert system be removed and the sooner will physicians secure proper pecuniary remuneration for expert services.

—*The Medical News.*

THE PARISIAN WORLD.

The French Government has made due acknowledgement of the generous help extended by the United States to the sufferers by the volcanic eruption in Martinique. The French people, however, and more especially those of the capital, appear to take little interest in the terrible calamity. "Tout Paris" is vastly more concerned about the auto races than about the destruction wrought in France's most important American colony.

—*The Evening Telegraph.*

THE TRIUMPHS OF CIVILIZATION IN A LONG SENTENCE.

The rapidity with which the entire civilized world has heard of this later disaster, the speed with which it is able to set about rendering prompt aid to the thousands who have escaped an overwhelming death only to find themselves face to face with suffering, starvation and disease, are triumphs of civilization that must impress upon us, terrible as the catastrophe now is, how much more far-reaching it would have been in its disastrous results, had it occurred in more remote times, when, owing to slowness of communication and transit, the fatal horrors which universal sympathy is now straining every nerve to avert would have had full sway ere intelligence could have reached the world, or, when known, relief measures could have been conceived and executed.

—*The New York Medical Journal.*

Correspondence.

A CRITICISM OF DR. BUXTON'S PAPER ON THE BACTERIAL PURIFICATION OF SEWAGE.

By G. EVERETT HILL, of New York.

To the Editor of the **Philadelphia Medical Journal:**

You recently published a paper on sewage purification by Dr. B. H. Buxton, of Cornell Medical College. In this he makes somewhat extended mention of Colonel Waring's "forced aeration" system of sewage treatment. The statements concerning it are so erroneous or misleading as to compel the belief that the author is not familiar with the system he attempted to describe.

The paper states or implies:

(1) That Waring's filters were filled with sand;
(2) That he attempted to treat raw sewage aerobically;
(3) That the "solids had no chance to get liquefied";
(4) That "the filters quickly clogged and had to be cleaned at great expense";
(5) That "under the forced aeration system it is necessary previously to remove the suspended solids as far as possible by chemical precipitation";
(6) That the treatment of sewage by the Waring system is "impossible in practice."

The author is mistaken on all these points.

(1) Not one of the Waring filters (and I have built or supervised the building of fifty-six of them since the original Newport experiments) has ever been filled with sand. The filtering material in every case has been either slag, broken stone, pebbles, coarse white gravel, coke or (once) oyster-shells. The only sand used has been a surface "distributing blanket" 6 inches thick, beyond the touch of the air-blast and always saturated.

(2 and 3) No raw sewage ever touches the aerators. After screening, the sewage passes slowly through a submerged continuous filter, down and up again. During this time the filth is attacked by anaerobic liquefying bacteria and ripened for subsequent oxidation in the areaters, or secondary filters. That the presence and effect of these septic influences were early recognized by Colonel Waring (even although not fully appreciated) is shown by the following paragraphs from the report of the original experiments, published in the winter of 1894-5:

> "Three inches below the upper surface of the stones of the primary filters no dissolved oxygen was present, as was proved by many tests."
>
> "The effluents of all the strainers had the same characteristics. * * * Dissolved oxygen was invariably absent, except in one case."
>
> "Not infrequently an increase in nitrogenous matter was shown in the effluent after leaving the first tank, especially when the rate of flow was slow. This seemed to be due to putrefaction of stored nitrogenous matter, resulting in the production of soluble compounds."
>
> "The rate at which this clogging matter gathered was very variable and depended upon obscure conditions of the sewage. It was noticed that an admixture of salt water materially increased it, evidently from precipitation of soap; and that putrefaction, as has been indicated, tended to decrease it by making soluble compounds."

(4) The [illegible] were frequently raked and washed. The surfaces of the primary filters choked at more or less regular intervals, ranging from 6 to 14 days, as it was intended they should. When clogged, they were drained and allowed to rest, aerating meanwhile. In this manner the sludge was burned out and the filters made ready for further use. There was no "cleaning at great expense." The filtering material was not removed nor washed during the [illegible] months of the experiment. One of the filters passed sewage equal to 315,543,000 gallons per acre yet when the plant was dismantled,

> "the upper foot (approximately) of the central compartment of each of the straining tanks showed more or less accumulation of silt, probably the result of the few heavy rainfalls during which pumping was continued, bringing much gutter mud to the tanks. Below this, the material was apparently as clean as when first put in, the pebbles and white gravel looking as though they had just been taken from their native beach. In no part of the tanks was there any sign of organic matter or any suggestion of the hundreds of thousands of gallons of sewage which had been passed through them. The thin layers of sand on top of the aerators were black with sulphides, but all the material below this was sweet and clean."

(5 and 6) Chemical precipitation has never been used as an adjunct to the Waring system, if we except certain experiments of the Massachusetts State Board of Health [illegible] the tanks of the Newport experiment. All artificially aerated filters have thus far been kept [illegible]. Some of the larger plants have been in use 5 years without any removal or washing of the filtering material. None of the [illegible] have ever been cleaned so far as I am aware. Wherever washing of the material in the primary filters has been necessary, it has been due to the entrance of inorganic material (silt and mud).

The only serious objection to the use of the Waring system is the cost of running the blowers. In cases however, in which the sewage must be pumped and a power installation [illegible] is to assist, the additional cost of aeration is very light. The only [illegible] at East Cleveland, Ohio, where there is an installation with a capacity of [illegible] gallons per day, is the cost of [illegible] pounds of coal daily, say about [illegible] per year per head of population served.

A REPLY.

By B. H. BUXTON, M. D., of New York.

To the Editor of the **Philadelphia Medical Journal:**

Mr. Hill's statements are no doubt perfectly correct, and I freely admit that I did injustice in my paper to the Waring system of sewage disposal as it is carried out in practice. [illegible] I can hardly imagine that I have caused any injury to the memory of the late Col. Waring. My paper [illegible] general principles from the [illegible] point of view, and to [illegible] individual [illegible] best method of sewage disposal would [illegible] something [illegible] as more.

I did not say, however, that the treatment of sewage by the Waring system is "impossible in practice." What I did say was that it had been demonstrated that it was [illegible] impossible in practice to treat raw sewage by either of the first two processes, (forced aeration and contact beds).

Under the forced aeration system it is necessary previously to remove the suspended solids as far as possible by chemical precipitation, and I might have added the process of [illegible] treatment; but if I had done so at this particular point the continuity of the argument would have been broken.

I had no intention of dealing specially with the Waring system. My only object was to point out in a general way that raw sewage cannot be satisfactorily treated by [illegible] methods alone, and this appears to be admitted by Mr. Hill.

The following extract from the Report of the Massachusetts State Board of Health, 1899, will show that my arguments are [illegible] principles although I found I was wrong in applying them too literally to the Waring system.

"That the cycle of anaerobic and aerobic actions upon the filters is of advantage not only in retaining such part

fication, but in preventing the accumulation of organic matter in the interspaces in the filters, and the consequent clogging, is well proved by a comparison of the aerated filters with the results obtained with the contact filters.

The aerated filters were put into operation in 1892 and contained 5 ft. in depth of coarse gravel stones, and were operated at a rate of approximately 500,000 gallons per acre daily.

Through these filters currents of air were drawn almost continuously. This experiment was carefully conducted, and immense volumes of air were forced through every part of the filters. As a result fair purification was obtained. (See Report for 1895.)

These aerated filters became so clogged with organic matter from time to time, however, that, in order to continue them in operation, all the filtering material had to be removed or washed: aeration failing completely to destroy or oxidize the organic matter, and determinations of the amount of organic matter in this wash-water showed that a very large percentage of that applied with the sewage was stored up in the filters and removed by the washing. This organic matter was of a granular character, not at all offensive, but rather of an earthy odor.

In these filters we were depending entirely upon oxidation, allowing no opportunity for anaerobic action within the filters, as in the present contact filters, and hence the organic matter applied in the sewage was not given an opportunity to become putrefied—that is broken down by the rapid anaerobic action—and thus changed into bodies easily oxidized. Even when resting the aerated filters at times of clogging, we drew air through them, still depending upon oxidation, while recent experiments have demonstrated that we could have more quickly removed the stored organic matter in them if we had kept them full of sewage and depended entirely upon anaerobic action. We have operated the contact filters for longer periods, at higher rates, and without causing clogging, and obtained more satisfactory effluents. In fact, the results of the operation of the aerated filters compared with the results obtained by contact filters have apparently demonstrated the superiority of the latter method, the better results obtained being due undoubtedly to the causes already explained."

Reviews.

An American Text-Book of Pathology For the Use of Students and Practitioners of Medicine and Surgery, Edited by Ludvig Hektoen, M. D., Professor of Pathology in Rush Medical College, in affiliation with the University of Chicago, and David Riesman, M. D., Professor of Clinical Medicine, Philadelphia Polyclinic; Instructor in Clinical Medicine, University of Pennsylvania. With 443 Illustrations, 66 of them in colors. Philadelphia and London, W. B. Saunders and Company, 1901. Imperial octavo, 1221 pages and index.

The American Text-Book of Pathology, announced several years ago, is the latest candidate for recognition as a representative and authoritative work on the subject with which it deals. Its editors are known as erudite teachers and investigators, each having added to the sum total of our knowledge, particularly in pathology. With the editors are associated seventeen contributors, each dealing alone with some special feature or having assigned to him the pathology of some organ or set of organs. Most of the contributors are recognized authorities upon matters of which they write, and practically all hold teaching positions. The writer of a text-book should be familiar with the subject upon which he writes and when dealing with a field so vast and rich in theory and literature must be able creditably to sift and present the essential facts of the subject; the editors have evidently selected the contributors with both these points in view. The outcome is a volume containing the views of a number of writers—a composite work—as fully as possible edited to uniformity. Space precludes the detailed review that so important a contribution merits and the reviewer can indicate, in part only, the general scope of the work.

The subject is divided into two parts, one dealing with general pathology, to which 444 pages are given; the remainder of the volume is devoted to special pathology.

The introduction by Dr. Barker is a scholarly review of certain general considerations, and includes, among other subjects, heredity, environment and immunity. The articles on General Morbid Processes (144 pages), Diseases of the Osseous System (62 pp.), and Ductless Glands (35 pp.) are from the pen of Dr. Hektoen. Dr. Riesman writes on Diseases of the Urinary Organs (89 pp.); Dr. Ohlmacher, Tumors (65 pp.) and Pathogenic Microparasites (100 pp.); Dr. Mitchell, Animal Parasites (26 pp); Dr. Vaughan, Intoxications (47 pp.); Dr. Carter, General Pathology of Fever (17 pp.); Dr. Lewis, Teratology (31 pp.); Dr. Cabot, Blood and Blood-making Organs (49 pp.); Dr. Stevens, Circulatory System (59 pp.); Dr. Collins, Nervous System (107 pp.); Dr. Warthin, Voluntary Muscles, Tendons, Tendon-sheaths and Bursæ (62 pp.); Dr. Nicholls, Digestive System (88 pp.); Dr. McFarland, the Respiratory system (56 pp.); Dr. Beyea, Female Genital Tract (66 pp.); Dr. Warren, Breast (12 pp.); Dr. Frank Hugh Montgomery, Skin (68 pp); Dr. Holden, Eye (47 pp); and Dr. Spalding, Ear (14 pp.).

There is no special consideration of technique, and in some instances, at least, the directions given are insufficient; such indefinite formulæ as "acetic-acid water" (p. 88), "iodinized solution of gum arabic" (p. 99), "a solution of potassium ferrocyanid and hydrochloric acid" (p. 136), and "mixture of iodine and glycerine" (p. 99), are practically worthless directions; the methods of blood examination are cramped into four pages, less than three of which are reading matter. The excellence of books on technique at present attainable is sufficient to justify omitting such questions from a text-book, but, when inserted, technique should have a working value.

The article on tumors is most interesting. The Durante-Cohnheim, or embryonal theory of tumor origin is given due credit. With regard to the alleged parasites, both animal and vegetable, an open mind is held. Tumors are divided into two groups, benign and malignant and under these headings all morbid growths are considered. It seems unfortunate unqualifiedly to term giant-celled sarcoma myeloma, as the description of myeloma (p. 693) is quite unlike that of myeloid sarcoma (p. 203). There are those who would take issue with the statement that operative removal of cancer is "so hopeless" (p. 211) although the stand is not by any means defenceless. Very correctly the view that cancers are without function is abandoned. The term adenocarcinoma is certainly more commonly applied to cylindric-celled than glandular cancer, and the inquirer will not find scirrhus or encephaloid mentioned under the head of glandular carcinoma.

In the chapter on microparasites the size of the bacteria described is rarely given; the buboes of plague are not classified, nor anywhere in the volume accurately described. The pathogenic protozoa are discussed in this chapter and not among the animal parasites. No mention is made of the observations of Melnikow-Raswedenkow upon echinococcus multilocularis nor is the synonym alveolaris given.

The observations of Loos on skin infection as a manifestation of ankylostomiasis is not mentioned. Trichinella is not given as a synonym of trichina. The article on Intoxications is most interesting, accurate, and well written, but

it is quite impossible to resist the belief that part of it would be more appropriate in a work on toxicology.

Inconsistencies of statement have for the most part been adjusted by careful editing, but occasional exceptions occur; thus, on page 465, in discussing the cord lesions of pernicious anemia, it is stated that "The condition is not systemic" and that "a very slight degeneration of the posterior peripheral nerve roots as sometimes found," while on page 585 it is stated that "in the beginning the disease is systemic" and page 586 "the posterior nerve roots.... are unaffected." In this particular subject, and often elsewhere, matter is duplicated and here two inferior illustrations are repeated.

It seems an odd section arrangement to discuss the lymphatic glands and spleen under the circulatory system. The pneumococcus might have been mentioned as one of the organisms causing membranous pharyngitis (p. 795). Spasmodic stricture and atonic esophageal dilatation receive no mention. Gastroptosis is called Glénard's disease (p. 770). Peptic ulcers are spoken of as recent and old, not as acute and chronic, the usual subdivision. It is not stated that similar ulcers occur in the esophagus. The editors might have explained the meaning of the term "broken down pus" (p. 773). The etiology and morbid anatomy of phlegmonous gastritis are not given. One would gather that gumma is the only syphilitic lesion occurring in the stomach. Pyloric stenosis, acquired, and gastrectasis, acute and chronic, are not considered. Direct and indirect herniæ are not mentioned. Volvulus (p. 780) is more commonly a twisting upon the axis of the mesentery than the axis of the bowel. The specificity of any particular organism in dysentery is doubted. The review of Mallory's studies bearing upon the histology of typhoid lesions is correct on page 791 and not fully accurate on page 236 The statement (p. 794) that tuberculous ulcers usually do not possess undermined edges is not in accord with the reviewer's experience. Cirrhosis of the liver is classified and the forms accurately described, but little is said of the cause or causes, even alcohol is not mentioned. Pancreatic cysts receive no consideration. The extremely favorable prognosis of nasal diphtheria (p. 836), particularly the acute form, is not generally accepted as correct. Auld's observations on emphysema receive no recognition.

The statement that the color of the lung in red hepatization of croupous pneumonia is due to the abundance of erythrocytes in the exudate is not in accord with the views of Jürgensen and Pratt. No change in the alveolar epithelium in croupous pneumonia is mentioned.

It would be unfair to indicate which articles in the reviewer's estimation deserve special mention, but it is sufficient to say that none leads the reader astray; the descriptions are clear, and unusually free from confusing statements or clauses subject to misinterpretation—errors often conscpicuous in books of its kind.

Most of the illustratins are far above the average and many are superb, deserving special mention by reason of their trueness and accurate coloring. The legends are usually clear; the magnification is quite constantly given in some articles and just as faithfully ignored in others, being crudely indicated by "low power" or "high power," as the case may be. References are given in some articles and are absent in others. The proof-reading has been most thoroughly done and but a few entirely unimportant errors have come to the reviewer's notice—Torson (p. 445), manosmia (p. 665), pneumatosis (p. 851), Issaksohn (p. 853), and a few others, pratically all evident typrographical slips.

The index is compact, and fully crossed for convenient reference. The type, paper and printing, as well as the binding, are admirable exponents of the publisher's art, but the insertion of twenty-five pages of advertising matter in a volume already rather bulky is an unpardonable breach of good taste.

The volume is to be commended as an accurate exposition of the science of which it treats and the editors and publishers merit the warmest praise of American readers for this admirable contribution to our growing list of practical medical text-books. [W. M. L. C.]

Hypnotism, by L. W. De Laurance, Chicago, The Henneberry Co., 1901.

The character of this book is at once indicated by the remarkable and original cover which it bears. A white owl or white dragon is sending from a central sun huge rays or golden light, while beneath there is printed in massive golden letters the word hypnotism. When we open the book we find that its contents hardly justify a serious review in a medical journal. It is written from a lay standpoint, contains nothing new and much that is objectionable. It bears as a frontispiece a portrait of the author and is replete with illustrations in each of which the author figures prominently. The author is not a medical man, but as we are informed on the title page, an "instructor in the School of Hypnotism and Suggestive Therapeutics," Pittsburg. In consequence this book has for medical men little value. It is doubtless meant to appeal to the laity for whom it is written. Whether it is wise and proper that hypnotism, if used at all, should be used by persons, uneducated in medicine, is a very serious question. Indeed, we entertain the very positive conviction that such practice should be prohibited by law. [F. X. D.]

The Treatment of Acute Intestinal Catarrh.—Nothnagel, (*Praktitscheski Vratch*, Vol. 1, No. 7), calls attention to the following trite truths regarding the treatment of catarrhal inflammation: (1) A real cure of an acute catarrh can only be brought about through the regenerating processes going on in the organism or the affected tissues. (2) Complete recovery is only possible in acute catarrhs. The second point is especially emphasized and the assertion is made that a chronic intestinal catarrh is incurable. It is, therefore, of the utmost importance to prevent the acute catarrh from becoming chronic. This can be accomplished not so much by medication as by a careful regulation of the diet and régime. During the acute attack the diet should be very light and bland, the stomach and intestines being given as much rest as possible. The patient should also avoid draughts, sudden changes of temperature, wind, dust, smoke and prolonged talking. This régime should be kept up until the complete disappearance of the symptoms.

Posttraumatic Diseases in the Army.—Charles Legrain divides the diseases in the French Army which follow injury into 4 groups the posttraumatic infectious diseases without inoculation; the posttraumatic infectious diseases with inoculation; noninfectious posttraumatic diseases; and nervous diseases following traumatism. Among the diseases of the first group are tuberculosis, syphilis and malaria. In the second group are the secondary infections, tetanus, glanders, etc. In the third group come acute articular rheumatism, gout, nephritis, muscular rheumatism, neuralgia etc. Among the nervous diseases which follow injuries are hysteria, neuritis, myelitis, etc. In all cases the exact relation between the injury and the disease must be found by a detailed study of each case. When the illness is the result of military service, the soldier deserves a pension but when no such relations exists, the soldier deserves no pension. [illegible] (1901) M. C.

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

An Appointment.—Dr. Joseph Sailer has recently been appointed upon the medical staff of the Howard Hospital, Philadelphia, replacing the late Dr. Charles Wirgman.

Philadelphia Almshouse and Hospital for the Insane.—It seems most probable that within the next 3 years the Almshouse and the Hospital for the Insane, both of which are now departments of the Philadelphia Hospital, Blockley, will be removed to Petty's Island. The superintendent of the Philadelphia Hospital believes Petty's Island to be the most desirable place for the institutions. It is near the city, it is isolated except by ferryboat, it offers the best opportunity for sanitary drainage, and it will never be encroached upon by other buildings. He believes that the island is big enough to house the poor and insane for the next 3 generations. Not one half of the ground will be necessary for buildings, and the balance can be utilized for giving employment to patients and for raising vegetables.

An Announcement.—The trustees of the Medico-Chirurgical College of Philadelphia have declared vacant the chair of genito-urinary surgery of the institution, formerly held by Dr. E. R. Kirby.

The Municipal Hospital Site.—A plot of ground extending from Kensington Avenue to Frankford Creek and from Oxford Turnpike to the County Line will soon be purchased for the erection of a new county hospital for the treatment of contagious diseases. The plot of ground is high, well located and easy of access. It contains 62 acres and the purchase price is $115,000. Beside being the most accessible site, it is the least expensive of the 65 other places offered. This lot is in the 36th. ward. The ordinance for its purchase and for the sale of the present Municipal Hospital was adopted without opposition by the sub-committee of councils.

Berks County Medical Society.—At the May meeting Dr. Shantle delivered an address upon the eye as a specialty. Dr. Hartman read a paper on tubercular adenitis.

The Health of Philadelphia.—The reports for the week ending May 17 show a marked decrease in all infectious diseases except whooping cough. Scarlet fever also seems to hold its own, 93 cases with 3 deaths being reported. Eighty cases of typhoid fever were reported with 11 deaths; 45 of diphtheria with 12 deaths, and 12 of smallpox with but one death. One hundred and nineteen cases of whooping cough were reported, the disease being especially prevalent in the northwestern part of the city, 51 of these patients attending one school. The epidemic of measles at Norwood, after an apparent cessation has again broken out, a dozen new cases being reported in 2 days.

NEW YORK AND NEW JERSEY.

American Medical Editors' Association.—The annual meeting will be held at Saratoga, June 9 and 10, under the presidency of Dr. A. J. Stone, of St. Paul. The secretary of the association is Dr. O. F. Ball, of St. Louis. A number of valuable papers will be read.

American Association of Genito-Urinary Surgeons.—At the sixteenth annual meeting, held at Atlantic City April 29 and 30, 1902, the following officers were elected for the ensuing year: President, Dr. Paul Thorndike, Boston, Mass.; vice-president, Dr. Edwin C. Burnett, St. Louis, Mo.; secretary, Dr. John Vanderpoel, New York. The next place of meeting will be Washington, D. C.

Dr. Jacobi's Farewell Lecture.—On the afternoon of May 7, Dr. Abraham Jacobi, professor of children's diseases in the College of Physicians and Surgeons, New York, delivered his last lecture to the students. He has now retired as professor.

Complimentary Dinner to Surgeon-General Sternberg.—A number of prominent physicians and pathologists of the United States will give a complimentary dinner to Dr. Sternberg, Surgeon-General of the United States Army since 1893, at New York, June 13. The dinner is to be an expression, on the part of his many friends, of their appreciation of his services to the country and the profession. Dr. Sternberg is soon to be retired from the Army.

Charity Organization Society, New York.—The fifth annual summer school in philanthropic work will open June 16, to continue 6 weeks. At the morning exercises addresses will be delivered by a number of well-known workers from all over the United States. Visits will be made and practical work done, intended to introduce the students to life among the poor in New York and the best means for improving their condition. The different settlements and tenement districts on the East side, and Blackwell's and Randall's Islands, are among those to be inspected. Graduates of a college or university who have had one year's work are eligible to membership. The registration fee will be $10. Further information can be had from the director of the school, 105 East 22nd street, New York.

New York Orphan Asylum.—At the celebration of the 96th. anniversary of its foundation, May 13, the superintendent announced that the institution would move into its new building at Hastings on the Hudson, June 1. The present buildings have been occupied since 1836. On the new ground, which contains 40 acres, are an administration building and 8 cottages, thoroughly up-to-date in all respects.

Fire in the Naval Hospital, Brooklyn.—Fire occurred in the laboratory adjoining the Naval Hospital building, May 12, causing great excitement in the hospital and in the building for contagious diseases. The laboratory was only saved from destruction by the prompt work of the naval officers and attachés of the hospital. There were 76 patients in the hospital and 5 in the contagious disease building, but a panic was averted. It is believed that an improperly insulated electric light wire caused the fire.

Richmond Beach, Staten Island, has been bought by Mr. Schwab, president of the United States Steel Corporation, for the benefit of the poor and sick children of New York. The land comprises a fine beach, a fresh-water lake, a grove and highland where from 1500 to 2000 children can be provided for daily, being entertained by bathing, boating, donkey rides, and games. Mrs. Schwab announces that a large steamer will make trips to the beach daily and that every child will receive a big dinner.

NEW ENGLAND.

Free Hospital for Women, Brookline, Mass. A new surgical ward was opened May 10. It is situated on the second floor in the Western wing of the building, and will accommodate 12 patients. A large reception was held by the board of lady visitors and trustees.

Osteopathy Defeated.—The bill authorizing the Boston Institute of Osteopathy to grant the degree of doctor of osteopathy has recently been defeated in the Massachusetts House of Representatives. It was opposed by the State board of education, by the board of medical registration and by the heads of other educational institutions in the State.

A New Floating Hospital.—Plans have been drawn up for building a new ship for use as a floating hospital. It is to have 4 decks. Forward, on the main deck, will be 2 wards with 16 beds each, and between these are examining and treatment rooms. A little further aft will be a room for the preparation of babies' food, where milk may be prepared. On the lower deck, forward, will be a number of contagious wards. A large boiler and dynamo room with a steam disinfector and atmospheric plant make it possible to maintain an even temperature of 74°. On the upper deck are 4 large wards forward and aft, with 16 beds each, examining and treatment rooms, a pharmacy, with an excellent system of dumb-waiters to the decks below and the one above. The deck above will be the out-patients' deck, and the entire aft portion an open ward for out-patients.

American Laryngological Association.—The 24th. annual meeting will be held at Boston, May 26 to 28, Dr. John W. Farlow, of Boston, being president. Among the papers to be read is one on the development of the tonsils by Dr. C. S. Minot; a tumor of the face and pharynx, by Dr. Thomas White; and the importance of the ethmoidal cells, by Dr. H. A. Lothrop.

Two Big Hospitals.—On May 25, a quarter of a century will have passed since the death of P. B. Brigham, who left over $3,000,000 for the construction and equipment of what is to be known as the Peter Brigham Hospital. According to the plans of the late Mr. Brigham, the institution is to be erected in the central part of Boston, and, when completed, is to be opened to all sick persons in indigent circum-

stances in Suffolk county. By the will of his nephew, Robert Brigham, almost $2,000,000 were left for founding the Robert B. Brigham Hospital for Incurables. Robert Brigham also left the sum of $1000 each to most of the charities of Boston. Both hospitals will soon be erected.

Old Ladies' and Children's Home, Groton, Mass.—Alvah Wright has given 80 acres of land in the Eastern part of Groton to the town as a site for an old ladies' and children's home. The institution will be for the benefit of aged women unable to support themselves, and for cripples, young and old. Many children will be taken care of during the summer.

Newton Hospital, Newton, Mass.—The formal opening of the new Thayer and contagious wards of the Newton Hospital occurred May 15. The new Thayer ward takes the place of a former ward, destroyed by fire. Much attention has been given to the detailed construction of the new buildings, which are said to be of an entirely fireproof character.

Smallpox at Rutland, Vt.—As the result of an incorrect diagnosis, Rutland is threatened with a serious epidemic of smallpox. A man died May 3, after a short illness, during which his friends were allowed to see him. Three hundred people attended the funeral. Now it appears that he must have had smallpox for his nurse, sister, 2 children and 5 members of the family of a friend have developed the disease. Four hundred men who worked with him have been exposed to the infection.

WESTERN STATES.

Proposed Home for Epileptics.—The annual report of the Board of Charities of the State of Indiana urges the necessity of establishing a home for epileptics. A separate institution is needed for these unfortunates. The report also shows marked improvement in the efficiency and management of the different State institutions. The insane asylums' report shows a slight increase in the number of inmates.

The Original Habitat of Man.—Professor Dyche, of the University of Kansas, lectured in Kansas City, Mo., May 15, upon this subject. He advanced the theory that the first man inhabited the northern part of Greenland and the territory surrounding the poles. In a recent trip to the northern part of Greenland, Professor Dyche found fossil specimens of the California red wood tree. As an illustration of the fight of animals against advancing inclement nature Prof. Dyche cited the case of the mammoth, which was at first a heat-loving animal. Those which refused to leave their northern home gradually grew hair as a protection. When the environment became too severe, the species perished. Prof. Dyche drew conclusions from the flight of birds. He believes that birds migrate north to breed, because of an instinct, acquired by centuries, of returning to the original breeding grounds in the north.—*New York Sun.*

An Appointment.—Dr. A. B. Bevan has been appointed professor of surgery in the Rush Medical College, Chicago, to fill the position made vacant by the death of Dr. Fenger. Dr. Bevan was graduated from the Rush Medical College in 1883, served in the United States Marine-Hospital Service until 1888, was professor of anatomy at Rush until 1900, and associate professor in surgery until the present time.

Diphtheria at Arena, Wis.—On account of an outbreak of diphtheria, the public schools were closed during the first week in May. Quarantine regulations are absolutely disregarded and it is probable that a severe epidemic will result.

Atmospheric Purification.—The Chicago Board of Health has recently carried out a number of experiments proving that the air was purified by a snowstorm. Culture plates exposed January 18 gave from 630 to 1050 colonies. January 21, 0.28 of an inch of snow fell, and plates exposed the next day gave but from 66 to 180 colonies, showing that the atmosphere was almost 90% purer after the snowfall.

Spotted Fever.—The secretary of the Montana State Board of Health, with a party of physicians, has been investigating the outbreak of spotted fever which is causing a panic among the inhabitants of the Bitter Root Valley, Montana. Every case of the disease has been fatal, and up to the present time it has baffled the skill of all physicians who have sought to investigate it. Several eminent New York scientists have been invited to participate in the investigation now commenced by the State.

Fire in a Deaf-Asylum.—Fire destroyed the main building and chapel of the Iowa School for the Deaf, Council Bluffs, May 10, causing a loss of $[illegible]. The buildings were uninsured. Two hundred and sixty pupils and 63 teachers, officers, and employés escaped. Several firemen were injured. This is the fourth State institution to burn within the past 2 years.

A Bequest.—It is announced that Mr. J. H. Wade has given the sum of $100,000 to the Fresh Air Camp, to [illegible] in its charitable work this summer, and a similar sum of money to the Lakeside Hospital, Cleveland, Ohio.

University of California.—A new premedical course has been established in the College of Natural Sciences and the degree of B. S. may be conferred by the University of California after the first 2 years in the medical department, on recommendation of the faculty of the College of Natural Sciences. The previous plan of conferring the degree of M. D. and B. S. upon the completion of 6 years in the University, 3 in the academic and 3 in the medical department, is therefore abandoned. Students who have taken the 3 years premedical course at Berkeley will no longer be admitted to the medical school of the University of California.

Chickenpox to be Reported.—The Health Department of Milwaukee, Wis., from now on requires that physicians report all cases of chickenpox. This was done because a number of cases of smallpox had been treated as chickenpox by some physicians in the city. In this manner the Health Board hopes better to control the spread of smallpox.

SOUTHERN STATES.

United States Public Health and Marine-Hospital Service.—The bill increasing the efficiency and changing the name of the United States Marine-Hospital Service was passed by the Senate May 17, without debate. The bill authorizes the President to utilize this service in times of threatened or actual war. When this service was reorganized in 1871 it was placed on a military basis. It has done considerable work in connection with the army. There are 106 commissioned medical officers in this service, which is one-third the total number of commissioned medical officers in the army. The bill provides for bringing the laboratory, now provided for by law, into relations with the scientific work of the Army and Navy and the Department of Agriculture and with other scientific laboratories in different parts of the country. A provision is made for conferences with State and Territorial Boards of Health whenever the public health would be promoted by such conference. This will provide for co-operation between the national and State authorities and will bring the two classes of service into much closer affiliation. A provision is also made for securing uniformity in the registration of vital statistics of the country. The President is authorized to prescribe rules and regulations from time to time relative to the conduct of the service and thus improve it whenever necessary.

Cambridge Hospital, Cambridge, Md.—A site has at last been procured in West Cambridge costing $[illegible] upon which the new Cambridge Hospital will be erected. $10,000 have been appropriated by the last legislature for establishing the institution.

Johns Hopkins Hospital, Baltimore, Md.—A new surgical building to cost $[illegible] is to be erected at the corner of Hopkins Avenue and Monument Street. It will be a [illegible] building with basement and [illegible] and operating rooms in the basement. Dr. Osler's private [illegible] and consists of rooms on the second floor, Dr. Halsted's rooms on the third floor and a large amphitheatre on the fourth and fifth floors to accommodate 200 [illegible]. The building will be thoroughly modern in every respect and [illegible]. It is expected that the present [illegible] hospital will be torn down to make room for the new building.

Emergency Medical Aid for Congressmen.—As a result of several cases of illness which have occurred in the House of Representatives recently, a resolution was adopted May 15 to provide an emergency equipment of medicines and instruments to be approved by Representatives Wilson Showalter and Ball, physician members of the House

MISCELLANY.

Cholera.—A full and interesting account of the measures taken by the International Sanitary Board, Cairo, to prevent the spread of cholera by the pilgrims returning from Mecca has just been received. The pilgrimage this year has been exceptionally heavy, nearly 40,000 having come from the North. Eight or 10 shipboards are now detained at El Tor in quarantine, and cholera is reported to exist among them. After the quarantine at El Tor, those considered incapable of carrying the infection are allowed to leave for Europe. As none of the steamers is allowed to land at Suez without clean bill of health, the danger is limited to those small groups of pilgrims who attempt a clandestine landing in Egypt in rowboats. The entire Egyptian seacoast is being patrolled to prevent any such landing. Modern methods of disinfection are employed at El Tor, there being sufficient facilities to disinfect the clothing and perform bathing operations at the rate of 100 pilgrims per hour. For Egyptian pilgrims who have no long sea voyage to undergo, the period of quarantine is 18 instead of 15 days. Those who are sick when disembarked are conveyed to one of the 3 hospitals at El Tor, one of which is destined especially for surgical cases. Temporary hospitals are also fitted up in tents for suspicious and contagious cases. The camp is surrounded by soldiers to prevent the escape of the pilgrims. For destitute pilgrims, the Government provides 2 meals a day.—Under the date of May 21 advices from Manila state that the cholera situation in the Philippines remains unchanged. 1108 cases with 806 deaths occurred in Manila: 3592 cases with 2604 deaths in the provinces.

United States Quarantine Regulation.—In view of the improved conditions in the ports of Cuba and the fact that there has been no yellow fever on the island in 1902, the season of close quarantine for yellow fever against the Island of Cuba has been postponed until June 1, 1902, with the provision that the surgeon-general of the Public Health and Marine Hospital Service be authorized to put into effect regulations immediately, should changed conditions require them.

An Appointment.—In accordance with the recommendation of the United States Public Health and Marine-Hospital Service's office, Havana, Dr. Eduardo F. Nuffez, formerly quarantine officer of the port of Havana, was appointed chief quarantine officer for the Island of Cuba, May 20. Dr. Nuffez is a graduate of the University of Pennsylvania, practised 5 years at Philadelphia, and was an acting assistant surgeon in the Army during the Spanish-American War. He has been engaged in quarantine work in Cuba during the past 3 years.

Bubonic Plague.—Reports from Hong Kong, April 22, state that 3 fresh cases of plague were reported since April 20, 2 of them in natives. This brings the total of plague cases this year up to 18. Macao has been declared an infectious port, 12 cases of plague having occurred there since the beginning of the year. The Public Health Reports announce an epidemic of the plague at Pakhoi. Under the date of May 2, the Secretary of State had a cablegram from the United States Consul at Canton, stating that the plague was epidemic at East Honam, but is decreasing in Canton.—From April 4 to April 10, 21 new plague cases were recorded in Egypt; later 2 new cases appeared in Alexandria.—Several cases of plague have also been reported at Nagasaki, Japan.

The Guam Leper Colony.—The Governor of the Island of Guam has requested an appropriation of $2000 from the Navy Department for the purchase of land and the erection of houses for a leper colony. He has already found several cases of leprosy and has leased ground for the temporary segregation of these individuals. It is his intention to create a colony rather than to collect all cases in one hospital building. During the interregnum immediately following the withdrawal of the Spanish Government, the few lepers of the hospital gradually slipped out, and have been received and cared for by the people of the villages who are loath to betray them. It is believed that no material harm in the way of dessemination of the disease has as yet resulted from this recent lack of segregation. Steps have also been taken to obtain attendants and nurses for the colony.

The Manufacture of Lithium Carbonate in the United States.—Two lithium minerals have so far been mined, lepidolite and spodumene. Large deposits of the former are found near Pala, San Diego county, California. Spodumene is found in the Etta mine in the Black Hills of South Dakota, while a number of other mines in that neighborhood yield smaller quantities. The production of lithium carbonate in 1901 amounted to 1750 tons, worth $43,200, more than 3 times the amount produced in 1900. American lepidolite has even been shipped to Germany. In fact it was the custom to send all raw lithium mined in this country to Germany, where lithium salts were manufactured and then imported. Now, however, these salts are manufactured by 2 chemical companies in New Jersey.

The Health of Cuba.—Cuban statistics for the month of March show the smallest number of deaths for any March since 1899. Six months have passed, now, without a single case of yellow fever appearing in Havana. In 1897, 1389 deaths occurred from yellow fever; in 1900, 123; during 1901, when mosquito work had been rigorously carried out, but 5 deaths occurred. During 1900 there were 350 deaths from malaria. In 1901, the first year of the mosquito work, there were 151 deaths; during March, 1902, but 3 deaths occurred. This plainly shows the effect of the destruction of mosquitoes. About 2500 cases of tuberculosis have been reported and are now located by the sanitary officer.

Obituary.—Dr. Lyman Beecher Todd, at Lexington, Ky., May 13, aged 70 years.—Dr. Thomas Dudley Isom, at Oxford, Miss., May 4, aged 86 years.—Dr. D'Estaing Dickerson, at Kansas City, Mo., May 3, aged 67 years.—Dr. John T. Shutt, at Mercer County, Pa., May 4, aged 50 years.—Dr. Charles H. Masten, at Nyack, N. Y., May 1, aged 62 years.—Dr. A. Fritts, at Wilmington, Del., May 16, aged 32 years.—Dr. Reuben J. H. Tall, at Baltimore, Md., May 12, aged 59 years.—Dr. Edward Bagnicki, at Williamsburg, N. Y., May 16, aged 62 years.—Dr. Rea du Pue, at San Francisco, Cal., May 5, aged 26 years.—Dr. F. J. Leadbrook, at Orofino, Idaho, May 13.—Dr. John Charles Earle, at Easton, Md., May 17, aged 78 years.—Dr. C. P. Calhoun, at Altoona, Pa., May 18, aged 60 years.—Dr. Allan H. Hulshizer, at Philadelphia, Pa., May 19, aged 51 years.

CONTINENTAL EUROPE.

Professor Escherich's Opening Lecture.—Dr. Escherich, formerly professor of pediatrics at Graz, recently called to Vienna, delivered his first lecture in the St. Anna Hospital for Children, April 30. In his lecture he first spoke feelingly of his predecessor, Professor Widerhofer, who had hoped to celebrate his 70th. birthday by laying the foundation of the new administration building of the hospital. It is expected, however, that this will be erected according to Professor Widerhofer's plan. Escherich announced that he will not only give clinical lectures, but will also demonstrate cases before students and physicians. He then lectured upon the physiology of the growth in childhood.

A Woman President.—At the last Congress of the Pirogoff Society, recently held at Moscow, a lady, Dr. A. G. Archangelskaia was president of the section on surgery.

Notes.—Tarnier said in 1873 that no woman on a milk diet ever has eclampsia, and Pinard's experience fully confirms this view.—Russian physicians assert that horseflesh is more nutritious than beef.—Nearly 3000 German doctors have signed a petition to the Reichstag asking that the burning of bodies of persons who die of contagious diseases should be made obligatory.—France loses about 150,000 persons every year through tuberculosis.—An Austrian physician has invented a powder known as antisputol, which experiment has shown to be capable of destroying the bacteria causing tuberculosis, typhoid fever and diphtheria.—Dogs are being trained for ambulance service in the Prussian army.—Buda Pesth has the largest Jewish population, proportionate to its size, of any city in the world. Two hundred and thirty-six per 1000 of her people are Hebrews. Of the population of Switzerland, 71.3 per cent. speak German, 21.4 French and 5.6 Italian.—There are physicians in Germany who charge only 2 cents for a consultation and 4 cents for a visit.—It is reported that smallpox has broken out severely in Antwerp and Brussels, and the report goes on to say that the disease was imported from London.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

May, 3, 1902. (No. 2157.)

1. An Address on the Signs on the Skin in Certain Common Diseases. JAMES GALLOWAY
2. A Case of Chloroma with Pathological Report and some Notes Descriptive of the Disease.
G. H. MELVILLE DUNLOP.
3. Tuberculosis of the Conjunctiva.
SYDNEY STEPHENSON
4. On the Subcutaneous Injection of Paraffine for the Removal of Deformities of the Nose.
WALTER DOWNIE.
5. On the Spread of Leprosy and an Examination of the Fish Hypothesis of Leprosy as applied to Kashmir
ERNEST F. NEVE.
6. Case of Epithelioma Complicating Lupus Erythematosus Treated by Scraping and Healed by the X-Rays.
G. G. STOPFORD TAYLOR.

1.—In the course of **nephritis** the occurrence of **eruptions on the skin**, which vary in their manifestations between those of urticaria and erythema multiforme, are sometimes noted. Galloway considers that these, as the other symptoms indicate, are due to vasomotor paralysis or the cachexia capillaries in patches, followed by the effusion of serum or of blood into the upper layers of the cutis. In the course of **diabetes**, the skin is very likely to become infected by the pyogenic micro-organisms, producing the well-known condition of furunculosis and in some instances the development of carbuncles. In addition, the diabetic patient may present seborrheic dermatitis, and dermatitis of the genitals with pruritus. In **diseases of the circulatory system**, chilblains are likely to develop when the circulatory disease is complicated by low tension. In addition, such patients may present [illegible] hyperemia of the dependent parts. In such persons slight traumatism may result in severe bruising and finally in sloughing of the skin. In some cases the skin lesions of circulatory origin closely resemble the tuberculides. [J. M. S.]

2.—[illegible] reports a case of **chloroma** occurring in a boy aged 5 years. For a year before coming under observation, patches of ecchymosis were frequently noticed under the skin; any scratch would immediately suppurate; and at one time there was albuminuria. When admitted to the hospital the nutrition was poor, the complexion of a waxy yellow tint, numerous petechiæ were scattered over the body; there was puffiness of the face, protrusion of both eyeballs, enlarged cervical glands, the voice was whispering, hemic bruits were heard over the cervical vessels, and the pulse was accelerated and irregular in time and force. Smooth hard tumors developed on the eyelids, the jaws and in the temporal regions; the tumors in the eyelids became pale green in color, jelly-like in consistence and gradually covered both eyeballs. Deafness and optic neuritis appeared, the prostration became greater and death occurred 2 months after admission. The leucocytes one day before death numbered 123,000, the erythrocytes 3,[illegible] and the hemoglobin was estimated at 12%. Careful notes of the post mortem are given. The tumors are described as lymphosarcomata, resembling lymphomata in their histological structure and simulating sarcomata in the fact that they arise from the periosteum and give rise to metastases. Greenish masses were found scattered throughout the internal organs, excepting the brain and spinal cord, and invading the marrow and periosteum of the bones. There were 2 growths [illegible] in the heart muscle, a phenomenon observed in only one other case. The writer has collected 27 cases; 14 were under 15 years, 7 between 15 and 20 years, 3 over 20 years, and in one the age was not mentioned. Nineteen were males and 7 were females, the sex of one not being mentioned. This is probably the first case in which the diagnosis was made during life. Before the appearance of the tumors a diagnosis would be impossible and we have only the symptoms of leukemia to guide us—anemia, prostration and hemorrhages. When subsequent to these symptoms exophthalmos, failing sight, deafness and tumors develop the diagnosis of chloroma should always suggest itself. [F. T. S.]

3. Stephenson reports 2 cases of **tuberculosis of the conjunctiva**, one in a child, aged 17 months, and the other in a child, aged 15 months. [J. M. S.]

4.—Downie reports 2 cases of **saddle nose treated by subcutaneous injections of paraffine.** The deformity in both cases followed syphilitic ulceration of the [illegible] nasi. Sterilized paraffine with a melting-point of 104° was used. The [illegible] is sterilized and kept warm by means of a hot-dry stove, and the [illegible] paraffine is injected with a [illegible] syringe, the needle being kept hot with an electric current. Pressure is applied around the nose in order to confine the fluid to the nasal region and the paraffine is moulded into shape as it cools. In one case 2 dram and in the other 1 dram was injected beneath the skin. Immediately after the injection the skin becomes white and glazed, later bright red in color, both of which gradually disappear without pain or other reactionary symptoms. [F. T. S.]

5.—It is possible that there are about 300 cases of **leprosy in Kashmir**, out of a population of about a million. The cases, with few exceptions, are found either in herdsmen from the mountainous districts, or in agriculturists who have mixed freely with such herdsmen. The disease is more common among the men than among the women, the latter forming only about 10% of the lepers. Neve has examined these lepers in order to determine the amount of truth in the hypothesis, advanced by Jonathan Hutchinson, that the disease is spread by the eating of fish in an uncooked or decomposing state. He finds that this hypothesis is not tenable. If the disease is to be stamped out, the most important measures to be taken are (1) to separate healthy children from their leprous parents as soon as possible; (2) to withdraw lepers from the general community as completely as possible; and (3) to use such proper sanitary precautions as shall prevent possible infection or contagion. In fact, the disease should be treated as no less infectious than tuberculosis, [illegible] points of resemblance. [J. M. S.]

6.—Taylor reports a case in which a large **soft epithelioma** developed on the nose of a patient suffering from lupus erythematosus. The cancerous growth was scraped away and the resulting raw surface exposed to the **X-rays** for 10 minutes daily for 41 days, when the healing process became arrested and the new epithelium desquamated. The dose of the rays was reduced and given at longer intervals; the healing process had become complete at the end of 2 months. [F. T. S.]

LANCET.

[illegible]

1. An [illegible] JAMES GOOD.
2. The [illegible] and its Prevention. Lecture III. W. H. CORFIELD.
3. [illegible] lishment of Subcutaneous Leal [illegible]
T. PRIDGIN TEALE.
4. [illegible] Present in the Sputum and Urine.
F. A. SOUTHAM.
5. [illegible]
ALEXANDER CROMBIE
6. [illegible] Phosphate. T. R. BRADSHAW.
7. [illegible]
SIR WILLIAM SAVORY.
8. [illegible]
[illegible]
9. [illegible]
[illegible]
10. [illegible]
GEORGE CARPENTER.

2.—Cornish completes his [illegible] lecture on the [illegible] of typhoid fever and its prevention. In this address he refers to the [illegible] epidemic of enteric fever which has caused the mortality in the Punjaub and refers to some of the [illegible] (T. P. K.)

4. Southam records a case of [illegible] in which [illegible] were present in the sputum and urine. The case occurred in a native of Natal, who had suffered from the Matabeleland Rebellion of 1896. The patient had contracted a [illegible] of the

right tibia caused by direct violence. On the day following the injury the patient was unusually drowsy and developed some delirium. His temperature rose to 104 F. On November 11th., the patient could only be aroused with difficulty. On the 12th., fat was detected in the urine. On the 14th. fat globules and red blood-cells were found in the sputum. The base of the right lung showed evidences of consolidation. Gradually the mental symptoms disappeared and he made a good recovery. [F. J. K.]

5.—Crombie presents statistics regarding the effect of inoculation against typhoid fever in South Africa. His statistics are based upon an examination of 250 officers who recently came before a Medical Board of the British Army, at 18 Victoria Street, London S. W., returned from South Africa on account of wounds and disease. The author found that 112 had been inoculated against enteric fever. From a study of the cases he thinks that the antityphoid inoculation offers a smaller handicap to attack of the disease in the long run, but that there appears to be a great liability to infection of enteric soon after the operation of antityphoid vaccination. [F. J. K.]

6.—Bradshaw contributes an article on an undescribed urinary deposit; monohydric magnesium phosphate. The urine was that from a patient suffering from dilatation of the stomach who had been greatly relieved of his distress by taking magnesia. The urine was alkaline in reaction; quite free from any decomposition or odor. It contained a sediment which consisted of sparkling crystals. Microscopically examined, they appeared as elongated narrow needles. The deposit was subjected to various tests. It was insoluble in alkalies but dissolved completely in acetic acid without effervescence. It also yielded the reaction of a salt of magnesium which the author states showed it to be an orthophosphate. He contends it seems obvious that the magnesium forming the deposit in the present case was derived from that which had been swallowed for the relief of the gastric distress. Owing to the dilated condition of the stomach, we must conclude that its contents were unduly retained, so that the salts were absorbed into the blood instead of passing on into the intestines and thence escaping through the kidneys. [F. J. K.]

7.—Savage reports a case of ovarian tumor with spontaneous rupture, and edema of the leg simulating malignancy. He remarks that rupture of an ovarian cyst is not often met with in a simple tumor, owing to the fact that most of such cases are recognized early and operated upon before the tension of the fluid within the cyst has reached the point of rupture. The colloid material in this case had remained free in the peritoneal cavity for 2 months before operation, and was about a pint in quantity. The edema in the legs resulted from the heavy weight of the tumor pressing on the iliac veins. On removal of the growth the edema quickly disappeared. [W. A. N. D.]

8.—Guthrie discusses "idiopathic" or congenital, hereditary and family hematuria. He is aware of the existence of idiopathic hematuria in 12 persons, 8 of whom are brothers and sisters or first cousins. Their mothers are 2 sisters who are also subject to the complaint. These 2 sisters had 2 mothers similarly affected. He remarked that the characteristics of idiopathic hematuria are the following: It is hereditary, familial, and congenital; the condition may vary in extent; persisting for many years. In some cases blood is found in the urine at all times; in other cases it is only discovered by microscopical examination except when exacerbations occur. The quantity of blood varies in different cases. The amount of blood during exacerbations is always far greater than in cases of nephritis. In point of profuseness, the blood passed in cases of idiopathic hematuria resembles congenital hematuria. Slight pyrexia, malaise, headache, vomiting and slight pains in the back or limbs occur in nearly all of the cases. Exacerbations are usually attributed to catching cold and are associated with slight bronchial catarrh and other trivial ailments. The duration of the exacerbations varies from a few days to a week or two. Edema, ascites and cardiovascular changes are not associated with idiopathic hematuria. The specific gravity of the urine usually varies from 1015 to 1030. The quantity of urine is about normal. Its reaction is acid or neutral, and it nearly always contains albumin in varying from 1-20 to 1-4 of its bulk. The sediment contains red blood-cells and tubular bloodcasts in more or less abundance but never hyaline casts. He points out also that hemophilia and idiopathic hematuria are not associated. The most reliable supposition in regard to the cause of idiopathic hematuria is that there is some inherent weakness or vulnerability of the walls of the renal vessels leading to what has been called renal hemophilia or renal epistaxis. The vasomotor system may be at fault, in which case the disease might be grouped under cyclical or postural albuminuria. [F. J. K.]

9.—Carpenter reports a case of scurvy developing in a rickety boy, aged 5½ years. [F. J. K.]

MEDICAL RECORD.

May 7th, 1904.

1. So-Called "Joint Derangement" from Movable Bodies in Joints. JOSEPH D. BRYANT.
2. A Few Cases of Penetrating Stab Wounds of the Abdomen. JOSEPH B. BISSELL.
3. Prophylaxis in Pneumonia. H. R. TUTHILL.
4. The General Complications and Sequelæ of Measles. ADOLPH RUPP.
5. Eye Complications of Measles and their Treatment. D. H. WIESNER.
6. Cerebral Abscess. C. E. RUTH.
7. A Report of Experiments made with Cargile Membrane for the Purpose of Determining its Value in Preventing the Formation of Peritoneal Adhesions. ROBERT T. MORRIS.

1.—Joseph D. Bryant discusses the so-called joint derangement from movable bodies in joints. The etiology of these bodies is the subject of no little contention, some are characterized as fibrous, others tough and striated, of ligamentous texture, or hard like bone. In the majority of instances they are said to be fibrocartilaginous and, if ancient, possessed of a central bony structure. Their shapes are various, dependent in part upon their particular environment. There are probably of traumatic origin in at least a large percentage of cases. The author reports a case in his paper which occurred in the knee joint of a young man of 22 years. The results of operative practice under the best regulated forms of aseptic procedure are practically devoid of danger to life and limb, but to this end a perfected technique is absolutely necessary. [T. L. C.]

2.—J. B. Bissell reports 12 cases of penetrating stab wounds of the abdomen. He concludes from a study of these cases: A stab wound involving the peritoneal cavity is frequently followed by recovery without operation. In every case the wound, and the field near it, should be thoroughly antisepticized and kept so; an examination should be made with the cleansed fingers, if at all, and only to determine whether the wound penetrates the abdomen, and to ascertain if any injury has been done to the contents. If doubt exists about involvement of the organs, it is better to bring the divided edges of the peritoneum into the wound, fasten them there, drain and wait. If the abdominal viscera have certainly escaped damage, the wound should be closed by suturing the peritoneum, the muscles and the skin and the fascia in 3 different layers, catgut being used; or if the wound be long and gaps, a catgut running suture may be used for the peritoneum, and silkworm in one layer for the skin and muscles. If there be grave doubt and the symptoms point to damage in the peritoneal cavity, the wound must be enlarged and a complete exploration made carefully; or, better still, a median laparotomy may be done exactly as in an examination of tumors of the abdominal cavity. The contents of this cavity should be examined, repaired, if necessary, and returned, and the opening then sutured, as before advised; or, if the damage be too severe, the injured gut or omentum should be brought to the wound and a drain inserted, in order that an exit may be given to any [illegible] of fecal matter that may happen. This last technique is similar to an operation for appendicular abscess or suppurative appendicitis. If the gut is cut across, it must be united in any one of the usual ways. If the circulation is cut off from the intestine so much of the intestine as is deprived of its bloodsupply must be resected.

If the symptoms of internal hemorrhage are present and increasing, the indication is imperative to open the abdomen, find the origin of the bleeding, and control it. [T. L. C.]

3.—H. R. Tuthill discusses **prophylaxis in pneumonia.** He believes that the most rational mode of treatment is by the administration of **internal antiseptics,** such as **creosote, the carbonate of creosote and salol.** It is his opinion that these drugs have a direct specific action when brought in contact with the bacillus and, while we may not be able to give them internally in such proportions or dilutions, it likewise does not seem necessary in order to obtain an inhibitory effect; for nature at the same time is undoubtedly making efforts in the same direction. [T. L. C.]

4.—Adolph Rupp presents a paper on the **general complications and sequelae of measles. Stomatitis** has been the only marked complication of the mouth that he has seen. **Gangrene** affecting the gums, cheeks, fauces, tonsils and tongue may occur. **Diphtheria** occurring in these parts is also recorded. The **lung complications** are the most frequent and the most important. There are especially **acute bronchitis** of various grades of severity, **and catarrhal pneumonia.** In the writer's experience suffocative attacks simulating asthma affect only few children during the early stage of measles. Towards the end of an attack of this disease the lymphglands in various parts of the body may become inflamed and enlarged and the bronchial glands may become caseous or tuberculous. The **thyroids** may also become acutely affected to the extent of making breathing difficult, but this is but a transitory condition. The nervous system during and after measles becomes variously affected, but the more serious complications are extremely rare. Convulsions at the onset of the disease, even when they seem serious, usually produce no permanent ill effects. [T. L. C.]

5.—D. H. Wiesner states that the **eye complications of measles include conjunctivitis, simple or mucopurulent, blepharitis, blepharospasm, hordeolum and keratitis.** The treatment of these conditions is given. [T. L. C.]

6.—C. E. Ruth reports 4 cases of **cerebral abscess** all of which followed **middle ear disease.** The writer emphasizes the importance of such treatment of the membrana tympani as will provide sufficiently free drainage. The tympanum must always be kept clear of **obstructive granulation tissue.** [T. L. C.]

7.—Robert T. Morris presents a report on experiments made on rabbits, for the purpose of determining the value of **sterilized animal membrane** (prepared by Dr. Charles H. Cargile) **in preventing the formation of peritoneal adhesions.** The membrane seems to resist absorption in the peritoneal cavity for more than 10 days and less than 30 days, its presence apparently causes the formation of temporary loose adhesions which are harmless and which become absorbed for the most part in less than 30 days. The membrane seems to cause very little disturbance to the peritoneum, and does not furnish a good culture medium for bacteria; it protects areas of peritoneal surface that have suffered injury to their endothelial covering until new endothelial cells have repaired the injury without involving neighboring peritoneum. It is not necessary to suture the membrane in place, as it becomes instantly adherent to moist surfaces and is not readily dislodged afterwards. Morris is impressed with the advantages which this material offers. [T. L. C.]

MEDICAL NEWS.

May 11, 1902 (Vol. 59, No. 20.)

1. Etiology of Paresis. ARTHUR W. HURD.
2. The Comparative Frequency of General Paresis. CHARLES G. WAGNER.
3. The Early Diagnosis of Paresis. F. X. DERCUM.
4. Treatment of Paresis: Its Limitations and Expectations. EDWARD COWLES.
5. Sclerotomy, Anterior and Posterior; When Indicated in Glaucoma; Method of Operating. DAVID WEBSTER.
6. A Danger from the Employment of the Weighted Vaginal Speculum. FREDERICK GRIFFITH.
7. Orthopedic Operations for Intractable Cerebrospinal Cord Lesions with Report of Two Cases. HOMER GIBNEY.

1.—W. Hurd concludes his article saying, that syphilis is the most common factor in producing paresis. It may cause it directly—an exciting cause. It may cause it indirectly by bringing about such a devitalization of the system generally as to render other influences operative—a predisposing cause. It is not usually the sole cause but there is associated with it the deleterious effect of mental stress and overexcitement, dissipation and alcoholism, and heredity. In a certain, relatively small, number of cases mental stress, worrying or overwork may be the sole ascertainable cause. Traumatism may also be the cause in a still smaller proportion of cases, but in many of them it acts as a developing or ripening agent of an incipient paresis in a syphilitic subject. [T. M. T.]

2.—C. G. Wagner's experience is that *paresis* forms about 8.75 per cent. of all cases of insanity. It occurs most frequently between the ages of 30 and 50; and it is gradually increasing in frequency at the present time: men are more liable to the disease than women (1 to 7); it is invariably fatal in its termination and usually so in less than 2½ years; it is nearly twice as frequent in large cities as in the country, and heredity, syphilitic infection and alcoholic indulgence are important factors in its production. Neither professional men, students, musicians nor actors appear to be especially susceptible, nor does intellectual work or any other special kind of occupation seem to predispose the individual to the disease, but general cerebral strain with more or less hereditary influence is found to have existed in the majority of cases. Overwork, sexual excesses, alcoholism, irregular habits of sleeping and eating and such accidents as sunstroke and cerebral traumatism appear to be the great factors in the production of this disease. [T. M. T.]

3.—F. X. Dercum believes that in the early recognition of paresis it is of the utmost importance to study carefully the symptoms of every so-called case of **neurasthenia.** After physical signs have made their appearance, the recognition of the disease is comparatively easy, but he believes that it is during the initial period, the neurasthenoid stage, that the diagnosis should be made. He thinks that this diagnosis can be made if we bear in mind the clear and well-defined symptomatology of chronic fatigue—neurasthenia—on the one hand, and the special symptoms of the mental weakness and degeneration of paresis on the other. [T. M. T.]

4.—E. Cowles gives Dr. Bruce's conclusions in which he says that (1) general paralysis is a disease directly due to poisoning by the toxins of bacteria, the point of attack of which is through the gastric and intestinal mucous membrane; (2) the poisoning is probably a mixed poisoning but the bacillus coli is apparently one of the noxious organisms; (3) the result of treatment with serum, taken from a case of general paralysis in a condition of remission and injected subcutaneously into an early progressive case, points strongly to the fact that some form of serum treatment is the proper treatment for this as yet incurable disease. [T. M. T.]

5.—D. Webster says that in **anterior sclerotomy** his results have been very unsatisfactory and it has been abandoned by him. He thinks it might be advantageous in acute or subacute glaucoma supervening upon nephritic retinitis. In the author's experience iridectomy fails to relieve the tension and arrest the disease. The operation accounts to little more than a large paracentesis. There is no doubt that it will [illegible] a [illegible] of the tension of the eye at least temporarily. In posterior sclerotomy the author has had [illegible] that were gratifying results. [T. M. T.]

7.—H. Gibney emphasizes the importance of operating in [illegible] and separate [illegible] of cerebrospinal origin and having corrective [illegible]

them, to apply promptly a well-fitting apparatus best suited to each individual case, thus facilitating locomotion and in a degree ameliorating the condition. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

May 17, 1902. (Vol. LXXV, No. 20.)

1. Subcutaneous Injection of Paraffine in the Correction of Nasal Deformities. HARMON SMITH.
2. The Clinical Aspect, Symptoms and Differential Diagnosis of Osteomyelitis. R. TUNSTALL TAYLOR.
3. The Surgical Treatment of Bright's Disease (A Preliminary Communication.) RAMON GUITERAS.
4. Why Doctors Disagree. A Plea for a Modern Code of Ethics. BITTLE C. KEISTER.
5. Hypnotism, a Useful Aid in the Treatment of the Morphine Habit. SIGMUND A. AGATSTON.

1.—H. Smith gives his method of **subcutaneous injection of paraffine.** He is rigidly aseptic, using 5 minims of a 4 per cent. solution of cocaine prior to the paraffine injection. He does not use any preliminary solution and believes that more tissue is separated by it than should be filled in with paraffine. The time is short and the pain very slight. The paraffine is sterilized before using and is about 115°F. Then, with a forcible aspirating syringe and a needle, he draws the paraffine up and evacuates the air bubble and submerges the syringe, needle and all in sterile water 120° F. This keeps the paraffine in liquid form, then, uplifting the soft tissue of the nose above the dorsum with the left hand, he inserts the needle well beneath the skin, carrying its point byond the site of greatest deformity. If this is at the root of the nose, he inserts the needle about ¾ of an inch above the lip and with its point upward. If the deformity is at the junction of the nasal bones and cartilages, he inserts the needle at a point over the nasal spine directing the point downward. The injection is made slowly, at the same time withdrawing the needle and using the thumb and index finger of the left hand to mould the paraffine to the necessities demanded by the peculiarity of the deformity. The paraffine remains plastic about half a minute and can be moulded as desired during this time. [T. M. T.]

2.—R. T. Taylor divides the symptoms of **osteomyelitis** as follows: (1) The premonitory stage or stage of infection; (2) the acute stage or stage of invasion; (3) the subacute stage or stage of conflict; (4) the quiescent stage or stage of repair. In the *first stage* we have a feeling of apathy, anorexia, malaise and exhaustion, which are followed usually by a profound chill, or, in the case of young children, by a convulsion, and at this time the second stage begins. In this stage we have dry tongue, high temperature with continued fever, gradually rising and with morning remissions, rapid pulse and respiration, as a rule, a typical typhoid clinical aspect. Emaciation is rapid. In grave cases there is muttering delirium, especially in children, the spleen is usually enlarged, the serous and synovial cavities from metastasis or extension show their secondary involvement by exudations of a serous, fibrinous, purulent or hemorrhagic nature. Death may be sudden from fat or septic embolism. Pain is an early symptom. In the *third stage* there will be an abatement of all the symptoms, if the patient lives. In the *fourth stage*, with the removal of all traces of necrotic tissue and septic material, the part goes on to regeneration with only such symptoms remaining as have been caused irremediably by the pathological process and those symptoms which are incident to the repair and strengthening of the disabled bone. The extent of the disease largely governs the duration of this stage and the restoration of function. [T. M. T.]

3.—R. Guiteras concludes that nephropexy is always a beneficial procedure in a movable kidney in a patient suffering from chronic nephritis; that nephrotomy has proved a valuable operation in unilateral chronic nephritis associated with hematuria and nephralgia; that the value of complete decapsulation of the kidney as a therapeutic measure in chronic Bright's disease has not as yet been determined, as the procedure has not been employed extensively enough to warrant positive conclusions.

[T. M. T.]

5.—Agatston advises in addition to drugs the use of **hypnotism** in cases of morphine poisoning. He says it will be found an invaluable adjuvant to both patient and physician, no matter how great the will power in the former and the determination in the latter. The author reports 2 cases in which he has had most satisfactory results.

[T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 15, 1902.

1. Birth and Death Rates as Influenced by Obstetrics and Gynecic Progress. GEORGE J. ENGELMANN.
2. Amaurosis and its Treatment by the Subcutaneous Injections of Strychnine. HASKET DERBY.
3. Diseases of the Ear of Interest to Insurance Examiners. PHILIP HAMMOND.

1.—Will be abstracted when concluded.

2.—Hasket Derby contributes an article on **amaurosis (atrophy of the optic nerve) and its treatment by the subcutaneous injection of strychnine.** Several cases occurring in his practice are reported, and the following statistics given; in addition the history of a case representing that class in which there is blindness without impairment of the general health. There are notes of 117 cases. Of these 78 were males, average age 43.7; 38 were females, average age 37.7. Both eyes were affected in 86 cases; one only in 31 cases. In 71 cases there was no history to be traced. In the remaining 46 he found the following probable causes: Abuse of alcohol and tobacco, 11; syphilis, 8; blow on the head, 9; brain disease, 6; apoplexy, 1; epilepsy, 1; locomotor ataxia, 1; meningitis, 2; optic neuritis, 2; erysipelas, after lachrymal abscess, 1; mumps (both cases children), 2; following pregnancy, 1; tumor of the pituitary body, 1. Twenty-six of these patients were subjected to treatment, and the amelioration is attributed by the author as due to the use of a single drug, strychnine, injected subcutaneously into the temples in gradually increasing doses. The results were as follows: The term "relief" being applied in the sense of an evident arrest of the progress of the disease, with occasional slight increase in the limits of the visual field and acuity of vision, each case being observed for a length of time sufficient for estimating failure or success. Not relieved, 15, the disease progressing and terminating in blindness; doubtful relief, 1; temporary relief, 2; appreciably relieved, 8. The author, after quoting and discussing the literature on the subject, and appending the charts of the visual fields in the cases under treatment, concludes as follows: (1) Strychnine is a stimulant to the optic nerve. Even in normal eyes it slightly increases the acuteness of vision and widens the visual field. These effects are temporary (Fuchs). (2) In certain cases of optic nerve atrophy its local subcutaneous injection has, to say the least, coincided with an arrest in the progress of the disease, and has been followed by a somewhat increased acuteness of vision. Whether these effects are temporary or permanent, time and fuller statistics will show. (3) In a progressive case of this disease, it is clearly our duty to state the above facts to the patient, and allow him to take the treatment if he is so inclined. (4) The strychnine should always be administered in the temple, and by subcutaneous injection. [M. R. D.]

3.—Philip Hammond, in a paper on **diseases of the ear of interest to insurance examiners,** shows the necessity for careful examination with a mirror and speculum in all suspected cases, and the importance of obtaining positive evidence as to whether the drum is open or not. The conditions of vertigo, chronic discharges from the ear, and especially the presence of suspicious nodules and tumors of the auricle in elderly persons, as well as exostosis, are considered with their relation to insurance risks.

[M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

May 17, 1902.

1. The Evolutionary Aspect of Infectious Diseases, with Especial Reference to the Local Venereal Diseases. G. FRANK LYDSTON.
2. The Preliminary Report of the Transmission of Pathogenic Germs by the Common House-Fly. JACOLYN MANNING.
3. The Fixation of a Movable Liver, and Report of a Case of Hepatopexy. J. H. CARSTENS.
4. Some Acute Diseases of the Ear; their Diagnosis and Treatment. PHILIP HAMMOND.
5. Improved Method of Examining the Female Bladder. J. CLARENCE WEBSTER.
6. The Differential Diagnosis of Typhoid Fever. WILLSON O. BRIDGES.
7. Grave Abdominal Injuries without External Evidences of Traumatism. R. HARVEY REED.

1.—Will be abstracted when concluded.

2.—Jacolyn Manning presents a preliminary report on the **transmission of pathogenic germs by the common house-fly.** During the experimentation 44 culture-tubes have been subjected to fly infection; of this number 41 tubes showed colonization at the end of 48 hours, 3 tubes remaining apparently sterile. The following germs have been transmitted by fly infection, isolated, and pure cultures obtained; pathogenic germs—**bacillus pyocyaneus, staphylococcus pyogenes aureus, bacillus typhi abdominalis, bacillus coli communis.** Nonpathogenic—**bacillus prodigiosus, sarcinæ arantia, sarcinæ alba, molds and fungi.** [F. J. K.]

3.—J. H. Carstens refers briefly to **98 cases of floating or movable** liver which have been reported and presents a case in which he operated for this condition. The patient was a woman, 48 years of age, weighing 220 pounds. The thickness of the abdominal wall prevented a diagnosis of the condition. When the abdomen was opened, the right lobe of the liver was prolapsed as far as the brim of the pelvis. The liver was easily replaced, a portion of its surface denuded, a corresponding area of parietal peritoneum denuded, and the coronary ligament sutured to the upper angle of the wound. Great improvement of symptoms followed the operation. Examination of the literature of the subject convinces Carstens that injury is the cause of the condition in nearly every case; occasionally a malignant growth will cause a prolapse of the liver. The symptoms are usually those of distress and a feeling of weight in the region of the liver. Tympanites and intestinal indigestion also frequently occur. Nervous symptoms are very marked and of great variety. Tight bandaging usually gives some relief. [J. H. G.]

4.—Philip Hammond discusses some **acute diseases of the ear** with special reference to their diagnosis and treatment. The most common cause of earache excepting actual inflammation of the ear is a carious tooth and usually it is a lower molar on the affected side. Furuncle is a frequent cause and sometimes difficult of diagnosis. Acute closure of the Eustachian tube is painless and is followed by more or less deafness. Collections of fluid in the middle ear are apt to result from closure of the tube. If the tube does not become patulous after a number of days of treatment of the nasopharynx, incision of the drum becomes necessary and usually results in the prompt restoration of hearing. In acute suppurative inflammation of the middle ear the patient suffers sharp pain from the beginning which gradually grows worse, and inspection of the drum shows congestion of the upper and posterior part which extends until the whole upper part of the membrane is involved. During this stage the various applications of heat give most relief, together with catharsis and the administration of a small amount of bromide or phenacetine. If the symptoms do not subside under this treatment the drum should be incised and not allowed to rupture spontaneously. The whole posterior half of the drum should be freely incised and the opening should be a curved one. If the incision is made early, little or no pus wil be evacuated, but the symptoms will be immediately relieved. Drainage should be accomplished by means of cotton wicks rather than by the employment of irrigation. When the discharge is a thick pus, irrigation becomes necessary. Diminishing discharge with improvement in hearing indicates recovery, but diminishing discharge without improvement in hearing might indicate a premature closure of the drum with the likelihood of subsequent trouble. The time to make a diagnosis of mastoid involvement is long before the definite local symptoms appear over the mastoid. The absence of temperature in this condition is no reliable guide. Tenderness on deep pressure over the mastoid is a valuable symptom. With an increasing collection of pus in the mastoid there is more pronounced bulging of the drum and in some cases there will be a complete closure of the auditory canal from swelling of the wall next to the mastoid. Much pain is felt excepting in tuberculous cases. When mastoid involvement is suspected, free drainage should be maintained through the drum. If tenderness is present over the mastoid, cold should be applied by means of Leiter's coil. Leeches are also of value at this time. Great risk is run in postponing drainage and cleaning out the mastoid. [J. H. G.]

6.—W. O. Bridges discusses the **differential diagnosis of typhoid fever.** He describes the syndrome and mentions a number of variations from the type. The combined symptoms which are almost invariably present during the first week, to be relied upon for a presumptive diagnosis, are: A daily increase in temperature with headache and malaise; moist, furred tongue with red edges and tip; a pulse of 80 or thereabouts and evidences of bronchial catarrh. If to these be added the diazobenzol urinary reaction on the fourth to the sixth day, with or without occurrence of nosebleed, the presumption is very strong. A palpable spleen, rose spots and the Widal reaction early in the second week supplementary to the foregoing, would make the diagnosis absolute. The diseases most commonly mistaken for typhoid fever are remittent malarial fever, continued fever of uncertain septic origin, commonly called simple febricula, acute miliary tuberculosis, la grippe, appendicitis, typhoid pneumonia and septicemia. The writer believed that the irregularity of typhoid fever in children accounts for its supposed relative infrequency at this period of life. [F. J. K.]

7.—R. Harvey Reed discusses a number of cases of **grave abdominal injuries without external evidences of traumatism.** From reading the literature of this class of cases, together with his own experience, he is led to the conclusion that it is the surgeon's duty to make an exploratory incision in all cases in which there is grave doubt as to the real nature of the injury, and particularly so when the constiutional symptoms point to a condition more serious than is indicated by either the subjective or objective symptoms, provided the physical condition of the patient is such as to warrant an operative procedure. [J. H. G.]

AMERICAN MEDICINE.

May 17, 1902.

1. The Future of Obstetrics as a Specialty in America. BARTON COOKE HIRST
2. Acquired Incomplete and Complete Prolapse of the Uterus and Vagina in Nulliparous Women. HENRY D. BEYEA
3. A Case of Fracture of the Neck of the Femur, etc. JOHN LINCOLN PORTER.
4. Goiter: Medical and Surgical Treatment. THOMAS P. SCULLY.
5. The Sodium Tungstate Test for Combined Chronics. A. L. BENEDICT
6. Vaccination from the Standpoint of the Surgeon. ERNEST J. MELLISH
7. Raynaud's Disease. EMIL KING

1.—B. C. Hirst in an article on the future of obstetrics as a specialty in America holds that it would be a most desirable development of the near future if the average

labor case would be entrusted to a highly trained, well-informed, skilful and experienced nurse, the physician being called in to repair the injuries of childbirth, to deal with any complication or abnormality that might arise, to make, perhaps, the daily routine visit, and, above all, to make the final careful examination at the end of puerperal convalescence. By this plan the specialist and general physician, too, could undertake the supervision of an almost unlimited number of cases. [T. L. C.]

2.—H. D. Beyea reports a case of **prolapse of the uterus in a nulliparous woman.** The case was one of complete prolapse of the uterus and vagina with hypertrophic elongation of the supravaginal cervix, occurring certainly without injury or apparent distinct relaxation of the pelvic floor, or injury or hypertrophy of the vaginal cervix. Beyea presents a résumé of the cases of this condition that have been reported. They seem to be brought about by poor health, physical weakness and general tissue relaxation and are frequently dependent upon want of development of the uterus and its supports. The exciting causes are the diseases, laborious occupations and great physical efforts which actively increase the intra-abdominal pressure. The case reported was operated upon successfully. [T. L. C.]

3.—J. P. Porter reports a case of **fracture of the neck of the femur** in a man, 76 years old, treated with the **Thomas hip-splint.** Perfect recovery followed in 10 weeks. [T. L. C.]

4.—Thomas P. Scully presents a paper on the medical and surgical treatment of goiter. Iodine should be used internally, if at all. He advises the compound tincture in 4 to 6 drop doses, 3 times daily, increased to the point of toleration. He employs mercury in the form of an ointment of the red iodide, 3 parts to one of lanolin, and orders that a small amount of this, about the size of a pea, should be rubbed in daily as long as could be borne. In his hands thyroid extract has not been satisfactory. He states that he is using suprarenal extract in a hemorrhagic case with some apparent improvement. Electricity, he thinks, is a valuable adjunct in treating small parenchymatous goiters. Galvanopuncture is recommended. He has observed no benefit from the employment of digitalis or strophanthus, but states that he has used tincture of *Crataegus oxyacantha* (American hawthorn) instead of these drugs with better results. It is his opinion that surgery offers more encouragement for relief than any other line of treatment, particularly in cases of long standing. [T. L. C.]

6.—E. J. Mellish discusses the question of vaccination urging the necessity of strict asepis. He advises against vaccination on the lower extremities. [T. L. C.]

7.—Emil King reports a case of **Raynaud's disease** occurring in a farmer, aged 68 years. The full clinical notes are included. [T. L. C.]

AMERICAN JOURNAL OF THE MEDICAL SCIENCES.

February, 1904.

1. Affections of the Mouth and Throat Associated with the Fusiform Bacillus and Spirillum of Vincent. E. MAYER.
2. A Case of Acute Cholecystitis With Gangrene: Cholecystectomy and Recovery. F. DONAGHUE.
3. Phrenic Nerve Injuries. W. SCHROEDER and F. GREEN.
4. A New Factor in the Etiology of Malarial Fever, Indicating New Methods of Treatment. F. KING.
5. Angina Pectoris. B. ROBINSON.
6. The Pathology of the Healed Fibrous Adhesions of the Pericardium. G. WELLS.
7. A Case of Fibroma Molluscum. M. HARTZELL.
8. Herpes Zoster and Its Relation to the Internal Inflammations and Diseases, Especially of the Serous Membranes. R. CURTIN.
9. The Changes Occurring in Striped Muscle in the Neighborhood of Malignant Tumors. F. ANZINGER.
10. A Case of Ophthalmia Neonatorum Caused by the Diplobacillus of Morax and Axenfeld. E. ANDRADE.
11. Forward Dislocation of the Head of the Fibula. J. RINEHART.
12. A Note on Osteophytes of the Nasal Chambers. A. MacCOY.
13. A Review of Some Recent Literature on Certain Infective Diseases. A. O. J. KELLY.
14. Report of a Case of Fibrinous Bronchitis, With a Review of All Cases in the Literature. M. BETTMANN.

1.—Mayer reports the case of a man, 23 years of age, who had had sore throat for two weeks. There was slight pain, slight salivation, and the glands at the angle of the jaw were moderately swollen. There were white deposits on the tonsils, the membrane being readily removed, but forming again quickly. Stained preparations showed the presence of a spirillum and a fusiform bacillus. Cultures showed only the presence of streptococci. Treatment consisted of gargle with boric acid and the application of compound tincture of iodine. The lesion gradually disappeared. The interesting feature is that the presence of the **bacillus of Vincent** apparently excluded diphtheria. These organisms are frequently found in patients suffering from syphilitic sore throat. [J. S.]

2.—Donaghue reports the case of a woman, 50 years of age, who was suddenly taken with pain in the region of the gall bladder. There was some vomiting, but later she improved, although a certain amount of pain persisted. A tumor extending about 3 fingers' breadth below the outer border of the ribs was easily palpated. An incision was therefore made, and the tumor was found to be a distended **gall bladder** which was filled with **calculi.** The common duct was not obstructed and the gall bladder was, therefore, removed. Upon examination the apex of the gall bladder was found to be gangrenous. The interesting feature was the absence of jaundice. [J. S.]

3.—Schröder and Green report the case of a man, 62 years of age, who, for 9 years, had had a slowly increasing tumor of the left side of the neck. This, upon aspiration, showed the presence of fluid blood. During the operation, which was difficult, the roots of the **phrenic nerve** were **ruptured.** After the operation the left half of the diaphragm rose above its normal position, Litten's sign was absent, and the respirations were slightly more frequent. In operations upon the neck in human subjects Schröder has pinched the phrenic nerve and observed contractions of the diaphragm on the same side. In dogs section was made of the phrenic nerve, or mechanical or electrical stimulus was applied to them. In all cases in which both nerves were resected, inverted respiration occurred; the diaphragm arched into the thorax and there were various areas of degeneration in the diaphragmatic muscle. The margin, however, usually maintained its nutrition, and often there were areas on each side which failed to degenerate. The paper is concluded with a careful review of the literature on the subject, a painstaking description of the anatomy of the phrenic nerve, and of the innervation of the diaphragm. The authors conclude that the diaphragm is not an essential muscle of respiration, and as the symptoms described as due to irritation of the phrenic nerve were uniformly absent, not only in the operations, but in all the experimental work, these may be due to something other than mechanical injury. The diaphragm is innervated by branches from the intercostal nerves, but this is secondary to the innervation by the phrenic. Division of the phrenic nerve by producing collapse of the anterior side predisposes to infection or to diaphragmatic hernia. Division of the phrenic nerve in man with unilateral paralysis is not necessarily fatal. [J. S.]

4.—It has occurred to King that perhaps **solar light** is one of the essential factors **in the sporulation of the malarial parasite,** and he believes that the clinical observation regarding the effect of sunlight, or particularly the fact that paroxysms rarely or never occur at nighttime, support this view. He supposes that the relative immunity of the negro race is due to the nontransparency of their skins. Of course, we should expect to find malaria worse in sunny weather, and less severe in cloudy weather, and this appears to be in accordance with the clinical observations, and it is therefore desirable, in order to avoid malaria, to keep in dark places, which is also in accordance with popular tradition. Therefore a part of the treatment should be seclusion in the dark. [J. S.]

5.—Robinson gives a brief account of the **symptomatology of angina pectoris.** He considers it a rare disease, describes the appearance and attitude of the patient during an attack, and mentions the various forms of pain that

have been experienced. The current idea that the anginoid attacks are associated with gastric disturbances, does not accord with Robinson's experience, but he believes it is true of pseudo-anginoid attacks. There is often intense desire for micturition. Incomplete attacks are very frequent. The commonest exciting causes are exertion, especially after a meal, cold or exposure to a high wind. Among the interesting points in the pathology are: The usual absence of severe valvular disease, and the frequency with which traumatism to the chest is mentioned in the history of the patient. The prognosis is always guarded and the treatment consists in measures to reduce peripheral resistance. Among the drugs mentioned are arsenic combined with iodide of potassium, nux vomica, sodium nitrite, and, occasionally, when the heart is weak, the older forms of cardiac stimulants. Rest in bed should be enjoined only immediately after an attack. [J. S.]

6.—Wells found 128 cases of **pericardial change** in 1048 autopsies. In 128 cases, 57 showed chronic changes. Of these 57 cases the cause was rheumatism in 8, tuberculosis in 6, and undetermined in 43. Of the latter group 24 were total, and the remaining partial. It it probable that the cause of adhesive pleuritis may also produce adhesive pericarditis. The infection may take place through the blood, through the lymph-channels, or by direct inoculation, that is, as the result of trauma, or by extension to adjacent tissues. Sometimes caseating glands rupture directly into the pericardium. He reports a case in which extensive tuberculosis of the lymphglans was associated with obliteration of the pericardium, and suspects that many cases of adherent pericarditis are probably of tuberculous origin, although not showing the anatomical characteristics of tuberculosis, an opinion that is rapidly becoming generally accepted. In 18 of his 43 cases healed tuberculosis could be demonstrated, and this healed tuberculosis seems to have been the probable cause in at least 13 cases. Several cases illustrating this are cited. Of the remaining 22 cases 15 were associated with fibrous pleuritis, and the others were due to extension from neighboring lesions such as sarcoma or the result of old myocarditis. Cases illustrating the association of pericarditis and pleuritis are cited. In 4 of them no etiological factor could be determined. It is possible that some were due to Bright's disease. In 8 cases there was much reason to believe that the adhesions were due to rheumatism. Tuberculosis was carefully excluded by inoculations and histological examinations, and there was a distinct history of rheumatism in all the cases. In these cases the mediastinal glands and the lungs showed no tuberculous change, and the patients as a rule were young. Four cases showed calcification of the exudate. The etiology of this condition is obscure. Tuberculosis does not seem to be the cause. In all cases there was a chronic cirrhosis of the liver. The effect upon the heart was very slight, although in cases of total obliteration of the pericardial sac interference with the function of the heart may occur. The most serious cases are those in which there are adhesions not only between the two layers of the pericardium, but also between the external layer and the surrounding structures. The relation of cirrhosis of the liver to chronic pericarditis is not understood. It is certain that we frequently get a pseudocirrhosis in these conditions, and in the calcareous form true atrophic cirrhosis. The cardiotuberculous liver is really a marked chronic passive congestion plus tuberculous changes. There is some reason to believe that pericardial adhesions are not necessarily permanent, but when the process ceases to advance they undergo atrophy and are finally broken, remaining as tags upon the surface. They are less apt to be broken over the surface of the right auricle. [J. S.]

7.—Hartzell reports a case of **fibroma molluscum** occurring in a woman, 26 years of age, who was mentally slightly defective. The tumors were excessively numerous, especially upon the forearm. Her general health was not affected. Sections showed disappearance of the interpapillary prolongation of the rete mucosum. The disease is rare, and is curable only by excision, and in such extensive cases, only the large tumors can be removed. [J. S.]

8.—Curtin reports several cases of **herpes zoster associated with pleurisy and effusion.** The first, a woman of 60, suffering from locomotor ataxia, had the characteristic pain at the base of the left chest. This was followed by a typical zoster, and later signs of an effusion developed in the chest. The second patient had numerous attacks of dry pleurisy, in the course of one of which a typical attack of shingles occurred. The third patient had pleuritic friction associated with the zoster. The fourth patient, a woman of 60, had the same combination. The fifth, a man, suffered from tuberculosis and Bright's disease. The pleurisy was not determined, but as the patient had tuberculosis it could be assumed, and the remaining 5 cases were of various other complications. In a recapitulation Curtin concludes that the signs of pleurisy usually antedate the herpetic eruption, and inquires whether the pleural symptoms may not be due to an internal zoster, or whether the zoster may not be due to inflammation of the filaments of the nerve. [J. S.]

9.—Anzinger has made a careful and systematic study of the voluntary muscles in order to determine the changes produced in them by malignant tumors. He examined 30 cases of cancer of the breast, infiltrating the pectoral muscle, 15 cases of epithelioma of the lip, one of cancer of the tongue, one of lupuscarcinoma of the cheek, 2 of secondary carcinoma of the diaphragm, 2 of sarcoma of the pectoral muscles, 2 of fibrosarcoma of the rectus abdominalis, 2 of sarcoma of the inferior maxilla, one of sarcoma of the forearm, 3 of sarcoma of the femur, one of sarcoma of the tibia, and one of general sarcomatosis of the skin—a very imposing array of material. Carcinoma of the breast usually invades the pectoral muscle by way of the lymphatics, as the fascia introduces a sufficient obstacle to direct extension. The growth may extend directly through the vessels, however, and not represent metastasis. The fibers undergo progressive destruction which may ultimately be complete. Epithelioma of the lip extends directly into the muscular substance. The epithelial cells sometimes penetrate the sarcolemma. Secondary invasion produces essentially similar changes. Sarcoma invades muscles by direct extension, usually producing rapid destruction of the muscle fibers, especially the round cell form. The changes produced in the muscles represent practically all the forms of degeneration to which muscles are liable. These changes however, are not specific, but are also produced by conditions other than malignant tumors. Carcinoma usually produces more serious general alterations than sarcoma. [J. S.]

10.—Andrade reports the case of a child, 3 years old, who suffered from **ophthalmia.** This resisted treatment until finally a bacteriological examination showed a pure culture of the diplobacillus of Morax and Axenfeld. Treatment with zinc salts rapidly cured it. The case proves that all forms of ophthalmia neonatorum are not due to the gonococcus. [J. S.]

11.—Rinehart reports a case of **forward dislocation of the head of the fibula** caused by pinching the limb between two freight-cars. Reduction was accomplished by flexing the leg upon the thigh and the foot upon the leg; then firmly pressing upon the dislocated bone and continuing this pressure while the limb was straightened. Reduction was accompanied by considerable noise. [J. S.]

12.—MacCoy calls attention to the fact that not infrequently there are in the mucous membranes of the nose certain hard bodies that he regards, from their structure, as osteophytes. They are situated far back in the nasal chamber, underneath the lower turbinated bone on the bony septum. They can readily be detected by the little finger used as a probe. Clinically they are of importance because they frequently interfere with the successful results of operations for deflexion of the nasal septum. [J. S.]

13.—Kelly abstracts some interesting articles on syphilis, tuberculosis, influenza, pneumonia, typhoid fever, and diphtheria. [J. S.]

14.—Bettermann reports a case of fibrinous bronchitis occurring in a negress, 22 years of age, who for several years had had in the Fall attacks of cough with copious expectoration in which **casts of the bronchi** were found. These casts contained a very small amount of fibrin which was chiefly in the outer layer, a reticular or fibrillar ground substance enclosing numerous cells, and in addition, certain bodies from 7 to 15 micron in diameter, which stained deeply by fuchsin, as used for tubercle bacilli and also retained the Weigert stain. Unna's polychrome methylene blue

stain gave the mucin reaction. An analysis of all the cases recorded in the literature shows that they can be grouped in 9 classes as follows: (1) Chronic bronchitis with expectoration of branching casts of the bronchial tree. (2) Acute bronchitis with expectoration of branching casts of the bronchial tree. (3) Cases in which branching casts were not expectorated, but were found in the bronchi at autopsy. (4) Casts expectorated but not showing branching. (5) Branching casts expectorated associated with organic heart disease. (6) Branching casts expectorated in pulmonary tuberculosis. (7) Small casts, often non-branching, associated with asthma. (8) Casts in the bronchi associated with pulmonary edema following thoracentesis. (9) Cases incompletely reported. Bettmann gives a careful analysis of the symptoms of these groups. The most important form is the first, and the results show that it occurs in either sex, increases to middle age, and then declines, and in several cases the patients were exposed to dusty atmospheres. Occasionally some infectious disease precedes the attack, or there may be some chemical irritant, or a family history of tuberculosis. Nearly all the patients had suffered from chronic bronchitis for some time. The symptoms consist of an exacerbation of chronic catarrh. The disease is paroxysmal and may last for many years. The symptoms are dyspnea, cough, occasionally slight fever, and very occasionally hemoptysis. The physical signs are not characteristic, and there may be all types of râles, and the patient may emaciate considerably. The subjective symptoms are usually oppression and tightness until the cast is expectorated. A curious feature is that in many cases there has been an associated affection of the skin. Of those casts examined the majority were composed of mucin. The bronchial mucous membrane usually does not show any characteristic change. In the acute form the symptoms are somewhat similar, but there is usually a history of an acute infectious disease. Bettmann also reports the case of a woman, 45 years of age, who had mitral insufficiency, during which there were frequent attacks of dyspnea, cough and expectoration of small bronchial casts consisting chiefly of fibrin. All the cases collected from the literature are tabulated at the end of the article. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

February 17, 1902. (39 Jahrgang, No. 7.)

1. The Repair of Defects of the Ala Nasi. FRITZ KOENIG.
2. The Surgery of the Bile Ducts. HEINRICH SCHEUER.
3. Functional Recovery with Tendon Transplantation. REICHARD.
4. Surgical Removal of the Nail. BAUMGAERTNER.
5. Gall Stones. G. BINDER.
6. Fracture of the Humerus from Muscular Action. MILBRADT.

1.—König explains the technique of his method of replacing a **defect of the ala of the nose** by taking a flap, without a pedicle, made of the entire substance of the auricle, and suturing this in the place of the defect in the ala nasi. As this contains cartilage, it heals well. A diagram illustrates the article. He has performed this operation successfully in a number of cases of lupus. [M. O.]

2.—**Surgical treatment for diseases of the bile ducts** has effected 98% of cures. In one case of carcinoma of Vater's valvule, in a woman of 59, cholecystostomy left a fistula; cholecystenterostomy was done later, but she grew gradually worse and died of cachexia. Such cases are very rare, only 15 having been published. Gall stones were found in but one of these cases. The symptoms were those of chronic obstruction, and the diagnosis could not be made positively. Palliative operations alone were indicated. Jaundice persisted, though no cause for chronic obstruction was found during laparotomy twice. The case-history of a man of 17, with cholangitis, follows. The liver was punctured with the cautery, much bile exuded, and he recovered. A very similar case proved to be hepatic abscess. Gall stones were absent in both patients. [M. O.]

3.—After a short historical sketch of **tendon transplantaion,** Reichard says that it is indicated in spinal and cerebral paralysis in childhood, Little's disease, hemiplegia, congenital clubfoot, contractures, etc. After several weeks' rest in plaster, massage and electricity are applied. He has performed 30 such operations in 9 months. One case-history follows in detail, of a man of 17 with left-sided cerebral paralysis. The operation is very successful, causing excellent functional recovery. [M .O.]

4.—**Baumgaertner dissects the nail out,** an almost bloodless operation, followed by renewed growth of the nail in a few days. He describes the anatomy of the nail and the technique of his simple operation. Local anesthesia is sufficient for this proceeding. It is indicated in onychia, ingrowing nails, hypertrophy or atrophy of the nail, etc. His instruments are described with photographs. [M. O.]

5.—During 15 years, Binder has treated **96 cases of gall stones,** 73 of them in women. 52 were under observation for at least 10 years. 7 were operated upon, and 11 died. 9 of those who died were jaundiced, as were 3 of those operated upon. Jaundice occurred temporarily in 22 cases; while the other 30 were never icteric at any time. Several case-histories follow in detail. But one of the operated patients died. These results show that operation is especially indicated when the gall stones are still in the gall bladder, before the bile has become infected. [M. O.]

6.—Milbradt reports a case of **fracture of the humerus** just above the elbow, in a man of 24, due to strong contraction of the brachial muscle, during an attempt to exhibit the strength of his arm muscle. A photograph shows how the accident occurred. [M. O.]

February 24, 1902. (39 Jahrgang, No. 8.)

1. Four Cases of Evacuation of the Sphenoidal Cells with Recurring Nasal Polypi. A. A. G. GUYE.
2. The Physiology and Pathology of the Renal Function. FRIEDRICH STRAUS.
3. Landwehr's Animal Gum in Diabetes Insipidus. K. von ALFTHAN.
4. Rest and Motion in the Treatment of Phthisis. NAEGELSBACH.
5. Acute Nephritis Early in Syphilis with Enormous Albuminuria. ERICH HOFMANN and E. SALKOWSKI.

1.—After a brief review of the literature, Guye reports the case-histories of four patients with **suppuration of the sphenoidal cells, occurring with recurrent nasal polypi.** All of the patients complained of headache, fetor of the breath, and nasal polypi. The sphenoidal cells were evacuated and curetted in all cases, with distinct relief, and the polypi were removed. The results in all cases were excellent. The details of the operative technique are given. [M. O.]

3.—von Alfthan, whose earlier experiments upon the effect of Landwehr's **animal gum** on the urine of patients with diabetes mellitus gave successful results, reports his investigations upon the urine of 2 cases of diabetes insipidus, treated in the same manner. While an increased amount of the animal gum was found in the urine in diabetes mellitus, the amount of the animal gum in diabetes insipidus was decreased. Therefore he draws no conclusions. [M. O.]

4.—**Both body and mind of a phthisical patient demand correctly dosed rest and motion.** This varies with the individual and his condition. Patients with subnormal temperature should be put to bed. So, too, patients who begin to show fever are put at rest in bed. When the fever only comes on in the evening, the patient should go to bed after supper. When hemorrhage occurs, or there are signs of

heart weakness, absolute rest in bed is again indicated. Graduated exercise is especially for the anemic patients. Thus, too, breathing exercises are indicated in a few cases. But very little gymnastics should be allowed during the first two-thirds of the sojourn in the sanatorium. No visitors should be received by patients with fever, and care should be taken what sort of books are given these patients, since any excitement often does harm. Nägelsbach considers the correct division of rest and exercise very important in the treatment of every case of phthisis. The literature of the subject is fully quoted. [M. O.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

January 23, 1902.

1. Concerning Glycolysis. R. LEPINE.
2. Chronic Progressive Chorea. WESTPHAL.
3. Blackwater Fever in a Case of Quartan Malaria Acquired in Our Own Neighborhood. M. OTTO.
4. Concerning Plague. (Conclusion). W. KOLLE and E. MARTINI.
5. Experiments Concerning Vital Staining of Blood. (Conclusion). H. ROSIN and C. BIBERGEIL.
6. A Determination of the Quality of Mothers' Milk by Microscopical Examination. FRIEDMANN.

1.—Lépine answers Bendix and Bickel (*Deutsche med. Woch.*, 1902, No. 1) with the statement that in his last work on glycolysis he excluded the errors which they believed never had been excluded. He also refers to the fact that his recent teaching has not been that glycolysis is necessarily an enzymatic process, but that the pancreas rather acts through the destruction of substances which interfere with glycolysis. [D. L. E.]

2.—Westphal reports 2 cases. The first patient showed a family history of the disease. She was taken with it herself after a normal pregnancy. The movements involved all the voluntary muscles, and her gait was much disturbed. She had disturbance of speech also. The physical examination showed nothing further, except increase of the knee-jerk. The disease began with extreme irritability and a maniacal tendency. These disturbances gradually disappeared, but the more characteristic psychic disturbances then began to show themselves—chiefly intellectual weakness. At the time of the report the patient showed marked dementia. The second case was interesting, because there was an entire absence of family history of the disease, which set in after a severe trauma. The case was evidently one of the sporadic type; although it is probable in such cases that there is some previous choreic family tendency which is not determinable. [D. L. E.]

3.—The case was an interesting one on acount of its having occurred in a man who had always lived in Northern Europe, and who, for 18 years, had resided in Hamburg, Germany. He had, however, 24 years before this attack, had an attack of malaria in Cracow. His attack of malaria set in in August, 1901, but was not recognized until October, when a blood examination was undertaken. It was of the typical quartan type of disease, and the parasites were typical quartan organisms. The attack of hemoglobinuria occurred on September 13th., directly after taking 7½ grains of quinine. An hour and a half after the dose was given, he had pains in the hips and extremities, severe gastric disturbance, and a sense of extreme anxiety; and he soon passed deeply pigmented urine. He was given about 3 grains of quinine, 3 times a day, per rectum in capsules. Probably very little of this was absorbed, but it did serve to check the disease. On the 27th. of October, quinine was given as a test, 15 grains being used at that time. This caused another attack of hemoglobinuria which soon subsided. The author calls attention to the fact that the relation between the attacks and the administration of quinine in his case could not be overlooked. It is also the first instance of blackwater fever occurring without any association with life in hot countries. He insists also upon the fact that this case shows that quinine should be at once used in malaria, and that the danger of causing blackwater fever in malaria appears only when the case has been allowed to run on for some time without the use of quinine. [D. L. E.]

4.—The authors insist upon the importance of rats in the causation of the disease. They think, however, that the importance of the insects infesting these animals has been overestimated. It is extremely necessary to investigate all epidemics among rodents in countries in which plague may appear. The use of the Danysz bacillus to destroy rats has, the authors believe, been unsatisfactory, but not wholly valueless. It is of the utmost importance that there should be international regulations concerning the destruction of rats on ships. If rats on ships, in particular, could be destroyed, for a considerable period of time, the authors think that plague would be driven back to the regions in which it is endemic. The use of protective immunization with serum cannot be considered to offer much hope. The use of the serum as a curative measure should, however, be further studied. [D. L. E.]

5.—The authors give a series of studies of a number of different stains—neutral red, eosin, eosin-methylene blue, pyronin-methylene blue, magenta red-methyl green. They reach the conclusion that their work exhibits, as its most important results, the following: (1) The demonstration of the chromophoric zones, the suddenly appearing staining of the leukocytes, the existence of nucleoli in the lymphocytes, and of basophile granulations in the red cells of normal persons—all these, found by methylene-blue stain. (2) The taking up of the neutral red and the toluidin blue in ballike form. (3) The spasmodic ameboid movements of the leukocytes and the marked movements of the granulations before taking eosin and other acid stains. (4) The peculiar variability of the staining with eosin—methylene blue with white corpuscles, and the differentiating stain of the bloodplaques with the same dye. (5) The red nuclear colors in the blue nuclei of the lymphocytes, with pyronin-methyl green, which is a characteristic of this form of cells; the fine structure of the protoplasm; also the amphibolic stage of nuclear staining: the dying nucleus stains with pyronin, the dead nucleus with methyl green. (6) The red chromatin basis exhibited in all blue nuclei by magenta red-methyl green staining. The authors have, so far, reported on normal blood alone, but state that they will soon publish a paper concerning the most important pathological conditions of the blood. [D. L. E.]

6.—Friedmann considers the most important points in the microscopical examination of milk to be the size of the fat globules and their number. As to size they may be divided into large, medium and small. The medium sized should be seen in largest number; with an enlargement of 400 to 500 diameters, one should find from 10 to 20 in the field. If more are present, it indicates an excessive amount of fat, consequently the milk is likely to be indigestible, although, if well borne, it is very nourishing. An excessive number of small globules is commonly accompanied by marked dyspeptic disturbance; it probably indicates degenerative changes in the milk. A series of examinations under a cover-glass will soon teach one to judge correctly of the quality of milk, although, if desired, more may be added counts made with a hemocytometer as described by Monti. In 7 cases of phthisis the author found that the mothers' milk contained very few fat globules which were of a visible size and of a mother-of-pearl appearance, very different from the normal conditions. He insists that microscopical examination of the milk is for the clinician the most important method of examination. [D. L. E.]

ZEITSCHRIFT FUER HEILKUNDE.

January, 1902. (Volume 23, No. 1.)

1. The Genesis of Vaginal Tuberculosis. CARL SIRENA.
2. Branchiogenic Carcinoma and Cystic Tumors of the Neck. GEORG JOANNOVICS.
3. A Case of Vesical Perforation by a Papillomatous Outgrowth from a Dermoid Cyst of the Left Ovary. CARL MUENCH.
4. Bacteriemia. RICHARD KRETZ.
5. Pathological and Anatomical Investigations on Ankylosis of the Vertebral Column. FRITZ REUTER

1.—During 12 years at the German University of Prague, 12 cases of **vaginal tuberculosis** were found. Tubercle bacilli may reach the vagina through the blood, as occurred in 2 of his reported cases; directly from outside, which did not occur in any case; or from neighboring organs, as occurred in 10 patients of the 12 case-histories which follow in detail. Vaginal infection followed from the uterus in 8 cases, once from the Fallopian tubes, and once from the intestines. It may also follow infection from the urine, peritoneum, perineum or lupus of the vulva. Tuberculous meningitis or phthisis was generally present also. Yet the fact remains that vaginal tuberculosis is rare compared to that of the uterus or Fallopian tubes, and when it does occur, it is generally secondary to these conditions. [M. O.]

2.—Joannovics reviews the subject of **branchiogenic carcinoma,** giving the case hitherto reported, adding 2 cases which he observed, with some benign cystic tumors of the neck, of embryonal origin, besides. In all, but 27 cases of branchiogenic carcinoma have been published, only 7 of which were diagnosed by microscopical examination. The differential diagnosis between benign cysts and branchiogenic cancer is well shown from case-histories quoted in full. His 2 cases of branchiogenic carcinoma are described with many details. The histories of several cases of benign cysts of the neck of embryonal origin follow. These tumors arise from the remains of the branchial arches. The extirpation of one of his cases of branchiogenic carcinoma was performed 5 years ago, and the patient is still perfectly well, without recurrence. Histological examinations alone make the diagnosis. Cysts of the neck generally arise from the remains of the second branchial arch, of entodermic origin. Ephithelium is often found in those cysts. [M. O.]

3.—Münch found over 24 cases of **vesical perforation in the literature, caused by dermoid cysts.** He reports a case of a pillomatous outgrowth from a dermoid cyst of the left ovary, which perforated the bladder of a woman of 51, who died the next day. She had not seemed very ill, and no diagnosis had been made. The condition was only discovered at the autopsy, which is most fully described. The papillomatous growth from the dermoid cyst simply bored its way into the bladder through the bladder wall. Very few such cases have ever been published. The literature is quoted. [M. O.]

4.—In certain diseases the **micro-organisms** are only **found in the blood,** as in relapsing fever; in others bacteria enter the blood secondarily and are carried off to cause metastatic abscesses, etc.; or the bacteria not only are carried in the blood, but cause changes in it also, as in typhoid fever, bubonic plague, etc. Thus a secondary blood-infection may cause death in smallpox, scarlatina, diphtheria, influenza, or pest. Mixed infection may also appear in the blood. Blood-infection may not cause local initial symptoms, as in malaria, Malta fever, etc.; or it may show marked initial symptoms, as in typhoid; or the blood simply transports the bacteria, as it does gonococci. What was formerly called pyemia or septicemia is now simply bacteriemia. [M. O.]

5.—Reuter describes 2 preparations of **ankylosed vertebral columns,** with detailed histological investigations and diagrams. Both spines showed a chronic process, evidently stretching over years, having caused ankylosis of the vertebræ, ribs, and the anterior parts of the intravertebral discs, with kyphosis. The absence of osteoid or fibrous tissue shows that no inflammation existed. The process was rather the simple production of bone from cartilage, lasting for years, affecting the entire vertebral column, from below upward, until immobility resulted. In places softening occurred. The condition is with difficulty differentiated from spondylitis or arthritis deformans of the vertebræ. Reuter calls it ascending vertebral ankylosis, accompanied by arching kyphosis. [M. O.]

ARCHIV FUER EXPERIMENTELLE PATHOLOGIE UND PHARMAKOLOGIE.

Bd. XLVII. Hft. 1 u. 2, 1902.

1. On the Direct and Collateral Effects of Ethylene Bromide and Ethyl Bromide. D. SCHERBATSCHEFF.
2. Further Studies Concerning the Chemical Nature of Tetanus Toxin. H. HYASHI.
3. Attempts to Control the Albumin Destruction in a Sheep Suffering from Fever. S. WEBER.
4. Concerning Phloridzin Diabetes. OTTO LOEWI.
5. On the Influence of Camphor upon the Extent of the Sugar Excretion in Phloridzin Diabetes. A Contribution to the Knowledge of the Source of Glycuronic Acid in the Animal Organism. LOEWI.
6. On the Question of the Production of Sugar from Fat. LOEWI.
7. On the Excretion of Phosphoric Acid in Carnivorous and Herbivorous Animals. W. BERGMANN.
8. On the Influence of the Inhalation of Carbonic Acid on the Body Temperature. N. v. WESTENRYK.
9. Concerning Parenchymatous Absorption. R. KLAPP.
10. On the Toxicity of Dimethylsulphuricesters (Dimethyl Sulphate and Some Analogous Esters of the Fat Series). S. WEBER.
11. New Observations Concerning the Active Substances in Guaiac Wood and Guaiac Gum. ED. SCHAER.
12. On the Effect of the Substances of the Digitalis Group upon the Vessels. R. GOTTLIEB and R. MAGNUS.

1.—The investigations were undertaken, because a **case of poisoning had occurred after the use of ethylene bromide by mistake, a dentist having ordered ethyl bromide,** but having been sent ethylene bromide by the druggist. The patient did not go into anesthesia, and cocaine was used locally. About an hour and a half after the operation, while the woman was returning to her home, she was overcome with vomiting and soon went into collapse; she died the following morning. Similar cases are described in the literature. Experimental studies are then reported; they were carried out on dogs and mice. Ethylene bromide produced in these animals symptoms similar to those which were noted in the case above mentioned. If the duration of the experiments was sufficiently long, and if the amount of ethylene bromide was large, death was produced. Narcosis was not caused in any of the animals. The respiration was increased in frequency, but was more superficial. The bloodpressure constantly sank. Death occurred partly from severe congestion of the lungs, partly from the reduction of the bloodpressure, and possibly from some reduction in the alkalinity of the blood; although the latter was certainly not marked. **Ethyl bromide produces no unfavorable collateral effects.** Death occurred if the amount inhaled was great, or if the inhalation was prolonged to beyond one hour, in many of the cases; but in some cases large amounts were taken, and observation was carried on over a long period, without any unfavorable effects being observed. [D. L. E.]

3.—Hayashi finds that the tetanus toxin isolated by the method of Brieger-Boer, as well as by a modification of this method which he has devised, shows **marked reactions of the albumin type;** and that, hence, there is no testimony that the poison does not belong to the protein group. Saturated magnesium sulphate precipitates the poison only partially. It may be precipitated with absolute alcohol, without producing any change in its physical or toxicological properties. Half-saturation with ammonium sulphate precipitates the toxin. A filtrate from a tetanus culture which had been freed from tetanus toxin by the addition of zinc carbonate still contained primary albumoses; consequently, one may conclude that the zinc double-salt of the toxin is precipitated before the nonpoisonous primary albumoses are precipitated. The tetanus bacillus will not grow on albumin-free culture media. Bouillon which contains little albumin, with little primary albumose, is a satisfactory method for the growth of the bacillus. The toxin which is produced in this case may be precipitated with zinc carbonate or a half-saturated solution of ammonium sulphate. It is probable, from the above statements, that tetanus toxin belongs to the protein group; and **not to the group of the globulins or albumins, but to that of the** primary albumoses. [D. L. E.]

3.—The object of the investigations was to determine whether it is possible not only to control the nitro-

gen loss, but to cause a retention. Fever was produced by the injection of an extract of glanders bacilli. The general results showed that during the course of the acute fever the animal lost albumin, as was to be expected, in spite of the fact that the nourishment which it took was sufficient to keep it in proper equilibrium in health. If fever were produced in the animal while it was in a period of albumin retention, and if it were given during this time large amounts of albumins and carbohydrates, **it was possible to keep it throughout the whole period of fever in a condition of nitrogen retention;** and if the animal had been starved and fever was produced, there was a decided retention of albumin if sufficient food were given. It is impossible to state whether as much retention could be produced during fever as it is possible to cause during health by increasing the food, because the animals would not take so much food during the period of fever. It was impossible to state, also, whether the protective effect of the carbohydrates upon the albumins was as marked as it is in health, because of the disturbing effect of the febrile destruction of albumin, and because the animals did not take food so readily in fever. [D. L. E.]

4.—Loewi shows that probably the chief reason that similar doses of phloridzin, when given by the mouth and by subcutaneous injection, do not have the same effect quantitatively is that a considerable portion of the phloridzin is not absorbed from the intestine; and that, further, **it is partly split up, and a resulting product which produces diabetes is only with difficulty absorbed,** and consequently has little influence upon the animal experimented upon. The author also shows that the liver does not have any notable effect upon the phloridzin. Injecting the phloridzin into a mesenteric vein was quite as active as injecting it subcutaneously. That a dose of phloridzin which produces the maximum amount of sugar excretion, with a definite amount of intake of food, does not necessarily produce the maximum of poisoning. If the sugar-producing food is increased, the phloridzin dose must also be increased, in order to produce the maximum excretion of sugar. Changes in the temperature have little influence upon the degree of the phloridzin glycosuria. [D. L. E.]

5.—The main object of this paper was to determine whether Mayer is correct in his statement that glycuronic acid is a product of the oxidation of dextrose in the organism. Camphor, as is well known, causes a marked excretion of glycuronic acid in combination with the camphor; hence, in phloridzin diabetes, after large doses of camphor were used, one would expect marked excess in the paired glycuronic acid and a coincident reduction in the sugar excretion, if Mayer is correct. Loewi's results indicate directly the contrary; and he concludes that **the mother substance of glycuronic acid is not the same as that of dextrose, and that glycuronic acid is not produced directly from dextrose.** Camphor produces some reduction of the sugar excretion, but a reduction which is wholly independent in its amount, of the quantity of glycuronic acid. From a theoretical chemical standpoint, also, one would anticipate that Mayer's conclusions would be found incorrect, since Fischer has demonstrated the probability that, if glycuronic acid is produced from sugar, it is never produced free, but pairs with the substance with which it is combined before it leaves the dextrose molecule—in other words, that the occurrence of glycuronic acid in the urine indicates the presence of the substances which will carry off this group from the dextrose molecule, and does not indicate that there is any disturbance of dextrose metabolism. [D. L. E.]

6.—Loewi decides that it is extremely probable that the various portions of the albumin molecule, in the same process of destruction, follow various paths; and, more particularly, that **the nitrogen-containing portion may be retained, while another portion—viz., that which contains carbohydrate, or which produces carbohydrate—may follow another path, and may be either excreted or oxidized in the organism.** If this is true, it teaches us, concerning the protective influence of other foods upon albumins, that fat has only a protective effect when the albumin is already split; otherwise, we could not find a portion of the albumin—viz., the carbohydrate element—in the urine. More particularly in relation to the production of sugar from fat the author notes that the excretion of nitrogen does not, by any means, always run parallel to the destruction of nitrogenous tissues; and that we are not justified in stating that there has been an increased production of sugar merely because the ratio of dextrose to nitrogen has risen. We are rather justified in thinking of the possibility of a nitrogen retention. His experimental work has also shown **absolutely no reason for considering that sugar is produced from fat.** The work in regard to the latter point was carried out by producing phloridzin diabetes and suddenly adding large amounts of fat to the food. The sugar showed no very decided change, but tended to decrease.

[D. L. E.]

7.—The reason for the present investigation was the [illegible] that in uratic diathesis the tendency to the deposition of uric acid calculus is due to the condition of the urine, rather than to the presence of an excess of uric acid; and, since the phosphates are chiefly important in increasing the acidity of the urine, it has been attempted to cause the phosphates to be excreted through the intestine, as far as possible, by giving calcium, it being generally believed that calcium salts are excreted chiefly through the intestinal wall. The investigations consisted in the subcutaneous injection of phosphoric acid into animals, with or without calcium; also in determining the way in which organic phosphates are excreted. It was found that [illegible] phosphoric acid is not excreted at all through the intestine, even when large amounts of calcium are given; in the herbivora, on the contrary, almost all the phosphoric acid is excreted normally through the intestine. Phosphoric acid, in organic combination, passes out in the urine [illegible] in the feces in sheep in inorganic combination. The investigations of course indicate that the **use of calcium for the purpose of increasing the solution of uric acid and urates in the urine is probably valueless.** (Further testimony to the same effect may be found in the recent reports of Ury, who discovered that probably most of the calcium is normally excreted through the urine, and not through the intestine.—[D. L. E.]

8.—The effect of large amounts of carbonic acid upon the body temperature has been previously determined. Westergaard's purpose was to learn the influence of small amounts of CO. The results would be typical were **first a reduction of temperature, and then a rise, which reached the normal point.** In several animals, the temperature was decidedly depressed but subsequently rose. The cause of the temperature reduction and the following rise could not be definitely determined. It is possible that the increase of the frequency and depth of the respirations had produced it. It is also possible that the use of small amounts of CO in inhalation may have a therapeutic use.

9. [illegible] first goes into an extensive discussion of the literature concerning [illegible] absorption and the methods which have been used to study it. He insists that the use of dyes and poisons in studying absorption through the tissues is an extremely crude method of procedure for, what we are really attempting to learn is [illegible] when the stool appears in the circulation, or when toxic symptoms of drug action appear but the quantity which can be so tested and the rapidity with which it is absorbed. The best quantitative method of investigating this he considers to be subcutaneous injection of certain sugars, which, as Voit has shown, **are excreted quantitatively through the urine.** Milk sugar is practically quantitatively excreted and it is [illegible] Hence it is especially adapted to the study of this question. Ten per cent solutions were found to be best. The solution was always injected into the same region in loose tissue, and he made certain that he always injected into the same tissue. The general results of his investigations were to show that not air baths have a very positive effect in increasing the absorption, that hyperæmia produced by constriction reduces the absorption, so long as the constriction is maintained subsequently dissolved, however, is very rapid; that elevation of the temperature decidedly increases the absorption; and that, in case large quantities of fats are present in the tissues, cocaine will increase the absorption as much as 50 per cent, at any time it is given. In this case, however, it is partly so much of the increase in absorption as it is a result of septic [illegible] factors which act in lessening the resistive powers of the tissues are closely as follows: Arsenic increases the absorption; [illegible] hypodermic injections. It is however, noted that the [illegible] secretions of various kinds, as [illegible] bleeding and hydræmia may increase the absorption. [illegible]

is not due to hyperemia, but is almost undoubtedly due to the loss of water from the tissues. The more active the osmotic processes are, the more rapidly will the sugar solution become diluted to a point at which it can be readily absorbed pass into the circulation, and be excreted. The author decides that **the most important methods of increasing absorption** are hot-air baths and constriction hyperemia, while cold and elevation are the best means of preventing it. [D. L. E.]

10.—The investigation of these substances was undertaken because of **several cases of poisoning** which occurred in their production in chemical factories. The symptoms were chiefly those of severe local irritation. Animal experimentation showed that dimethyl sulphate has an extremely irritating action upon all the surfaces with which it comes in contact. It especially causes violent inflammations of the respiratory organs and of the conjunctiva—symptoms which were very notable in the human cases of poisoning. It may also cause severe irritation in the skin. Given subcutaneously, it produces severe hyperemia and inflammatory change in the tissues, and causes severe convulsions followed by coma and paralysis. Given into the stomach, it has a **marked caustic action** and produces numerous gastric ulcers. The poisonous dose by subcutaneous injection is 0.05 grams per kilo of rabbit. Given by the stomach, the same dose, or a little more, is always poisonous. The poisoning is chiefly due to the local application. The cause of the general symptoms is to be found in the violent irritative effects of the dimethyl sulphate upon the circulation. As to the effect upon the nervous system, dimethylester varies from other esters and ethers of the fat series in the production of severe convulsions. The convulsions were not seen in the human poisonings. **The method of preventing poisoning** must lie in the prevention of the contact of much skin surface with the vapor, and in the prevention of the inhalation of the vapor. Antidotes scarcely come into consideration. [D. L. E.]

11.—Schaer gives a general discussion, without adding any experimental data. He particularly directs attention to the probability that **the saponin contained in guaiac is the active substance.** [D. L. E.]

12.—Gottlieb and Magnus have investigated the following substances: Digitoxin, digitalin, strophanthin, convallamarin, and strophantin Thoms, using the plethysmograph. They decided that the members of the digitalis group all cause an increase of bloodpressure, through increasing the energy of the cardiac contraction, and through contraction of the vessels. The contraction of the vessels is due to the peripheral action, and may be either general (as in the case of digitoxin), or be due to contraction of the vessels in the splanchnic area. In the latter case, the blood is driven toward the body periphery, and, as a result, there are **three influences exerted upon the peripheral vessels:** (1) The direct contractile action of the drug; (2) the passive distension, due to the fact that the internal vessels contract and drive the blood into the peripheral vessels; and (3) the active reflex dilatation, which is produced by the contraction of the abdominal vessels. There is no essential distinction between digitoxin and the other substances. The ultimate effect, however, upon the distribution of the blood in the two groups of substances is different. With digitoxin, the general vascular contraction drives the blood from the venous into the arterial system; with the other substances, the splanchnic vessels contract, and the distribution of blood changes; blood is driven from the venous into the arterial system, but also is driven from the interior of the trunk to the periphery. The general vascular contraction with the use of digitoxin causes much more labor for the heart. With strophanthin and the other substances of that group, the vessels in the periphery dilate, and thereby relieve the heart to some extent. The general action of the digitalis group is to cause an increase of the pressure and, by constricting the vascular channels in general to produce an increase in the rapidity of the bloodcurrent. These are sufficient to explain the improvement in the kidney function. Undoubtedly, however, they cause a necessity for increased cardiac action. It has not yet been satisfactorily determined, but it is essential to learn, to what extent the vascular changes described in this paper occur in patients in whom comparatively small doses are being used. [D. L. E.]

WIENER KLINISCHE WOCHENSCHRIFT.

[illegible] (XV Jahrgang, No. 7.)

1. The Symptomatology of Eclampsia.
JOSEF von BRAITENBERG.
2. The Effect of Urotropin on Typhoid Bacilluria.
ERNST FUCHS.
3. An Injury to the Ear; an Opinion.
VICTOR URBANTSCHITSCH.
4. Osteoplastic Trephining of the Skull for Brain Tumor.
GUSSENBAUER.

1.—Among 8408 cases of child-birth, 46 patients had **eclampsia.** Thirty-four had been in the hospital for at most 8 weeks before parturition. Many of them occurred with a spring epidemic of influenza. Forty of these women were primiparæ. The 6 others, who had already born children, had but one convulsive attack post partum. Fifteen women had contracted pelves. Albumin was found in the urine in all but 4 cases. Convulsions occurred 4 times during pregnancy, 24 times during labor, and 18 times during the puerperium. But 4 women died. The later the first attack, the [illegible] were the convulsions. Labor was induced immediately in all cases of eclampsia. Morphine, ice, normal salt, enteroclysis, etc., were given. Prophylactically the urine should always be watched during pregnancy. Of the 18 patients on whom labor was induced, no convulsions occurred in 9 after [illegible] in 4, 4 in one, and 7 in another, after parturition. Ten cases ended with spontaneous delivery. The puerperium showed fever in all but 10 cases. The cause of death in the 4 fatal cases were pye[illegible], nephritis, and apoplexy in 2 cases. In 31 cases delivery occurred between the thirty-ninth and fortieth week of pregnancy. Of 47 children, twins having occurred once, 45 left the hospital alive and well. In one case it is clear that carbolic acid caused the convulsions. Apoplexy is frequent with eclampsia. No single cause exists which can be found in every case of eclampsia. [M. O.]

2.—Fuchs, after reviewing the subject, states that **out of 41 patients with typhoid fever, the urine of only 14 contained micro-organisms.** In 4 cases these were very scanty, one of them showing colon bacilli alone. In 6 others colon bacilli, cocci, and other microbes were found. Urotropin had no effect in these cases. **In but 4 cases were many typhoid bacilli noted,** one of them ending fatally. In that case the bacilli were found during the fever, in the others after the fever. Typhoid bacilli decreased upon urotropin, but increased when it was stopped. [M. O.]

3.—Following severe blows on the head, **perforation of the left tympanum occurred.** This persisted, with pain, decreased hearing resulting. As doubt existed whether this was in result of the assault, or had existed for years prior to it, Urbantschitsch, who examined the case thoroughly, expresses as his opinion that hearing was most probably affected before this injury, but became worse from the blows. The injury was a slight one and its results disappeared in 2 weeks. Therefore the award of damages for the resulting injury was not justified. [M. O.]

THE SCOTTISH MEDICAL AND SURGICAL JOURNAL.

[illegible] (Vol. X, No. [illegible])

1. Melancholy and the Toxemic Theory.
T. S. CLOUSTON.
2. Notes on Surgical Cases. JAMES LAURIE.
3. Rupture Before Pregnancy in the Same Patient.
J. A. C. KYNOCH.
4. The Surgical Treatment of Sciatica.
GEORGE HALLEY.
5. Adrenalin, the Active Principle of the Suprarenal [illegible]. JOKICHI TAKAMINE.
6. Observations on Cases of Pernicious Anæmia.
ALEXANDER GOODALL.

7. The Hamilton Bed in the Royal Maternity Hospital, Edinburgh.

1.—T. S. Clouston says that it is of the highest importance to distinguish between the 2 classes, viz., those in whom the disease has originated in the cerebral cortex, and those in whom it has been secondarily caused by something *ab extra*. In the former feeding may be the essential indication, also strychnine, iron and quinine, alcohol and paraldehyde may be curative, while in the latter starvation and purging may be the right therapeutics, using calomel, salol, the antitoxic serum, diuretics, diaphoretics and thyroid extract. Half of the existing mental diseases or defects occur during the formative and developmental or during the decadent and senile period of life, and is caused, the author believes, primarily through the cortical nutritive arrests or perversion incident to nerve cell development or retrogression. On the other hand, there can be little doubt that toxemic conditions do play the chief part—though in many not the primary part—in general paralysis, puerperal insanity, alcoholic and syphilitic insanities, rheumatic and gouty insanities, and possibly phthisical insanity. In regard to some cases of epilepsy and epileptic insanity, the toxemic case is strong, but not yet proven. There are certain symptoms which should always suggest toxemia in any case, viz., pyrexia, convulsions, headache, vivid hallucinations, perversions of sensibility, stuporous and confusional states, abscesses, skin irritation, inhibition or marked interference in the cardiac and vascular actions, very foul tongue, fetid stools and absence of chlorides in the urine. [T. M. T.]

4.—George Halley reports a few cases of **sciatica treated by surgical interference** with the following conclusions: (1) Out of 5 cases in which the nerve was stretched, there was relief from pain immediately after operation; (2) relief from pain was known to have continued for 4 months in 2 cases and 13 months in one. In one of these it had existed for 8 years previous. In one, in which no subsequent history had been obtained, relief followed the operation, although sciatica had existed for 5 years previous; (3) from paralysis which followed opening the sheath of the nerve and an attempt to separate the nerve fibers, he does not consider it wise to do more than stretch the nerve and would open the sheath only if there were much effusion; (4) his opinion is that this treatment should be adopted soon, provided the cases are limited and well defined, having no other pains and no other organic condition in the pelvis or elsewhere; (5) should pain recur after operation in the limbs below the knees, he recommends further nerve stretching lower down. [T. M. T.]

5.—Jockichi Takamine, in his article on **adrenalin**, gives the following method for its manufacture. The suprarenal gland of sheep or oxen is disintegrated and extracted with water. Such extract is treated with alcohol to throw down the nonactive constituents, both organic and inorganic, and the filtrate is then evaporated in a vacuum to proper consistency and treated with alkaline substances. This process throws down the active principle in a crystalline form which is afterwards purified by repeating a similar method. Generally speaking, adrenalin, when locally applied, is the most powerful astringent and hemostatic known; also a very strong stimulant of the heart. It is non-irritating, nonpoisonous, and noncumulative as far as it has been observed. It is indicated in a condition produced by morphine and opium poisoning. It has produced good results in circulatory failure, in the prevention of collapse of anesthesia and allied conditions. It is invaluable in carrying out bloodless operations in nose, ear, eye and throat work. Out of a great number of operations in which it was used, in only a few instances was sloughing after operation reported. The length of time required to control bleeding depends upon its strength. [T. M. T.]

JOURNAL DES PRATICIENS.

February 1, 1902. (16me. Année, No. 5.)

1. Bilateral Inguinal Hernia with Displacement of the Testicles. A. BROCA.
2. Iodine in the Treatment of Granular Conjunctivitis. B. MELCONIAN.

1.—Broca presented a boy of 11, whose scrotum contained no testicles, yet whose external genitalia were too well developed to permit of his being a cryptorchid. The testicles were found **at the external inguinal ring**, and by pressure were easily brought down into the scrotum, but they immediately returned to the groin upon removing the pressure. **Bilateral inguinal hernia** had appeared at 14 months, with pertussis and the external inguinal rings were very large. Formerly a bandage would have sufficed; nowadays radical cure for the hernia should be performed. If pain occur in the testicles, castration may be done later, but only when absolutely indicated. [M. O.]

2.—Melconian advises **metallic iodine** in vaseline, 1 to 400, **for granular conjunctivitis**, applied to the inverted lids twice daily. Should the reaction be too great, a yellow oxide of mercury salve, 1 to 100, should be applied later. This treatment should be kept up 5 or 6 months. One case is reported in full, with recovery, while sulphate of copper, kept up for years, had no effect. The great advantage of iodine is that it heals without scar formation. [M. O.]

February 5, 1902. (16me. Année, No. 6.)

1. Syphilis of the Pharynx. DU CASTEL.

1.—Du Castel presented a boy of 17, with a leg ulcer which had existed for 3 years. No treatment had any effect. Du Castel, believing that it might be hereditarily syphilitic, in spite of the lack of confirming signs, ordered antisyphilitic treatment, upon which the ulcer healed. More detailed examination revealed **total destruction of the uvula**, undoubtedly syphilitic. He also presented a woman with ulceration of the face and of the pharynx, both cured by antisyphilitic treatment. Primary syphilis is generally noted on the tonsils; secondary ulceration is seen on the uvula and pillars of the pharynx; while gumma occurs on the vault of the palate or posterior pharyngeal wall. These ulcerations cause pain, dysphagia, regurgitation through the nares, etc. The lesion may be difficult to find. The process is not grave until perforation of the palate occurs. A boy of 15, with all the signs of hereditary syphilis, had so great an ulcer of the palate that the vault joined the posterior pharyngeal wall. The posterior nares were [illegible]. In such cases the [illegible] is not generally difficult. No lesions of syphilis may be evident, for the initial symptoms may have been very slight. Potassium iodide is indicated in large doses, with small amounts of mercury. [M. O.]

REVUE MENSUELLE DES MALADIES DE L'ENFANCE.

January, 1902. (T. 20, No. 1.)

1. Has the Power of Nursing Their Infants Diminished in the Women of Our Time? A. B. MARFAN.
2. The Anelolytic Ferment of the Blood Serum in the Normal and Diseased Child. P. NOBECOURT and SEVIN.
3. A Special Variety of Osteoarthritis of the Hip in Children. NOVE-JOSSERAND.

1.—Marfan refers to the statements of Budin concerning the diminishing power of nursing that the modern women are showing. Budin believes that this lessening of the power of women who nurse their babies is due to physical incapacity. This physical incapacity according to Budin is produced by dental caries, bowel diseases, dyspepsia and alcoholism. All of which he considers to be symptoms of degeneration. These considerations led Budin to say that a healthy man who wishes to raise healthy children ought not to marry a young woman who was not nursed by her mother, one who is of a tuberculous family, one from a neuropathic family, the daughter of a drunkard nor one who has decayed teeth. A young woman has a right to consider that these are [illegible]

the antecedents of the man whom she is to marry. Against these conclusions Marfan places those of Mme. Dluski who has found (1) that women, with few exceptions, make good nurses; (2) that more than four-fifths of women are good nurses from the beginning; (3) that almost all women become good nurses after a longer or a shorter time; (4) that cases of agalactia are excessively rare; (5) that the necessity for stopping nursing very rarely arrives; (6) that multiparæ who have nursed their children are better nurses than primiparæ; and (7) that complications affecting the breasts are more rare and less serious in old nurses. These conclusions were drawn from a study of women who were delivered in a lying-in-hospital. Marfan has studied 108 cases in private practice and he concludes that of healthy women who loyally try to nurse their children almost two-thirds are capable of making good nurses. As to the other one-third, the women who compose it are not all completely insufficient; the proportion falling in the latter class being about 10%. He thinks the conclusions of Bunge are inexact and that the power of nursing her offspring is not being lost by the modern woman. He also refers to the conclusions of Blacker, who has found that in the poor population of London mammary insufficiency should be regarded as absolutely exceptional; and of Nordheim, who has reached much the same conclusion concerning the women of Munich, in which place he finds that the rarity of natural nursing is due to social conditions rather than to physical incapacity. Marfan further concludes that an alcoholic parent does not necessarily render a female child powerless to nurse her offspring. He criticizes the rules of health to be followed in selecting a husband or a wife advised by Bunge. [J. M. S.]

2.—Nobécourt and Sevin have studied **the amylolytic ferment in the blood serum of the normal child and of the diseased child.** In the normal state, in the first month of life, the amylolytic ferment of the serum is very variable. In the second month the amylolytic power is about the same as in the first month. From the second month to the second year the mean power remains about the same, but amylolytic powers below this mean have not been found. In a child over 2 years of age, in the adolescent and in the adult, the amylolitic power corresponds to the maximum power observed before the age of 2 years. In some subjects the amylolitic power is weak; but it is always near the upper limit of that seen in children under 2 years of age. In such children the amylolitic power of the serums is not altered to the same degree in the course of all diseases. [J. M. S.]

3.—Nové-Josserand reports the case of a girl, aged 7½ years, who had complained of lameness on the right side since she was 6½ years old. There was no pain and no functional disorder. The child's parents paid little attention to this lameness, which remained stationery for 8 or 9 months, during which time the child walked about and played with other children of her own age. Then the lameness became a little worse and showed a tendency to increase. There was slight atrophy of the right thigh, and the child had a tendency to hold the limb in the position of adduction and internal rotation. The movements of the joint were free, however, only abduction and external rotation being limited. Pressure over the trochanter produced slight pain which was referred to the knee; but pressure applied indirectly to the hip or the knee joint or the foot was not painful. Under the influence of fatigue the limp increased a little and there was some pain. The diagnosis seemed to be beginning coxalgia. A radiograph showed a thickening of the portion of the ilium entering into the formation of the acetabulum. The bone appeared swollen and its external surface was deformed. The bone was increased in volume and the line between the head of the femur and the margin of the acetablum was obscured. In the center of the joint the bone was rarefied. The upper extremity of the femur showed no distinct change. The child was put to bed with continuous extension and a suitable splint. Pains disappeared and the movements of the hip became normal quickly, but the limp persisted even after 6 months of this treatment. Later, the limp disappeared and there were no objective or subjective symptoms of joint disease, except that the radiograph showed that the lesions seen at first were better marked and that the upper extremity of the femur seemed to be involved in the disease. The examination gave the impression of an ulcerative process similar to that of tuberculosis of the hip. But, in spite of the destructive appearance of the lesion, the head of the femur was not dislocated. After the child had been allowed to walk about for several months, all symptoms, including limp, disappeared and a third radiograph showed complete restoration of the joint, except for a slight hyperostosis in the infra-acetabular region and a slight increase in the thickness of the head of the femur. The author considers the case to be **a special variety of osteo-arthritis.** [J. M. S.]

LA PRESSE MEDICALE.

February 12, 1902. (No. 13.)

1. The Identity of Human and Bovine Tuberculosis. S. ARLOING.

1.—In a long and interesting review of the subject, Arloing says that the virulence of the tubercle bacillus varies, as it adapts itself to different organisms. Thus it is not surprising that human tubercle bacilli show less activity in certain animals than bovine tubercle bacilli. Pure cultures of human tubercle bacilli may be found and cultivated, which will cause tuberculosis in cattle, sheep, and goats. Those which are incapable of so doing, and such tubercle bacilli are found, do not cause a distinct form of tuberculosis. He believes that the **identity of the human tubercle bacilli and the bovine tubercle bacilli** must be admitted; but he does not admit their subdivision into human tubercle bacilli and animal tubercle bacilli. This distribution, made by Koch and Schütz, is not authorized by their results. Therefore Arlong believes that precautionary measures concerning meat and milk, in which the presence of tubercle bacilli is suspected, should be strenuously maintained. [M. O.]

February 15, 1902. (No. 14.)

1. Premature Delivery or Embryotomy in Contracted Pelves. PAUL BAR.

1.—The objections to **premature delivery** are that one-third of the infants die; that those which live are incompletely developed, easily becoming diseased or deformed; and that, with antisepsis, Cesarean section and symphyseotomy are to be preferred nowadays. But in some cases embryotomy becomes imperative, to save the mother's life. Cesarean section, while easily performed is nevertheless dangerous. Symphyseotomy should only be attempted upon women who are or appear to be not infected. When the child may be infected, or seems in any way abnormal it should be sacrificed, and symphyseotomy not attempted. Thus Bar only performs **symphyseotomy** when both mother and child are in excellent condition. But 12 mothers and 13 children died out of 100 symphyseotomies. Premature delivery is often indicated; Cesarean section or symphyseotomy may be indicated during labor; yet some cases remain in which embryotomy must be done. Strict antisepsis is necessary in all. Statistics follow to confirm Bar's opinion. [M. O.]

February 19, 1902. (No. 15.)

1. Alopecia Areata. E. DE LAVARENNE.

1.—The Academy of Medicine of Paris has appointed a commission to prepare a report upon the contagious or noncontagious nature of alopecia areata, "la pelade." In 1853 Bazin stated that its cause was the microsporon Audouini, which Gruby discovered in 1843. This was confirmed, in 1892, by the thorough work of Sabouraud. Yet Bergeron, in 1865, did not consider it a parasitic disease. Dermatologists outside of France have termed the condition a trophoneurotic trouble. From a thorough review of the subject it appears that the nervous theory is constantly gaining credence, while the absence of the parasite in many cases adds to the belief that alopecia areata is not contagious. Jacquet's observations support the nervous theory. It seems probable that the commission will reach this conclusion. Therefore the great care now taken in the isolation and treatment of chilren with alopecia areata in France may be decreased or even discontinued. [M. O.]

February 22, 1902. (No. 16.)

1. A New Cause of Chronic Lead Poisoning. E. GAUCHER and H. BERNARD.
2. The Pathogeny of Bronzed Diabetes. M. RABE.
3. The Special Technique of Massage. M. MARCHAIS.

1.—Gaucher and Bernard have found several cases of **chronic lead poisoning** among men who are engaged in polishing false pearls. Chemical examination of these artificial pearls showed the presence of some lead salt, probably a silicate, which explained the occurrence of lead colic among those polishing the pearls. The polishing wheel is of steel, which throws out a fine dust by scraping off bits of the pearls. It was this lead-containing dust which, inhaled or swallowed, caused the condition of chronic lead poisoning. [M. O.]

2.—Rabé reviews the many theories of **bronzed diabetes.** He believes that two conditions are necessary to provoke the deposit of hemosiderin in organs, the liberation of an abnormal amount of hemoglobin from destruction of the red corpuscles, and some widespread lesion of the viscera employing or eliminating this hemoglobin, particularly of the hepatic cells. In severe diabetes, hemosiderosis not only attacks the liver, but the other organs also. As the organs resist this pigmentation, some pigment is repulsed, falls into the lymphspaces and thus reaches the skin. That deposited in the liver and other organs eventually causes cirrhosis. Thus the occurrence of grave diabetes, hepatic cirrhosis, and mealanoderma is explained. [M. O.]

3.—Marchais describes in detail the **special technique of massage** in sprains, hydrarthrosis, luxation of the elbow, fracture of the humerus, radius, etc. He considers that massage is indispensable in many conditions; that the technique is simple; and that physicians should be capable of performing it when necessary. [M. O.]

Production of Artificial Abortion by Means of Electricity.—M. M. Mironoff (*Journal akouscherstwa i zshenskich bolezwei*, No. 12, 1901) recommends the electric current as the best and safest means of producing abortion when indicated. The patient is placed on a table or gynecological chair, the external genitals and the vagina are washed with a solution of formalin or lysol and soap, the cervix exposed by a speculum and the canal cleansed by means of pledgets of cotton saturated in a 2% solution of lysol. Apostoli's bipolar electrode is then introduced in such a manner that the platinum end of the second attachment is seen around the external os. A constant current is applied and gradually increased from 50 to 75 and even 100 milliampères for 15 minutes. At the end of this times the electrode is removed and the cervix and vaginal portion of the uterus swabbed with a 2% solution of lysol. Three applications are usually sufficient to produce the effect. [A. R.]

Society Reports.

ASSOCIATION OF GENITO-URINARY SURGEONS.

(Continued from page 873.)

SECOND DAY, APRIL 30, 1902.

Dr. F. T. Brown, New York, said that at the Presbyterian Hospital, during the past 10 years, there had been 1427 necropsies. Out of 258 (18%) of those which had tuberculous lesions, 48, (18%), showed **renal tuberculosis.** Of these 48 32 occurred in males and 16 in females; 39 had tuberculous lesions in both kidneys, 9 in one kidney, 5 of these involving the right and 4 the left kidney. The kidneys were more commonly involved than the spleen, liver or adrenals. During the same time there were in the hospital 78 cases diagnosed as renal tuberculosis, 13 (16%) of them had nephrectomy performed, with but one death, 2 months after operation; at the autopsy, the other kidney was found involved. The majority of the cases were of the disseminated miliary type. At necropsies 3% or 4% of [illegible] cases of pulmonary tuberculosis have been found. He did not believe that any surgeon would hesitate to perform immediate nephrectomy if he were sure that one kidney contained the only appreciable focus of tuberculosis. Through the courtesy of Dr. Tuttle, he was able to show a specimen of **pseudotuberculosis of the kidney,** first described in 1891.

Dr. H. H. Young, Baltimore, presented an exhaustive resumé of the literature of **tuberculosis of the seminal tract.** The disease usually starts in the epididymis. The bacilli, constantly carried up with the testicular secretion along the vas deferens, are soon localized in the ampulla, ejaculatory duct, seminal vesicles and prostate. The testicle is seldom the point of origin, becoming involved secondarily, generally much later than the seminal vesicles. Tuberculosis frequently travels from the kidney to the prostate and then involves the testicle. It is hardly ever primary in the bladder. In 35 cases the seminal vesicles have been removed for tuberculosis. Of 21, in which the results are given, 6 died, 5 had recurrences, and 10 were classed as well. Only 8 cases were followed over one year, when 2 had died, 2 had perineal fistulæ, and 4 were cured. In only one of the 6 fatal cases was primary involvement present before operation. Considering the infrequency of lung and bladder tuberculosis, with cures claimed in less than 50% of tuberculosis of the vesicles, the results obtained by operation were unsatisfactory.

Dr. Paul Thorndike, Boston, read a short paper on **tuberculosis of the testicle,** based on 75 cases collected from the Boston City Hospital. Sixty-seven per cent occurred between 20 and 40 years; 60% involved the left testis, 18% involved both testes and 22% involved the right testis. Gonorrhœa had preceded the disease in 20%, trauma in 12%. The epididymis alone was involved in 42 cases; epididymis and testis were involved in 32; the vas deferens was involved in 12; the seminal vesicles in 16, and the prostate in 13 cases. His paper discussed removing the epididymis and leaving the testis in proper cases, and the benefit to the patient of operations which remove only a part in cases in which total eradication is impossible. Dr. Thorndike also presented 2 cases of **genito-urinary tuberculosis.** In the first the deposit in the prostate was the only manifestation of tuberculosis in the body. In the second a patient with Addison's disease it was shown that the ureter on the same side had been infected through its mucous lining by the bacilli carried proximately in the urine secreted by the kidney, the pelvis of which was tuberculous.

Dr. Orville Horwitz, Philadelphia, read **an analysis of 96 operations for the relief of tuberculosis of the testicle** with these conclusions. Primary tuberculous infection of the epididymis or testicle may occur, the former being the more common. Primary infection of the epididymis the testicle becoming infected is more common than descending infection. Primary involvement of either the epididymis or testicle usually takes place through the circulation, the spot being predisposed by a slight traumatism or by some inflammation of the organ, most commonly gonorrhœa. Secondary tuberculous involvement of the epididymis or testicle sometimes follows primary foci in other parts of the [illegible] especially in the sexual organs that are

in a direct anatomical connection with the sexual glands, seminal vesicles, the prostate, urethra, bladder, ureter or kidney. The invasion of the testicle may be rapid, associated with acute inflammatory symptoms, abscess soon developing; or the onset may be slow, the symptoms simulating those of chronic syphilitic orchitis or malignant disease. The tuberculin test should always be employed in doubtful cases when only one focus of the disease is known. In doubtful cases associated with hydrocele, the fluid should be examined for tubercle bacilli and inoculation experiments made. Injections of emulsions of iodoform or zinc sulphate are not recommended. In all cases of encapsulated caseous nodules, quiescent in the epididymis, epididymectomy should be performed. Epididymectomy together with resection of the vas deferens is not attended by atrophy of the testicles or sexual weakness. The drainage of tubercular abscesses, followed by curettement, is only to be employed when radical treatment is not permissible. When the epididymis alone is involved, resection is required; whether partial or complete resection of the vas deferens is to be undertaken is still undecided. Double orchotomy should be performed when both glands are diseased, provided there is not extensive co-existing tubercular infection of other organs. As, in a majority of cases, removal of the primary disease is followed by subsidence of the tubercular involvement of the seminal vesicles, it is wiser to wait and only remove the vesicles later, if necessary. Hygienic climatic influences play important parts after operation. The antitubercular remedies are of great value in controlling the disease and should be employed in conjunction with whatever surgical procedure may be deemed necessary.

Dr. J. R. Hayden, New York, reported a case of **teratoma of the testicle** in a patient who, 7 years previous, had an epididymitis complicating a second attack of gonorrhea. The right testicle began to increase in size, became firm, hard and painful, with a feeling of weakness when standing, which disappeared when walking. Examination showed a smooth, painless, elastic tumor in the right half of the scrotum. The scrotum was normal in appearance and nonadherent. Sections of the tumor showed that it was composed of sarcomatous elements, undoubtedly a teratoma. It was regarded as decidedly malignant. Dr. Hayden also reported a case of **gangrene of the penis** in a printer, aged 57. He was a paranoiac, having various delusions regarding the cause and nature of his trouble. He appeared to be healthy in all other respects. The line of demarcation was well marked. Irrigation with hot bichloride solution was followed by removal of the slough, leaving a bleeding stump 1½ inches long. Healthy granulations were established and the entire stump was then covered with small skin grafts, with rapid recovery. Dr. Ramon Guiteras, New York, then read a paper on the **surgical treatment of chronic nephritis.**

THIRTY-FIRST CONGRESS OF THE GERMAN SURGICAL ASSOCIATION.

Berlin, April 2-5, 1902.

(Continued from page 831.)

FRIDAY AFTERNOON, APRIL 4.

Kümmell, Hamburg, discussed the limits of successful **renal extirpation and the diagnosis of nephritis** by cryoscopy. He found renal insufficiency in 265 patients, when the freezing-point of the urine was 0.61 or lower. Such a low freezing-point should prohibit operation. When doubt exists, catheterization of the ureters will confirm the decision. Hematuria, generally bilateral in nephritis, is usually accompanied by pathological changes. He strongly advocates cryoscopy and catheterization of the ureters in the diagnosis of renal disease. Strauss, Frankfort, spoke of the difference between the **physiological and pathological functions of the kidney.** He estimated the specific gravity, chlorine, nitrogen, and sugar excretion, demonstrating several preparations and case-histories. Hildebrand, Basel, reported 2 cases of **intermittent hydronephrosis** due to twisting of the ureter. In one, the ureter, after being separated below the point of twisting, was sutured into the pelvis of the kidney by Küster's method. Löwenhardt, Breslau, spoke upon **functional renal diagnosis.** Besides cryoscopy he uses an electrical test for renal insufficiency. Pels-Leusden, Berlin, read a **contribution to renal surgery,** reporting several cases of renal tumors, which appeared to be benign at operation, yet caused death by metastasis later. Tumors of the pelvis of the kidney are as a rule malignant, and should be removed *in toto*, since bits of them may cause infection of the bladder. Langemack, Rostock, read a paper on **nephrotomy** and its sequelæ. His experiments upon 75 rabbits show that transverse section of the kidney is much more dangerous than is commonly supposed. Küster, Marburg, spoke of the value of **cryoscopy.** Gerulanos, Kiel, reported 2 cases of **pyeloplasty** for twisted ureters. Barth, Dantzic, reported 3 cases of **pyonephrosis,** in which, relying upon cryoscopy, he did not operate, and recovery followed. Rovsing, Copenhagen, discussed **cryoscopy and phloridzin injections.** Among others who entered into the discussion were König, Schöngarten, Wolff and Caspar, Berlin; and Sudeck, Hamburg.

SATURDAY MORNING, APRIL 5.

Rehn, Frankfort, presented a patient with a **gunshot wound of the skull** in the neighborhood of the right sinus cavernosus. Convulsions appeared on the seventh day and persisted through operation. The bullet was found embedded in the sphenoid, and was extracted with much hemorrhage. Recovery followed. Thiem, Cottbus, showed a man from whose left occipital lobe a **cyst,** probably the result of circumscribed serous meningitis, had been removed. Optic neuritis was here purely inflammatory. Sänger, Hamburg, discussed **palliative operation for inoperable brain tumor, presenting some patients.** Every case should be trephined and the dura opened. von Bergmann, Berlin, believes that cysts of the brain were very rare, most of these cases being sarcoma. If the fluid contained in the cyst is rich in albumin, the cyst is probably part of a tumor. Hahn, Berlin, and Kümmell, Hamburg, added a few remarks on brain surgery.

Francke, Braunschweig, spoke of the **operative treatment of chronic constipation,** having performed laparotomy in 2 cases. He also showed the photograph of a hemorrhagic cyst of the skull, removed by operation. Holländer, Berlin, explained his method of performing **rhinoplasty.** Gluck, Berlin, spoke of the treatment of **ankylosis of the jaw,** showing several patients treated by resection. He also discussed the present position of laryngeal surgery, reporting 31 operations. Friedrich, Leipsic, discussed rhinoplasty.

Lexer, Berlin, demonstrated a **rectal myoma** which he had removed by amputating the end of the rectum. The patient recovered with a sacral anus. Only 4 such cases were found in literature. Riedel, Jena, described his method of operation for **hemorrhoids,** by which he completely cured 32 patients. Sendler, Magdeburg; Braatz, Königsberg; and Kocher, Berne, discussed this subject.

de Quervain, Chaux-des-Fonds, read a paper on **acute nonsuppurative thyroiditis,** which was frequently noted in infectious diseases. Krönlein, Zurich, has also noted similar cases, with marked characteristic symptoms.

Tavel, Berne, spoke upon the effect of **antistreptococcus serum.** Its action is principally antibacterial, not antitoxic. In severe cases without leukocytosis antistreptococcus serum was of no avail. Heidenhain, Worms, spoke upon **intestinal occlusion and enterostomy with peritonitis.** He believes that the cause of death of many cases of peritonitis is intestinal occlusion, due to inflammatory paralysis. Enterostomy was performed in 4 cases with success. Sprengel, Braunschweig, and Kocher, Berne, did not agree with Heidenhain. Brunner, Münsterlingen, reported his experiments upon rabbits in which he caused **peritonitis** by the injection of stomach contents. Anschütz, Breslau, discussed **ileus** with intestinal cancer, and local meteorism due to stenosis of the large intestine. He explained the mechanism upon a model.

Kuhn, Cassel, demonstrated the instruments and technique of **intubation.** Holländer, Berlin, demonstrated a case of nonpuerperal **osteomalacia** cured by castration. Jaffé, Posen, reported a case of isolated **paralysis of the quadratus menti** muscle. Marx, Lübeck, demonstrated the effect of quinine upon animal tissue. He advised quinine in inoperable cancer. Kehr, Halberstadt, described a plastic operation for defects of the choledochus by pedicled flaps from the stomach or gall-bladder. Ritter, Greifswald, spoke of nature's means of alleviating pain. His experiments show that blood and serum are the body's natural means for alleviating pain. This may be caused by the artificial

production of hyperemia. Müller, Berlin, spoke of the sensory disturbances of the skin with surgical diseases of the viscera.

SATURDAY AFTERNOON, APRIL 5.

Küster, Marburg, discussed **humeroscapular periarthritis.** He has seen at least 70 such cases, commonly called **subacromial bursitis.** Many cases supposed to be traumatic neuritis are really subacromial bursitis. He has seen good results even in chronic cases accompanied by ankylosis. Counterirritation and bandages are indicated in the treatment. Heusner, Barmen, reported his successful results with extension in contracture of the knee-joint and tendon-transplantation of the semimembranosus. Engels, Hamburg, demonstrated an apparatus attached to the thigh for carrying the knee flexed. Samter, Königsberg, reported good results in 33 cases of hernia operation. He also reported 8 exarticulations of the foot by circular incision. Eckstein, Berlin, presented a number of patients in whom skin deformities had been cured by injections of vaseline subcutaneously. Vulpius, Heidelberg, discussed **traumatic ossifying myositis.** Bone probably developed in the muscular tissue itself in these cases. Kölliker, Leipsic, spoke of operation for Sprengel's deformity, high position of the scapula. Braatz, Königsberg, read a paper on the theory and practice of surgical steam disinfection. Honsell, Tübingen, read a paper on aseptic and antiseptic dressing with ointment and adhesive plaster. Ledderhose, Strassburg, reported a case of intraperitoneal rupture of the bladder with recovery, though laparotomy was only performed on the sixteenth day. Wörmer, Gmünd, demonstrated a specimen of beginning cancer of the gall-bladder. Lenzmann, Duisburg, reported a case of total gangrene of the cecum following appendicitis. Silberberg, Odessa demonstrated his instrument for the application of buried sutures.

20TH. GERMAN CONGRESS ON INTERNAL MEDICINE.

Wiesbaden, April 15-18, 1902.

(Continued from page 879.)

THIRD SESSION.

Kaminer, Berlin, discussed the **relations between infections and the glycogenic reaction of leukocytes.** All infections, except tetanus and cholera in fowls, gave this reaction. Ehrlich, Frankfort, said that tetanus toxin does not give the reaction, because the leukocytes play no part in the production of antibodies. Hofbauer, Vienna, found that it was not present in typhoid fever, syphilis and measles; but the reaction was present in the other infectious diseases and suppurative processes. Huber, Berlin, believes that the reaction was absent in malaria because there were no toxins found in the blood.

Müller, Munich, discussed the **significance of autolysis** in certain diseases. A fibrinous exudate is removed either by wandering cells or by absorption through the lymph- and bloodvessels, the solid exudate being digested. Experimentally this autolysis is also noted, the nuclei becoming nuclein bases and phosphoric acid. Healthy tissues, however, are not digested. The most active agents in this process are the polynuclear leukocytes. That fermentation occurs to some extent is shown by the cavity formation caused by pyogenic bacteria or tubercle bacilli. Beer, Strassburg, described his experience in autolysis of the liver and of pus. Kraus, Graz; Weigert, Frankfort; and Matthes, Jena, took part in the discussion.

von Schrotter, Sr., Vienna, read a paper on **actinomycosis of the heart,** reporting a case in which clinical diagnosis of actinomycosis was confirmed by autopsy. He demonstrated specimens and sections of the heart, showing the actinomyces.

Gumprecht, Weimar, spoke of the nature of the so-called **Charcot crystals.** They are double refracting, and almost insoluble except when heated in bichloride of mercury, strong acids or alkalies. They also give peculiar reactions with acid stains. They are formed from the albumin of the bone marrow. Poehl, St. Petersburg, said that Charcot-Leyden crystals, Böttcher crystals and spermin crystals have the same melting point and are probably chemically related.

Klemperer, Berlin, discussed the **solubility of uric acid.** Uric acid, which occurs in concentrated solution in the urine, may be precipitated by heat or increased molecular pressure. Urochrome, the coloring matter of urine, makes the urine viscous and has the power of holding uric acid in concentrated solution. Edinger, Freiburg, noted the decreased amount of uric acid in the urine due to rhodan in the saliva; which shows that anomalies in the assimilation of the sulphates may be the cause of gout.

Sahli, Berne, described the simple and exact method of **clinical hemometry,** using a modified Gower's hemoglobinometer.

Rosenfeld, Breslau, spoke of the **pathology of the kidney.** Kidneys which are normal may contain a large amount of fat microscopically; this may also occur pathologically.

Salomon, Frankfort, discussed **fatty stools.** True pancreatic products, given therapeutically, are of value in diagnosing the cause of fatty stools. In the treatment, a diet is advised which is very poor in fats. Schmidt, Bonn, agreed with Salomon. Hirschfeld, Berlin, believes that a disposition to diabetes exists in such cases.

Straus, Frankfort, reported his experiments in the **physiology and pathology of the renal function.** His diagnosis following catherization of the ureters, was confirmed by operation or by autopsy in many cases.

FOURTH SESSION.

Schmidt, Bonn, read a paper on the **pathogenesis of gastric ulcer.** He considers contraction of the stomach wall, following which an ulcer is gradually covered with mucous membrane, of great importance from his investigations upon animals. Should this contraction be absent, a small defect soon becomes an ulcer through the digestive power of the gastric juice. The frequency of ulcer of the smaller curvature and near the pylorus is explained by the absence of folds in the mucous membrane. In chlorosis, which most frequently causes gastric ulcer, muscular contractility is usually very poor. Schmidt believes that the lack of mucous membrane covering in small defects always results in gastric ulcer. Hirschfeld, Berlin, discussed the relation between gastric ulcer and gastric cancer. From 5 to 6% of the cases of ulcer become cancer. Clinical symptoms, however, are by no means characteristic; besides, the two diseases may co-exist. Women are much more affected by gastric ulcer than men. Schmidt added that gastric ulcer, when secondary to cancer, is much more refactory to treatment.

Köppen, Norden, discussed operation in **tuberculous peritonitis.** It is striking that, after laparotomy, the exudate in tuberculous peritonitis only disappears when the tuberculosis of the peritoneum has begun to heal. He has noted this in animal experiments. If, by treatment, immunity of the organism can be brought about, recovery surely follows. He advises evacuation of the peritoneal effusion by puncture, using normal salt solution. By this treatment he has cured general purulent peritonitis.

Pick, Prague, spoke upon the question of **mechanical and thermal influences** upon the blood-stream and the tone of the bloodvessels, reporting a great number of experiments upon animals. Hoffmann, Düsseldorf, spoke of **acute dilatation** of a normal heart, having used X-rays for determining the size of the heart. In not one case of so-called dilatation following excesses and alcoholism was any increased size of the heart noted. A high placed diaphragm, and an increased heart's action have been mistaken for acute dilatation. Lennhoff, Berlin, believes that acute dilatation does occur from overexercise, and demonstrated a case. von Criegern, Leipsic, who examined 700 hearts, has never seen acute dilatation. Rumpf, Hamburg, believes that acute dilatation occurs, but much less frequently than is supposed. He reported an undoubted case. Hoffmann, however, insisted that true acute dilatation causes long-standing muscular dilation. Gerhardt, Strassburg, read a paper upon the **influence of drugs upon the pulmonic circulation.** Digitalis and suprarenal extract increased bloodpressure in the pulmonic circulation, while ergotine and hydrastinine had the same effect upon the systemic circulation.

FIFTH SESSION.

Bie, Copenhagen, discussed the **light-treatment and light-biology.** Chemical light rays, except red, yellow and green, may produce inflammation of the skin; ultraviolet rays cause dilatation of the bloodvessels in the skin. Chemical rays excite the lower animals; they probably also excite human beings, especially the red rays. Violet rays, on the other hand, quiet psychical processes, especially cases of mania. Red rays exert an influence deep in the organism; violet and blue rays, on the other hand, penetrate tissue only when it is bloodless. Ultraviolet rays only penetrate the upper layers of the skin. This is also true of the bactericidal effect of light-rays, due entirely to the chemical rays. Thus it is that only superficial skin affections can be cured by the light-treatment. Finsen has cured smallpox with red rays, excluding the chemical rays. Some good results with red rays are reported in measles and erysipelas. Locally, Finsen has achieved his best results with concentrated chemical rays in the treatment of skin diseases. The treatment is absolutely painless. Out of 640 patients, there were bad results in but 1.7%; 85% showed splendid recovery, while 15% recovered slowly. These cases included patients with lupus, nevus, alopecia, acne and epithelioma. von Jaksch, Prague, spoke of the sedative influence of blue light. Quincke, Kiel, referred to former experiments. He believes that the light-treatment causes not only subjective, but objective improvement in the general condition and in assimilation. Rumpf, Hamburg, has used the light-treatment, with and without blue glasses, with good effect in erysipelas and neuralgia. Hahn, Hamburg, also had good results in treating skin diseases. Marcuse, Mannheim, reported his experience in treating 400 patients with incandescent and arc lights. The latter is of use in the functional neuroses.

van Niessen, Wiesbaden, demonstrated his preparation of pure cultures of **syphilis bacilli,** which he had obtained from the blood of fresh cases of syphilis. Inoculation with this bacillus caused syphilis in monkeys and pigs. Holländer, Berlin, spoke on the cure of **lupus erythematodes.** He discussed the differential diagnosis of this disease from lupus vulgaris, believing it to be an affection of the glandular apparatus of the skin. He has had good results from quinine internally and tincture of iodine locally. Touton, Wiesbaden, does not believe in a routine treatment of all cases, since the course of this disease shows a great difference in individuals. He also believes it possible that a relation may exist between lupus erythematodes and tuberculosis.

Lazarus, Berlin, read a paper upon **the treatment of hemiplegia by utilizing other tracts of the spinal cord.** This treatment for hemiplegia and motor aphasia consists in compensatory utilization of the unaffected tracts of the spinal cord and the formation of new tracts. This is based upon the fact that the pyramidal tract is not the only motor tract, since there are a number of reserve tracts which pass through the subcortical ganglia, especially the optic thalamus and corpora quadrigemina. Besides, the unaffected hemisphere may act vicariously through the uncrossed fibers of the anterior pyramidal tract. All the ganglion cells of the brain are in direct or indirect connection, and tracts may be formed by methodical practice. This is brought about by innervation-exercises, every voluntary motor stimulus causing a voluntary movement. He divides these into pyramidal tracts, associated tracts and commissures. This treatment should begin as soon as possible after the stage of reaction of apoplexy.

Gutzman, Berlin, read a paper on the question of the **relation between abdominal and thoracic respiration.** He discussed voluntary changes in respiration, having used his own instruments to measure them. In healthy people inspiration and expiration occur simultaneously in the thorax and abdomen, though the thoracic movement appears to begin before the abdominal. When a man talks, however, abdominal respiration shows expiration, while the thorax is still at the height of inspiration.

(To be Continued.)

Special Article.

FACTS AND THEORIES CONCERNING SPERMOLYSIS.

The subject of cytolysis has opened up a new and interesting line of research. The general principle underlying cytolysis is as simple as everything in nature after we have once fathomed the mystery. It is based primarily on the autonomy of cells, each of which is as it were a distinct individual possessing specific properties. The cells of one organism are as much alien to the cells of another as any foreign body could be, and the further the given orgaisms are removed from each other on the scale of evolution the more mutually antagonistic are their cells. Thus, as already pointed out in the editorial columns, the bloodcells of one species of animal are distinctly poisonous to animals belonging to another species and act, when introduced into the blood of the foreign organism, as do bacteria or poisons. Hence, the phenomenon of hemolysis, which, aside from its importance as bearing on the problem of immunity, is also a most accurate test for human blood. Closely allied to, but not identical with hemolysis is the phenomenon of spermolysis. Landsteiner was the first to make the interesting observation that if guinea pigs are injected with the spermatozoa of a bull, a substance is developed in the blood of the guinea pig which acts destructively on the bull's spermatozoa. Shortly afterwards, the subject received the attention of Metchnikoff, Moxter, Metalnikoff and others, but the results so far obtained are more or less discrepant and the subject of spermolysis is by no means entirely clear. In a recent contribution to the *Archives des Sciences Biologiques,* published by the Imperial Institute of Experimental Medicine at St. Petersburg (Vol. IX, No. 1), London describes a long series of experiments bearing on spermolysis. He made the interesting observation that the blood of any animal contains substances antagonistic to the spermatozoa of any other, irrespective of species. Moreover, the same antagonism exists between the blood and the spermatozoa of the same individual. To this phenomenon of autospermolysis the author ascribes the function of keeping the motility of the spermatozoa in abeyance until they leave the body. This explanation, however, does not seem to tally with the author's observation that the blood of females, even those who had no intercourse with males, possesses spermolytic properties. Why this should be so in the female who has no spermatozoa to keep quiet, is certainly strange. But whatever the explanation, the fact remains that normal blood possesses iso-hetero- and autospermolytic properties, all three being, as established by the author, the functions of a single substance—spermolysin. The latter is composed, hypothetically, of alexin and desmon; the alexin being destroyed by a temperature of 55° to 56° C. Spermodesmon, coming in contact with the spermatozoa, enters into a close combination which acts favorably on the activity of the latter, but when the spermalexin is added, spermolysis takes place; in other words, spermodesmon is by itself antagonistic to spermolysin.

Lamann, in a recent contribution to the *Journal of the American Medical Association* (Dec. 28, 1901),

claims to have obtained specific reactions between semen or testicular emulsion and the serum of an animal immunized to the particular semen, but no reaction occurs if the semen of another animal is added to the serum. Thus, the blood serum of rabbits injected with dog's semen gives distinct precipitates with clear filtrates of the latter, but no precipitate occurs with human semen or with the emulsion of bull's testicle. Normal rabbit's serum and the emulsion of dog's testicle give no reaction; similarly, human bloodserum gives no reaction with human semen. From this the author concludes that the bloodserum of animals treated with different semens and testicular emulsions contain precipitins which are probably specific. The purpose for which these experiments were undertaken was to find a biological test for semen similar to the one already discovered for blood. In this he claims to have succeeded.

Here is an evident contradiction between the results obtained by Farnum and those of London, the latter having found that every serum contains to a greater or lesser degree hetero-iso- and autospermolysin. This contradiction may be explained by the following proposition: In the first place, Farnum's experiments, as admitted by himself, were by no means exhaustive. For instance, he did not determine whether the serum of the rabbits injected with dog's semen gives a reaction with dog's serum. This determination is of considerable importance, since it was shown by Moxter that injections of spermatozoa not only produce spermolysin but also hemolysin. This view, however, was strongly contested by Metchnikoff who maintained that by injecting testicular emulsion Moxter introduced also blood. Farnum, evidently, makes no distinction between spermatozoa and testicular emulsion, and yet such a distinction is important. As shown by Metchnikoff spermolysin and spermatidolysin are by no means identical; in other words, an animal injected with testicular substance will develop a serum antagonistic to the cells of the testicle, and yet the same serum will have but a slight action on the spermatozoa.

Mosquitoes and Yellow Fever.—In the *Bulletin Medical*, (October 12, 1901, No. 81), after a description of Rio de Janeiro, its position and topography, of the mosquitoes, their anatomy, life, and customs, the epidemics of yellow fever in Rio de Janeiro and Sao Paulo, its relation to meteorogical conditions, its transportation on sea by mosquitoes, and the recent experiments done in America, H. de Gouyea concludes that yellow fever is not transmitted directly or indirectly, since the germ, as yet unknown, is only found in the blood of those affected; that it is propagated by the mosquitoes (*culex taeniatus Wiedem* and perhaps other species) infected by sucking the blood of yellow fever patients; that the prophylaxis against yellow fever is the same as that against malaria and filariasis, namely, the avoidance of mosquitoes. Mosquito netting, screens, etc., the isolation of all yellow fever patients, living away from the haunts of the mosquitoes, inhabiting the upper floors of well-aired houses, these are all necessary, and ships should not be permitted to anchor in infected ports from which the wind is blowing. Oil should be employed to destroy the mosquitoes, fish should be placed in the ponds, drainage and embankments should be built, and ships leaving an infected port should have sulphurous acid introduced into their holds to kill all the mosquitoes present. [M. O.]

Original Articles.

NOTE ON THE OCCURRENCE OF ASCITES IN SOLID ABDOMINAL TUMORS.

By WILLIAM OSLER, M. D.,

of Baltimore, Md.

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The intersting lecture by Dr. Eden in the *Lancet* of February 8th., on the two cases of solid abdominal tumor with ascites, calls attention to a not sufficiently recognized cause of abdominal dropsy. In 1885, I saw with Dr. Walker, of Dundas, Ontario, a woman with recurring ascites, of doubtful origin, for which she had been tapped many times. Fortunately I saw her a day or two after the removal of the fluid, and was able to feel a tumor in the lower part of the abdomen. A week later, Dr. Thomas, of New York, removed a solid ovarian growth, and the patient has been well ever since.

My interest in the subject has been renewed recently by a very remarkable case referred to me by Dr. Koehler and Dr. Fackler, in a woman, aged 53, who had had at intervals for three years attacks of ascites. Within the past four months she had been tapped four times. Ten years ago it was stated that a tumor had been detected in the abdomen. There was a good deal of discussion as to the nature of the case, and she was referred to me for a decision as to the advisability of an operation. There was a solid tumor in the lower abdomen, which could be moved from side to side. I suggested the possibility of dropsy dependent upon a solid ovarian tumor, and asked my colleague, Dr. Kelly, to operate. He found a large fibroma of the right ovary with twisted pedicle and adhesions to the omentum. The tumor was removed, and the patient has recovered.

Dr. Hunner, Professor Kelly's first assistant, has very kindly collected for me the cases bearing upon this point from the gynecological clinic of the Johns Hopkins Hospital. Among 9400 cases there have been 10 patients with solid ovarian tumors, the ages ranging from 32 to 63. In six of these cases ascites was present on admission. Three of the cases had required repeated tapping. All of the cases recovered after operation.

As Dr. Eden remarks, ascites is the rule with solid tumors of the ovary, and so rare with fibroids of the uterus that its presence almost serves to exclude them. Other forms of tumor may be associated with ascites. In Montreal I saw a case of leukemia with recurring ascites. On the occasion of my first visit the distension was so great that the spleen could not be felt; in fact the ascites was not made out until after the patient had been tapped. In a case of a solid tumor of the mesentery there was an ascites of moderate degree.

The association is one to which the attention of the profession has not been called sufficiently. I was so impressed with it in the case upon which Dr. Thomas operated, that I made a reference to solid tumors as a cause of recurring ascites in the first edition of my text-book (1892). The question of operation is a very important one in the solid

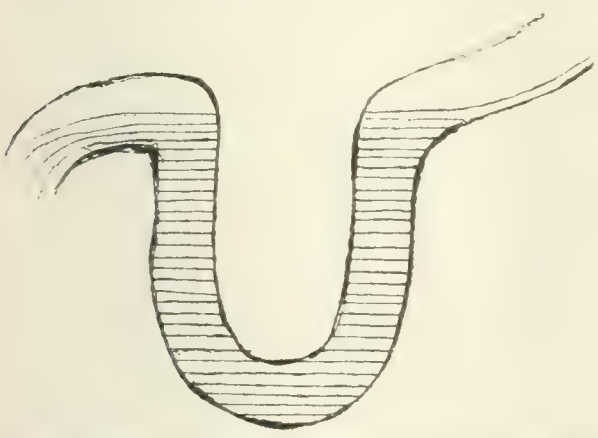
ovarian tumor is usually benign, and, as mentioned, the cases in Dr. Kelly's clinic have uniformly recovered.

ON A POSSIBLE CAUSE OF METEORISM AND PARTIAL INTESTINAL OBSTRUCTION, WITH REMARKS ON THE USE OF ESERINE IN INTESTINAL ATONY.

By FREDERICK A. PACKARD, M. D.,

of Philadelphia.

On November 2, 1900, I was asked to see, with Dr. D. E. Kercher, a woman, aged 60 years, with evident malignant stricture of the bowel and with intense tympanitic distension of the abdomen. In spite of a very large number of fluid movements in the course of each 24 hours, the abdomen had become steadily more distended until, when I saw her, it was producing intense discomfort and interfering with respiration and cardiac action to an alarming degree. The uniform tympanitic distension prevented any very careful examination. The thing that struck me as most peculiar was the fact that with many fluid fecal movements no flatus had passed for many days. It was hardly conceivable that an ordinary stricture of the bowel could cause retention of flatus without retention of fluid fecal matter. The only explanation that seemed to me possible was that the patient had a stricture of the small intestine at a point where the feces were still fluid and that on the proximal side of this stricture there was a loop of bowel so placed that it acted as a trap similar to that employed by plumbers to prevent the entrance of sewer-gas through the drain-pipes. This is best illustrated by a diagram such



Diagrammatic representation of a loop containing fluid feces forming a plumber's trap.

as that here shown. The existence of such a condition would permit of the overflow, so to speak, of fluid material that would effectually obstruct the passage of gas, unless the peristaltic force was sufficient to drive the fluid out of one arm of the U.

Acting upon this view, we gave the patient hypodermically 1-150 of a grain of eserine salicylate. This was repeated in 2 hours. After the second injection a large quantity of fluid fecal matter with a remarkable expulsion of gas occurred, while the abdomen became flat and soft. No further accumulation occurred, but the patient died from asthenia 9 days after I saw her.

At autopsy we found not actually the condition which I had anticipated, inasmuch as the malignant stricture was in the upper portion of the sigmoid flexure. The plumber's trap arrangement of the intestine had occurred in the colon, the transverse portion of which formed a long loop dipping well down into the pelvic cavity. At the time of the autopsy this contained a considerable amount of fluid feces.

While I had never happened to see previously a case suggesting this explanation of partial intestinal obstruction, I felt that the explanation was such a simple one that it must have occurred to others. However, on carefully looking through the literature, I found nothing to indicate that such a mechanism for intestinal obstruction to flatus had ever been described. Finding that this was the case, I spoke to a number of my friends who are engaged in abdominal surgical work to get their opinion upon the possibility of this being a frequent occurrence, and they considered my views as worthy of discussion. Now, after the lapse of a sufficient time and an amount of thought capable of preventing my drawing hasty conclusions, and after considering carefully what flaws there might be in the reasoning, I have decided to present this paper in order to call attention to what I believe may be a not infrequent cause of abdominal distension. I had hoped to have some further clinical data to substantiate my idea as to the occurrence of this form of gaseous obstruction, but in the past eighteen months no second case of this kind has come to autopsy. I had also hoped to be able to procure experimental evidence of the action of such a loop, but I have been unable to complete this as yet.

The only objection that might be urged against this mechanism as a cause of intestinal obstruction is that the loop in the case I have mentioned in detail was directed horizontally when the patient was in the recumbent posture. This objection I do not believe invalidates the conclusion that I drew, because the loop filled with fluid would tend to seek a lower level than that of the intestine filled with gas on either side of it.

Cash (Proceedings of the Royal Society of London, 1886, Vol. XLI, p. 212) by an ingenious series of experiments showed that in the dog onward movements of a body through the intestines by peristaltic action were stopped by a weight of from 8 to 10 grams, and was markedly interfered with by a weight of 5 grams. There are no facts to show the propulsive power of peristalsis in the human. On the other hand, there is no reason to believe that it is less in man than it is in the dog. Therefore the arms of the U need be of but slight length in order to contain a column of fluid of sufficient weight to remain immovable as a result of the peristaltic action of a paretic bowel wall. In other words, a loop, each arm of which will contain from 8 to 10 cc. of fluid, would be sufficient to overcome by the resistance of this fluid the peristaltic action of the bowel. The loop so placed that its arms pointed upward would therefore effectually preclude the emptying of the bowel so long as this position was maintained. A loop having much shorter arms might be sufficient to obstruct the passage of gas, provided there was a sufficient supply of fluid material to keep the loop filled in spite of peristaltic contractions. It is easy to see why such a loop might readily form in the transverse colon. Possibly one of the functions of the longitudinal band of fibers, so plainly seen in the large bowel, is the prevention of such loop formation.

Such loops might follow adhesions resulting from any inflammatory condition of the lower abdominal [illegible]. These might remain symptomless until a

*Read before the College of Physicians of Philadelphia, April 1, 1902.

weakening of the intestinal walls from some cause persisted to such a degree that the resistance offered by the contents of the limbs was sufficient to cause accumulation. Such a loop might also follow the liberation of an incarcerated hernia or the matting together of two adjacent segments of the small bowel through tuberculous peritonitis.

The condition mentioned above would evidently be aggravated by the administration of any remedies tending to render fluid the contents of the intestinal canal. In fact, I think it questionable whether the administration of hydragogue cathartics might not even cause the formation of such a loop if the bowel were paretic.

A case possibly also illustrating this condition came under my care a year ago at the Pennsylvania Hospital. On going on duty on the 1st. of April (1901), I found a patient who had been admitted a week before with abdominal pain and intense distension, preventing a careful examination. This distension had persisted in spite of a fair number of bowel movements. On the day when I took charge of him he twice vomited yellow liquid material, having the same appearance and odor as had the bowel movements. The duration of the disease, his good general condition and the absence of fever, leukocytosis and negative rectal examination, induced me to try the effect of eserine given in doses of 1-50 of a grain of salicylate at three-hour intervals. After one or two doses large, loose bowel movements occurred, the tympany subsided, and the vomiting, which had been previously troublesome, entirely ceased. Thereafter there was no return of his symptoms or signs; the bowels were evacuated daily and the patient insisted on leaving the hospital. It is difficult to explain such a case as this unless we assume that there was some transient cause of obstruction to gas of a kind similar to that described above.

Another case illustrating the value of eserine in apparent atony of the bowel was admitted to my ward at the Children's Hospital on June 25, 1900. A boy, 7 years old, presenting slight evidence of rickets (rosary, sunken xiphoid, wide intercostal spaces, etc.,) was brought to the hospital with a vague history of his having been sick two weeks with obstinate constipation. On admission, the abdomen was distended, the intestinal coils could be plainly seen, and there was slight diffuse abdominal tenderness. Rose-spots (?) were present on the abdomen. His temperature on admission was 102 F., and it was suspected that he was possibly suffering from typhoid fever, which was epidemic at that time. The temperature fell to normal 3 days after admission, and repeated examinations showed no agglutination of typhoid bacilli by the bloodserum. In spite of repeated enemata no bowel movement was obtained for 3 days and then a very slight and unsatisfactory evacuation. Although occasionally a little fecal movement was obtained after high enemata, this was never sufficient to relieve the distention. On the 4th. day, when the abdomen was found to be greatly distended and everywhere tympanitic, there was no complete paralysis of the gut as evidenced by the presence of borygmi. On the date last mentioned vomiting set in, the vomitus consisting first of curds and then of bowel fluid with the occasional appearance of blood. During the whole of this time the constipation continued. Owing to the obscurity involving the case I asked my surgical colleague to see it. He suspected the case to be one of hernia, but as the vomiting was so persistent, in spite of everything we could do to relieve it, that on the 5th. of July my surgical colleague, Dr. [illegible] Corscadden, saw the case with me in formal consultation. As the notes state, "It was agreed on the morning following, that the condition was different." This was because of our hope that still more by enemata might relieve the obstruction. Two bowel movements were obtained to date, resulting in but one small, yellow, constipated stool. On July 10th. and 11th. high purgative enemata were resorted to, consisting of

Magnesium sulphate	℥ i
Turpentine	♏ xii
Glycerine	℥ i
Water	℥ viii

[illegible] were given on the 10th. and 2 on the 11th. of July, and produced no result except a little more every 4th. hour. At 4 A. M. on the following morning he had [illegible]. A purgative enema was then given at half-past nine in the morning, and by 1 o'clock in the afternoon he had had two soft brown and liquid stools, the first of which contained lumps of fecal matter. Feeling that there was probably more material to be removed, the enema was repeated at 2 o'clock, and resulted in the evacuation of 1 soft and liquid brown stool. On the next day the notes state that the boy had retained 30 ounces of milk, and that the abdomen was not distended and was very soft.

Whether this was an illustration of the condition described at the beginning of this paper, I cannot feel sure. I rather incline to the belief that it was a case of simple constipation due to [illegible] of unknown causation.

Aside from cases of acute intestinal distension, eserine is apparently useful in the constipated habit of long standing, due primarily to weakness of the intestinal wall. I have lately seen a case which, among others, I think illustrates very clearly the occasional disadvantage of employing the ordinary laxatives which increase the bulk of intestinal contents. This man, 25 years of age, for as long as he could remember had had obstinate constipation with intervals of three or four days without a movement unless medicine was taken. After taking a laxative he had intense pain followed by a solid movement, and then a large number of loose movements, often occurring two or three times in the 24 hours for several days following. Rectal examination showed nothing but a dilatation of the rectum. If weakness of the wall of the colon was the cause of his constipation, increasing the bulk of the intestinal contents would theoretically not be the best way of causing the colon to empty itself. If there were already in the bowel a mass of material incapable of being moved, any laxative that increased the amount of the contents of the intestine would do harm rather than good, unless it was of such a character that it stimulated the sluggish bowel-wall to [illegible]. With suitable food and the patient on the examination of fecal matter in a large bowel not sufficiently strong to produce an evacuation was [illegible]. When finally the bowel was made to empty with the help of enemata or some very strong laxative there was a tremendous amount of putrefactive [illegible] that was [illegible] by many [illegible]. The dilatation of the bowel was then [illegible] by compression due to atony of the muscular wall. It was decided that [illegible] could be obtained by the use of glycerine suppositories and the patient was told to refrain from all laxatives. [illegible] was prescribed morning and evening. During the month that has succeeded the adoption of this plan of treatment the patient has had [illegible] normal daily movements without pain or distress.

[illegible] hernia.

There is comparatively little in the literature regarding the use of eserine in human medicine, although for years Calabar bean has been used by veterinarians in abdominal colic in the horse. Bauer (*Centralb. f. die med. Wissensch.*, Aug. 25, 1866) found that in cats alcoholic extract of Calabar bean produced a marked spasmodic contraction of the whole gastro-intestinal canal from the stomach to the rectum, frequent voiding of watery movements and later bloody mucus. So marked was its constricting action on the intestine that at the height of the cramplike contraction the intestinal lumen entirely disappeared and the gut resembled a white, bloodless, rigid cylinder of the thickness of a quill. He believed that the spasmodic contraction was produced by the direct action of the drug on the muscle-fiber of the intestinal wall. Laschkewich (*Virchow's Archiv*, 1866, Bd. 35, p. 291) found that in fatal poisoning with tincture of Calabar bean there was palsy of the sympathetic nerve and of the muscle of the intestinal wall. Such a late paralytic action is, however, frequently seen after drugs, poisoning from which in its early stages is accompanied by increased power in the parts later paralyzed. Bezold and Gotz (*Centralb. f. die med. Wissensch.*, April 6, 1867) confirmed the intestinal action described by Bauer in experiments with extract of Calabar bean and the sulphate of physostigmine. Westermann (Inaugural Dissertation, Dorpat, 1867; Abstr. in *Schmidt's Jahrbücher*, 1868, No. III, p. 290) also confirmed these results, and found that the tetanic contraction of the intestinal wall occurred in from 8 to 10 minutes after poisoning cats, rabbits and dogs with a 2½ per cent. glycerine solution of the alcoholic extract. Curiously enough he found that in rabbits the cecum was uninvolved, although the small and large intestine were thrown into spasm. He believed that the effect was due to disturbance of the sympathetic ganglia in the intestinal wall.

Subbotin (*Deutsches Archiv f. klin. Med.*, 1869, p. 284) contributed an article upon the clinical use of extract of Calabar bean in atonic conditions of the intestinal canal. After drawing attention to the use of the drug in chorea and tetanus, he refers to its powerful stimulating action upon the nervous apparatus of all the organs supplied with smooth muscle fibers as well as upon that of the heart. He points out that the poison of Calabar bean stimulates the nerve-centers and not the muscle-fibers themselves or the nerve-endings, since the contraction of the intestinal wall does not take place if their muscular elements are separated from the central ganglia in the brain by section.

He relates the case of a woman who had a tumor the size of the fist in the right iliac region, which twice disappeared after the employment of extract of physostigma. The cure was permanent so far as could be judged by the two years which had passed. He quotes a statement by Watson that in a case of tetanus the use of the tincture of physostigma had been followed by a slight evacuation where obstinate diarrhea had previously existed. Subbotin had since seen two cases of atonic condition of the intestinal canal to whom he had given with good results ½ gr. [illegible] of long-standing bronchial catarrh, with marked dyspnea and expectoration, he had effectually employed it.

Schaefer (*Berliner klin. Woch.*, Dec. 20, 1880) reports five cases of chronic constipation and flatulence, and one case of ascites from heart disease with flatulent distension following paracentesis. In all of these Calabar bean produced a striking and beneficial effect. Hiller (*Deutsche med. Woch.*, Feb. 28, 1883, p. 123) employed the drug for the relief of constipation and flatulence due to atony in doses of 1½ to 3 mg., given 3 or 4 times daily, and continued not longer than two or three days. He draws attention to the danger of using too large doses or continuing the use of the drug for too long a period, for fear of the production of continuous tetanic contraction with virtual intestinal obstruction. Maschka (*Berliner klin. Woch.*, April 9, 1883, p. 227) has recommended its use, not only in cases of intestinal atony, but also in chronic gastric catarrh, and even in acute intestinal catarrh. In the latter condition he believes that, by causing contractions of the intestinal wall, it relieves venous congestion with its attendant hypersecretion, and thereby lessens diarrhea.

The next article that I could find dealing with physostigma, or its alkaloid, is by Traversa (*Il Policlinico*, Jan., 1899; Abstr. in *Centralb. f. inn. Med.*, Feb. 18, 1899, p. 192). This article deals with the physiological action of physostigmine. He proved experimentally that it acted peripherally on the motor apparatus of the intestinal canal, this action not being influenced by the exclusion of the medulla, vagus, sympathetic and celiac ganglia. He considers that the tetanic contraction is produced by a hastening of peristalsis. He found that the contraction could be removed by the administration of atropine and that it did not occur in atropinized animals. The intestinal action of the drug, he states, is identical with that of pilocarpine.

Within the last few months a clinical article upon the use of the alkaloid has been written by von Noorden (*Berliner klin. Woch.*, Oct. 21, 1901, p. 1057). He states that he had used it for the past year and details the histories of five cases in which he had employed the drug to advantage. His first case was one of intense meteorism following a herniotomy. In some respects this case reminds me of the one which instigated me in making this report. His second case was one of double salpingitis, which developed intense tympany in spite of the passing of normal stools. This case was relieved by the drug after failure in obtaining relief from the rectal tube. His third case was one of appendicitis which after operation had enormous distension of the abdomen with gas, although the bowels were well moved. This one, also, was promptly relieved by the drug. The fourth case, one of typhoid fever with intense tympany, showed a diminution in the circumference of the abdomen amounting to 5 cm. after [illegible] doses of 1-90 of a grain of physostigmine [illegible]. His fifth case was one of relapsing typhoid [illegible] hemorrhage, followed by meteorism, which was relieved promptly and safely by the drug. [illegible] von Noorden always uses the salicylate of [illegible] physostigmine), because it can be well pre-

served in a dry state and is readily soluble in 5 parts of water. He also states that it is best given in powder with milk sugar.

INSUFFICIENTIA PYLORI A SEQUELA OF CHRONIC GASTRITIS; WITH REPORT OF TWELVE CASES SUCCESSFULLY TREATED.

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The stomach is one of the organs of digestion, and better to understand this article I will make mention, very briefly, of its anatomical structure.

The stomach consists of chiefly two coats, a muscular coat and a mucous coat. The serous peritoneal covering and the areolar layer between muscularis and mucosa need but be mentioned. The muscular coat has three sets of fibers; longitudinal, circular and oblique. The mucosa has two kinds of glands. The necessity of a suitable and proper nerve and blood supply is self-understood. The proper function of the stomach depends on the proper action of both of its chief constituents: the muscularis and mucosa. Both are essential for true chymification. But the function of each of these layers is distinct from the other. The function of the muscularis is a purely physical, mechanical—a dynamical one, the function of the mucosa is a chemical one. Both of these functions are absolutely necessary. Yet, strange as it may seem, the loss of the chemical function of the stomach is not so disastrous as the loss of the physical function of the muscularis. The chemical function of the stomach, as at present understood, consists chiefly of proteolysis, fat digestion is not yet fully established; the physical function consists of macerating the food and bringing it toward the pylorus. The contraction of the muscular coat will drive the chyme towards the pylorus and, if the pylorus is open, the chyme will pass on into the duodenum. Usually the entire stomach does not contract at once, but the contractions begin at the cardia and travel toward the pylorus in the form of waves. These successive, wavelike contractions of the muscularis have a mechanical action on the ingested food. If the pylorus is open, they will propel the food into the small intestine, but if the pylorus is not open, peristaltic movements grind and macerate the food. Here it will have to be remembered that during the early part of gastric digestion the pylorus closes tonically. This closing of the pylorus is ordinarily due to the irritation produced by the ingested food. Later in the process of digestion the pylorus relaxes at certain intervals during which chyme is propelled into the duodenum. We can readily see from this that in order that the pylorus may respond to irritation it must be capable of being irritated. The capability of the pylorus thus to respond presupposes the necessity of its being in a healthy state. A diseased pylorus, as diseased organs in general, will fail to respond to normal stimulation and its answer may either be exaggerated, delayed or altogether absent. In the human being the muscular coat is developed only to the extent of meeting its requirements, little dynamic function being necessary. But in the granivora the muscular coat is very highly developed and very powerful.

So much for the physiological function of the stomach.

A pathological condition of the stomach may be caused by changes in, or of, any of its coats, vessels or nerves. Pathological changes of the mucous coat will cause pathological changes of the chemical function, and pathological changes of the muscular coat will produce changes of the mechanical function of the stomach. I shall confine myself here only to the discussion of the beginning and the ending of chronic gastritis, a pathological change of the mucous membrane.

Chronic gastritis may be the sequela of acute gastritis or be chronic from the very beginning. As a rule, chronic gastritis is marked by intercurrent acute attacks, which latter are of variable duration. In the development of this disease the several structures and anatomical entities suffer. We need but think of the usual routine of inflammation in general—its beginning and ending—and apply it to the anatomical structures of the gastric mucosa, to picture to ourselves the pathologico-anatomical changes in chronic gastritis. Hyperemia precedes anemia, increased function is followed by cessation of function. Between these extremes, usually, years intervene. Remarkable, indeed, is the fact that notwithstanding the complete destruction of the mucosa the muscular layer, as a rule, is not changed. Chronic gastritis begins with an increased function and ends, if permitted to run its downgrade course, with the cessation of all secretions, with anadenia gastrica, when even mucus is absent. But between these two extremes we must recognize intermediary stages. These intermediary stages run their own course and may either proceed into anadenia gastrica, or themselves cause complications or be influenced by complications. Birch-Hirschfeld (Lehrbuch der pathologischen Anatomie, Vol. II, 1894, page 624), speaking about chronic gastritis, has the following to say: "*The pathologico-anatomical conditions of the stomach will present itself differently in accordance with the stage and character of the disease. If we proceed from the extremes of the forms of gastritis, supposed under the name of chronic gastritis, to the different types of the latter. But at the same time it must be observed, that there exist transitory stages between the individual forms, rather can it be considered, that the types, which I have separately described, represent in their volume only the extremes of various stages of the same processes. The [illegible] hypertrophy with atrophy of the glandular elements of the mucous membrane.*" Thus Birch-Hirschfeld justly describes the gastritis acida, of which I have seen many cases. Gastritis acida naturally requires to be differentiated from gastritis solvens and gastritis atretica, on the existence of which of course I must insist. There is also to be remembered a gastritis chronica mucosa. I cannot think of these pathological entities in any other light but that they are simply manifestations of the same destructive processes, progressing unchecked. The gastritis begins as a

gastritis acida, slowly running into the stage of gastritis subacida, then successively into the gastritis anacida and so on until anadenia gastrica is established as the last stage. Except in the last stage the enzymes are present, but in the last, also called phthisis gastrica, not only are there absolutely no digestive secretions, but even mucus is no more found. But notwithstanding these grave conditions, the muscular coat of the stomach, as a rule, remains intact. Thus Eisenlohr (*Deutsche med. Wochenschrift*, 1892, Ueber primäre Atrophie der Magen- und Darmschleimhaut und deren Beziehung zu schwerer Anämie und Rückenmarkserkrankung) reports an autopsy in which he found absolute atrophy of the mucosa with an intact muscular coat. This is not an isolated experience; on the contrary, it is generally corroborated.

Now as to the seat of the disease. Of course the mucosa of the entire stomach is involved, in the course of time; but whether it is so from the beginning is rather doubtful. As matter of fact, the polyrus is found chiefly or altogether affected. As Birch-Hirschfeld says: "It is true that chronic gastritis is especially pronounced in the pyloric portion." Riegel (Erkrankungen des Magens, 1897) says: "Before all the pyloric region is affected." Fleiner (Lehrbuch der Krankheiten der Verdauungsorgane, 1896) says. "Often it seems that only the pyloric region is affected." If we consider the most common causes of chronic gastritis: mechanical or chemical insults to the stomach, that these causes by their irritation cause contraction of the pylorus, that the stomach tries to expel these insulting agencies, but finds the door closed, that consequently the onslaught against this closed door must necessarily produce injury to this part, we can easily explain, why the pyloric portion is found, most often, to be the locus morbi.

Having briefly referred to the mucosa, the muscularis may now engage our attention. As said above, the office of the muscularis—as everywhere else—is a mechanical one, a dynamic one. The question of tonus, motility and dynamia must be solved by the relative condition of the muscular coat. The function of the muscular coat is not only to expel the chyme beyond the pylorus, but also to macerate the food, to reduce the food into small particles. That the muscular coat of the stomach is able to do it, and that it actually does it, is beyond question. Above is mentioned the fact that the stomach of granivorous animals takes excellent care of the ingested grains, grinding and splitting them open with its highly developed muscular coat. In man the dividing of the food into small pieces is begun by the teeth and continued by the muscularis of the stomach. That the maceration of the food is only a mechanical act, not a chemical, I believe will be little questioned. Besides, repeated experiments by me with artificial digestion, which always gave me the expected chemical results, have never caused the maceration of bread, familiar to every one working with test meals. That the teeth alone could never produce chyme very finely divided, "floury" in appearance, such as we often see, must likewise be admitted. If we now recognize, as we must, that the finer maceration of the food depends on the muscular activity of the stomach; if we now admit, as we must, that the more finely divided the chyme, the greater is the muscular activity of the stomach; then we must likewise admit that by the *physical appearance* of the chyme the dynamic function of the stomach can be judged. In other words, the finer the chyme, the greater is the dynamic function, the motility of the stomach. I cannot lay too much stress upon this last sentence. The motility of the stomach is a dynamic function and must be judged solely by evidences of dynamic activity, as expressed in the physical appearance, the fineness of subdivision of the chyme. Quantity cannot be held out as the decisive factor—quantity is not the result of dynamic action. The quantity of chyme aspirated must not be taken as the index of the tonicity of the muscularis of the stomach. The quantity aspirated merely indicates the relation between the quantity ingested and the quantity that left the stomach. We must not forget the normal condition of the pylorus during stomach digestion. Above we have seen that the pylorus is normally closed at the beginning of digestion and then opens only at intervals. This closing of the pylorus is normally produced by the irritation of the mucosa by the ingested food. On the degree of the irritation of the mucosa depends the degree of the closure of the pylorus; the greater the irritation, the more spastic the closure, the longer the closure. The more irritating the ingesta, or the more readily the mucosa responds to irritation, the quicker, the more prolonged will be the closure of the pylorus, very often complained of by the patient as pain soon after eating and pointing toward the region of the pylorus. The longer the pylorus remains closed, the less chyme can be emptied beyond the pylorus, the more chyme will remain in the stomach in a given time. Consequently, the quantity of the chyme depends entirely on the relative state of the pylorus and nothing else. A large quantity of chyme aspirated, the solid part of which consists chiefly of a "floury layer," simply means a protracted closure of the pylorus, whatever the cause may be, and must not be interpreted as reflecting derogatorily on the motility of the stomach. Whenever the aspiration one hour after Ewald's test meal gives 100 or more cc., and the chyme is very finely divided, forming the "floury layer" at the bottom, with very few or no coarse particles, the case is not only not atony, but the very contrary—hypertony—of the stomach. In these cases, just mentioned, we also find high acid values, which increased acidity depends, I believe, on the presence of volatile organic acids, on organacida gastrica. The action of these acids on the mucous membrane is increased irritation and more prolonged, spastic contraction of the pylorus. In these cases the muscular coat attempts to expel the chyme, but exerts its efforts on an irritated and closed pylorus, and between these attempts and the spastically contracted pylorus the chyme is finely divided analogous to the breaking up of the grains by the granivora. The diagnosis in such cases, in which large quantities of chyme are aspirated but

in which the solid part consists of the "floury layer," ought to be "*stenosis pylori ab irritatione.*" For the diagnosis of atony of the stomach we must have not only a large quantity of chyme, but the chyme must not show any evidences of increased dynamia; the solid portion of the chyme must consist of coarse, large, not sufficiently broken-up particles of the ingesta. Atony of the stomach must show for its confirmation a large quantity of chyme plus a preponderance of the large particles of food with either no floury layer or but a small quantity thereof.

What holds good of large quantities must hold good, in a contrary sense, of small quantities aspirated. As in the former the quantity relates but to the condition of the pylorus, so here must a small quantity of chyme or perhaps absence of chyme after one hour after Ewald's test meal, be recognized as a pathological condition of the pylorus. The condition of the pylorus here is the very opposite of the former; it is *insufficiency. "Insufficientia pylori is a condition of the stomach in which no appreciable quantity of chyme is arpirated one hour or less after Ewald's test meal, and whatever is aspirated is coarse in appearance."* This condition—little or no chyme—one hour or less after the test meal—has been observed also by others, but has invariably been interpreted as indicating compensatory hypertony of th muscular coat. Thus writes G. Honigman (*Deutsche med. Wochenschrift*, 1890, Ueber Magenthätigkeit bei Diabetes Mellitus) of his observations on the anacidity of diabetics: "All examinations proved that this (motor function) was decidedly increased, as the stomach propelled larger quantities into the intestines in half the time." In these cases we find most often absolutely no acidity added to the acidity of the ingested bread itself which varies from 4 to 10, or even 12. In the cases not so far advanced we may find no digestion acidity after one hour, but there may be some earlier.

Now, the cause of the insufficiency. As the title of this article reads, I believe, that one of the causes of insufficiency may be, or rather most often is, a chronic catarrh. Again I will call attention to the normal cause of the closure of the pylorus: irritation of the mucous membrane. This presupposes a healthy mucous membrane coming in contact with the food. But where there is an interposition of the neutralizing, alkaline mucus between ingesta and mucous membrane, the mucous membrane does not appreciate the presence of irritation, hence no exciting of the pylorus, hence no contraction, and hence no closure of the pylorus. Of course, it goes without saying, that besides the interposition of mucus, the mucous membrane is itself altered by the chronicity of the cases. We have also seen above that chronic gastritis is especially and mostly marked at the pyloric portion. There is no necessity that the absence of any chyme at the end of one hour after Ewald's test meal should have to be explained by hypertony. But very little effort is necessary to bring the food past an open pylorus, especially as gravity itself might play a part. In the case cited above (Eisenlohr's) we see that notwithstanding the complete atrophy of the mucosa the muscular coat was intact, so that there could be no impairment of its function. Ebstein (*Deutsches Arch. f. klin. Med.*, Vol. 26) says: "Relating to the causes of incontinentia pylori, I remarked in my first publication, that from the evidence of the presence of such (incontinentia pylori) we cannot conclude upon the definite lesion of the stomach. I want to reiterate here that I do not consider it at all necessary that a gross anatomical lesion must be present, demonstrable at the autopsy and detrimental to the sphincter pylori—that a myopathic, material substratum must be present to bring about incontinence of the pylorus, but that most likely there may be also nervous causes, not appreciated by the anatomical knife." And further he says: "If we try to explain to ourselves, by what nervous interference the pylorus may become incontinent, three possibilities suggest themselves. . . (2) the mucosa of the pylorus is anæsthetically unable to effect the reflex contraction of the pylorus." Thus speaks Ebstein. He recognizes causes other than can be demonstrated as gross anatomical lesions and which he interprets as nervous. The correctness of this last sentence of Ebstein we might well picture to ourselves by comparing with a nasal catarrh. A patient suffering from nasal catarrh cannot smell ordinary odors, not because of any lesion to the nerves, but because the odors do not come in contact with the nerves, because of the interposed mucus. Why must hypertony of the stomach be accepted to explain the absence of food in the stomach at too early a time? Were there real hypertony—hyperdynamia with an ordinarily closed pylorus—the patient would give subjective symptoms. Honigman (cited above) explains that anacidity causes compensatory hypertony. In other words, because the stomach chemism gives out, the muscular coat comes in obligingly and sympathetically helps out. What a beautiful picture of true and unselfish brotherly love: An assertion of this kind, unfortunately too numerous in our noble science, I plead to be unable to appreciate. There is entirely too much reflex action and too much sympathetism abounding in medical literature. How one wishes for the recurrence of the conditions that prevailed during the life of that grand, noble and pious [illegible] personage—Nasse—for no other reason than to deal squarely with all such demons of human happiness as reflex action, sympatheticism, neurasthenia, hysteria, paralysis and a lot of others. There is no reflex or sympathetic hypertony of the stomach. [illegible] absence of closure of the pylorus, because of which the food is not checked in its onward march. The ordinary muscular coat, which has been found rarely to be interfered with, needs but little effort to push along the food, provided, however, its efforts are not checked by a contracted pylorus. Hemmeter (Edition 1900, page 773) makes a citation of Eichhorst by Boas thus: "For a proof of the purely nervous origin of insufficiency it is necessary to exclude the above mentioned diseases of the stomach and intestine and such organic diseases of the pyloric as chronic gastritis which usually is always a serous infiltration of the muscular muscle and may lead to a temporary insufficiency." Even the finding of an infiltrated, thickened mus-

cular coat would not militate against the assumption that the insufficiency, with no gross pathological lesion at the pylorus discernible, is the result of an antecedent chronic gastritis.

With the appearance of pyloric insufficiency we enter upon the beginning of the end, the beginning of atrophy of the mucosa. The process is usually a very gradual one, taking considerable time to develop. There may at first be some resistance left in the pylorus and, accordingly, there may be no food in the stomach one hour after the test meal, but chyme may be found, with good digestion acidity, at an earlier time. In the progress of the gastritis also this latter condition disappears, to make room for its successor—atrophy—and complete insufficiency of the pylorus results, with no chyme or digestion acidity very soon after the test meal. In this condition even mucus is absent, as there is no glandular structure left to produce it. This last condition—absence of chyme, ferments and even mucus has been termed by Einhorn achylia gastrica and by our esteemed teacher, Ewald, anadenia gastrica.

Symptoms. Grave as the condition is, in itself it gives no symptoms. So long as the intestines functionate normally the patient knows nothing about his condition. It is true that the patient gives a history of previously having had trouble with his stomach, but he got better. Of course it is to be expected that the patient who could not take care of his stomach will not take care of his intestines. The symptoms entirely refer to interference with the normal function of the intestines. The symptoms the patient complains of are sins of both omission and commission; the intestines fail to take proper care of the food, thus causing injurious, toxic chemical changes, and noxious materials and gases are absorbed and circulated. The usual complaints are headache, which, as a rule, is localized as a frontal headache; supraorbital headache, temporal headache, hemicrania, or pain at the top of the head. If the latter is the case, the patient usually complains of beating and hammering in the head; vertigo, anorexia, nausea, dryness in the throat, burning in the mouth, sour and bitter taste, eructation, singultus, choking sensation in the throat; pressure, weakness or pain in the stomach; (the designation of stomach by the patient must not be taken anatomically; they usually mean by stomach everything below the chest, and often speak of weakness of the heart pointing to the epigastrium), shaking or running around in the intestines, flashes of heat and cold, constipation or diarrhea, painful breathing. Some complain of headaches, others have no headaches at all. Some are constipated, others have diarrhea, and in some constipation may alternate with diarrhea. The usual assumption that headaches and constipation always go together, that they are interdependent, I cannot corroborate. I often see constipation without headaches, and headaches without constipation. The taste may be sour or bitter, or both, or neither. Eructation is evidently the rule and may be odorless or fetid. The patient may complain of all these symptoms or of but few. Anorexia seems to be present in all cases. The symptoms are usually less severe in the forenoon, because little food is then taken.

The prognosis will naturally be influenced by the age of the patient and by the condition of the stomach. Where we find insufficiency of the pylorus with no digestion acidity at the end of one hour after Ewald's test meal, but do find such at an earlier time, the prognosis is naturally better. But where we find no contents even half an hour after the ingestion of the meal, and no digestion acidity, the condition is certainly graver.

Treatment. The treatment will depend on the stage of the disease. It might not vary as to the kind of drugs which are to be employed but as to the time when to employ such drugs. Our aim must be to find out if there is any gastric digestion present and how soon after the ingestion of food the stomach is empty. For that reason more than one aspiration of the contents of the stomach will be necessary. Of course, we proceed in the routine way and begin with the aspiration one hour after the test meal was taken. If no chyme is forthcoming, having first made sure that the reason for such is not an obstructed lumen of the tube, the patient is to be seen again next morning and aspiration attempted one-quarter of an hour earlier. If again unsuccessful only half an hour is allowed to pass and, if found necessary, aspiration is attempted one-quarter of an hour after the test meal was taken. In this way we gain very valuable and absolutely necessary information. In the final stage there is no gastric digestion at any time. Whatever gastric digestion is found must not be interfered with.

The drugs to be used in this disease must be calculated to help the intestinal digestion, as it is only the derangement of this function that gives the symptoms. The combinations of sodium and magnesium, rhubarb, ammonium chloride, pancreatin and bile in the form of inspissated ox gall are about all the drugs necessary. I have not yet found it necessary to prescribe any of the so-called intestinal antiseptics. Fanciful and high sounding as their names may be, I have so far found no excuse for their use and, somehow, got along, splendidly, without them.

How soon after the meal are these drugs to be taken? This will depend on the result of the examination of the patient. If the stomach is empty immediately after eating, we will direct the patient to take the drugs prescribed immediately after eating. But if the examination shows that there is still some digestion in the stomach and that the ingesta do not at once leave the stomach, we will time the taking of the drugs accordingly. We will not interfere with whatever stomach digestion we may find. Hydrochloric acid and pepsin and all the many pepsin preparations are of no use here, as they are of no use at any time for helping gastric secretion. Hydrochloric acid can never be given in the strength necessary and pepsin is very seldom found absent unless in anadenia gastrica. I saw but once, so far, the absence of pepsin together with hydrochloric acid and this in a case of pernicious anemia. With a proper regulation of the diet and some of the drugs

mentioned the patient gets along splendidly without antifermentatives or intestinal antiseptics.

Of food articles I forbid the following: Coffee, tea, too rich cocoa, carbonic acid waters, beer, wine, brandy and whiskey, white meats, beans and peas unless their cellulose covers are removed after soaking in water over night, cabbages, cauliflower, radishes, turnips, spices, tomatoes in every form and everything prepared with vinegar, grapes, peaches, plums, prunes. Of other fruits only little must be taken and they must be peeled. Milk must not be permitted ad libitum. The condition of the teeth must be looked after and whatever repairs necessary must be done. In the poor patient who cannot afford a set of artificial teeth, the complete maceration of every article of food before ingesting must equally be insisted on. This can be done by the meat grinding machine which is quite cheap. I advise them to cook their meat in any style under the above precautions and then run the meat through the meat cutting machine, set to cut very fine, and then mix it with the gravy. In this way the patient likes the food. Symptomatic treatment in this disease is abhorrent and uncalled for. With a diet strictly adhered to and with the use of some of the above drugs the patient soon feels the good effects. Half teaspoonful doses of sulphate of sodium in a glassful of hot water, taken hot, about half an hour before each meal, will best clean the stomach of any mucus there may be there. Besides, it will be remembered that, next to sodium chloride, sulphate of sodium is the chief salt of the pancreatic juice.

In cases of diarrhea there is but one drug upon which I have learned to rely with full confidence. This drug is strychnine. The results achieved with this drug border upon the incredible, the miraculous. But the drug must be rapidly pushed to the point of tolerance. There seems to exist no maximum dose at all. Cases of diarrhea, which have existed for years, responded to strychnine almost immediately. I begin with a thirtieth of a grain t. i. d., then quickly increase up to 1-7 even to 1-6 of a grain t. i. d. I try to reach this dose as quickly as possible. The stools at once diminish in number and gain in consistency. The good effect is almost immediately felt by the patient. In from two to three weeks diarrhea gives place to normal evacuations. In one case, not reported here the patient, a man of 52 had anywhere from 12 to 20 griping, watery, movements daily, for some seven and a half years, and gave himself up. When he came to consult me about his stomach he spoke nonchalantly of his diarrhea and never mentioned its duration, having come to regard it as commonplace, although it greatly annoyed him. My assurances that he might hope for cure he accepted only at a great discount and this purely out of respect for me. In fact he expressed but little anxiety to be cured of what he considered, from sore experience, was incurable. Strychnine worked its wonders in about $3\frac{1}{2}$ weeks. Why strychnine so acts I hope some day to be able to demonstrate by researches of its chemistry; I am pretty well on this road. The constipation of which other patients complain is soon enough cured by the drugs indicated above. The headaches, which in this disease are always the result of deleterious substances and gases circulating in the blood, cease with the beginning of better digestion. I almost forgot the dose of the antiheadache remedies. My usual prescriptions are: Half a teaspoonful of sodium sulphate in a [illegible]ful of hot water half an hour before meals and of the following, after meals:

Natr. bicarbonate.
[illegible]
[illegible] 5ss

M. ft. pulv. D. Sig. teaspoonful after meals as directed. How long after meals it should be given must entirely be guided by the result of the examination. If the stomach is found to have some digestive capacity we must not interfere with this action by giving the alkalies too soon. On the other hand, if we depend upon guess work and give them late enough, I am afraid the patient may likewise become inoculated with the guessing science, and may guess about the efficacious work of some other colleague. It is evident that if the alkalies are given too late the food will have time to undergo some deleterious changes and to our surprise we may discover a "certain idiosyncrasy" or "neurosis" which may more give rise to the eventful discovery of some new antibodies. There must be no guessing; absolute facts must be our watchword. The time at which the stomach empties itself must be absolutely ascertained. Ewald's test meal might well be supplemented by the test meal of Riegel for such purposes.

CASE 1.—Mrs. Julia L., 42 years, Hungarian, for the last [illegible] weeks complains of a shaking of her intestines every morning at about 10, which lasts till 1 P. M.; burning and biting in the stomach accompanied by a frost over her body which is not followed by sweating. This compels the patient to lie down and apply heat to the abdomen after which she feels better. During these attacks the patient has a feculent taste in her mouth; appetite good, diarrhea, 4-5 stools daily and painful, no headaches. Examination: Fasting, no contents; test meal after one hour scarcely any contents, very little mucus, absolutely no acid reaction. I saw her no more after this.

CASE 2.—Mrs. Betty B., 35 years, Russian, complains of constipation, bitter taste, pain in abdomen, headache, eructation. I gave her at first bromides and a hydrochloric acid mixture and told her to come again for an examination. She came 2 weeks after on the 23rd of February 1901. The examination showed no contents in the fasting stomach nor one hour after the test meal. I gave her natr. bicarb., magnes. ust. āā., one teaspoonful one hour after meals, also a mixture of equal parts of condurango, tr. chin. co. and tr. gentian. Another test meal examination on the 27th three quarters of an hour after the test meal gave little chyme, positive on congo. On the first of March she reports feeling better and the aspiration of the chyme half an hour after the test meal gave general acidity 42, free acids 26. On the 7th of March reports she has daily movements considerably much less. On the 13th reports, much improved. On the [illegible] she says feels very much improved. Stools regular headaches still present but very mild, no more eructation. On the 28th aspirated about 80 cc. 50 minutes after the test meal, no motions audible in free acidity 24. On the 14th of May aspirated one hour after the test meal and found [illegible] present, no motions [illegible] On the 1st of June came to tell me that she feels very well.

CASE [illegible] April 27, 1901. Mrs. Hanna K., 47 years, native of Bukovina, complains of dryness in the throat, pressure [illegible] heat in stomach and headaches. An examination some time after that date revealed achylia, i. e. just about 2 cc. coarse pieces, anacid. Another examination half an hour after the meal gave the same result. She got

Natr. bic., magnes. ust. aa. 30.0, a teaspoonful half an hour after meals; another time she got with this also rhubarb and soda. She came the 25th of November and said that since she last saw me, on the 30th of August, she feels well, has been out of medicine for a long while, but would like to get some more medicine; I gave her the rhubarb and soda mixture.

CASE 4.—June 29, 1901. Mrs. Fannie Z., 44 years, Russia, tall, slim woman. For the last 14 years had spells of anorexia and pain in the stomach lasting for a few weeks each time. Was advised by her physician to drink brandy, of which she took 3 to 5 times daily. For the last 5 years has pain after each meal, lasting for from one-quarter to three-quarters of an hour. Never vomited; constipation alternates with diarrhea; cramps wake her every morning. Examination the following day showed no contents. Gave her the bicarbonate magnes. mixture and strychnine, which I began with a thirtieth of a grain, rapidly increasing the dose. On the 16th I again examined her and the test meal was aspirated 40 minutes after the eating. I got about 5 cc. coarse in appearance, which reacted on congo. On the 30th of September she came back after an absence of a few weeks and when I asked her for the reason of her staying away she replied that she thought there was no cause for her calling, as she felt very well. She again got her former remedies. Another examination only 15 minutes after the ingestion of the meal again gave but a few cc. which reacted on congo. She feels that she has much improved and certainly looks it.

CASE 5.—Mrs. Jennie S, 55 years, Galicia. This case is a highly interesting one. This poor woman has been suffering for the last few years from spastic singultus, which came every few minutes and made her life so miserable that it was impossible for her to leave her neighborhood for fear of being molested and maltreated as a possessed one. One day she came to the dispensary and her unnatural, very loud outcry, which could be heard for a great distance, attracted my attention. I left my room and went to inquire, when this poor woman was shown me. I ordered her to my office. A test meal examination gave the picture of insufficiency. This examination was on July 10. I gave her instructions as to her diet with the soda and magnesia mixture half an hour after meals with excellent result. Another test meal examination on the 18th of July, half an hour after eating, gave one or two cc. of chyme, anacid in reaction. These attacks of singultus stayed away for about 7 or 8 weeks, when they again appeared. This time the attacks did not disappear so readily until milk had been entirely eliminated from her diet; she now lives on soda crackers, eggs, soup and meat, little bread; feels well, no singultus.

CASE 6.—July 15, 1901. Mrs. Hanna N., 57 years, Hungarian, complains of occasional pains in the stomach, pressure, bitter and sour taste, no headaches, never vomited, bowels more or less constipated, anorexia, eructation, cannot eat meat. Test meal examination the following day one hour after eating, 2 cc. coarse, mucus, anacid. On the 22d. she reports feeling better after the soda and magnesia mixture. She also got sulphate of soda half a teaspoonful in a glass of hot water half an hour before meals. Another test meal examination on the 30th, half an hour after eating, gave only a few cc. mucus, but congo was positive.

CASE 7.—August 2, 1901. Mrs. Helene N., 48 years, Russia, complains of burning in the mouth, enuciation, headache, no pain nor pressure in the stomach, but lays special stress on the burning in the mouth. I gave her rhubarb and soda after meals and half teaspoonful doses of sodium sulphate before meals with the direction to come ready for test meal examination. She came on the 6th. One hour after the test meal only 2 or 3 cc. were aspirated imbedded in mucus.

On the 11th she came again and the test meal was aspirated half an hour after eating when about 20 cc. were obtained, consisting of coarse pieces imbedded in mucus, congo negative. She now got the soda and magnesia mixture soon after eating. On the 17th she reports better; on the 21st says she has no more eructation and on the 1st of October reports quite better.

CASE 8.—August 14, 1901. Mrs. Sali S, 33 years, Hungarian, complains of hard feeling in the stomach, cannot breathe without having pain, nausea, vertigo, no eructation, constipation. On the 4th of September she came for a test meal examination which showed only a few cc. of coarse particles, no mucus. Soda and magnesia mixture was the prescription. On the 9th reports feeling better. The aspiration of the test meal half an hour after eating gave likewise only a few cc., congo negative, mucus present, sodium sulphate before meals was now added to the soda-magnesia mixture. On the 16th the test meal was again aspirated one hour after eating with the same result as the first time. On the 12th of October says she has no more vertigo, neither hardness in the stomach and there is less eructation.

CASE 9.—August 28, 1901, Mrs. Fanny G, 48 years, Hungarian, complains of vertigo, anorexia, temporal headache, bad taste in the morning after getting up. Came for test meal examination on the 4th of September. After one hour no contents. Prescribed the soda and magnesia mixture. Another aspiration on the following morning half an hour after the eating brought forth a little chyme, which reacted on congo. On the 16th she reports feeling better.

CASE 10.—September 16, 1901. Mr. Samuel S, 45 years, Galicia, complains of headache, feels as if he had hunger but cannot eat, nausea at times. Came for test meal on the 22d, when no contents could be gotten one hour after the eating. On the 30th, 35 minutes after the test meal was aspirated with the result of getting about 2 cc. of coarse particles in mucus; congo and litmus negative. Another test meal aspiration 15 minutes after eating on the 1st of October gave only about 15 cc. blood stained, due to the patient's straining.

CASE 11.—September 18, 1901. Mrs. Yettie A, 25 years, Galicia, complains of dryness in the mouth, very bitter taste, choking sensation in throat, vertigo, diarrhea, tenesmus, bloody stools for about 4 weeks, prolapsus recti. Only one test meal examination, which yielded just about 1 cc. in mucus, negative to congo.

CASE 12.—October 16, 1901, Mrs. Annie S., 48 years, Russia, sour and bitter taste, dryness in mouth and pharynx, in consequence of which must drink much, vertigo, supraorbital headache, flashes of heat and cold, bowels move only by drugs. The test meal examination one hour after the eating gave but a few cc. in mucus, congo negative. An examination the following day three-quarters of an hour after eating gave the same result. Soda and magnesia treatment. On the following day I again aspirated and waited but half an hour with no different results from the first two times. On the 30th she reports better and on the 20th of November says she feels very much better.

A word or two about my routine in examination. The patient is ordered to have his last meal in the evening about 7. From that time on till the following morning, when he appears at my office, he is ordered not to swallow anything—neither food nor drink. At my office the patient's stomach is examined first while fasting then he gets the test-meal which consists of 35 gm. of roll and exactly 300.00 cc. water—the measuring and weighing is done by myself. The patient eats in my presence and the time is exactly noted; the patient is never permitted to do things himself and guess quantity or time.

The reports given here include but one male; nevertheless I refrain from making any reference as to the relative frequency in the male and female. Neither did I think it necessary to enter into a discussion of the original causes or concomitant diseases or condition of other organs. My object in this article is to establish the presence and identity of the pathological condition herein described and hint at the treatment.

THE "FOURTH DISEASE" OF DUKES, WITH REPORT OF AN ATYPICAL OUTBREAK OF SCARLET FEVER.*

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Every physician who has practised among children is familiar with variations in the clinical picture presented by certain of the acute exanthemata in some epidemics. Such variations are frequently shown by scarlet fever, measles and rubella, occasionally rendering their recognition difficult or even impossible.

Rubella especially, since it was first separated from measles, has been noted for its varying symptomatology, in some epidemics resembling true measles, while at other times showing distinct scarlatiniform characteristics. This fact has caused some even to doubt the existence of rubella as a distinct disease, claiming that all such cases can be placed under measles or scarlet fever. Recently we have had a view advanced, exactly opposed to this, and we are now asked to recognize, in the two varieties of rubella, two distinct diseases.

Dr. Clement Dukes, the well known physician to Rugby School, contributes a paper to the *Lancet* of July 14th., 1900, entitled, "On the confusion of two different diseases under the name rubella (rose-rash)." In this paper we are introduced to a new exanthema, which is provisionally called the "fourth disease." Since the publication of this communication a spirited controversy has been waged in the English medical journals as to the validity of this claim. No attempt will be made here to follow the course of this controversy. Dukes has found many able supporters, among whom may be mentioned W. H. Broadbent, and H. Ashby, in England, and F. T. Simpson, in America. The subject was under discussion at the last meeting of the British Medical Association. It has attracted as yet comparatively little attention in this country.

During the past autumn I have had a series of cases under my charge which I feel throw some light upon the subject.

Let us consider Dukes' description of the so-called "fourth disease" and his reasons why its symptom group entitles it to recognition as a distinct disease. He first calls attention to the fact already referred to, that rubella or German measles may present a varying picture clinically, in some epidemics tending to resemble measles, in others having more of a scarlatiniform character. It is this scarlatiniform variety of rubella which he calls the "fourth disease." That as a matter of fact he also includes under this term mild cases of scarlet fever, will be referred to later. His conclusions are based on a study of three school epidemics. He begins by assuming as absolute the truth of Cullen's law, that one attack of an eruptive fever entails immunity from a second attack of the same disease during childhood. He considers exceptions to this law medical curiosities. The apparent exceptions are nearly always due to errors in diagnosis. A child may during childhood have attacks of measles, scarlet fever, rubella and the "fourth disease," but practically never a second attack of any one of these, the close resemblance between some cases of measles and rubella or between rubella, scarlet fever and the "fourth disease" causing the mistake. Let us very briefly consider the points which differentiate the new disease from rubella and from scarlet fever according to Dr. Dukes.

The differential diagnosis from rubella.—The rash does not appear first on the face; is not papular becoming later macular and morbilliform, but appears almost simultaneously over the body and limbs, and is of a brilliant, diffuse erythematous character from the onset. There is not the marked enlargement of the cervical glands. The desquamation is pronounced, and is not slight or absent as in rubella. The disease occurs in patients who have had rubella. The points of resemblance between them lie in the identity of the period of incubation, premonitory symptoms, throat, tongue, pulse, temperature, mild character of the symptoms, duration of the infectiveness and the absence of sequelae in the two diseases.

The differential diagnosis from scarlet fever.—Outbreaks are most frequent in spring and summer, while scarlet fever is more apt to occur in autumn and winter. The period of incubation is longer ranging between 9 and 21 days, while that of scarlet fever is usually from two to five days. The rash is practically identical with that of scarlet fever in character and distribution, but is possibly slightly more elevated. Premonitory symptoms such as nausea are absent or very slight. The throat symptoms are absent or trifling. The glands, especially the postcervical, are considerably enlarged. Desquamation is as marked as in scarlet fever, but seems to bear less relation to the intensity of the rash. The tongue never desquamates giving rise to the classical "raspberry" tongue. The temperature is rarely as elevated, or the pulse as much quickened as occurs in scarlet fever. The course of the disease is less severe and the duration shorter. The period of infectiveness is two weeks, although desquamation may continue much longer, as compared with an infective period of eight weeks in scarlet fever. Complications such as nephritis and otitis media are not known to occur. Finally an attack of the "fourth disease" does not protect against scarlet fever.

Let us now examine briefly the three epidemics reported by Dr. Dukes, from which he draws his conclusions, and upon which his claims are based. As will be seen by reference to his original paper, epidemics I and II are reported very incompletely, and the clinical appearances are scarcely touched upon. Epidemic III is reported quite fully and is the only one which can be studied in detail.

I. Epidemic of 1892, 16 cases. At the time this epidemic occurred the cases were supposed to be the scarlatiniform variety of rubella, although in many respects they closely resembled scarlet fever. No details are given. Dr. Dukes now thinks that these cases should be classed as the "fourth disease," but tells us nothing to show why they should be so considered.

II. Epidemic of 1893, 31 cases. In this epidemic

*Read before the Section on Clinical Medicine and Surgery of the Medical and Chirurgical Faculty of Maryland, March 11, 1902.

two diseases are stated to have co-existed—scarlet fever and the "fourth disease." In some of the cases the boys had scarlet fever alone, in some the fourth disease alone, while nine boys developed scarlet fever during convalescence from the "fourth disease," and one boy the "fourth disease" during convalescence from scarlet fever. Dr. Dukes gives us practically no data in regard to these cases of the "fourth disease" clinically, but admits that, as in epidemic I. he considered them at the time to be rose rash. We are simply asked to accept them as examples of the new disease without a word as to the symptoms upon which such a diagnosis is made, or as Dr. Milland, in a later communication to the *Lancet*, so well puts it: "No evidence whatever is adduced to approve that the cases were not rose rash beyond Dr. Dukes opinion to the contrary."

III. Epidemic of 1900, at Rugby, during March and April. This is the important group. The cases are reported quite fully clinically, and are of great interest in connection with my own series. In this outbreak 19 boys were attacked, eight of whom had previously had rose rash. It was from a study of this series that Dukes came to the positive conclusion, that he had to deal with a new and distinct disease. I will now give Dukes' résumé of the clinical picture presented by these nineteen cases.

Premonitory Symptoms.—Practically none except slight malaise.

Vomiting.—Present in only one case.

Eruption.—"Really the first symptom to attract the attention of the sufferer was the rash, which in nearly every case was very full and quite characteristic of scarlet fever. In fact, if ten experts had inspected the skin and made no other investigation, all would have diagnosed the eruption as scarlet fever."

Throat.—Only slight swelling and redness, when there were any throat symptoms at all.

Desquamation.—This varied from slight roughness of the skin to cases in which "the peeling was equal to the worst I have ever seen in scarlet fever." In some cases the amount of peeling bore no relation to the intensity of the eruption.

Tongue.—This was "furred," but in no case was there peeling on the fourth day.

Glands.—These were enlarged and tender universally, but not so markedly as in rose rash.

Temperature.—The average maximum was 101°, but the maximum temperature ranged from 99.4° to 104.2°.

Pulse.—In only one case did it go above 100.

Kidneys.—No albuminuria in any of the cases.

Incubation Period.—Not determined.

Duration of Infectiveness.—This is said to last from 10 to 14 to 21 days.

Previous Scarlet Fever.—This had not occurred in any of the cases.

Previous Rose Rash.—Eight boys (42.1%) had previously had rubella.

After a careful examination of these 19 cases I am convinced that Dr. Dukes had to deal here with a mild epidemic of scarlet fever, and not with a new disease. There is not a single symptom given which may not occur in true scarlet fever. My recent experience with a mild and somewhat atypical outbreak of undoubted scarlet fever is convincing.

Let us now consider briefly this Baltimore outbreak and its bearing upon the so-called "fourth disease." The epidemic occurred at the Home of the Friendless, and extended from October 30th. to November 24th., 1901. The cases as they appeared were removed to the Children's Hospital, connected with that institution. In all, 11 cases came under my charge. On the whole the cases were characterized by their mildness, but in the series is to be found every gradation, from absolutely typical examples of scarlet fever to cases which answered in all respects to Dukes' fourth disease. It seems better to give a general résumé of the symptoms rather than the clinical history of each case.

Severity.—Of the 11 cases, two were of "moderate severity," three were "rather mild," while six were "very mild."

Age.—This ranged from 4 to 10 years.

Premonitory Symptoms.—In no case were these severe. In five cases slight malaise; in the remaining cases no premonitory symptoms.

Vomiting.—Absent in six cases. Occurred in five instances.

Throat.—In two cases the tonsils were enlarged, in six cases the fauces were red and velvety and in three cases the throat was negative.

Eruption.—In seven cases the rash was a brilliant scarlet. It seemed to appear almost simultaneously on the chest, arms, thighs and buttocks, spreading rapidly over the remainder of the body. In only two cases did it extend to the face. In about half the cases it was the first symptom. In character the rash was usually a brilliant, diffuse erythema, but in two cases only a faint flushing of the skin. In two brothers with naturally rough skins it was darker and more mottled in character, and miliary vesicles occurred. The average duration was three to four days, extremes one to six days. As the rash cleared up it became darker and somewhat macular before disappearance.

Desquamation.—In all cases this occurred. In two cases it was very profuse, in three cases moderate and in six cases slight. In a few cases there was no special relation to the intensity of the rash. "Peeling" occurred in some cases before the rash had entirely disappeared, and in several cases persisted for four to five weeks on the hands and feet.

Glands.—In seven cases in which notes upon the glandular condition were made, there was noted a general enlargement of the cervical, axillary and inguinal glands, while there was a marked enlargement of the postcervical glands.

Temperature.—In every case there was some rise in temperature at onset. The highest temperature was 103.4°; in only three cases was the maximum range above 102; in four cases the maximum temperature was between 100° and 102; in four cases it did not rise above 100°, one case not exceeding 99°.

Pulse.—In only one case was the pulse very rapid, reaching 154. In eight of the remaining cases the maximum rate varied from 108 to 120. These rates are not rapid considering the age of the children.

Kidneys.—In only one case was there even a febrile albuminuria.

Complications.—In three of the most severe cases there were complications, otitis media, membranous

streptococcus angina with suppurating cervical glands; and membranous streptococcus angina with cervical adenitis and with jaundice.

The incubation period and the period of infectiveness could not be determined. There was no previous history obtainable of scarlet fever or rose rash.

A study of this epidemic shows that all the cases were of essentially the same character, although varying in severity. The more marked cases were typical examples of scarlet fever, but we have every gradation to cases in which many of the classical symptoms were lacking. Over one half of my cases can be placed in this latter group. It is this group which interests us here. Applying the points which Dr. Dukes considers sufficient to differentiate a new disease to these six mild cases, we find an agreement in all respects between them and the cases of his series as follows, (a) absence of marked premonitory symptoms, such as vomiting; (b) identical character of the eruption; and (c) of the desquamation; (d) tongue did not desquamate and assume a "raspberry" character; (e) general glandular enlargement, especially of the postcervical glands; (f) pulse not markedly quickened; (g) slight elevation of the temperature and short duration of the fever; (h) no kidney complications; (i) incubation period and period of infectiveness not determined in my series. Dr. Dukes gives the incubation period as from 14 to 21 days, but admits that in his third epidemic, (the one which we are studying), this could not be determined. The short period of infectiveness claimed for the "fourth disease" is based on merely negative evidence derived from comparatively few cases, and is equally valueless. In my cases this could not be determined.

From my study of the question I feel that the following conclusions are justified.

1. Dr. Dukes has not established the existence of a new exanthematous disease.

2. That under the so-called "fourth disease" he has included cases of undoubted scarlet fever, (epidemic III), and probably also cases of rubella (epidemics I and II).

3. That in certain epidemics scarlet fever may present an atypical picture, with many of the classical symptoms absent, rendering a diagnosis difficult or impossible in isolated cases.

The subject is one of considerable interest. The short period of infectiveness claimed for the "fourth disease" is alone sufficient to make the question one of practical importance. Even if Dukes has not established the existence of a new and distinct disease upon the lines laid down in his paper, the discussion, which has followed the publication of his views, shows only too plainly the difficulties of diagnosis in many of the acute exanthemata. That rubella may present a widely varying clinical picture, at times resembling scarlet fever, at other times measles, has been generally attested by reliable observers. It is not impossible or even improbable, when the infectious agent or agents producing this condition are known, that the rubella group may be subdivided. Based upon clinical differences alone, such a separation does not now seem possible, for at the bed-side we meet with every gradation between these two extremes. Nor is this the only difficulty, for, as has been pointed out, a diagnosis of some undoubted cases of scarlet fever and measles upon the clinical appearance alone may be impossible. The value of Cullen's law can also be very readily overestimated. To start out with the assumption that Cullen's law must be true, and then to arrange your facts to accord with it, is, to say the least, unscientific. Dr. Dukes has fallen into this error. The only value of such a law lies in its agreement with observed facts. There is every reason to believe, on the other hand, that a second attack of some of the exanthemata during childhood is by no means infrequent. Too much importance is often attached to the skin rashes in the exanthemata. It is frequently forgotten that the rash in these diseases is merely a symptom, and that we have to deal with an underlying general acute infectious process of which this is only one of numerous manifestations. The fact that the same infectious agent may produce skin lesions differing widely in character is seen in many diseases the etiology of which is unknown. The marked similarity of the skin lesions which can be produced by different infectious agents is equally well known. These facts should put us on our guard against the danger of attaching too much importance to the rash alone.

A perfectly satisfactory classification of the exanthemata can hardly be hoped for until more is known of their etiology. In the mean time let us be slow in accepting so-called new diseases in this group, when the claims for recognition rest upon superficial points.

A DISCUSSION OF THE MORBID CONDITIONS OF THE UPPER RESPIRATORY TRACT RESULTING FROM THE INFECTIOUS DISEASES.

CAROLUS M. COBB, M. D.

of Boston, Mass.

The intense interest, with which the profession has studied and is now studying the etiology of diseased conditions and the interdependence of what were separated diseases, has led to a discussion of the relation of disease in the upper respiratory tract, not only to neighboring organs, as the eyes, ears, and lungs, but to general disease as well. That local disease in the upper air tract may cause disease of the larynx, the bronchi and the air cells either by extension of the disease process, or by interference with the normal breathing, is, I think, admitted by a large part of the profession. It is equally true that the same local condition may cause systemic disease either by the migration of bacteria through the lymph or blood currents, or by the absorption of toxins resulting from the local disease. So far recorded cases show that infection from this source has a tendency to attack the surrounding glands, the joints, the peri- and endocardium and more rarely the kidneys. It is quite probable that more extended observation may show that other organs are liable to infection in this way. Not only is local disease in the upper air tract a source of infection in acute inflammatory conditions, but also in those slower forms of inflammation which are called sub-

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acute or chronic. It is perhaps a safe rule never to consider the examination of a chronic disease, which could originate in this way, as complete until we are certain that there is no point of infection in the upper air tract. The importance of disease of the nose and throat in relation to ear disease is too well recognized to need any extended notice, it is only necessary to call attention to the fact that fully 75 per cent. of the deafness of the world originates in some disease or deformity in the nose or nasopharynx. With this brief summary of the more important effects of these diseases, we will now consider the etiology of the chronic inflammatory diseases of the upper respiratory tract. We shall not include in this discussion either syphilis, tuberculosis, lupus, rhinoscleroma, psoriasis, or malignant new growths, but rather confine ourselves to the so-called catarrhal diseases. The word catarrhal is at present only used in a generic or symptomatic sense, and does not or should not be used, to imply that there is any inherent tendency in the individual or family to inflammation of the mucous membranes. It is of course admitted that circulatory and dietetic conditions may, and often do, have an influence over the course and severity of the inflammatory condition in the upper air tract, but there is no evidence that they ever cause a true inflammation of the nasal mucous membrane. A few words in regard to the effect that absorption from the intestinal tract may have upon disease of the nose and throat. This condition has received various names at different times and it is not material, in relation to this subject, under which of these names the condition may be recognized. It is of course granted that the toxemia resulting from a faulty digestive process may be so intense and so prolonged, that every secreting surface in the body may participate in the effort of elimination. The effect of this upon the nasal mucous membrane is to cause congestion and to increase the secretions. If the membrane and secretions of the nasal chambers are healthy, this result is not important, but if they are diseased, the effect is likely to be more serious, and, from this cause, a nasal empyema, which has been latent for a long time, may be started into an activity which may last for months. This combination of local disease and the irritation caused by toxemia has led to a great deal of confusion in regard to the etiology of chronic nasal and post nasal discharge. In this connection it cannot be too strongly emphasized, that a nasal or post nasal discharge caused by toxemia should not continue indefinitely after the toxemia is relieved or cured. The well-recognized clinical fact that elimination by the bowels or kidneys is of benefit to these cases is misleading, firstly, because it relieves but does not cure the chronic cases; secondly, because the toxemia which is relieved in this way is often the result of the local disease in the upper air tract, and lastly, because the same method of treatment is used almost daily for many conditions which do not originate in a faulty digestive process. We will leave this vexed and ever recurring question of the etiological importance of intestinal absorption with this statement, that intestinal toxemia may and often does cause a temporary nasal discharge, but that this should not continue after the source of the irritation is removed, and secondly that the same cause may increase an already existing disease. There is no evidence that intestinal toxemia ever causes a chronic catarrhal disease of the upper air tract, while, on the other hand, the researches of MacIntyre, Hajek, Ruault, Kanthack, Lennox Brown, Miller, St. Clair Thompson, Fränkel, and others have shown that the so-called catarrhal inflammations are the result of bacterial action. And they have further shown that the bactericidal action of the normal secretions of the nose and throat is so great, that so long as these secretions are healthy, the individual will be likely to escape the ordinary throat troubles. There is every reason to believe that this explanation of the origin of catarrhal disease of the upper air tract is correct, and we have then as etiological factors, either a mechanical obstruction which interferes to a greater or less degree with normal respiration through the nasal chambers, or a secretion vitiated by disease. Nasal obstruction, and consequent mouth breathing, has received a large share of attention in the last few years, and it is only necessary to call attention to the fact that one of the most injurious results of this condition is the interference with the action of the nasal secretions. The air in normal breathing through the nasal chambers is warmed, moistened, and freed from bacteria. The secretions may remain healthy, but are unable to do their work on account of the mechanical obstruction. The second etiological factor is an unhealthy nasal secretion, either with nasal obstruction, or with a normal breathing space. A point which needs emphasis is that the unhealthy secretion is not the result of the nasal obstruction *per se*, but is rather the result of an acute inflammation of bacterial origin. An unhealthy nasal or post nasal discharge does not differ etiologically from a chronic discharge in other parts of the body, *i. e.*, it is the result of an acute inflammation in a cavity the drainage of which is interfered with to such an extent that the membrane lining the cavity does not heal. I attempted to show in an article in the *Archives of Otology*, Nos. 2 and 3, Vol. 29, that the discharge which is known as nasal and post nasal catarrh, has its origin in the nasal accessory sinuses, and I wish now to call your attention to the important part which the infectious diseases play in this involvement of the sinuses. The diseases which may infect the accessory sinuses, as given by Hajek in the order of frequency, are acute coryza, la grippe, pneumonia, typhoid fever, facial erisypelas, scarlet fever, measles, diphtheria, smallpox, and cerebrospinal meningitis. To these should be added the purulent rhinitis of children which often begins at birth, perhaps from an infection in the parturient canal. The infection of the sinuses which occurs during the course of these diseases cannot with certainty be attributed to the primary disease in all cases. But the bacteriological evidence that the sinuses are infected by the primary disease in pneumonia (Fränkel, Weichselbaum), influenza (Lindenthal, Weichselbaum), diphtheria (Weichselbaum, E. Fränkel, Dmochowsky, Zuckerkandl, Wolff, and Richard Mills Pearce) is conclusive. It is a fact worthy of notice that even in these diseases secondary infection may occur, and Zuckerkandl calls attention to some cases of diphtheria in which the sin-

uses were intensely inflamed without the presence of true membrane, and he considers these as cases of secondary infection by other bacteria. To Fränkel belongs the credit of first calling attention of the involvement of the sinuses during the course of croupous pneumonia. Weichselbaum makes the astonishing statement that he found the accessory sinuses involved in 90 per cent. of those dead of epidemic influenza. Wolff has reported the results of a bacteriological examination of the sinuses from autopsies performed on 22 cases of diphtheria, 5 cases of measles and 2 cases of scarlet fever. He found the antrum involved in all of the cases of diphtheria, and in many of the cases one or more of the other sinuses were also affected. The inflammation of the sinuses varied in intensity, 15 of them being severe, in 12 of these the Klebs-Löffler bacilli were found, the other 7 were simply mild attacks caused by other bacteria. Of the 5 cases of measles examined, the antrum was found involved in 3, cultures from the antrum in 2 cases showed the streptococcus and pneumococcus, and in one staphylococcus. The sphenoidal sinuses were not involved. In one of the cases of scarlet fever, the antrum and the sphenoidal sinuses were involved and cultures showed staphylococcus pyogenes aureus and the bacillus pyocyaneus. The other case showed no inflammatory changes and the cultures were sterile. Richard Mills Pearce, of the Boston City Hospital, reports that he obtained cultures from autopsies of 39 cases of diphtheria, 2 cases of diphtheria with measles, 5 cases of diphtheria with scarlet fever, and 4 cases of scarlet fever. In the 39 cases of diphtheria, inflammatory changes were found in the accessory sinuses of 25. The number of sinuses involved varied in the different cases, the antra being the most often affected, *i. e.*, in 16 of the 25 cases. Both cases of diphtheria with measles had double antral disease, Klebs-Löffler bacilli and streptococci being found in both antra in each case. Of the 5 cases of diphtheria with scarlet fever only two had disease of the accessory sinuses, but in one of these cases all of the sinuses were involved, and in the other the disease was unilateral. Cultures from one case showed Klebs-Löffler bacilli and a variety of unrecognized bacteria, from the other streptococci and staphylococci. In three of the four cases of scarlet fever, inflammatory changes were present in the accessory sinuses. Cultures showed streptococcus and staphylococcus albus and aureus, and the bacillus pyocyaneus, and in one a short diplobacillus. One important fact was noted by Dr. Pearce, which was that the "inflammatory changes in the antra did not produce symptoms sufficiently marked to attract attention during life."* A reason for this was probably the serious condition of the patients while under observation. If this large percentage of the fatal cases of these diseases suffers from involvement of the accessory sinuses, it is probable that many of the cases which recover are similarly affected, and this explains the persistence of the Klebs-Löffler bacillus in the nose for weeks and even months after all other evidence of disease has disappeared. Positive cultures have been obtained from the nose after 6, 7, 8, 9 and 12 weeks in different cases in the Boston City Hospital, and in one case in the Lynn Hospital for Contagious Diseases after 14 weeks. Le Gendre and Pochon reported a case in which positive cultures were obtained from the nose for 15 months after a case of nasal diphtheria. In this case douching the nose would cause the bacilli to disappear for a time, but they would reappear as soon as the douching was stopped. Post mortem examinations, such as those of Wolff and Pearce, are of the utmost practical importance, and it would be of benefit to the profession if more of them were made and reported. We will now briefly consider some of the clinical manifestations resulting from these diseases. One of the most noticeable results of the infectious diseases of the nose and throat is the hypertrophy of the glandular tissue. This hypertrophy may be confined to the faucial tonsils alone or all of the tissue of Waldeyer's ring may be involved, *i. e.*, the tonsillar tissue on the posterior wall and vault of the nasopharynx, the cushion of tonsillar tissue around the Eustachian tubes, the faucial and lingual tonsils, and even the tonsillar tissue in the larynx. Often these throats look as though the muscular walls were thickened. This appearance is caused very largely by the interference with the action of the muscles by the masses of hypertrophied tonsillar tissue. The effect within the nasal chambers is equally well marked, the whole glandular structure being apparently involved in some cases. Acute coryza, measles, scarlet fever and diphtheria are the diseases which seem to be followed by the greatest amount of glandular hypertrophy. Associated with this increase in the size of the lymph glands there is usually a purulent rhinitis, which may be due in part to the interference with drainage by the hypertrophied glandular tissue in the nose or nasopharynx and in part to local diseases within the sinuses. It is safe to say that the longer this condition is allowed to continue, the more likely it is to lead to a chronic catarrhal condition. The clinical history of cases of nasal and post nasal catarrh shows the etiological importance of the infectious diseases. When a patient fixes a definite time as the beginning of the discharge, it is very easy to find the disease of which the catarrh is the sequel, but all patients are not observing and often the disease has existed for so long a time that it is hard to trace its relation to the original cause. It is easier to trace the effects of diphtheria and scarlet fever, than it is that of other diseases, because the laity believe that these diseases leave the throat in a bad condition and they therefore attach importance to any trouble which they may have with the throat after such attacks. An analysis of 243 chronic cases of disease of the nose and throat during my last service in the Lynn, Mass., Hospital shows 112 cases of adenoids and enlarged tonsils, 29 cases which had obstructive disease of the nose and 102 cases with nasal or post nasal discharge without nasal obstruction. Unfortunately the history of the adenoid cases was not kept, thus rendering it impossible to form a true estimate of the relative etiological importance of the different infectious diseases. Of the 29 cases of nasal obstruction only 17 complained of nasal or post nasal discharge. Of the 102 cases which complained of nasal or post nasal discharge without nasal obstruction,

*Reprint from the Journal of the Boston Society of Medical Sciences, March, 1899.

31 had suffered from childhood or did not know when it began,
25 followed one or more attacks of influenza,
14 followed an attack of diphtheria,
11 were caused by repeated colds,
7 followed scarlet fever,
6 followed measles,
4 followed typhoid fever,
2 followed pneumonia,
2 followed pneumonia and

It is quite probable that a large percentage of the cases which are given as existing from childhood belong with the cases given as caused by the acute infectious diseases and the remainder to the purulent rhinitis of children caused by various infections. In this list of unselected cases 69 per cent. can be directly traced to the infectious diseases and this is a very fair estimate of the cases in general. It is of course granted that different series of cases may give different percentages for the individual diseases, but the result will not be materially different. The importance of the so-called catarrhal inflammations of the upper respiratory tract and the relation which is shown to exist between these diseases and the infectious diseases demands the utmost care on the part of the general practitioner, not alone in regard to the diagnosis of this complication of the infectious diseases but for the treatment during convalescence at which time so much can be accomplished. This complication is easily overlooked during the height of the primary disease. The failure to make a diagnosis of the involvement of the accessory sinuses leads to serious results because the after-treatment is absolutely neglected. Treatment during the height of the primary disease is generally useless and often dangerous. The danger consists in the use of sprays and douches, which are almost certain to carry the disease farther than it would have extended if let alone. One of the most serious consequences of this treatment by douches and sprays is the involvement of the middle ear, which almost invariably follows their use. It is therefore during convalescence that these patients should be watched and treated, and they should not be considered well so long as there is obstructed nasal respiration, or a purulent or mucus discharge from the nose or throat. It is often necessary to keep them under observation for weeks or even months, but if by doing this we succeed in preventing the establishment of a chronic catarrhal condition, with its attendant complications, we shall confer a lasting benefit upon our patients. As to the treatment of these cases, a large percentage of them can be cured by the persistent use of ointments or pigments containing at first antiseptics and later absorbents and astringents. A few cases, however, may go on to extensive suppuration which demands opening of the affected sinuses and thorough drainage. The results obtained from treatment will, of course, depend upon the extent and severity of the disease within the sinuses but nowhere can more be accomplished by persistent effort than in these cases. The points which I wish to emphasize in closing are:

First, the importance of the so-called catarrhal inflammation of the upper air tract, not only in relation to local disease, as catarrhal inflammation of the middle ear, the eyes, the larynx, and the bronchial mucous membrane, but to general systemic infection as well.

Secondly, that nasal obstruction does not cause a catarrhal discharge, *per se*.

Thirdly, the frequency with which the accessory sinuses are involved in the infectious diseases.

Fourthly, the neglect of the diagnosis of this involvement of the sinuses, either during the course of the primary disease or during convalescence.

Fifthly, the hypertrophy of the glandular tissue in the throat and nose following the infectious diseases.

Sixthly, the persistence of the Klebs-Löffler bacilli in the secretion of the nose, which may be a serious menace to the public.

Seventhly, the large percentage of the cases of catarrhal disease, *i. e.*, where the complaint is of a nasal or post nasal discharge, which can be traced to the infectious diseases. In the table given in this paper 69 per cent. of these cases could be traced directly to some of them.

AN UNUSUAL CASE OF DIPHTHERIA.

By J. NEWTON HUNSBERGER, M. D.,
of Skippack, Pa.,
and D. H. BERGEY, M. D.,
of Philadelphia.

The case which we report seemed of such an unusual character and so uncertain in its etiology, until post mortem examination had been made, that we deem it worth reporting.

Clinical History: Alice R., white, aged 3 years. Had never been ill except for occasional attacks of spasmodic croup after taking cold. Family history good, except that her brothers and sisters, 5 in number, are all more or less subject to attacks of spasmodic croup.

Dr. H. saw her on Monday, February 5, 1901, when he elicited the following history: Had an attack of croup on Thursday night previous to the first visit, which was promptly relieved by an emetic. No history of fever, vomiting, or sore throat. Child had been running around ever since in a draughty kitchen with cold floor. Seemed well except for persistent croupy cough. Sunday night had several attacks of dyspnea, not severe enough, however, to require an emetic.

Examination: Appearance good, breathing fairly good. Little could be elicited by auscultation. Bronchial breathing somewhat harsh. No fever. Appetite good. Throat perfectly clean, with no redness or thickening of fauces. Cough brassy. Voice weak, but not husky. Pulse good, not much accelerated. Had a few "tight spells" Monday night, otherwise rested well. Seemed lively and bright on Tuesday morning and could not be kept in bed. There was no marked change except that the spells of dyspnea became more frequent and more severe after 4 P. M. Saw her at midnight. Color bad, lips and finger tips blue. Voice gone apparently from weakness, or rather from insufficient quantity of air being forced through vocal cords. Very restless. Pulse 120 and fairly strong. Respiration not *stridulous* or *noisy*, but hard, pumping in character, with base of chest contracting hard. Sternum very prominent and every chest muscle working its hardest to use the small amount of lung available. Conscious. Throat clean. No fever. Appetite fair.

Saw her Wednesday morning. Passed a restless night with all the symptoms increasing in severity. Beginning drowsiness. Color wax-like, with cyanosis of the extremities. Conscious. Complained of no pain. Very quiet. No severe cough. No stridulous breathing. No gasping, but simply one heroic, continuous effort to get a little more air through the clogged bronchioles. Cyanosis became more marked and patient became more quiet until death put an end to the never-to-be-forgotten scene at 3 P. M. Death being apparently due to carbon dioxide poisoning.

Autopsy: Body well nourished. Abdominal organs of

exceptionally healthy appearance. Heart empty and normal in appearance. Chest cavity well filled by lungs—no collapse. Lungs are pale anteriorly but somewhat reddened posteriorly. No membrane found in bronchi. Could not examine the larynx, but do not believe there was any membrane there.

Bacteriological and Pathological Report: Portions of the child's lung were removed and sent to the laboratory for examination. Cultures were made at once from the interior of the pieces of lung and these developed pure cultures of the diphtheria bacillus. A guinea-pig inoculated with a culture, 24 hours old, of the organism, died in about 30 hours with typical post mortem lesions.

The lung was hardened in alcohol and embedded in celloidin. Sections from different portions of the lung show practically the same result; viz., a large number of the "acini" and bronchioles are completely blocked with fibrin, round cells, and red bloodcorpuscles, and this material contains large numbers of the bacilli. The picture under a low power of the microscope does not resemble that seen in pneumonia, because the "acini" and bronchioles that are filled up in this manner are more or less separated from others which are but little affected, if at all, so that it seems the material may have come down some of the smaller bronchioles and filled the "acini" communicating with these, while no such material passed down some of the other bronchioles, thus leaving adjacent parts of the lung practically free from disease. The appearance is practically identical with some of those presented in the exhaustive report on diphtheria by Councilman, Mallory, and Pearce (*Boston Journal of Medical Sciences*, 1901).

An ante mortem diagnosis of diphtheria was not made, as it was supposed to be a case of so-called capillary bronchitis. This shows the value of a throat culture in cases with a history of persistent croupy cough even though no throat symptoms may be present. It may be interesting to note that none of the other children contracted the disease, though no attempt whatever had been made to keep them from the sick child.

On the Excretion of Typhoid Bacilli by the Kidneys During and After Typhoid Fever.—Klimenko (*Russki Archiv Pathologii*, etc., Vol. XII, No. 2) **found typhoid bacilli in the urine of 13 patients suffering** from typhoid fever **out of a total of 65 examined**, or in 20%. The urine in all contained a slight amount of albumin (not more than 0.25% by volume) and gave the diazo reaction. In none were the typhoid bacilli found in the urine before the third week of the disease. No connection was observed between the roseola and the appearance of the bacilli in the urine, nor was any relation found between the severity of the disease and the appearance of the bacilli. The bacilli could no longer be discovered in the urine on the third day of convalescence in 5 cases, on the fourth day in 3, on the fifth day in 1, on the tenth day in 1, on the fifteenth day in 1 and on the twenty-sixth day in 1. From the above observations and a perusal of the literature on the subject the following conclusions are drawn: (1) Apparently, the typhoid bacilli, in cases in which they appear in the urine, disappear in the majority of instances in 3-30 days. In rare cases they may remain for years. (2) The urine of every typhoid patient, either during the attack or convalescence, should be looked upon as a source of infection and should therefore be disinfected. (3) Hence, typhoid patients should be given internally some drug which acts as an antiseptic on the genito-urinary tract. (4) It would be desirable were it possible to examine the urine of every typhoid convalescent for typhoid bacilli in order that the proper measures may be taken should they be found. (5) In rare cases the bacteriological examination of the urine may aid in the diagnosis of obscure cases of typhoid fever.

[A. R.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ending May 17th., 1902:

SMALLPOX—United States.			C.	D.
ALABAMA	Mobile	May [illegible]	[illegible]	
CALIFORNIA:	Los Angeles.	Apr. 19-May 3.	11	
	San Francisco.	Apr. 27-May 4	7	
COLORADO:	Denver.	Apr. 28-May 5	[illegible]	
FLORIDA	Jacksonville	Apr. [illegible]-May [illegible]	[illegible]	
ILLINOIS:	Belleville.	May 3-10.	[illegible]	
	Chicago	May [illegible]	[illegible]	[illegible]
	Galesburg	May [illegible]	[illegible]	
	Peoria	Apr. [illegible]	[illegible]	
INDIANA	Evansville	May [illegible]	[illegible]	
	Indianapolis	May [illegible]	[illegible]	
KENTUCKY:	Covington.	May 4-11.	13	
	Lexington.	May [illegible]	[illegible]	
MAINE:	Portland.	May 3-10.	1	
MARYLAND:	Baltimore.	May 3-10.	[illegible]	
MASSACHUSETTS	Boston	May [illegible]	[illegible]	
	Brockton	May [illegible]	[illegible]	
	Cambridge.	May 3-10.	1	
	Chelsea	May [illegible]	[illegible]	
	Lowell	May [illegible]	[illegible]	
	Malden.	May 3-10.	[illegible]	
	Newton.	May 3-10.	1	
	Northampton	May [illegible]	[illegible]	
	Somerville	May [illegible]	[illegible]	
MICHIGAN:	Detroit.	May 3-10.	[illegible]	
	Grand Rapids	Apr. 26-May [illegible]	[illegible]	
MINNESOTA:	Winona	Apr. 26-May [illegible]	[illegible]	
MISSOURI:	St. Louis	May 4-11	48	
MONTANA:	Butte.	Apr. 27-May 4	4	
NEBRASKA:	Omaha.	May 5-12.	[illegible]	
NEW JERSEY.	Camden	May [illegible]	[illegible]	[illegible]
	Hudson County, including Jersey City	Apr. 27-May 4	[illegible]	[illegible]
	Newark.	May 3-10.	[illegible]	[illegible]
	Passaic	Apr. [illegible]-May [illegible]	[illegible]	
	Plainfield	May [illegible]	[illegible]	
NEW YORK	New York	May [illegible]	[illegible]	[illegible]
OHIO:	Cincinnati.	May 2-9.	11	
	Cleveland.	May 3-10.	4	
	Toledo.	May 3-10.	1	
	Youngstown.	Apr. 19-26.	1	
PENNSYLVANIA	Columbia	May [illegible]	[illegible]	
	Erie	May [illegible]	[illegible]	
	Philadelphia	May [illegible]	[illegible]	[illegible]
	Pittsburg	May [illegible]	[illegible]	1
	York	Apr. [illegible]	[illegible]	1
SOUTH CAROLINA	Charleston	May [illegible]	[illegible]	
	Greenville	Apr. [illegible]-May [illegible]	[illegible]	1
SOUTH DAKOTA.	Sioux Falls	May [illegible]	1	
TENNESSEE	Memphis	May [illegible]	[illegible]	1
	Nashville	May [illegible]	1	
TEXAS	San Antonio	Apr. [illegible]	[illegible]	
UTAH:	Ogden.	Apr. 1-30.	3	
	Salt Lake City	May [illegible]	[illegible]	
WASHINGTON	Tacoma	Apr. [illegible]-May 4	[illegible]	
WISCONSIN	Green Bay	May 4-11	[illegible]	
	Janesville	May [illegible]	[illegible]	
	Milwaukee	May [illegible]	[illegible]	

SMALLPOX—Foreign.				
GREAT BRITAIN	Birmingham	Apr. [illegible]-May [illegible]	[illegible]	
	Gateshead	Apr. [illegible]-May [illegible]	[illegible]	
	Leeds	Apr. [illegible]-May [illegible]	[illegible]	
	Liverpool	Apr. [illegible]-May [illegible]	[illegible]	
	North Shields	Apr. [illegible]-May [illegible]	[illegible]	
	South Shields.	Apr. 26-May 3	4	
	Sunderland	Apr. [illegible]-May [illegible]	[illegible]	
INDIA	Bombay	Apr. [illegible]	[illegible]	[illegible]
	Calcutta	Apr. [illegible]	[illegible]	[illegible]
	Karachi	Apr. [illegible]	[illegible]	[illegible]
	Madras	Apr. [illegible]	[illegible]	[illegible]
ITALY	Naples	Apr. [illegible]	[illegible]	
MEXICO	City of Mexico	Apr. [illegible]-May 4	[illegible]	1
	Vera Cruz	May [illegible]	[illegible]	
SPAIN	Malaga	May [illegible]	[illegible]	

YELLOW FEVER.				
COSTA RICA	Port Limon	Apr. [illegible]	[illegible]	
MEXICO	Vera Cruz	May [illegible]	[illegible]	9

CHOLERA.				
CHINA	Amoy	May [illegible]-Apr. [illegible]	[illegible]	[illegible]
INDIA:	Bombay.	Apr. 8-15.	[illegible]	1
	Calcutta	Apr. [illegible]	[illegible]	[illegible]

PLAGUE—Insular.				
HAWAII	Honolulu	Apr. [illegible]	[illegible]	[illegible]

PLAGUE—Foreign.				
CHINA	East Heaven	May [illegible]-[illegible]	[illegible]	[illegible]
INDIA:	Bombay.	Apr. 8-15.	[illegible]	[illegible]
	Calcutta	Apr. [illegible]	[illegible]	[illegible]
	Karachi	Apr. [illegible]	[illegible]	[illegible]
JAPAN:	Nagasaki.	Apr. 1-20.	[illegible]	1

The Philadelphia Medical Journal

A Weekly Journal Owned and Published by The Philadelphia Medical Publishing Company and Conducted Exclusively in the Interests of the Medical Profession.

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The Meeting at Saratoga.—The coming meeting of the American Medical Association at Saratoga promises to be one of unusual interest and importance. The place itself is one of unusual attractiveness, and this is a matter of some weight in securing a very full meeting. The hotel accommodations at Saratoga are ample, and the opportunities for some legitimate social functions will be all that can be desired. The annual meetings of the various medical associations give the average doctor his annual chance for some recreation as well as some intellectual refreshment, and it is right and proper that this should be so.

We shall watch with interest the working of the new constitution. It provides for a House of Delegates, which will hereafter be the legislative body of the Association. This will relieve the general meeting of all tedious business details, which in the past have so monopolized its time. By this arrangement business will be pushed ahead, while in a sense it will also be pushed to one side—not to its disadvantage, however, but to the advantage of the scientific work.

We trust that the all-important subject of state licensing, or reciprocity, or states' rights, or interstate comity, or by whatever name it may be called, will be fully discussed. Dr. Rodman's plan of a National Examining Board, which was described by its author in a recent number of the **Philadelphia Medical Journal,** will doubtless be considered. It has many features to recommend it, and we shall discuss it more at length in our next week's issue. Something should be done by this great national representative medical association towards bringing order out of what is fast becoming a chaos.

At the general meeting the address in Medicine will be delivered by Dr. Frank Billings, of Chicago; in Surgery, by Dr. H. M. Sherman, of San Francisco; and in State Medicine, by Dr. J. M. Emmert, of Atlantic, Iowa. The presiding officer is Dr. John A. Wyeth, of New York, whose words will be listened to with great interest. The programs of the various sections are exceedingly full.

Pregnancy and Typhoid Fever.—The recent illness of the young Queen of Holland, with its pathetic sequel, has excited renewed interest in medical circles in the interesting question of the placental transmission of disease. It is now well recognized that certain diseases that are rampant in the maternal system find ready access into the placental circulation, where they quickly accomplish their work of destruction and terminate the incipient human life. Such are the exanthemata, which appear to be especially prejudicial to fetal existence, and, in addition, assume an unwonted virulence, in the presence of gestation, whereby their morbidity and mortality are essentially increased. This is equally true of most of the other germ-diseases. Without going minutely into the theories that have been advanced to explain the phenomenon of placental transmission, there are two that have especially appealed to the embryologist. These are the parasitic and the leukocytic. As Rostowzow has indicated, it would seem that under the influence of the given infection the epithelial coat of the chorionic villi loses impermeability, whereby the bacilli are enabled to pass directly through it. Delore not long since demonstrated the disorganization of the delicate structure of the placental tissue together with the abolishment of the physiological function of the placental villosities through the action of bacteria. The selective power of the plecenta as a result is abolished and the germs and their toxins pass unimpeded into the fetal tissues. The leukocytic theory implies that through a diseased state of the leukocytes the resisting power of the system is diminished, and as a result the plancenta fails to present the barrier to the entrance of germs into the fetal tissues that it normally does. Since Manzoni and Charcelay, in 1841, proved the existence of fetal typhoid fever, many other investigators have demonstrated its existence, including such eminent observers as Straus, Chambrelent, Widal, Eberth and Fränkel. The Widal test has been demonstrated also in a number of instances, the blood being taken from various fetal organs. The result of the transmission of typhoid fever from the mother to the embryo or fetus is usually attended with disastrous results for

the latter. The statistics of Sacquin and Martinet give a fetal mortality of 63¼%.

In other cases the fetus may survive although manifesting the symptoms of the disease, while yet again it may be born alive and healthy during the course of the maternal disease. In brief, it should be stated that the earlier the pregnancy the graver the results for both mother and fetus. In addition, women aborting during the course of typhoid fever, especially in the later stages of the disease, are more apt to succumb to the exhaustion incident upon the abortion, and, as has also been proved by various observers, their liability to septic infection is greater. It speaks well for the medical attendents on the young Queen that the distinguished patient has thus far made such a satisfactory recovery.

Dysentery as an Acute Infectious Disease.—In 1873, Austin Flint, in his Treatise on the Principles and Practice of Medicine, defined dysentery as an inflammation of the large intestine attended with mucous and bloody dejections. He recognized three varieties of the disease, sporadic, epidemic and chronic. In 1892, Osler (*The Principles and Practice of Medicine*) placed dysentery on the list of specific infectious diseases, recognizing acute catarrhal dysentery, amebic dysentery and diphtheritic dysentery. In 1898, Shiga (*Centralblatt. f. Bakt.*, XXIII and XXIV, 1898) described a bacillus to which he attributed etiological functions in relation to the disease. The causative influence of this bacillus has since been confirmed by Flexner (**Phila. Med. Jour.**, Sept. 1, 1900; *John Hopkins Hosp. Bull.*, October, 1900) who made his investigations in the army hospitals in Manila. Flexner also found this bacillus in the dejecta of a soldier who had contracted dysentery in Porto Rico. Strong (*Jour. Amer. Med. Asso.*, Aug. 25, 1900) continued the studies started by Flexner, in Manila, and Kruse (*Deutsche med. Woch.*, October 4, 1900) obtained the bacillus from the stools of patients during the epidemic of dysentery in Laar, Germany. Flexner's students Vedder and Duval (*Jour. of Exper. Med.*, Feb., 1902) studied outbreaks of dysentery in the Philadelphia Hospital, in the Lancaster Almshouse and Insane Asylum and in the Springside Home, New Haven, Conn. They found this organism in all cases.

Bacteriologically, then, the cases of acute dysentery in all parts of the world are due to a common micro-organism, except those cases in which the ameba coli is found in the stools. From this standpoint we shall be able to classify dysentery, according to its cause, into amebic dysentery and acute dysentery.

Moreul and Rieux (*Rev.de Méd.*, Feb., 1902) have isolated an organism from the stools of dysenteric patients in Finisterre, which they consider to be the cause of the disease. This organism, however, presents certain differences from the bacillus dysenteriæ, notably that it produces fermentation in lactose . It is possible, therefore, that these observers have not found the true organism described by Shiga. Flexner thinks that their failure is due to the fact that they did not pick out the organism from their plate cultures by applying the agglutination test with the blood of the patient, but instead picked out the organism first, then immunized animals and with the blood of these animals obtained agglutination.

Remlinger (*Rev. de Méd.*, Oct., 1901) has reported a series of complications of dysentery, such as nephritis, anasarca, arthritis, epididymitis, phlebitis and abscess of the spleen, that, from the clinical side, indicate the infectious nature of the disorder. It seems, therefore, that both from its bacteriological and clinical aspects the position of dysentery among the acute infectious diseases is established. We may then advance the following definition: Acute dysentery is an acute infectious disease, due to the bacillus dysenteriæ, characterized by an inflammation of the intestine of varying severity and accompanied by small,mucous and blood-stained stools passed with tenesmus. On the other hand, amebic dysentery would answer to the same definition, except that the ameba coli must be recognized as the cause. Both types of dysentery may become chronic.

Theories About Volcanic Blasts.—The eruption in Martinique seems to be upsetting some of the cherished theories of scientists. It has been held by many geologists that volcanoes do not emit gases and flames, but Mount Pelée seems to have done so. The sudden and complete annihilation of all animal life in St. Pierre is hardly to be explained otherwise. Professor R. T. Hill, of the United States Geological Survey, who has gone to Martinique, has cabled his opinion that the destruction of life in St. Pierre was by a "tornadic blast of gas; probably dry superheated steam." Professor Jaggard, of Harvard, sends word that there is no evidence of lava. "The people" he says, "were killed by an explosive volcanic tornado, which bore with it a wave of burning gas."

These theories are not in harmony, for, while dry steam at a very high temperature would kill almost instantly, it is not an inflammable gas. In fact, it would soon condense into water. Professor Verrill, of Yale, claims that he has taught for a long while that volcanoes can and do emit inflammable gases. His view is that the heat is so great that water on

coming in contact with lava beds is resolved into its two constituents gases, oxygen and hydrogen, and in case of sea-water the salt contributes chlorine which goes to form hydrochloric acid. Hydrogen is highly inflammable, and the tremendous gust of it from Mount Pelée would burst into flame and soon burn itself out, destroying every living thing which it enveloped. The intense heat itself would be enough to destroy all life in a few moments. As we remarked last week, sulphurous acid might also be present in large quantities.

The testimony of the few survivors is almost unanimous to the effect that the air was filled with flames. The captain of the *Roddam*, a very intelligent observer, says that the flames burst through the open port holes of his vessel as she lay in the harbor, miles distant from the volcano.

The question, relating as it does to the causes and modes of death in such a catastrophe, has distinct interest for medical readers.

The Coal-Miners and the Doctors.—The prevailing labor troubles in the coal-mining regions serve to bring out some interesting facts. According to the *United Mine Workers' Journal* the report of the Pennsylvania Bureau of Statistics shows that 4,374 miners lost their lives in the ten years preceding 1900, and that an average of one man in 200 is killed every year. These figures, we presume, refer to Pennsylvania exclusively, and they are truly appalling.

Among the grievances of the miners seem to be not only the so-called "company stores" but also the "company doctor." This official, we suppose, is employed by the company to attend the miners—and probably their families—and his salary is paid out of an assesssment on the miners' wages. The following figures are illustrative of the state of affairs from the standpoint of both the miners and of the doctors.

The miners worked an average each of 194 days last year, earning an average of $1.28 a day, which means that their daily wage averaged a trifle over 79 cents a day for the year. They ask a 10 per cent. advance upon that 79 cents, which if granted would increase their daily average to 86 cents for the year. Out of the miner's yearly average income of $248 he has to pay $36 for rent, $5 for oil, $14 for powder, and $6 for the "company doctor." This leaves $187 for food, clothes, tools, church and every thing else. This seems like a beggarly wage upon which to support a family; but we should like to ask what would the doctor do if this allowance were not guaranteed to him? He would probably go without this pay in a large proportion of cases. Experience shows that, as a rule, men on such small wages are not "good pay" even for small bills, and the fact is not strange. Therefore we think it should not be taken as too much of a "grievance" that the company should insist upon the doctor receiving his small pay. Our sympathies in this case are naturally with the medical man. The great objection to the system, doubtless, is that it leaves the miner no choice of doctors. But this is exactly the case with every free patient who goes to a hospital. A man who secures medical attendance for his family for a whole year for six dollars cannot expect to have a wide choice. He is not entitled to it at that price.

The Needle Mania.—Dr. T. D. Crothers, in his recent work on Morphinism, describes what he believes to be a new psychosis. This is the fascination exerted on some neurotic persons by the hypodermic needle. Dr. Crothers seems to think that this psychosis is a peculiarly aggravated form of morphine addiction, but not exclusively so. In one case which he describes, in the person of a learned judge, the patient was not addicted to morphine. He was simply hypnotized by the needle. He would take medicine in no other way. In such a case as this the idea becomes a real obsession| It is not so much a physical appetite, as it is a fixed idea. This is a psychological question of considerable importance.

Of course, the most common and most aggravated of these cases are found in the victims of morphine. But that there is a large psychical element in some of these cases, is proved by the fact that these patients can be broken of the morphine habit but not of the needle habit. Dr. Crothers gives interesting examples of this craze. In one man the morphine was gradually removed by his physician until it was reduced to *nil*, but the use of the needle had to be continued. If it was stopped, the patient became exceedingly nervous and depressed, and could not sleep. His physician finally allowed him a fixed dose of distilled water twice a day, and he remained comfortable. He was, of course, ignorant of the deception. In another case the patient, a woman, was gradually weaned of her morphine, but remained in constant dread of heart failure if she did not have her needle. She was pacified with a few drops of a bitter solution.

The mental state in these cases is that of overpowering habit, of fixed idea. The patients are the victims of obsessions. When it is considered that this state exists probably in the majority of morphine victims and is *plus* the physical craving for the drug, it is readily seen how difficult the problem of cure becomes.

Dr. Crothers has taken a more profound—a more

psychological—view of these cases than some writers, and we are convinced that in some respects he is right. The addiction to morphine and cocaine is in many ways a psychosis.

Suicide in Chicago.—As we have pointed out before in these columns, the big city by Lake Michigan seems to be gaining an unenviable reputation as the "suicide center" of the United States. We are in receipt of weekly health reports from its enterprising authorities, who are evidently proud of its low general death-rate, and from these we obtain the following figures: For the week ending on May 10th., there were 13 cases of suicide in Chicago, and for the week ending on the 17th., there were 14 cases. According to the *Philadelphia Press* (which doubts the increase of population claimed since the official census—an increase of 450,425 in less than two years) these figures give a suicide-rate of one in every 3,350 of population. The rate for the whole United States for the year 1901, was one suicide in every 10,750 of population. Therefore Chicago has three times as many suicides in proportion to the population as the country at large. Its rate is higher than that of any other large city in the world.

The explanation offered by the Chicago authorities is entirely unsatisfactory. They say the suicides are due to influenza. We note no such increase elsewhere from this source. It is more propable that the high rate is due to conditions peculiar to Chicago itself. That city attracts an immense unstable floating population. The struggle for existence in this class is great; the pace is fast; the unsuccessful are soon submerged. These are conditions that make for suicide in any large community. In Chicago they are intensified, and a high suicide-rate is the melancholy result.

Clinical Lecture on Tumors of the Nose and Throat.—We believe in the value of the clinical lecture and commend to our readers that by Anthony Bowlby to be found in another column of our present issue. He deals in an interesting way with the subject under discussion, and what he has to say must prove of value as well to the man in general practice as to the specialist and general surgeon. To the general practitioner the lecture is of interest as it deals with the early diagnosis of tumors of the nose and nasopharynx, and to the specialist as it presents the author's views regarding the treatment of these conditions. Bowlby, however, deals extensively with the treatment of but one variety of tumor, namely, fibroangioma. We believe that this style of article, which deals with the clinical side of so important a subject, must prove of interest to the majority of our readers, and we are particularly glad to present them with a lecture from so capable and prominent an English specialist as Anthony Bowlby.

The Open-Door Treatment of Insanity.—We hear every once in a while of this new plan of treatment. It is simply the so-called "non-restraint" treatment pushed to extremes. The philanthropists who urge the "open-door" treatment think they are inspired by the example of Tuke and Pinel. They would throw open the doors and let the insane go free. They would put maniacs and delusional paranoiacs on their good behavior, and, like William Penn with the Indians, they would sign a treaty of peace with lunatics. These poor patients are sadly abused; they are cruelly deprived of their liberty; they are mortified in their pride and self-respect by the locks and keys of their jailers. Fling open the doors, cry the philanthropists, and let the insane pass in and out—especially out.

To these philanthropists we recommend the paper by Dr. Moulton in this issue of the **Journal.** This paper illustrates what an insane patient is capable of doing even when wisely restrained. Dr. Moulton's patient was so impressed with the idea that he could do what he liked with his own, that he cut loose one of his testicles. This shocking mutilation is not unheard of in the asylums, but it is fortunately rare. We knew of one case in which a patient ablated in two successive operations each of his testicles and later made a third attempt to mutilate himself by slashing into his perineum in order to remove, as he thought, some of the remaining cord. Such is the force of an insane delusion. Such would be among the sequences of unlimited "non-restraint" and "open-door" treatment.

We feel like reminding some gynecologists (but such as need to be reminded are now rare) that the excision of the ovaries in the case of an insane woman is no more rational than the operation which Dr. Moulton's patient performed on himself. The seat of insanity is the brain, not in the generative organs.

The Association of Military Surgeons of the United States.—We have received the announcement of this Association, and from it learn that the eleventh annual meeting will be held in Washington during the first week in June. The program is a very attractive one, and the indications are very flattering for a full attendance of members as well as of a large number of distinguished foreign representatives. The President of the United States will attend the opening meeting, and the members of his Cabinet, as well as other prominent public men, will honor the session with their presence. Among

the interesting exhibits will be a drill of the hospital corps.

The program is very full and the subjects announced are of great scientific interest as well as practical value. The activity of army medical men in promoting scientific medicine, and their splendid opportunities for doing so, are well shown on this program. The military activities of the United States Government in recent years, especially in foreign countries, have given the army surgeons a wide range for observation. Their contributions to science have been increasing in value, and this meeting will doubtless impress upon the general as well as the professional public to what an extent the public and the profession are indebted to this body of active and successful scientific workers.

We commented favorably last week on the bill enlarging the duties and changing the name of the Marine-Hospital Service. While Congress was about it, why did it not change the name in reality, and give the Service a good handle? "The United States Public Health Service" would have been a good name, but Congress has insisted on tagging "Marine-Hospital" on, too. The new name is cumbersome and hard to abbreviate. Our legislators should have more ear for euphony, and more regard for editorial time and space.

The paper, which we published recently, by Dr. Tyson and Dr. Croftan, on hematoporphyrinuria due to the excessive and long continued use of sulphonal, has attracted much attention. Some of the friends of the drug think we took rather an extreme stand in our editorial comment when we said that it would be better not to use it at all. The same objection, they say, can be raised to morphine or any other agent. This is true. We should have condemned the abuse, not the legitimate use, of sulphonal.

Current Comment.

WE ALSO AGREE.

The annual meeting of the National Antivivisection Society was held on May 6, Archdeacon Wilberforce in the chair. The principal speakers were the Chairman and the Hon. Stephen Coleridge, neither of whom had anything new to say. Though talking bravely of the progress of their cause, they betrayed a consciousness that the platform on which they have in previous years disported themselves with such evident relish is crumbling beneath their feet. While professing to glory in being called fanatics, they complained bitterly of the treatment that has been meted out to them by the press generally. We are glad to be able to agree with Archdeacon Wilberforce on one point. He declared that he and his brother fanatics are absolutely incorrigible.

—*The British Medical Journal.*

COMMON-SENSE.

It is impossible to make a good doctor of a man who has not got what is known as common-sense. He may be ever so learned in the opinions of others, able to quote this, that and the other authority, but without common-sense he will not know how to value knowledge correctly or to work out its application skillfully. A man may possess an enormous amount of abstract information, be a perfect walking encyclopedia, but without common-sense he is a poor doctor, and sad is the case of those who must depend upon him. Common-sense is the basis of judgment, the inspiration of correct action, without which no man can hope to succeed as a physician.

—*Medical Brief.*

PINGPONGITIS.

And now come our English cousins with a new disease—"pingpong ankle," an account of which has just been published in the *British Medical Journal*. It is evidently a trouble that is known by its play rather than by its works, and in its etiology seems to be a companion to tennis elbow, golf chest, and "Charley horse," or the stiffened arm of the baseball player. Technically, it is a tenosynovitis, an acute inflammation of the sheaths of the tendons of the flexor and extensor muscles of the left leg and foot; it is accompanied by much pain and swelling of the ankle, but yields readily to rest and antiphlogistic treatment. The foreign journals are full of hints and advice in regard to a proper costume and suitable footgear, but, fad though it be, and prone as we Americans are "to dress the part" in our sports and fashions, we hardly think that they will be generally adopted. Roses do not grow without thorns, and, universal as the game has been for the past year or more, the list of published casualities is as yet small.

—*The Medical News.*

Correspondence.

THE TREATMENT OF PNEUMONIA IN CHILDREN.

By ABRAHAM GOLTMAN, M. D., of New York.

To the Editor of the **Philadelphia Medical Journal:**

Pneumonia in children often taxes the resources of the physician. The inability of the little patient to state his symptoms and very often the difficulty of administering the drugs combine to make the treatment more difficult.

I wish to report the methods I have used in several cases in which the prognosis was poor, and in 2 cases without hope. On February 8th., in the morning, I was called to see a child, 2 years old, who, the mother stated, was "breathing fast." On examination I found the following conditions: Face flushed, alæ nasi dilating at each inspiration, semi-comatose, pupils reacting very slightly, respirations 60, pulse 148, temperature 104°. The mucus in the tubes could be distinctly heard at a distance from the bed, and the heart sounds were weak and irregular.

I first gave the child an injection of strychnine, 1/150 of a grain, and drop doses of spts. ammon. aromat. every hour. I immersed the child in a warm bath, and rubbed him thoroughly to promote the action of the skin, then dried him and wrapped a cold sheet around his body. This method revived the little patient and promoted coughing, which, I was glad to see, relieved him somewhat. I ordered brandy every two hours, and left.

On returning the same evening I found a very slight change. I caused douches of hot and cold water poured from a height on the chest alternately, which repeated shocks threw the chest out as it were and promoted coughing. The same evening, 11.30 o'clock, I found a change. The eyes were opened, the child recognized his mother, pulse had ropped to 118, respiration to 40, and tem-

perature to 101°. The warm bath and cold sheet were continued, with the use of strychnine (hypodermically) for several days after. The child made a slow but sure recovery.

I wish to add that strychnine used in these cases (watched carefuly) is a great respiratory stimulant, also acting on the heart as well, given in such doses that a child of that age could tolerate. As to the hot and cold douches described above, I think there is nothing that will take their place in such a case in which prompt and somewhat heroic measures are required.

A CONGRESS ON TUBERCULOSIS.

By LAWRENCE F. FLICK, M. D., of Philadelphia.

To the Editor of the **Philadelphia Medical Journal:**

Apropos of the Congress on Tuberculosis spoken of in your recent issue, I would suggest that it be held under the auspices of the newly created "Public Health and Marine-Hospital Service." This would be a fitting inaugural work for the new department. A congress on tuberculosis should be held under Government auspices.

Reviews.

Hypnotism and Suggestion, in Therapeutics, Education and Reform, by R. Osgood Mason, A. M., M. D., New York, Henry Holt and Company, 1901.

The author considers his subject in eight chapters. The object of the first chapter is to bring before the mind of the reader certain propositions which in his judgment are most important. The first two, namely that the "things which have been established by sciences as practical and useful" cannot be ignored and the second that "cures by psychic methods of whatever kind or of whatever sect are not miraculous or supernatural," are self-evident and are not worthy of extended discussion. This, however, is not equally true of the third proposition, namely that there is an inherent psychic potency in matter itself; that this "is the motive and formative power in all subsequent development, in the production of organisms and in the activity of the functions which maintain life and health in these organisms,—in short, that mind forms and dominates all organisms, consequently it forms and dominates the human organism; and if it dominates, it can heal." This metaphysical conception well illustrates the point of view from which the book has been written and it fully prepares us for the following curious juxtaposition. "The subjective method, upon whatever matter engaged, represents foresight, initiative, motive power, but it is liable to misdirection in its application, to squander energy and meet defeat. The objective method represents experience, knowledge, reserve force, caution, guidance. It has been the conservative clinging to the exclusive and excessive use of drugs in the cure of disease, and the scorn and neglect with which it has treated subjective, psychic means of cure, that have brought the therapeutic part of the old objective scientific school of medicine into distrust."

The "newer therapeutics" is a title which the author applies to treatment by suggestion, obviously ignoring the fact that physicians have since time immemorial applied suggestion without hypnotism constantly in the treatment of their patients. How far the author ignores the elementary conceptions of modern physiology is well illustrated by the following description of hypnotism. "It is only nature's method of harmonizing and increasing vital force —of bringing two persons into such relations that the physical, mental, or moral needs of one may be more surely and effectively supplied by the other." We are also informed that "the very condition of hypnotic sleep is healthful, useful and elevating" and that "it is simply carrying out the divine law of rest and healing and when to that are added the great results of suggestion, the results are great to what at first seems possible." Comment should be unnecessary! Nor has modern scientific medicine time to deal with such metaphysical and spiritistic conceptions as the following. "It is impossible truly to conceive of matter deprived of its psychic elements, its attribute of attraction, its power of choice, its loves; and spirit without matter is unthinkable; it is impossible to conceive of the psychic element of attraction, of affinity, of love, of thought, except in connection with matter."

In Chapter II, the author deals with subliminal consciousness, double personality and lucidity. He not only adduces some of the well-known cases of double personality, but also calls to his aid such cases as that of Ira Healy who during hypnotism did very many things—to say the least—hard to believe; such for instance as the following. "Mrs. Long came up to Ira, holding out her hand closed—back of the hand up. She asked Ira what was in it. He said 'watch.' It was a small gold hunting-case one. She then asked him to tell the time through her hand. He immediately put the side of his forehead to the back of her hand, and stated the time. No one in the room knew the time it marked. On opening the watch, it was found that he had named exactly the hour and minute." We submit that the time of physicians is really too valuable to seriously consider such evidence.

To the practical value of hypnotism the author gives but scant attention. It is true that he describes ten cases of nervous disorders which were more or less benefited by hypnotism. None of these, it should be stated, presented any new or remarkable features.

The above citations are sufficient to reveal the general tenor of the book. The chapter on Rapport contains material with much of which the scientific world is already familiar and many stories and citations which it is fortunate we are not compelled to believe. They are on par with those with which Flammarion has filled a volume. In closing the book we are forcibly reminded of an answer given by Dr. Joseph Leidy when asked "Why don't you investigate spiritualism?" "What is the use when there are so many real things to study." [F. X. D.]

The Practical Medicine Series of Year Books. Comprising ten volumes on the year's progress in medicine and surgery. Issued monthly under the general editorial charge of Gustavus T. Head. M. D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. 1, General Medicine, edited by Charles Billings, M. S., M. D., Head of Medical Department and Dean of the Faculty of Rush Medical College, Chicago. With the collaboration of S. C. Stanton, M. D. October, 1901. Chicago, 40 Dearborn street. Cloth, $1.50.

The volume before us is one of the series of ten that the Year Book Publishers intend to issue during the year. This, the first volume, is devoted to general medicine. The succeeding volumes, which are to be issued monthly, are to deal with general surgery; diseases of the eye, ear, nose and throat; gynecology; obstretics; general medicine; pediatrics, and orthopedic surgery; materia medica and therapeutics, climatology, preventive medicine and forensic medicine; anatomy, physiology, pathology and bacteriology; and skin and genito-urinary diseases, and nervous and mental diseases. The present volume, which was published in October of last year, deals with those diseases that are more common during the winter months, such as diseases of the respiratory organs, general infectious diseases, such as influenza, smallpox, chickenpox, diphtheria and cerebrospinal meningitis; rheumatism and allied conditions. In addition the diseases of the circulatory apparatus, diabetes mellitus, anemias, diseases of the kidney, auto-intoxication and obesity are treated, among

other conditions. The abstracts are well made and Dr. Billings, the editor, has made some pertinent critical comments. The typography and the paper might be much improved. [J. M. S.]

An Introduction to Physiology. By William Townsend Porter, M. D., Associate Professor of Physiology in the Harvard Medical School, Part IV. Physiological Optics. The University Press, Cambridge, Mass., 1902. Small 8 vo., pp. 99.

The subject-matter in this work, which is difficult to most beginners, and hence but imperfectly understood by them, is here given in such a way (a graphic one as it were—which is the method that has been pursued by the reviewer with his own classes) that any one who will take the trouble to follow the directions offered, must have an adequate and a distinct idea of what the author intends to convey; and, above all, is made able to deduce the same and similar results by constructions of varied kinds and counter types.

Such a work, the expressed result of conscientious study, constant laboratory research, and an intimate knowledge of the requirements of those who are desirous to gain proper information of this special branch of physiology, is a pleasure to read. It offers itself in marked contrast to the ofttimes incomprehensible formulæ of the not-too-rare mathematical pedant whose sole aim is to mystify his hearers and readers by pursuing his course in some new and devious way—and whose one ambition is to be right, and yet not understood. It also avoids the pitfalls of uncertainty and even error of the none-too-zealous compiler of books (particularly ophthalmic ones) whose own knowledge being uncertain as to what is grain and what is chaff, is, in consequence, quite innocently (and ignorantly) disposed to give to the world a production that is neither right nor wrong: one that is simply valueless.

In a word, careful perusal of Professor Porter's fasciculus upon Physiological Optics at once shows that the book has been prepared by one who is thoroughly conversant with his subject, and who has the rare art of understanding how to impart knowledge to the student body. [C. A. O.]

Quain's Dictionary of Medicine, by Various Writers. Third Edition, largely rewritten and revised throughout, with fourteen colored plates and numerous other illustrations. Edited by H. Montague Murray, M. D., F. R. C. P., assisted by John Harold, M. B., B. Ch., B. A. O., and W. Cecil Bosanquet, M. A., M. D., M. R. C. P. New York, D. Appleton & Co.

The editor of this edition of Quain's well known Dictionary of Medicine tells us in his preface that the object has been to produce a book which will serve as a reliable and readily available work of reference for the practitioner and student. That is precisely the general scheme of the work as originally planned by the late Sir Richard Quain, with of course, such changes and additions as the lapse of time may seem to have required. It is entirely too voluminous a work for us to review in detail in these columns, but we desire to say, after an acquaintance of many years with the first edition of Quain's Dictionary, that we believe it to be one of the most useful and most accurate books of reference that can be placed in a physician's library. We have been in the habit of referring to it constantly and have very seldom been disappointed; and we believe that the present edition has brought the work thoroughly up to date and will continue to preserve its reputation. Its list of contributors extends over nearly nine closely printed pages, and includes the names of many of the best known British physicians and surgeons. Such a book cannot fail to be a small library of itself, and we take pleasure in recommending it, especially to those young members of the profession who are thinking about stocking their medical libraries.

[J. H. L.]

Atlas and Epitome of Special Pathologic Histology. By Docent Dr. Hermann Dürck of the Pathological Institute of Munich. Edited by Ludvig Hektoen, M. D., Professor of Pathology in Rush Medical College, Chicago. Vol. II. Liver, Urinary Organs, Sexual Organs, Nervous System, Skin, Muscles, Bones. With 123 colored Illustrations on 60 Lithographic Plates. Cloth. Pp. 129. Price $3.00 net. Philadelphia and London: W. B. Saunders & Co. 1901.

This is the second volume on Special Pathologic Histology of Saunders' Medical Hand-Atlases, which deals with the pathology of the liver, urinary organs, sexual organs, nervous system, the skin, the muscles and the bones. This work contains 123 excellent colored illustrations. In the text, which is clear and concise, all the subjects are well-treated. Special stress has been laid upon the relation between the microscopical and macroscopical appearance of pathological changes in organs. This volume fully maintains the standard of excellence shown in other editions of Saunders' Medical Hand-Atlases. [F. J. K.]

Traumatic Separation of the Epiphysis in Childhood. Kirmisson, in a lecture at the Trousseau Hospital, Paris, reported 2 cases of traumatic separation of the epiphysis of the lower end of the femur in children aged 7 years. There was marked deformity of the left knee in the first case, well shown in a diagram. (*Bulletin Médical*, January 25, 1902.) While the diaphysis protruded internally, the epiphysis was pushed outward. There was no effusion until the next day, though the leg was put in extension at once after the accident. As the effusion in the joint increased on the following days and fever appeared, the hemarthrosis was punctured under anesthesia, and the fragment put in a splint in good position. Recovery followed quickly. In the second case the injuries to the leg were so severe that it was necessary to amputate at the hip. This was successful. In the specimen the separation of the epiphysis can be plainly noted. In the treatment the great difficulty in reduction is due to the small size of the epiphyseal fragment. The condition is generally complicated by arthritis, ankylosis, etc., and arrest of development may follow. The condition is found *in utero* and up to 14 years of age, more often in boys than in girls. The cause is generally indirect force. The diagnosis is not difficult, considering the age of the child. The gravity of the prognosis varies. The treatment consists of reducing and rest afterward. The literature of the subject is fully quoted. [M. O.]

Urine Analysis in the Diagnosis, Prognosis and Treatment of the Diseases of Nutrition.—At a recent lecture at the Pitié Hospital, Paris, Dr. Albert Robin discussed urine analysis in the disease of nutrition. The functional disease creates the organic lesion. After dividing his subject into urinary analysis, respiratory chemistry, blood examination and the examination of the feces, Robin said that the urine shows the effects of assimilation and malassimilation. Normal constituents may be changed, and abnormal substances may appear, soluble and insoluble, organic and inorganic. In some cases a urine examination alone will permit the diagnosis of typhoid fever. The prognosis of diabetes is dependent on the urine examination; in diabetes, too, the result of treatment can be watched by means of the urine. The activity of various organs may be estimated, latent morbid processes and functional disturbances may be diagnosed, doubtful diagnosis may be confirmed, and the prognosis and therapeutics of some conditions may be indicated, all by the exact examination of the urine. (*Bulletin Médical*, January 11, 1902.)

[M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Medical Club of Philadelphia.—It is announced that the Medical Club will give a reception to Dr. P. M. Rixey, surgeon-general of the Navy, on the evening of June 14, at the Art Club, Philadelphia. Prominent naval officers who are stationed in Philadelphia will be among the guests.

Jewish Hospital.—At the annual meeting, held May 25, it was announced that an important addition would soon be made to the Jewish Hospital, at Tabor, Philadelphia. A children's ward will be built by the $40,000 bequeathed by Miss Emily Philips. A private hospital for pay patients will be erected by the $60,000 donated by Meyer Guggenheim, of New York. The new operating building, now in the course of construction, has been given by Mr. and Mrs. Marx Loeb. It is expected that this will be completed by September.

Woman's Medical College.—Twenty-eight women were graduated from the Woman's Medical College of Pennsylvania, at the 50th. annual commencement of the institution, held in the Academy of Music, Philadelphia, May 21.

NEW YORK AND NEW JERSEY.

American Medical Association.—The 53rd. annual meeting will be held at Saratoga, N. Y., June 10 to 13. The general session will open at 11 A. M., June 10, the various sections holding their first meetings at 2 P. M. Dr. Frank Billings, of Chicago, will deliver the address on medicine; Dr. Harry M. Sherman, of San Francisco, that on surgery, and Dr. J. M. Emmert, of Atlantic, Iowa, that on State medicine.

The Sternberg Dinner.—Members of the medical profession who wish to attend the complimentary dinner to Surgeon-General Sternberg, to be given in New York, June 13, may send their subscriptions to Dr. Biggs, 5 West 58th. street, New York.

A Suspicious Case.—By the steamship *Eleanor Mail*, which arrived at the New York Quarantine Station, May 21, a passenger from Pernambuco, Brazil, who had been ill over a week with symptoms very suspicious of bubonic plague, was removed by the quarantine commission to the hospital on Swinburne Island. As the captain had already thought of the possibility of bubonic plague, he had isolated the patient a few days after the symptoms first appeared. The steamer is, however, detained for disinfection, and no official verdict has yet been given as to the nature of the disease.

General Memorial Hospital, New York.—Mrs. C. P. Huntington has given $100,000 to the General Memorial Hospital for the Treatment of Cancer, to constitute a Collis P. Huntington Fund, the income from which is to be used for pathological research. This hospital was formerly called the New York Cancer Hospital.

700 Tainted Descendants.—According to Mrs. Annable, of Brooklyn, a woman of criminal tendencies, whose habits were of the lowest, died in 1827, aged 51 years. Her descendants, who number 800, have now been traced. Out of these 800, 700 are known criminals, having been convicted at least once. Three hundred and forty-two of them are drunkards, 37 were murderers and were executed for their crimes. This family has cost the nation $3,000,000, this being the sum paid out for their trials and executions.

Long Island College Hospital.—A new home for the Long Island College Hospital, at a cost of $400,000, is to be erected by J. R. Maxwell in memory of his brother, H. W. Maxwell, who during his life gave $100,000 to the institution, for the nurses' training school. Four pavilions will be built and those now used by the institution torn down. The board of regents proposes to change the name of the hospital, as soon as the new buildings are erected, to the Maxwell Long Island College Hospital.

SOUTHERN STATES.

Opposition to the Sternberg Bill.—The bill recently passed by the Senate providing for the retirement of Surgeon-General Sternberg met with decided opposition in the House of Representatives, May 23. Objection was made to the present consideration of the bill in its entirety in order that amendments providing for the promotion of 2 officers might be included in the bill.

The Texas State Medical Association has adopted resolutions advocating State control of tuberculosis and appropriating $200 for publishing and distributing literature on the subject throughout the State.

Army Medical Corps.—The Army Medical Board, which has been in session in Washington since April 3, for the examination of candidates for commissions in the Medical Department, has examined 6 classes, yet has found but 9 candidates qualified for appointment. This leaves 56 vacancies in the Army Medical Corps.

Cecil County Medical Society.—At the annual meeting held at Elkton, Md., May 20, Dr. William H. Welch, of Johns Hopkins University, delivered an address on infection and immunity. After an unusually clear exposition of the latest knowledge upon this intricate subject, he emphasized the difference between antitoxic and bactericidal serum. In the former class, in which are diphtheria and tetanus, isolated toxins caused immunization; the latter, among which are antipneumococcic, antistreptococcic and other serums, are obtained by active immunization of the horse with living or dead micro-organisms. In therapeutics, at present, the antitoxic serums alone are of practical importance, the others being of scientific interest, but of doubtful efficacy. He deprecated the fact that these serums should ever have been placed on the market, since they only tend to shatter the confidence of physicians in serumtherapy.

Tri-State Medical Society of Alabama, Georgia and Tennessee.—The 14th. annual meeting of this society will be held at Birmingham, Ala., October 7 to 9, 1902. Dr. F. T. Smith, of Chattanooga, Tenn., is secretary.

Military Surgeons of the United States.—The 11th. annual meeting will be held in Washington, June 5 to 7. The President of the United States, Commander of the Army, Admiral of the Navy, and many important statesmen will be present at the opening session. Beside scientific papers pertaining to military subjects, there will be an exhibit of surgical instruments and dressings, and an exhibition of the hospital corps drill will be given on the grounds of the Arsenal.

The Delaware State Medical Society will hold its annual meeting at Newark, June 3 instead of June 10, owing to the desire of some of the members to attend the meeting of the American Medical Association.

CANADA.

From Our Special Correspondent.

A Medical Council for the Dominion.—Dr. Thomas G. Roddick's bill for establishing a Medical Council for the Dominion of Canada has successfully passed both Houses of the Canadian Parliament and has had the signature of the Governor-General affixed to it. When the measure was before the Senate, an important amendment was offered subsequently concurred in by the Commons that no province shall be represented on the Council either by elected or appointed members until after the said act had been adopted by the legislature of the province and had therefore accepted registration under this Council in lieu of registration with the provincial board. Another clause was also added providing that the act shall not confer any power to open medical schools or give medical education. Dr. Roddick may well be satisfied with the result of his prolonged labors in view of the fact that this subject has been before the medical profession since 1867.

An Appointment at McGill University Medical School.—Dr. Wyatt Johnson, assistant professor of hygiene, has been appointed professor of hygiene in succession to Dr. Craik, who recently retired as dean of the McGill Medical Faculty.

The Question of Compulsory Vaccination in Montreal.—A short time ago the City Council rejected a by-law which sought to provide for compulsory vaccination in that city. This was done in face of the fact that the Provincial Board has power to compel municipalities to enact such legislation, and in face of the fact, too, that over 300 municipalities throughout the Province had complied with the order of the Board of Health of Quebec. The new by-law, which is to be submitted to Council next week, does not contemplate compulsory vaccination, but will seek

to lessen the danger arising from the after-effects of the operation. The new by-law provides that vaccination shall be performed by qualified physicians only, with a fine of $40 for any infraction thereof

Toronto Clinical Society.—The Toronto Clinical Society closed a very successful season, May 7, when the following officers were elected for the ensuing year: President, Dr. E. E. King; vice-president, Dr. G. R. McDonagh; corresponding secretary, Dr. W. J. McCollum; recording secretary, Dr. George Elliott; and treasurer, Dr. Geoffrey Boyd.

Medical Work in Labrador.—Dr. Wilfrid Grenfell, the English physician who is devoting his life to the amelioration of the fishermen of Labrador, writes that at present there is great destitution among the inhabitants. His work ranges from treating a compound fracture to making a pair of boots from the skin of a freshly killed seal. In the summer Dr. Grenfell journeys along the coast in a steamer, the hospital ship *Strathcona*; in winter his tours are made on dog sleds. He has recently established a third hospital at St. Anthony, on the North French Shore.

Consumption Sanatorium Burned.—At an early hour on May 21, the Laurentian Sanatorium, founded and conducted by Dr. Arthur J. Richer, of Montreal, at St. Agathe des Monts, was destroyed by fire. There were 15 patients in the institution at the time, one of whom, a woman, was a victim of the flames. Dr. J. A. Ferguson, the physician in charge, regardless of his own danger, alarmed the inmates, led and carried his charges to places of safety. For 5 years this institution has been conducted with distinct success, and was the only place of the kind in the province of Quebec. The value of the institution was $15,000; it had accommodations for 20 patients, and had a staff of competent attendants.

Montreal Dispensary.—At the fifty-second annual meeting of the Montreal Dispensary, held a short time ago, the secretary's report for the last official year showed that during the past 12 months 16,675 people had sought advice and treatment at this institution. They were divided as follows: Medical and surgical cases, 8,505; eye and ear, 2,069; women's diseases, 1,725; nose and throat, 912; skin diseases, 1,983; children, 1,327; dentistry, 154.

Montreal Civic Hospital.—The city council of Montreal has ultimately decided against the proposal for a dual hospital for the care of infectious diseases; but, according to a resolution passed recently in regard to the construction of this hospital, patients are to be cared for according to their religious beliefs. The hospital will be built on the pavilion system, the pavilions to be arranged in such a manner so as to allow a division of the nursing staff according to religious belief, Catholic and Protestant.

MISCELLANY.

French Guinea.—A new hospital is to be erected at Konakry, French Guinea, Africa, to be called the Ballay Hospital, in memory of Mr. Ballay, the founder of the French Colony there.

Bacteria on Money. From bacteriological investigations made at the Hospital du Bey, Algiers, it has been found that almost all varieties of bacteria occur upon currency. Metal, however, has a certain antiseptic effect, causing the bacteria to be short-lived. The action of gold is less marked in this respect than in other metals. Typhoid bacilli will live from 5 to 7 days on a gold piece, but die in less than 18 hours on other metals.

Increase of Cancer.—Wutzdorff has recently collected a great quantity of cancer statistics. During the 7 years, from 1892 to 1898, the deaths from cancer in Germany increased 18.5%. A satisfactory explanation of this increase in the number of deaths from cancer has not yet been found. In England, from 1881 to 1899, the increase in the deaths from cancer amounted to 56.3% among males and 32% among females. In the Netherlands, from 1874 to 1897, deaths from cancer increased more than 80%. In Switzerland also there has been a marked advance in the number of deaths from cancer in 1889 to 1898. In the United States similar conditions exist. In Massachusetts there died of cancer in the year 1856, per 100,000 inhabitants, males 12.9, females 24.5; in 1895, however, 44 and 94.4. In the State of New York the cases of cancer increased from 2473 in 1888 to 4117 in 1897.

The Smallest Microbe.—A Buenos Ayres scientist has discovered what is said to be the smallest microbe yet known. He says that it is much smaller than the influenza bacillus, and is only just discernible when magnified 1500 times. This tiniest of bacteria produces abscesses in cattle known in South America as manguea. The hotter the climate, the more fatal is the infection. If, however, the abscess is opened early, the progress of the disease is arrested and the animal saved.

Laboratory for the Study of the Abnormal Classes.—An amendment to the Sundry Civil Expense bill was recently introduced by Senator Hoar, of Massachusetts, and referred to the Committee on Education and Labor. This amendment provides for the establishment, in the Department of the Interior, of a laboratory for the study of the abnormal classes, such study being a development of work already begun under the Federal Government. This work includes not only laboratory investigations, but also the collection of sociological and pathological data, especially as found in institutions for the criminal, pauper and defective classes; as observed in hospitals, schools and other institutions; also investigation of anarchistic criminals, mob influence, and like phenomena. The causes of social evils are to be sought out, with a view to lessening or preventing them. These results will be collected and published. The amendment also provides for a director in the laboratory at an annual salary of $3500, to have the power to employ specialists to assist him, and such other help as may be necessary. For the expenses thus involved, together with the equipment of the laboratory, $10,000 are to be appropriated, to be available on the passage of the act.

Infectious Diseases.—Under date of May 27, the number of cases of cholera reported in Manila reached 1,165, with 935 deaths; in the provinces, 5,001 cases, with 2,878 deaths. The disease, however, is lessening in Manila. One case has appeared upon the U. S. transport *Hancock*, which will delay her departure for another 5 days.—Cases of plague continue to appear in Honolulu. A Chinaman died of the disease April 19, another death was reported April 29, and others May 7 and 8. One death also occurred from the plague at Kobe, Japan, May 22.

Obituary.—Dr. James Rose, at Waynesburg, Pa., May 21.—Dr. William H. Watkins, at Milwaukee, Wis., May 23, aged 54 years.—Dr. J. K. Niven, at Ironwood, Mich., May 17.—Dr. H. H. Howard Hill, at Everett, Pa., May 22, aged 57 years.—Dr. S. J. Morriss, at Atlanta, Texas, May 18.—Dr. Frank R. Reynolds, at Eau Claire, Wis., May 22.—Dr. John Vedder, at Saugerties, N. Y., May 22, aged 86 years.—Dr. George W. Archer, at Detroit, Mich., May 18.—Dr. John L. White, at Bloomington, Ill., May 13, aged 69 years.—Dr. John H. Van Eman, at Kansas City, Mo., recently, aged 62 years.—Dr. M. E. Zakrzewska, at Boston, Mass., May 13, aged 73 years.—Dr. Allen Fowler, at Salt Lake City, Utah, May 7.—Dr. John B. Wiley, at Gerardstown, W. Va., May 4, aged 74 years.—Dr. Adolph Schlernitzauer, at Millstadt, Ill., May 8, aged 84 years.—Dr. Sidney J. Lanier, at Oliver, Ga., May 9.—Dr. Alfred Desardins, at Marquette, Mich., May 7, aged 46 years.—Dr. John W. Godfrey, at Moweaqua, Ill., May 10.—Dr. Joseph L. Pope, at Bardstown, Ky., May 9, aged 72 years.—Dr. Campbell Slayden, at Dickson, Tenn., May 6.—Dr. Samuel G. Ade, at Chicago, Ill., May 11, aged 43 years.

GREAT BRITAIN, ETC.

The Diagnosis of Malaria.—At a recent meeting of the London Medical Society, Dr. Patrick Manson read a paper on the diagnosis of malaria from the standpoint of the practitioner in England. The pathognomonic indications of malarial infection are clinical, therapeutical and microscopical. Clinically, there are many signs and symptoms, such as fever, anemia, jaundice, enlarged spleen and liver, gastro-enteritis, tendency to spontaneous recovery and to subsequent recurrence. Periodicity, however, alone justifies a positive diagnosis. Quotidian periodicity, however, alone justifies the positive diagnosis. Quotidian periodicity, however, is valueless for the diagnosis; in fact, it is doubtful whether it ever occurs, though multiple infection by 2 kinds of parasites might simulate quotidian fever. Therapeutically, quinine never has failed to arrest malaria in England inside of 48, or, at most, 96 hours after administration. Therefore a periodic remittent fever, persisting after 10 gr. of quinine 3 times a day for 4 days, is not malaria. Quinine should not be given in tablets or pills. Microscopically, the diagnosis is most satisfactory, if un-

dertaken by one with experience. An amateur's results are valueless, whether positive or negative. Manson prefers the method described by Drs. Christophers and Stephens. He has never seen a case of indigenous English malaria. The point was emphasized that, although a positive diagnosis of malaria might be indicated in some given case, the presence of malaria does not exclude other diseases, but often predisposed to other infections; also that the development of latent malaria was favored by other infections, especially typhoid fever and tuberculosis.

Measles in Schools.—From the special report of Dr. Young, medical officer of health for Stockport, we learn that 2520 pupils were absent from school on account of an epidemic of measles. As the average absence from school for measles is 4 weeks, it will be seen that the result is a record of 10,080 weeks of education lost. In some towns a school is closed when the average attendance is diminished to the extent of 10% by one single disease. Dr. Young suggests that an outbreak of measles may be limited by closing the schools, for 2 reasons: by the removal of susceptible children from infected surroundings, and by the removal, from close contact with susceptible children of someone in an infectious condition.

The Etiology of Typhoid Fever.—At the sixth session of the Intercolonial Medical Congress of Australasia, held at Hobart, Tasmania, in February, Dr. Thomas Cherry, of the University of Melbourne, delivered an address on the etiology of typhoid fever, in which he observed that the study of the bacteriology of typhoid was rendered exceedingly difficult, because the disease was not readily transmissible to any of the lower animals. The bacillus coli communis and the typhoid bacillus are certainly members of the same bacterial group. Many cases are on record which show the long periods of time that typhoid bacilli exist without causing symptoms. Many mild cases of fever are really typhoid, forming an unsuspected means of spreading the disease. The contagion is spread in the great majority of cases by water. The origin, however, of isolated cases is in many instances absolutely unknown. He concluded that typhoid fever might be a composite disease or series of diseases caused by closely allied organisms. Typhoid fever at once disappears from a community when a proper system for the disposal of sewage is instituted. In hot countries, at least, flies and dust have some share in bringing about the contamination of water, milk and other articles of food. The length of time during which the bacilli could exist outside of the body was unknown, but there was evidence to show that contagion remained in contaminated soil for several years.

Notes.—On condition that no antivaccinationist occupied it, $5000 have been presented by an anonymous donor as a perpetual endowment of a bed in a Cheltenham hospital. —There are now 39,912 doctors and 4615 registered dentists practising in the United Kingdom.—A London medical journal says that American apples are cored, sliced and dried, sent to France, and there converted into cider. With the addition of carbonic acid gas and yeast and a little flavoring powder, the cider becomes champagne, and much of it goes to England, and is drunk under the delusion that it is of the best brand.—The ratio in Great Britain of children per marriage has fallen from 4.36 in 1884 to 3.63 in 1900.—The war against rats in the London docks has so far resulted in the destruction of nearly 120,000 rodents, the number being officially certified.—There are at present in London 52,000 persons aged more than 75 years.—No hurtful microbes were found in the air of the House of Commons when it was analyzed. The fact was established, however, that the atmosphere of the Chamber was too rarefied and dead. These defects, due to the methods of filtration and ventilation, are to be remedied.—A few years ago nearly one-twentieth of the inhabitants of Gloucester had smallpox. Out of a population of 42,000 36,000 were then vaccinated and the disease promptly disappeared.—Mr. G. A. King, of Eastbourne, has left real estate amounting to over £30,000, subject to two life interests, to Guy's Hospital.—During the months of January and February there were 800 deaths from typhoid fever in the British army. Notwithstanding the regulations regarding boiled water, the soldiers continue to drink out of brooks and rivers.

CONTINENTAL EUROPE.

The Prevention of the Spread of Cholera in Bosnia and Herzegovina.—The Austrian Government has established a most rigorous inspection for pilgrims returning from Mecca to Bosnia and Herzegovina. The so-called "pilgrims' shirts" undergo rigid inspection at the frontier, and, if anything suspicious is found, they are destroyed. The water from the sacred Zemzem Spring, which all the pilgrims bring with them, is boiled for a half hour before being allowed to enter the country.

Medical Examinations in Germany.—A pamphlet containing the regulations governing the practice of medicine in Germany has recently been published. The requirements necessary for a license are divided into 3 groups, necessitating 2 examinations, preliminary and final, and one year of practice at a university clinic or hospital. The preliminary examination must be passed at the university, not more than 4 candidates being examined at a time. Permission to come up for this examination is only granted to graduates of a "gymnasium" or "realgymnasium." Certificates from a foreign school may only be admitted as an exception. With the application for admission to this examination, the student must send proof of having studied 5 half years at a German university, though exceptionally the time may have been spent at a foreign university. He must also furnish proof of having done practical work in microscopical, anatomical, physiological, and chemical branches. The examination comprises anatomy, physiology, physics and chemistry, zoology and botany, lasting 4 days. Anyone failing twice is not re-admitted for examination. The final examination can be passed at any German university. At least 4 half years of study must have elapsed since the preliminary examination, and proof must be produced that the candidate has for 2 half years practised in the medical, surgical and obstetrical clinic: has, without assistance, treated 4 women at childbirth in the presence of a professor; has for half a year worked in an eye hospital, medical polyclinic, children's clinic, and special hospitals for throat, nose, ear, skin, and syphilitic diseases; has made studies in vaccination and gained the required technical practice, and has attended lectures on topographical anatomy, pharmacology and medical jurisprudence. His application for examination must be accompanied by his list of studies and a certificate of good conduct. This examination comprises general and pathological anatomy, medicine, surgery, obstetrics, insanity, hygiene and the specialties. If a candidate fail in one subject, he can reappear for examination on that subject from 2 months to one year later, according to his grade. If he does not come up for examination within 3 years, he is considered to have failed entirely. Whoever fails twice is not re-admitted. To take this examination costs the student about $50. After having passed, the candidate for the degree of M. D. must spend two years at a hospital or university clinic, of which time at least one-third is to be devoted chiefly to internal medicine. He may chose the place, but may not change it more than twice without permission. This year of practice may also be passed with a suitable medical man, for which, however, the sanction of the imperial chancellor is to be obtained. At the end of this year of practice, the candidate applies to the central authority of his country, enclosing all the required papers, and then only, if everything is satisfactory, receives his license to practise medicine in the German Empire.

Obituary.—The death is announced of Dr. N. J. de la Croix, pathologist to the Hospital of St. Peter and Paul, in St. Petersburg, aged 50 years, and of Dr. Florian Be[illegible], prominent orthopedic surgeon of Berlin, aged [illegible] years. —Dr. Trautmann, professor of otology and director of the polyclinic for diseases of the ear, in Berlin, died May 4, aged [illegible] years.—On the same day Dr. F. L. Goltz, well-known Strassburg physiologist, died, aged 68 years.—The death of Dr. N. Kalindéro, professor of medicine at the University of Bucharest, died April 29.—Dr. F. Frusci, professor of surgical anatomy and operative surgery, died recently at Naples.—Dr. Adolf Kussmaul, professor of theory and practice of medicine at the University of Heidelberg, died at Heidelberg, May 28, aged 80 years. He made a specialty of diseases of the stomach and introduced the use of the stomach-pump in medicine.—The death is also announced of Dr. Filhol, professor of paleontology in the Museum of Natural History, Paris, member of the Academy of Sciences and of the Academy of Medicine, aged [illegible] years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

May 10, 1902. (No. 2158.)

1. Remarks on the Surgical Treatment of Arteriovenous Aneurysm. FREDERICK TREVES.
2. Splenic Leukemia and Phthisis Combined in the Same Patient. G. PARKER.
3. The Blood in Cases Affected with Filariasis and Bilharzia Hematobia. ALFRED C. COLES.
4. Case of Infective Endocarditis Treated with Antistreptococcus Serum. H. M. COOPER and CYRIL OGLE.
5. Case of Fatal Anemia Presenting Some Unusual Blood Changes. O. K. WILLIAMSON and E. W. MARTIN.
6. Spontaneous Gangrene of Both Lower Limbs In a Man Aged 36. WILLIAM MITCHELL.
7. On Treatment of Hemophilia with Calcium Chloride. C. E. WALLS.
8. Notes on Cases Illustrating the Use of Adrenalin Chloride in Ophthalmic, Nasal and Aural Surgery. A. STANLEY GREEN.

1.—Treves describes 4 cases of **ateriovenous aneurysm**, 2 of which were examples of aneurysmal varix (direct communication between the artery and vein), and 2, instances of varicose aneurysm (indirect communication between the artery and vein through an aneurysmal sac.) In each instance the injury was inflicted by a bullet in the South African War. In the first, the superficial femoral vessels were involved; in the second, the popliteal artery at its point of bifurcation; in the third, the bifurcation of the common femoral; and in the fourth, the internal maxillary artery. All of the cases recovered after operation. The intoduction of the small caliber bullet into warfare has once more made arteriovenous aneurysms as familiar as they were in the past when bleeding was so indiscriminately resorted to. Spontaneous cure does not occur. The prognosis is more favorable in the varicose aneurysm than in the aneurysmal varix. The mortality from arteriovenous aneurysm is not so high as in aneurysms in which the artery alone is implicated. Gangrene is rare and rupture uncommon. Functional troubles are more marked and local disturbances greater, however, than in the simple arterial aneurysm. The muscles atrophy, the leg remains swollen and painful, ulcers form, and the limb becomes useless often in a rigid and vicious position, so that early treatment becomes imperative. Rest, posture, bandaging, compression and Hunterian ligature are to be condemned. The vessel or vessels should be ligated at the wounded point. The ideal procedure is that in which both the affected artery and vein are ligated above and below the abnormal communication, but this is not always advisable. When the condition is one of varicose aneurysm, it is well to excise the sac between the vessels. [F. T. S.]

2.—Parker reports the case of a man, aged 34 years, who complained of severe pain in his left side. The right side of his chest was remarkably flattened and contracted, and had been so for 10 years. Seven years before the author saw him, he was treated for tuberculosis of the larynx. On examination, there was marked evidence of old phthisis with a good sized cavity in the right lung. There was a hard mass in the splenic region, which exploratory incision proved to be an enlarged spleen. In May, 1900, the blood contained 4,000,000 erythrocytes, 16,560 leukocytes and 76% of hemoglobin. In March, 1901, the blood showed 4,000,000 erythrocytes, 238,000 leukocytes, of which 14% were myeolocytes. The spleen was still more enlarged; then the cough became troublesome and the patient had an attack of hemoptysis. From this time the condition of the blood fluctuated; at one examination the erythrocytes only unmbered 2,800,000, while the leukocytes numbered 640,000. The differential count of the leukocytes showed that the condition was one of **splenomyelogenous leukemia** as indicated by the large number of myeolocytes, the normoblasts, and even the number of eosinophiles and mast cells. The combination of **leukemia and phthisis** is very rare, only 2 instances having been previously reported. [J. M. S.]

3.—Coles has examined 2 specimens of **blood from cases of filariasis.** In one of these specimens he found 15% of eosinophiles and in the other 17%. It then occurred to him that patients infected with **bilharzia hematobia** might also contain an increased number of eosinophile cells. On examining the blood of a patient suffering from this disease he found 20% of eosinophiles. [J. M. S.]

4.—Cooper and Ogle report the case of a man, aged 26 years, who gave a history of rheumatic fever 4 years before. For 6 months he had been complaining of feeling out of sorts. He was markedly anemic and wasted; his tongue was dry and coated with brown fur; there was no abnormality in his lungs; his heart presented the usual signs of aortic regurgitation, together with a systolic murmur in the mitral area which was heard at the angle of the left scapula; his liver and spleen were not enlarged; and his urine contained a little albumin. Shortly after he was first seen, he had an attack of hematuria; then an attack of hemoptysis; this was followed by pain in one side of the head, accompanied by stupor but without loss of consciousness and without evidence of paralysis; he then had 2 attacks of diarrhea. His temperature varied between 102° in the evening and 97° in the morning; his pulse-rate varied between 120 and 104. The condition was regarded as one of **infective endocarditis** and a bacteriological examination of the blood gave a pure culture of streptococcus. Treatment with antistreptococcus serum was begun; 10 cc. were given every other day until a total of 110 cc. was used. This was accompanied by one-dram doses of a 5% solution of nuclein by the mouth. After 30 or 40 cc. of antistreptococcus serum had been administered, the patient's condition was very much improved. After he had received 100 cc., the temperature became normal and remained so for 7 days and the blood and albumin entirely disappeared from the urine, but the pulse-rate did not diminish. On the eighth day, the evening temperature rose, but, after another dose of antistreptococcus serum, it returned to normal and remained there for 3 days. The patient was much weaker, however, and died suddenly. [J. M. S.]

5.—Williamson and Martin report the case of a man, aged 43 years, who complained of weakness and shortness of breath. His hands and feet were slightly swollen and he had a slight cough of 2 months' duration. He was well nourished, but very anemic, and the skin about his nose suggested lemon color. Edema of the lower extremities and slight puffiness about the eyes were present; there were no hemorrhages; the temperature was 99°; the lungs were negative; there was a short systolic murmur heard all over the precordium; the pulse was 94; and the urine contained neither albumin nor sugar. The patient's condition became steadily worse and ophthalmic examination showed hemorrhages in the fundus of the left eye. Then his temperature became intermittent and he died. Blood examination showed a variation of the erythrocytes between 900,000 and 300,000; the leukocytes between 45,000 and 34,000; and the hemoglobin between 20% and 12%. There was marked poikilocytosis and many nucleated erythrocytes, the majority of which were normoblasts. The ratio of erythrocytes and leukocytes varied between 14 to 1 and 18 to 1. At the necropsy, nothing very characteristic was found, although there were many petechiæ on the pericardium, bilateral pleurisy with effusion, old tuberculosis of the lungs, fatty heart, fatty liver, enlarged spleen and fatty kidneys. The blood picture was a combination of **pernicious anemia and lymphatic leukemia.** [J. M. S.]

6.—Mitchell reports the case of a man, aged 36, who had an attack of influenza and pleurisy in November, 1899. In the spring of 1890, he had a similar attack, but in June, 1900, he was examined for life insurance and passed. In January, 1901, he complained of severe pain over the ball of the little toe of the left foot. The pain was worse at night and sensation was somewhat impaired. A diagnosis of rheumatism was made, and he was sent to a watering place and took hot-air treatment without benefit. Then a diagnosis of neuritis was made, but later definite **gangrene** set in and his **left leg** was amputated, 7 inches above the knee. The third day after the operation, the patient began to complain of numbness and tingling pain in the right foot. On the fifth day definite **gangrene** was evident, and his **right leg** was amputated. There was some sepsis in the right stump which yielded to treatment, and 5 weeks after the first operation, the patient was able to sit up. All the arteries in the amputated leg, from the popliteal down, contained thrombi. The thrombitic process had apparently started from below and spread upward. Sections of the posterior tibial and popliteal arteries of the left leg showed well-marked calcareous degeneration of the media and atheromatous thickening of the intima. [J. M. S.]

7.—Wallace reports the case of a woman, aged 25 years,

who had had a hemorrhage lasting 36 hours after the extraction of a tooth. She gave a very definite history of hemophilia, although the rest of her family were free from that diathesis. The patient was put upon 10-grain doses of calcium chloride, 3 times a day, for a week, and at the end of that time an incisor tooth was extracted with little more hemorrhage than is usually met with. After continuing the calcium chloride for another week, 3 more stumps were extracted without excessive hemorrhage. The patient then absented herself for 3 weeks, during the last of which she was without medicine. The extraction of another tooth was followed by a greater amount of bleeding than had been noticed on either of the former occasions. The doses of calcium chloride was then increased to 15 grains, after which all the septic stumps were extracted, 3 or 4 at a time, without undue hemorrhage. [J. M. S.]

8.—Green records 13 cases illustrating the use of adrenalin chloride in ophthalmic, nasal and aural surgery. Adrenalin chloride in a solution of 1 to 1000 obviates the difficulties which were formerly encountered in using solution of the gland substance. The solution requires dilution to the extent of 1 5000 for nose and ear work and 1 10,000 for instillation into the eye. The diluent should be either boiled water or salt solution, and the dilution should be kept in colored bottles as light changes it to a brick red color. In ophthalmic work its chief use is in inflammatory conditions of the conjunctiva, pannus, iritis, keratitis, sclerotitis and dacryocystitis. In aural work it is indicated in middle ear inflammations and polypi. In nasal work it may be employed for swellings of a vascular nature and hyperemias and in operations in which a bloodless field is desired. The nostril should always be plugged after operation, as bleeding may commence after 20 or 40 minutes and become very troublesome. [F. T. S.]

LANCET.

May 10, 1902.

1. A Baillie Lecture on the Seed and the Soil. W. HOWSHIP DICKINSON.
2. Embalming the Dead. J. G. GARSON.
3. The Quiescent or Latent Period in the Course of Grave Abdominal Inflammation. A. H. TUBBY.
4. Some of the Surgical Aspects of Glycosuria and Diabetes. LLEWELLYN C. P. PHILLIPS.
5. A Case of Poisoning by Morphine Injection Treated by Infusion of Salt Solution. EDWARD F. WILLOUGHBY.
6. An Interesting Phenomenon Occurring in Tachycardia. HERBERT D. EVERINGTON.

2.—J. G. Garson contributes an article entitled **embalming the dead.** He mentions that the art of embalming the dead has not been lost, but its practice has become well-nigh discontinued in many places at the present time. Modern methods of embalming are much simpler than those used by the ancients. He thinks embalming should always receive the direct attention of the qualified medical attendant of the deceased, and not be relegated to the undertaker or some one employed by him. The most suitable period to select for the process is about 24 hours after death, at which time rigor mortis has nearly passed off. Whether the operation is undertaken for temporary or permanent preservation of the body, the plan of procedure should include the introduction into the tissues through the vascular system of a preservative fluid and externally the same should be applied. If gas or fluid be present in the thorax or abdomen, it should be removed and the preservative fluid injected in its place. The fluid may be injected either into the brachial artery, femoral artery or abdominal aorta. He thinks that the abdominal aorta is most suitable on account of its large size, and, if venous engorgement follows the injection, this can be relieved by incising the vena cava. There is a great danger of rupture of a bloodvessel during the process of injecting the fluid, and care should always be exercised in not exerting too great a force. Pressure should be applied evenly. The preservative fluid should always be of sufficient quantity and energetic enough in its action to prevent putrefaction of the body for the period required, and must be sufficiently fluid to pass through the capillaries into the tissues. He states that a good preservative solution for the bloodvessels should contain bichloride of mercury, glycerine and methylated spirit. The formulæ of preservative fluids are mentioned, and, finally, he describes in detail the technique of embalming. [F. J. K.]

3.—A [illegible] quiescent or latent period in the course of grave abdominal inflammations. Under the [illegible] of the apparent cessation of symptoms [illegible] take place in the course of abdominal inflammations. This period is quiescent in that some of the symptoms disappear, and latent in that it precedes an aggravation of trouble, acute peritonitis and a fatal issue. It is well illustrated by a case of gastric perforation which [illegible] symptoms on Monday; these however, entirely subsided on Tuesday, and did not recur until [illegible] when they returned with great violence, [illegible] lying from hemorrhage from the stomach while being placed under the anesthetic. This quiescent period [illegible] in traumatic rupture of the intestine, [illegible] after at the intestine is subject to or bruising of the peritoneal connections of the viscera, such as the ovaries and tubes in some diseases of the genital organs of women and in acute appendicitis. Numbers of reported cases are referred to, which illustrate this period in all the foregoing conditions. In order to avoid a mistake at this time, when it is easy for the surgeon to go astray, especial attention must be given to pulse and temperature, rigidity, distension, vomiting and the leukocyte count. When distension is marked and persists longer than 24 or 36 hours after treatment, it is a very unfavorable symptom. Vomiting is usually absent during the quiescent period. Leukocytosis varies during this period, depending upon the situation and extent of the inflammation.

[J. H. G.]

4.—To be treated editorially when completed.

5.—Edward F. Willoughby reports **a case of poisoning by morphine injection treated by infusion of salt solution,** which occurred in a woman, who, on September 15, had taken 8 grains of sulphate of morphine in 3 hypodermic injections. She had not acquired any tolerance for the drug. About an hour and a half after the injection of the drug into the system, the patient became semiconscious, and soon sank into a state of profund narcosis. Three injections of 1 50 of a grain of sulphate of atropine and 1 10 of a grain of nitrate of strychnine were administered without any perceptible effect. A dozen injections of 20 minims of ether were also given with doubtful results. Artificial respiration was resorted to, as natural respiration had ceased, which was continued for 4 hours, when natural respiration was re-established. The strongest possible interrupted electric current was applied to the soles of the feet. Urine was drawn off through a catheter. A liter of physiological salt solution was infused into the subcutaneous tissues of the flank with the result that almost immediate beneficial effect followed. Duskiness and coldness of the skin disappeared and consciousness returned. He argues that the good result was obtained by elimination of the morphine from the vascular system into the gastro-intestinal canal. In order to prevent re-absorption of the drug he administered a weak solution of potassium permanganate giving the patient a wineglassful every 15 or 20 minutes until contraction of the pupils had passed off. He contends that the saline infusion was responsible for washing the poison out of the circulation and the permanganate as having aided the result by preventing re-absorption.

[F. J. K.]

6.—Herbert D. Everington reports **an interesting phenomenon occurring in tachycardia,** which occurred in a married woman, 36 years of age, who was admitted into the Royal Hospital for Women and Children, Waterloo Road, on August 3, 1900. The patient, at the time of admission, was suffering from articular pains and swellings. The pulse-rate was 128, its rhythm regular and its volume full; her temperature was 102 F. The patient was placed upon a milk diet, bicarbonate of soda and salicylate of soda were administered. On August 7 the alkaline salicylate mixture was replaced by salicylic acid. Up to August 9 the pulse-rate varied between 92 and 112 per minute at which time it became extremely rapid. It could not be counted at the wrist but with the aid of a stethoscope it was found that the rate of heart action was 224 per minute. On the following day the heart beats were 220 per minute. Potassium bromide, sodium salicylate and digitalis were administered. The pulse-rate was extremely rapid for several days and then fell. On August 25 the pulse-rate was 192 per minute. On August 22 the patient presented a [illegible]

cided typhoid appearance. On September 2, tachycardia was again present, which continued for some time. Gradually the patient's health became much better, and she was finally discharged from the hospital in December. The author notes that an interesting feature in this case was that during deep inspirations, invariably a marked reduction in the frequency of the heart-beats occurred.

[F. J. K.]

MEDICAL NEWS.

May 24, 1902 (Vol. LXXX, No. 21.)

1. Consumption Contracted in Colorado and Methods to Restrict its Spread. S. G. BONNEY.
2. The Treatment of Puerperal Eclampsia. WILLIAM E. PARKE.
3. Venesection and Transfusion in Puerperal Eclampsia. R. ABRAHAMS.
4. Puerperal Hemorrhage. GEORGE SEYMOUR.
5. How Shall We Treat Sepsis Following Abortion or Labor? W. O. HENRY.
6. The Etiology of Puerperal Toxemia. A. ERNEST GALLANT.

1.—S. G. Bonney in his article recommends that measures for the **restriction of consumption** should be enforced in Colorado and in other States. These measures are not advised because there is an inherently greater likelihood of its increase in Colorado than elsewhere, but because (1) it is recognized that consumption is a communicable disease within certain limitations; (2) that some degree of danger, therefore, exists in any locality, despite favorable climatic conditions; (3) that it is known frequently to be preventable, and hence imposes a direct obligation upon society to secure all possible means of prevention. The author also gives certain rules to secure prevention: (1) Compulsory notification and registration of all cases of pulmonary tuberculosis; (2) the education of the consumptive himself; (3) special detention institutions for the ignorant or vicious; (4) state sanatoria; (5) segregation hospitals for the hopelessly ill; (6) no interference with personal rights, family ties, etc., except under certain conditions; (7) periodical disinfection of apartments, etc.; (8) prohibition of expectoration upon the sidewalks, etc.; (9) separate and distinct methods of instruction directed to the general public; (10) public attention drawn to a proper mode of living, occupation and environment, including the hygiene of the home with reference to ventilation and sunlight; (11) formation of societies for the study and prevention of tuberculosis; (12) government and municipal supervision of the construction of public buildings, tenement houses, factories, commercial establishments and conveyances. [T. M. T.]

2.—W. E. Parke says that treatment should begin before **convulsions** occur and may be conveniently considered under (1) preventive and (2) curative. Under the **first division** the use of a milk diet with lime water or carbonated water is advised as the best diet. Then stimulation of all the emunctories, the chief ones being the bowels, skin and kidneys, and in a minor degree the lungs. For the **bowels** a dram or 2 of phosphate of soda may be given, well diluted with hot water before breakfast, supplemented once or twice a week by fractional doses of calomel before retiring; aloin, belladonna and strychnine pill may be added, if necessary. The **skin** should be kept active by hot baths of 20 minutes duration twice a week or even daily. The patient can be wrapped in blankets and surrounded by hot-water bottles or hot-air baths may be given when the conveniences are at hand. For the **kidneys** the copious use of water in addition to milk is advised. Basham's mixture is a favorite remedy. If a more active diuretic is desired, calomel, squills and digitalis are recommended. If the pulse is of high tension, nitroglycerine is advised for a brief time. Suitable exercise in the pure air has some value. In the **second stage**, if the renal insufficiency continues, labor must be induced. For the treatment of the convulsions themselves **venesection** in the strong is of good service; 12 to 30 ounces may be withdrawn. Inhalations of chloroform can also be used. **Veratrum viride** has been used in 10 minim doses of Norwood's tincture with good results. **Chloral** and **bromide** are valuable adjuncts to the medicinal treatment. **Morphine** is not advised. The use of **normal salt solution**, either under the skin or into the bowels fulfils 2 valuable indications: (1) That of diluting the poisons in the blood; (2) that of increasing the activity of the kidneys thus getting rid of the waste products of metabolism. If there is a desire for prompt action of the bowels, 2 or 3 drops of **croton oil** placed on sugar on the back of the tongue will have the required effect. [T. M. T.]

3.—In Abrahams' experience the abstraction of blood in **eclampsia** produces: (1) An immediate favorable change in the woman's appearance; the cyanosis of the face, the rigidity of the muscles, the spasms and twitching which are often noticed even during the stage of deep coma all stop at once; (2) the pulse, be it ever so hard, loses its tenseness; (3) the coma, no matter how deep, yields either abruptly or slowly, but surely. In **transfusion** he found (1) improvement in the pulse; (2) that it induces free sweating and free micturition; (3) it produces intense thirst in the awakened patient which causes her to drink copiously, and this is very desirable. [T. M. T.]

4.—George Seymour gives the principal causes of **antepartum hemorrhages** as follows: (1) Atony of muscles, bloodvessels and nerves of the whole system, especially of the uterus and its adnexa; (2) accidents giving rise to such physical disturbances as may come from excessive cohabitation, intense mental emotions and violent passions, injuries from falls, blows on the abdomen, coughing, vomiting, lifting heavy weights, etc.; (3) criminal or accidental abortions, with retention of a whole or a part of the placenta; (4) abnormal insertions of the placenta with the varied forms of placenta previa, from the simple adhesions of the placental border down to the inner cervical ring to the implantation of the placenta centrally over the os internum, so that after dilatation of the os the placenta only can be felt; (5) neoplasms of the uterine body, especially fibroids; (6) ectopic pregnancies and hematomata. [T. M. T.]

5.—W. O. Henry sums up the treatment of this condition as follows: (1) Remove early with the finger and sharp curette, flushing all debris, decidua, bloodclots and sloughing tissue which may be infected, from the uterus and from all raw substances of cervix, vagina and vulva; (2) dry all of these raw surfaces and freely apply to them 95 per cent. carbolic acid, washing away the surplus with sterile water; (3) unless hemorrhage requires leave no tubes or packing of any kind in either vagina or uterus; (4) have simple carbolized, 2 per cent., vaginal douche used twice a day; (5) open the bowels freely with calomel, ½ grain every hour for 4 hours, to be followed by Rochelle salts until sufficient action has occurred; (6) give quinine, 3 grains, every 4 hours, followed by tincture of the chloride of iron, 15 drops, in water; (7) give good nourishment, with milk, eggs and stimulant every four hours; (8) let this be the routine **early treatment**; (9) when fixation of the uterus occurs and infiltration takes place in Douglas's cul-de-sac or in the broad ligaments, or when the tubes or ovaries fill with pus in acute cases, open promptly and drain through the vagina; (10) if multiple abscesses occur in the uterine walls, if the walls become badly infected or, if necessary in order to secure perfect drainage for a badly infected pelvic cavity, remove the uterus and all else necessary by the vaginal route.

[T. M. T.]

6.—A. E. Gallant in his article on the **etiology of puerperal toxemia** concludes as follows: (1) Puerperal toxemia is due to the implantation of pyogenic bacteria within the genital tract before, during or after labor, in which they find a well-tilled soil, of the right temperature, moistened with the necessary saline fluid, upon which they thrive and, multiplying, living or dead, produce chemical substances (toxins), which, when absorbed into the system, induce the condition known as toxemia and give rise to the symptom complex designated sapremia and septicemia. The introduction of micro-organisms is, in the larger proportion of cases (barring gonococcic cases), an avoidable offence. Unfortunately, infection from external sources is not rare: therefore, it is the imperative duty of nurse, student and physician, when in charge of a pregnant or puerperal woman, conscientiously to practise asepsis.

[T. M. T.]

MEDICAL RECORD.

May 24, 1902.

1. Radiotherapy for Cancer and Other Diseases. WILIAM J. MORTON.
2. Benign Tumors Complicating Pregnancy. BACHE M. E. EMMET.
3. Malignancy Complicating the Pregnant State. S. MARX.
4. Uterine Displacements Complicating Pregnancy. EDWARD A. AYERS.
5. A New Substitute for Silver Nitrate. ABERT C. BARNES. and HERMANN HILLE.

1.—William J. Morton contributes an article on **radiotherapy for cancer and other diseases.** He concludes as follows: (1) Radiotherapy broadens our conception of the possibilities of the therapeutics of modern medical science. (2) The X-ray has a general application for the relief of pain. (3) As to technique, a standardization as to the apparatus and its capacity, as to duration and frequency of treatments and distance of the tube, is recommended to operators. (4) **The X-ray has a curative effect in internal cancer** and other internal diseases. (5) For superficial disease a medium soft tube may be used, for internal cases a hard tube. The hard tube is applicable, however, in all cases. (6) X-radiation is recommended prior to any operation, to clear the tissue of cancer particles and foci, and to circumscribe the disease. (7) X-radiation is recommended after operation to preclude a recurrence. (8) X-radiation may be recommended in place of an operation, and may be preferable to one for the reason that operation secures but a comparatively moderate percentage of permanent recoveries, and because up to date X-ray procedure shows a continued improvement in cases, and a percentage of cures which will, undoubtedly, compare favorably with surgical operation. (9) There is danger to the patient or uncertainty as to what might be accomplished when the X-ray is employed by immature operators. (10) In X-radiation we possess more nearly a solution of the problem of curing cancer than by any other method of treatment. [T. L. C.]

2.—B. M. E. Emmet discusses **benign tumors complicating pregnancy.** He sums up his convictions as to treatment by stating that he would willingly operate on young non-pregnant women, who may expect to become so at any time, and remove any fibroid of the uterus which is accessible. Should the young woman be recently pregnant he would remove such growth if it were large, wherever situated. If it had grown slowly and was small, he would leave it if in the body, but remove it if in the lower segment or neck. If the patient be midway in pregnancy and such growths be discovered, he would leave them alone absolutely if they were in the body and not giving rise to trouble. If in the lower segment or neck he would temporize, seeking to crowd them out of the pelvis and try to tide over until the uterus has become thoroughly accustomed to the pregnancy, when he might still hesitate about interfering at all, but watch and choose his method at the time of labor. Possibly no interference may be necessary, or it may prove desirable before that time to induce premature labor. Should such growths be discovered only in the late months, he would operate only if they grew up in the neck and of such size as to threaten or impede delivery. In this event he would operate from below. Tumors may be so general and threatening that one may be obliged to remove the whole uterus even early in pregnancy. [T. L. C.]

3.—S. Marx considers **malignancy complicating the pregnant state.** The most important subject to be considered relates to the treatment. The physician must chose between terminating the pregnancy and in a few days extirpating the offending organ, performing both operations at the same time. He discusses the choice of operation which may be followed. In his opinion, there is no doubt that in the earlier cases the ideal method is the vaginal route, preceded by vaginal Cesarean section. For those tumors that are discovered too late to render a radical cure by any operation, there remains but one factor to be taken into consideration, namely the unborn child. Generally speaking, in those occasional cases in which the patient is the victim of malignant growth in some distant organ and pregnant at the same time, there is no indication for the physician to interfere unless he feels that the pregnancy is an associated evil factor in the case. He reports 2 cases of such emergencies which he has encountered. [T. L. C.]

4.—E. A. Ayers discusses **uterine displacement complicating pregnancy.** He believes that they best permit of classification according to cause rather than to variety and he offers the following as fairly satisfactory: **Displacements due to uterine sources.** These embrace retroversion and flexion, anteflexion and anteversion, prolapsus, incarceration. **Adhesions.**—To bladder, to rectum, to abdomen, (ventrofixation, suspensio uteri), to broad ligament, and to intestines. **Peri-uterine pressure.**—Pelvic abscess, appendicitic abscess, ovarian tumors and cysts, hernia uteri, hernia intestinalis, kidney (floating, sarcoma), bladder (urinary distention), extra-uterine pregnancy, myomata, intestinal distention. These various conditions are discussed at length. [T. L. C.]

5.—A. C. Barnes and Hermann Hille describe **a new substitute for silver nitrate.** The present communication deals with a **derived proteid** heretofore undescribed and its chemical combination with silver. This product is called **silver vitelline** and is in the form of a dark brown powder. The chemical and physical properties are claimed to be unique. It contains 30% of silver, twice the amount of any proteid silver heretofore produced. The extreme solubility of this silver compound is remarkable. One ounce of it is freely and completely soluble in less than a dessertspoonful of water. Solutions of silver vitelline, no matter how concentrated, do not precipitate albumin or sodium chloride; hence it can have no **coagulating or caustic effects on mucous membranes** nor can it be chemically changed by their secretions. A number of clinical reports concerning the effects of this compound in the treatment of gonorrhœa and other conditions are included in the paper. They are favorable without exception. [T. L. C.]

THE NEW YORK MEDICAL JOURNAL.

May 24, 1902. (Vol. LXXV, No. 21.)

1. Pathology of the Tissue Changes Caused by the Röntgen Rays, with Special Reference to the Treatment of Malignant Growths. CARL BECK.
2. Albumin in the Urine. A New Way of Applying Nitric Acid and Other Reagents. L. NAPOLEON BOSTON.
3. Suprapubic Prostatectomy. FLOYD WILLCOX McRAE.
4. Tracheal Injection in the Treatment of Bronchial and Lung Diseases. LARUE D. ROCKWELL.

1.—C. Beck distinguishes 3 different degrees of burns from the X-ray: The first degree being characterized by the symptoms of hyperemia, the cells being infiltrated and the temperature somewhat higher. In the second degree there is the formation of blisters, the clear or yellowish contents of which lift the corneous from the mucous stratum of the rete Malpighii. The third and gravest degree is characterized by the escharotic destruction of the irradiated tissues. The most characteristic difference between ordinary burns and the integumental changes produced by the Röntgen light is the fact that the latter do not manifest themselves before the lapse of a period of incubation as a rule about 2 weeks. At first there is a light later itch, redness and finally, the skin becomes brown and scaled. After a few weeks there is complete recovery. Sometimes slight pigmentation of the integument remains. In one of the author's cases of lupus treated this way it was necessary to irradiate 15 times before results occurred. It was not until the twentieth exposure that the redness decreased and some of the nodules began to shrink. After the twenty-fifth exposure the ulcerations had cicatrized, the scabs had disappeared and no nodules were found. The redness still persisted for 6 weeks. [T. M. T.]

2.—L. N. Boston advises the following method when

examining for albumin by the nitric acid test: A pipette is filled with from one to one and a half inches of the urine to be tested. Then this pipette is either carried under a stream of water and then dried by a towel, or all urine is removed from its surface by a damp towel. This pipette with its contained urine is placed near the bottom of a bottle containing pure nitric acid, when the pressure of the index finger is loosened and the acid allowed to flow gradually up into the pipette. When the pipette is seen to contain about the same amount of the acid and of the urine, the finger is again pressed firmly and the pipette removed from the bottle and held toward the light on a level with the eye, and, if albumin is present, a distinct white cloud in the form of a ring appears at the zone of junction of the urine and acid. This ring is often intensified by placing the pipette in different lights or against a dark background. The hand when placed back of the pipette and carried slowly above and below the level of the ring serves this purpose. The following important points of this method are: (1) It takes but a few seconds; (2) it is easily executed and the fact that the albumin ring is not affected by the jarring of the pipette, due to its being formed in a tube of small caliber; (3) the small quantity of both urine and reagent needed; (4) the unnecessary use of test-tubes. [T. M. T.]

4.—L. D. Rockwell reports a marked improvement of the condition of 2 cases **treated by tracheal injections.** The medicines used are volatile substances of thoroughly tested germicidal power and are held in solution by sterilized olive oil, which, when thrown into the trachea, spreads itself over the bronchotracheal walls, giving a considerable surface for volatilization, and thus the currents of respiration are constantly loaded and carry these germicidal vapors into all portions of the lungs where the air penetrates. The solution is then absorbed and reaches the deeper structures. Being taken into the circulation, it reaches all parts of the system, and produces a secondary effect in its elimination, as the breath of the patient is found loaded with the odors of the medicines and the odor is also detected in the urine. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 22, 1902.

1. An Abstract of Some of the Prevailing Opinions on the Periods of Incubation. Observation and Isolation of Some of the Infectious Diseases. ELBRIDGE G. CUTLER.
2. Gunshot Wounds of the Knee Joint by the Projectile of Reduced Caliber. LOUIS A. LAGARDE.
3. Birth- and Death-Rate as Influenced by Obstetrics and Gynecic Progress (Concluded). GEORGE J. ENGELMANN.

1.—Will be abstracted when concluded.

2.—Louis A. LaGarde, Major and Surgeon of the United States Army, discusses **gunshot wounds of the knee joint by the projectile of reduced caliber.** Gunshot wounds of the knee joint during the time of war-hospitals were divided in the following manner, and may, according to the author, be similarly classified now. (1) Simple perforation of the synovial sac without accompanying lesions of any bone. (2) Injury to the joint with lodged ball. (3) Injury to the joint exhibiting guttering of the articular ends of the bones. (4) Complete perforation of the bone, traversing the joint in different directions. (5) Implication of the joint by fissuring and comminution of the bones entering into its formation. During the pre-antiseptic period the treatment employed was: (1) Amputation; (2) conservatism; (3) excision. This was followed by a clean wound treatment, inaugurated by the advent of antisepsis. According to LaGarde the predictions of von Coler, that, if it be found that wounds by the smooth bore are aseptic, joint wounds will be the most favorable of all bone injuries to treat, have been fully established, as the following recapitulation from the author's article shows: (1) We find that the mortality of gunshot injury of the knee joint in the Civil War was 53.7%, and as amputation was universally done all those who recovered escaped with the loss of a limb, unfit for duty; (2) that 33 cases of gunshot wounds of the knee produced by the larger caliber lead bullet in campaign, reported by Reyher and von Bergmann, treated antiseptically, gave a mortality of 11.1%; (3) that 62 cases produced by a variety of missiles reported by the Surgeon-General since 1898, similarly treated, gave a mortality of 8%, and that 45.6% of those who recovered were restored to duty; (4) that of 19 cases in the Santiago campaign by the reduced-caliber bullet, the mortality was *nil*, and that 73.6% of the wounded recovered fit for duty. It is thus seen that the humane features of the reduced caliber bullet have operated not only in diminishing the mortality in gunshot injuries of the knee from about 8 or 11 % to *nil*, but that it has increased restorations to duty 28%, as shown by comparing the last 2 tables. [M. R. D.]

4.—The author's conclusions are that a careful review of the figures in his article shows that obstetrics and gynecic progress has left no distinct impress upon the record of vital statistics comparable to the decreasing death-rate and the control of epidemics which mark the development of medical science. The fecundity of woman has decreased, and still-birth is somewhat decreasing in Europe, but little here. Antisepsis has caused some reduction of death in childbirth, less in this country than in Europe, in spite of the midwife abroad. The death-rate in private practice and in the community is still greater than in most maternities. The high fetal mortality in illegitimate labor is distinctly attributable to criminal interference. Decreasing fecundity is due to the deteriorating influences of refinement of higher civilization, of luxury and the intentional limitation of the family. [M. R. D.]

JOURNAL OF AMERICAN MEDICAL ASSOCIATION.

May 24, 1902.

1. The Treatment of Inoperable Septic Peritonitis. HORACE G. WETHERILL.
2. The Neuroses of the Heart. HERMAN H. HOPPE.
3. Acute Congestive or Inflammatory Glaucoma. CHARLES J. KIPP.
4. Case of Cesarean Section under Spinal Anesthesia. S. R. HOPKINS.
5. A Case of Blastomycetic Dermatitis (?). JOHN GLENDON SHELDON.
6. Acute Anterior Poliomyelitis in a Youth of 18 Years. Remarks on the Sensory Symptoms. FRANK R. FRY.
7. Some Clinical Aspects of Chemistry. CHARLES P. EMERSON.
8. Appeal for the Early Treatment of Squint. NELSON MILES BLACK.
9. Attendants and Nursemaids. HELEN C. PUTNAM.
10. The Evolutionary Aspect of Infectious Diseases, with Especial Reference to the Local Venereal Diseases. (Concluded.) G. FRANK LYDSTON.

1.—Horace T. Wetherill, after a discussion of **the treatment of inoperable septic peritonitis,** summarizes his views as follows: (1) The treatment of septic peritonitis by surgical measures, on the one hand, or by rational medical measures, on the other, must be determined in each case first through a carefully made differential diagnosis as to the source of the infection; second, through an estimate of the apparent virulence and diffusion of the infection, and third, through consideration of the elapsed time since the infecting material was injected into the cavity. (2) Infections from the intestines, vermiform appendix and oviduct are apt to be dangerous in the order given, because of the relatively greater mobility of the first and then the second and third, and of the greater relative distribution of their contents, which favors and promotes diffusion of infection and prevents plastic closure of the leaking viscus. (3) Physiologic rest of the intestines favors limitation of the area of peritoneal involvement and the saving of life, and is best attained by the maintenance of an empty bowel and the avoidance of cathartics; this means lavage, fasting and no salts. If enemata are used for clearing the rectum, as may be required, they must be small in amount and injected with the utmost care from a low bag. (4) Cases of diffuse peritonitis with profound local and general symptoms must be regarded as being inoperable, inasmuch as the interests of the patient and the requirements of good surgery both demand that untimely surgical measures be not employed when better results may be had with simpler and safer ones. (5) Early operation, before diffusion has taken place, is safe in most instances to be advised, if the environment be favorable and an experienced surgeon at

hand. Interval operations are certainly advisable after recovery from a diffuse peritonitis from any source.
[J. H. G.]

2.—Herman H. Hoppe contributes an article **on neuroses of the heart.** He mentions that nervous affections of the heart may be caused by a derangement of the nervous system locally in the heart, by faulty conditions of the nerves leading to the heart, disturbances in the center in the medulla, and, finally, by a derangement of the nervous system as a whole, such as occurs in hysteria and neurasthenia. He discusses these neuroses under 3 headings: (1) Neurasthenia cordis; (2) tachycardia; and (3) bradycardia. He discusses at some length 4 varieties of neurasthenia of the heart which are: (*a*) Typical neurasthenia of the heart; (*b*) arrhythmia of the heart; (*c*) pseudo-angina pectoris; and (*d*) nervous bruit. [F. J. K.]

4.—Hopkins presents the history of a case of **Cesarean section performed under spinal anesthesia,** which he believes shows the superiority of this method over ether or chloroform, because of the relaxed condition of the uterine muscles likely to obtain with the patient anesthetized by either of the latter methods. After the operation, the uterine contraction was prompt, vigorous and perfect, and the hemorrhage was less than usual when the child is born *per vias naturales.* The operation required 40 minutes, and anesthesia was profound during that period, though the tactile sense was not lost. The mother made an uninterrupted recovery, and left the hospital at the end of 5 weeks.
[W. A. N. D.]

5.—John Glendon Sheldon reports **a case of blastomycetic dermatitis** which occurred in a Polish woman, 32 years of age. This case came under his observation in May, 1901, with the following history: The patient noticed a small, firm, slightly tender swelling in the right angle of the lower jaw, which was located under the skin and appeared to be freely movable. The mass developed into an abscess, and ruptured, leaving a small ulcer. The ulcer increased in size. The process extended rapidly. Induration and swelling of the tissues occurred, followed by pus formation in some areas. For several months the right side of the face, neck and the right ear were affected. The disease continued to progress, and, finally, involved the face, neck, ears, forehead and the scalp in places. During the course of the process, the patient complained of local pain, tenderness and itching; difficulty in eating and speaking occurred on account of the involvement of the lips. As the tissues about the eyes became involved, progressive dimness of vision followed. The patient's general health was not impaired. The blood revealed a polymorphonuclear leukocytosis. There was no increase of eosinophiles. The borders of the diseased areas were well defined, and in many parts surrounded by apparently healthy skin. In some parts the diseased skin was markedly elevated. Healed areas presenting a somewhat atrophied appearance were scattered here and there. Some of the areas which presented the seat of progressive involvement of disease showed papillomatous growths, abscesses, crusts and ulcers. The abscess cavities contained cocci and pus cells. Some of the smaller abscesses also contained globular and budding bodies, supposed to be yeast fungi. The larger abscesses did not contain yeast fungi. The author states that the treatment was unsatisfactory. The treatment which seemed to be of greatest service was curetting, followed by applying iodine and guaiacol. [F. J. K.]

6.—Frank R. Fry reports **a case of acute anterior poliomyelitis** which occurred in a man, 18 years of age, who came under his observation on January 25, 1901, 3 months after the onset of the attack. On October 13, 1900, the patient had a febrile attack accompanied by much pain in the back and thighs, which was followed by acute paralysis of the lower extremities. During the first 2 days of his illness, the pain in the loins and thighs was intense, and, 2 days after the onset, paralysis of the lower extremities was complete. The painful stage lasted from 8 to 10 days, after which time some pain still remained in the paralyzed members for about a week. Slight voluntary movement re-appeared in the right leg, but none in the left during the fourth week of his illness. Three months after the onset of the illness the muscles of the lower extremities were found atrophied. Contractures were present in the flexors of the left knee and foot. All of the atrophied muscles presented reactions of degeneration. Careful sensory tests showed light obtundity. The author discusses at some length the sensory symptoms of acute anterior poliomyelitis and summarizes as follows: (1) Cases of acute anterior poliomyelitis with no noticeable sensory symptoms. These are rare, at least in adults and in children old enough to express themselves. (2) Cases of acute anterior poliomyelitis with severe pain and hyperesthesia in the paralytic members in the onset and lasting for a variable time. These cases are also rare. (3) Cases of acute anteror poliomyelitis in which sensory disturbances fall between the extremes of numbers 1 and 2. These are the usual cases. (4) Cases of multiple neuritis with unusual sensory symptoms and distribution. (5) Cases of so-called "multiple neuritis of the motor type," with few or no sensory symptoms. (6) Cases in which multiple neuritis and poliomyelitis are associated. Such cases have been pathologically demonstrated. They are difficult to diagnosticate, and certainly are not frequent. They are caused by some widespread and intense toxic process, producing grave general symptoms. (7) Miscellaneous conditions, as acute ascending paralysis, "family periodic paralysis," myasthenia, hysteria, etc., which, in the differentiation under consideration, will hardly create confusion when carefully studied. [F. J. K.]

7.—Charles P. Emerson contributes a very interesting article which deals with **some of the clinical aspects of chemistry** in all branches of medicine. [F. J. K.]

8.—Nelson Miles Black makes a plea for **the early treatment of squint.** He emphasizes that the treatment of squint should be begun as soon as slight deviation of the eyes is noticed, and should consist of: (1) The maintenance of fixation in the deviating eye to prevent deterioration of vision in that eye. (2) The correction of all refractive errors. (3) The exercise of the fusion faculty, and when that is well developed, if the deviation is not corrected, resort to operative measures to produce approximate parallelism of the axes; the desire of fusion developed by the exercise of this center will then maintain parallelism and binocular vision. [F. J. K.]

9.—Helen C. Putman, while not an advocate of less preparation or prices for nurses ranking like the present graduate, contends that there is a widespread need and legitimate demand for women to care for the sick, in suitable and selected cases who shall be less expert and less expensive than the graduated nurse. [F. J. K.]

AMERICAN MEDICINE.

May 24, 1902.

1. The Physical and Dietetic Treatment of Valvular Heart Disease During the State of Perfect Compensation.
CARL VON NOORDEN
2. Symptomatology, Diagnosis and Differential Diagnosis of Neuritis. SYDNEY KUH.
3. The Vermiform Appendix as a Cause of Intestinal Obstruction. J. E. SUMMERS, JR.
4. Electrolytic Hemostasis in Vaginal Hysterectomy for Cancer; Report of Two Cases.
ANDREW J. DOWNES
5. Two Cases of Stenosis of the Pylorus.
FRANK M. MURDOCH
6. Contributions to Practical Therapeutics.
ALBERT C. BARNES and HERMANN HILLE
7. Suppurative Otitis Media and some of its Dangers.
E. OLIVER BELT.

1.—Carl von Noorden discusses the **physical and dietetic treatment of valvular heart disease during the stage of compensation.** He mentions the belief of former years that the foremost principle of treatment was absolute rest. It is one of the greatest therapeutic achievements that [illegible] emancipating himself from this doctrine, demanded that a heart with valvular disease should not be rested but on the contrary should be exercised as much as possible. It is important for patients to understand that they must not unduly spare themselves. Palpitation of the heart and shortness of breath must under no circumstances be produced by exercise taken. Obesity must be prevented and von Noorden lays down the **general dietetic rules of treatment.** He describes the value of systematic muscular exercise, and especially emphasizes the value of **walking up**

hill. The patients should ascend slowly, breathing deeply and regularly. The especial advantage of walking is that the exercise may be graduated carefully. He mentions **hydropathic treatment,** especially the Nauheim baths. Unfortunately not every case of heart disease is fit for this treatment. The most suitable patients being those whose hearts are as yet in a state of perfect compensation. von Noorden states that for the last 2 years he has employed with great success the **electric baths of** Dr. Schnée, whose apparatus and methods he describes. [T. L. C.]

3.—J. H. Summers, Jr., reports the case of a patient operated upon, in whom the appendix acting as a diverticulum caused an **acute intestinal obstruction.** Recovery followed. [T. L. C.]

4.—A. J. Downes reports 2 cases in which **vaginal hysterectomy** was performed for cancer according to the method of Dr. Byrne. The author states that results seem to corroborate Byrne's claim that amputation and hysterectomy within the peritoneal covering of the uterus by means of his galvanocautery knife, while a minor operation gives as good if not better results than any of the other numerous major operations. The reason is that the cautery knife destroys cells in direct contact with it and seals the lymphatic vessels and thus adds something to the severed tract that prevents absorption or dissemination through it. The method has its limits in cases in which there is not much migration beyond the mucous lining of the cervix. Downes states that he has now performed electrothermic vaginal hysterectomy 4 times including the 2 cases here reported for cancer. All the patients recovered. The cases described in this paper were operated upon respectively in November and December last. [T. L. C.]

5.—Frank W. Murdoch reports 2 cases of **stenosis of the pylorus.** Both patients were men of the same age and, up to the time of operation, their histories were very similar. The physical examination, as well as the chemical analysis of the gastric secretions, pointed in each case to a **benign stenosis of the pylorus.** The subsequent histories of these patients are, however, very different. To-day one is alive and in excellent health, and the other is dead from carcinoma of the stomach. The writer believes that the patient who died had at sometimes a chronic gastric ulcer which in healing had caused the stenosis of the pylorus; and the cancer had developed on the site of the ulcer about the time, or a few months after, the operation was performed. [T. L. C.]

6.—See *Medical Record,* May 24, 1902.

JOURNAL OF EXPERIMENTAL MEDICINE.

February 5, 1902. (Vol. VI, No. 2.)

1. The Effects of Subminimum Doses of Strychnine in Nephrectomized Rabbits.
   S. J. MELTZER and W. SALANT.
2. Contribution to the Pathological Anatomy of Malarial Fever. JAMES EWING.
3. The Etiology of Acute Dysentery in the United States.
   E. B. VEDDER and C. W. DUVAL.

1.—It seems quite well established that the body of an ordinary animal, if it survives the administration, does not retain any strychnine, and nearly the entire elimination takes place through the kidney. That the restriction of elimination by the kidney will increase the effect of strychnine, has not yet, so far as we know, been seriously tested by experiment, but is apparently taken as selfevident. Meltzer and Salant record a series of experiments to ascertain whether repeated injections of **subminimum doses of strychnine,** separated by shorter or longer intervals, become effective as soon as the sum total reaches an effective minimum. Rabbits, which are very sensitive to strychnine, were used for the experiment. 0.45 to 0.5 mg. are toxic doses, while 0.55 to 0.6 mg. are fatal doses of strychnine nitrate per kilo of rabbit in a single injection. The experiments show that the removal of the rabbit's kidney does not decrease the required amount of the minimum dose. Assuming that any dose of strychnine which cannot be eliminated by the kidneys remains in an effective state within the blood, which is the prevailing view, we might expect, no matter how small the doses nor how long the intervals between the injections, that, as soon as the sum total should reach the minimum of 0.45 or 0.5 mg. per kilo, a tetanic outbreak to occur there immediately, and that, as there is no elimination, the tetanus ought to repeat itself indefinitely. Furthermore, it might appear that when the sum total of strychnine administered reached the dose of 0.6 mg. per kilo, the first tetanic outbreak ought to terminate fatally. The results of these experiments, however, were entirely at variance with these expectations. They show that rabbits, without their main eliminating organs, the kidneys, can, nevertheless, tolerate the sum total of twice and thrice the fatal dose of strychnine without showing any reaction, if only care is taken to employ proper subminimum doses at not too short intervals. It is possible that after the removal of the kidneys the act of elimination is carried on by other organs, for instance, by the gastrointestinal canal. It is possible that strychnine is destroyed within the circulation by the blood, the liver, etc. It is further possible that substances develop within the blood of nephrectomized animals that do not decompose strychnine, but neutralize its effect upon the nervous system. It is also possible that absorption from the subcutaneous tissues in nephrectomized animals is impaired on account of the increased blood pressure. All these hypotheses are open to experimental study. It has been argued by physiologists and pharmacologists (L. Hermann for instance) and has been repeatedly maintained by clinicians, that in chronic diseases of the kidneys, when the eliminating power of this organ is considerably reduced, great care should be exercised in the administration of poisonous medicines, lest they accumulate in the blood with fatal effects. According to these experiments with strychnine on animals entirely without kidneys, fatal doses may be gradually introduced without effect, and there is a great difference between even a maximum medicinal dose and a minimum toxic dose. The animal body apparently possesses a mechanism capable of regulating the cumulative capacities of the blood even in the absence of the kidneys. The influence of removal of the kidneys on the cumulative effect of other poisonous substances has not yet been studied; but the fear of the cumulative effect of strychnine in renal disease rests, at present, apparently on theoretical grounds alone. [J. M. S.]

2.—Ewing reports 9 fatal cases of **malaria** and one of streptococcus infection with pigment deposits resembling those of malaria. In the first case fatal malaria developed in a patient who, for 25 years, had not been away from the vicinity of New York City. While quinine in moderately large doses, with arsenic, controlled the active sporulation of the parasite and reduced the temperature, the treatment failed, as usual, to have any effect upon the crescentic forms, which persisted in large numbers until, rather suddenly in the last few days of the disease, they disappeared almost entirely, although the patient died in hyperpyrexia. This pyrexia is no indication of a failure of quinine to control the infection, as none of the young forms were seen after October 12, and the terminal fever must be referred to other causes. The prolonged delirium and coma were the chief clinical features of the case. There seemed little ground for doubting that the mental condition was referable to the malarial infection, because the coma was established before the urine contained casts and albumin; the changes in the urine were never marked; there were none of the usual concomitant signs of chronic uremia. Neither can the coma be referred to the presence of organisms in the cerebral vessels, as none were found there, and it becomes necessary to regard the cerebral symptoms as dependent upon other conditions, probably toxic, associated with the severe malarial infection. The most striking pathological feature of the case is the massing of pigment in the kidneys, especially in the cells of Henle's loops, which was derived from altered red cells. In the second case, the rather sudden termination after a period of comparative freedom from severe symptoms was an unusual feature. The prominence of the cardiac symptoms; the acute degeneration of the kidneys; and the activity and extent of the phagocytic process were also notable. The case is one

of acute cardiac failure in pernicious malaria. The microscopic examination showed the presence of unusually large numbers of parasites in the visceral capillaries, the heart muscle containing an excessive proportion of them. A considerable mechanical effect of such a massing of parasites in obstructing the circulation can hardly be doubted, although no signs of complete thrombosis of small vessels could be found. On the other hand, no inflammatory reaction in or about the vessels or in the muscle fibers or supporting tissue, no hemorrhages, or evidences of degeneration or necrosis of cells, could be found. These facts appear to furnish some evidence that the bodies of malarial parasites do not exert any marked local toxic influence, but that their local action is largely mechanical. In the kidneys, on the other hand, where the effects of a toxic agent were very marked, the number of parasites was comparatively small, hardly exceeding that found in the peripheral blood. In these organs there were distinct signs of severe acute degeneration, referable, not to the presence of parasites, but to the general toxemia. The phagocytic process was extremely active in the liver, the spleen, and the marrow, where the great majority of parasites were englobed in phagocytic cells. The leukocytes were everywhere actively engaged in the process. In the kidney, the majority of phagocytic cells were leukocytes. In the heart muscle, and in the connective tissue generally, the parasites were very abundant and were multiplying rapidly, unrestrained by any phagocytic tendency in the endothelial cells. The third case was one of the cerebral type; the capillaries of the brain contained an excessive number of parasites. The symptoms were due to the presence of a single group of parasites, the development of which could be followed throughout the cycle. Sporulation appears to have been completed during the night of September 6, when the temperature reached its highest point, 104°. At 10 A. M., September 7, the blood contained a large number of rings with a single large chromatin body, and without pigment. At 10 A. M., September 8, the parasites had increased in size; numerous outgrowths had appeared on the circumference of the rings; the chromatin was invariably increased in quantity, subdivided, and irregularly placed, and a few parasites showed slight pigmentation. There were still no spheroidal bodies with compact pigment to be found after 30 hours growth. The patient died at 3 A. M., September 9, and the great majority of parasites found in the cerebral capillaries were of large size and abundantly pigmented, and a few rosettes were seen, indicating the approach of general segmentation at the end of 48 to 50 hours' growth. The severity of the renal lesion, with the absence of parasites in the renal vessels is to be noted. The changes in the cells of the renal tubules were of the type of acute degeneration, so that the lesion must be referred to a toxic condition associated with a malarial infection. In the fourth case the localization of an enormous number of parasites in the marrow of the ribs and vertebræ was the characteristic feature. There was a single very compact group of parasites in the blood and viscera. This condition is the more remarkable since the pigmentation of the viscera, the grade of anemia, and the general condition of the patient indicated a somewhat prolonged course of the infection. The changes in the blood in this case illustrate the rapid development, as a result of malarial infection, of a condition identical in morphological character with that of primary pernicious anemia. Apart from the lesions directly referable to the growth of malarial parasites, the changes in the marrow included a well-marked cellular hyperplasia, affecting principally the myelocytes and other small mononuclear cells and giant cells; the disappearance of fat cells; the increase in size of the nucleated red cells; the majority of which were megaloblasts; and the disappearance of "islands" of nucleated cells. In the fifth case there was a single compact brood of parasites in the kidney composed of fullgrown forms which were richly pigmented. Numerous miliary hemorrhages and thrombosis of vessels with infarction, are the usual mechanical results of the presence of large numbers of parasites in a tissue. Since the discharging tubules contained, among a large number of casts, some entangling infected red cells and pigmented leukocytes, with a few infected red cells found free in the lumina of the tubules, it seems possible that a diagnosis in such a case might be estabished during life from the examination of the urine, which should show marked diminution in quantity, considerable albumin and blood, many granular and epithelial and some blood casts and infected red cells and pigmented leukocytes, both free and adherent to casts. In the sixth case the most important feature was the absence of parasites from the blood in a patient who nevertheless died with a typical temperature curve of fatal estivo-autumnal malaria. The absence of parasites from the blood at once raised a doubt regarding the nature of the disease; but the cause of death was an acute malarial infection in the fourth or fifth relapse. There had been very few parasites in the blood and these had disappeared promptly on the administration of quinine. Estivo-autumnal malaria may pass through 4 or 5 relapses without leaving marked deposits of pigment in the viscera and may end in a fatal attack in which very few parasites, which soon disappear under quinine, are to be found in the blood or viscera. The seventh case was an instance of fatal, uncomplicated malaria with infection by the large, and so-called "benign," tertian parasite. This organism was demonstrated in the blood in large numbers during life and without admixture with other varieties. There were somewhat peculiar pigment deposits in the viscera. The severity of the anemia deserves mention, in view of the general rule that the large tertian parasite is less active in impoverishing the blood than the malignant tertian. The prolonged coma, with very few parasites and very little pigment in the brain, classes this case with others which indicate that profound cerebral disturbance in acute malaria is not necessarily connected with the localization of parasites or pigment in the cerebral capillaries. The patient had a catarrhal colitis; but the necropsy failed to give any evidence that the malarial infection was directly concerned in its production, as few parasites and little pigment were found in the wall of the colon. The pigment deposits were most abundant in the heart muscle and kidney; the earlier stages were noted in the lungs, pia, abdominal fat and lymphnodes; a few crystals were seen in the marrow; while the liver and spleen, containing an unusual quantity of ordinary malarial pigment, failed to show any trace of the crystalline variety. These extensive deposits of pigment, which were found in nearly all parts of the general circulation seem, without doubt, to be referable to a greatly increased globulicidal action of the plasma, and taken in connection with the renal lesions, indicate that the patient was suffering from that extreme form of destruction of blood which characterizes hemoglobinuric malarial fever. In the eighth case the wall of the colon contained large numbers of amebæ, while exhibiting almost no indications whatever of the coincident malaria. The liver, spleen, marrow and peripheral blood, on the other hand, showed the changes referable to an extreme malarial infection, quite as severe as that demonstrated in some cases of fatal uncomplicated malaria. While amebæ were very abundant in the wall of the colon none whatever were found in the feces. The ninth case illustrates the condition of the malarial pigment 2 months after the subsidence of the acute infection. This period had sufficed to remove the traces of malarial infection from the majority of the viscera, while in the spleen and the liver, the pigment had been largely transferred from the parenchyma to the connective tissue septa, giving sections of these organs a very characteristic appearance. The above period was not sufficient to enable all the endothelial cells of the liver and spleen to become entirely free from pigment, and some of them still presented the usual appearance of the phagocytes of acute malarial infection. Nearly all forms of pigment deposited in tissues undergo gradual solution in their inclosing cells, yielding, in the case of ironholding pigment, a diffuse reaction of hemosiderin. The tenth case illustrates the great similarity which the pigment deposits of septic conditions may show to those of malaria. In this case of septicemia the pigment grains were more often distinctly crystalline and large, spheroidal, hemogenous black grains were more abundant than in acute malarial cases while the fresh, yellowish, finely-granular pigment was much less abundant. The concentration of pigment deposits in the tissue about blood-vessels was a somewhat characteristic feature. It would be impossible from a study of the pigment depos-

its alone to deny the co-existence of malarial infection, for as is shown in the description of other cases a similar destruction of blood may and, in some degree, frequently does accompany malarial infection. The destruction of bloodcells in various septic conditions may be confidently referred to the increased globulicidal action of the plasma, which has long been known to characterize these conditions. It is frequently impossible to distinguish between the pigment deposits of malaria and those resulting from increased globulicidal activity of the serum in other diseases. It follows that it is rarely, if ever, possible to establish the diagnosis of malaria merely from the presence of pigment deposits in the viscera. For hardening the tissues Ewing found that 5 to 10% of formalin proved most satisfactory. A combination of hematoxylin and methylene blue is strongly recommended for staining intracellular parasites. Nocht's method brings out the body of the parasite very much better than any other method employed. He strongly recommends the employment of smear preparations of the viscera, treated as blood specimens, for the study of minute cellular changes, phagocytosis, and the demonstration of parasites. The **liver** was generally slightly swollen and its consistence slightly reduced. The pigment deposits were always sufficient to give a slightly brownish tint to the section of the organ, but this change was sometimes far from characteristic. Distension of the gall-bladder was commonly seen. Parasites, in the majority of cases, were comparatively scarce. They were usually englobed by phagocytic macrophages and endothelial cells, together with red cells, leukocytes, and pigment, and in these situations they almost invariably presented evidences of degeneration and solution. They were not positively identified in the liver cells. Among the active phagocytes the large mononuclear cells of the capillaries, the endothelial cells, and the leukocytes could be identified. There were often evidences of a fusion of large mononuclear cells, endothelial cells and leukocytes into large protoplasmic masses inclosing several infected red cells. Occlusion of capillaries by these masses or by many discrete cells was often observed, in the neighborhood of which the capillaries were sometimes found dilated. The liver cells often exhibited the changes of acute degeneration. Necrotic cells were rarely discovered. Fatty infiltration of the liver cells was remarkably slight. The liver cells usually contained many large and small greenish granules of bile pigment. In all cases the liver cells presented a variable number of fine, light-yellow granules which gave the reactions of hemosiderin, while a diffuse reaction for hemosiderin was obtained in some endothelial cells and in the connective tissue of the portal canals. It was strikingly apparent that the infection had exhausted itself in producing vascular and cellular alterations, while there was an entire absence of the changes of beginning fibrosis. The **spleen** was increased in size in all cases, the change being generally proportionate to the length and, to a less extent, to the severity of the infection. The most prominent microscopic features were the pigment deposits and the cellular hyperplasia and distension of the pulp cords. It was always difficult to identify parasites positively in the sections, whereas they were always found in larger numbers in smears of the pulp tissue. They appeared to be more abundant than in the liver, and the same description of their inclosure and destruction in phagocytes applies to both liver and spleen. Marked obstruction to the circulation in the spleen must have existed from the distension of sinuses by macrophages, swollen endothelial cells, leukocytes and infected red cells. The deposit of pigment was usually more abundant in the spleen than in any other situation, and in acute cases was uniformly distributed in the macrophages, endothelial cells, and leukocytes of the pulp, while the Malpighian bodies were almost invariably free. A chocolate tinge of the **marrow** expressed from ribs and vertebræ was a characteristic change. Of the changes in the marrow referable to the growth of parasites, cellular hyperplasia, obstruction to the circulation, and deposit of pigment, it may be said that they are very similar to and of equal extent with those of the spleen. The chief interest in the lesions of the marrow in malaria lies in their relation to malarial anemia. The author is in accord to a considerable degree with the conclusions of Bignami and Dionisi. Bignami believes that cases of malarial infection, in which pronounced features of primary pernicious anemia were observed, are to be regarded as true examples of primary pernicious anemia, claiming that the reversion of the marrow to the embryonal type of blood formation partly results from other associated causes. The lesions found indicate that the changes in the marrow in fatal cases of acute malaria follow one of two types. (1) The cellular hyperplasia is pronounced, the nucleated red cells are abundant and tend to increase in size, the eosinophile cells, giant cells, and lymphocytes are over-abundant, while the fat cells are compressed and atrophic. With these changes, the blood shows moderate or severe anemia of the chlorotic type, with a marked tendency to develop the signs of pernicious anemia, which not infrequently become distinct. Pigment deposits and parasites are often unusually abundant. (2) The cellular hyperplasia is moderate, fat cells being abundant in the vertebræ and persisting in the ribs. Nucleated red bloodcells, eosinophile cells and giant cells are deficient. The blood shows severe anemia of the chlorotic type; the leukocytes are usually diminished and the eosinophile cells are scarce. Pigment deposits and parasites are usually not very abundant. The usual behavior of the **leukocytes** was noted in the majority of instances. In some severe and prolonged cases the lymphocytosis was a marked feature. Pigmented leukocytes were seen in the majority of cases, most abundantly in the severe and long-established fevers. They were found in nearly all fatal cases, but were most abundant in a case which recovered. It appears that pigmented leukocytes were more closely related to the severity of the antecedent paroxysms than to the extent of the pigment deposits in the viscera. The objects englobed by **phagocytes** as seen in the circulation included: (1) Parasites, free or inclosed in red cells. (2) Pigment elaborated by parasites. (3) Hematoidin derived from the destruction of red cells. (4) Hemosiderin derived from the detritus of red cells. (5) Intact or broken red cells. (6) Other leukocytes. The abdominal **lymphnodes** were usually found moderately swollen, but always without signs of pigmentation. In gross appearance the **lungs** in pernicious malaria presented little that is characteristic of the disease. Somewhat peculiar areas of lobular pneumonia were found in 2 cases, but the exudate was composed of the ordinary elements, and the inflammation was not specially connected with the growth of parasites. Microscopically, there were no pronounced changes found in the **cardiac muscle** cells, but the perinuclear mass of large greenish granules was sometimes very abundant. Mastcells were sometimes found in unusual numbers in the endomysium. Distinct fatty changes were not observed. With one exception, little pigment and few parasites were found in the capillaries. This was a notable exception to the usual rule and very large numbers of young parasites and pigmented cells were found completely filling distended capillaries throughout the heart wall. The available evidence hardly seems to warrant a positive conclusion that acute cardiac failure in pernicious malaria may result from a massing of parasites in the cardiac muscle, and it would be safer to conclude from the present case merely that the condition of the cardiac and skeletal muscles demands more attention than is generally paid to these tissues in pathological studies of malaria. Grossly, the **kidneys** presented no characteristic signs of malarial infection. Microscopically, the usual lesions consist in granular, hydropic and fatty degeneration, pigmentation by hemosiderin granules, and sometimes isolated or diffuse necrosis of convoluted tubule cells. The intertubular capillaries usually contained moderate numbers of pigmented leukocytes, macrophages and infected red cells; while the glomeruli gather a larger number of similar elements. The kidney rarely suffers from the accumulation of growing parasites, as does the brain, the mucous membranes, etc. On the other hand, the eliminative function of the kidney exposes it to the effects of the toxemia of malaria, so that albuminous urine is a very common clinical sign in acute pernicious malaria, while the condition of the renal cells in the present cases, and in most others reported, shows nearly constantly a considerable damage to the organ from this cause. The lesions were, in most of the present cases, of a purely degenerative type, without evidence of exudation into the stroma or

other changes in the connective tissue. In 6 of the present cases no gross lesions in the gastro-intestinal mucosa were to be found. Marked diarrhea in pernicious malaria may occur without anatomical changes in the intestinal mucosa. It may result from a secondary catarrhal colitis not directly caused by the malarial parasite, or it may result from amebic colitis, in which the malarial infection is not directly concerned. In some cases of comatose malaria with rich infection, the brain presented a characteristic brownish discoloration, most marked in the gray matter, which resulted from deposits of pigment. The majority of cases of comatose malaria do not exhibit a massing of parasites and pigment in the brain, so that the characteristic discoloration of the gray matter sometimes found is not to be expected in these cases. Multiple hemorrhages in the gray matter were not discovered in any of the reported cases. The principal feature in the microscopic appearance of the brain tissue is the massing of red cells infected with various forms of estivo-autumnal parasites in the capillaries. It is probably safe to refer the marked cerebral symptoms of such cases of acute pernicious malaria to the general condition of obstructed circulation. The lesions in the ganglion cells demonstrated by Nissl's method have appeared in the present cases not to differ essentially from those seen in other infectious diseases with marked cerebral symptoms. From the study of 64 cases of malarial coma at Montauk and in New York, it appears that coma in pernicious malaria occurs in 3 rather distinct clinical pictures and under three entirely different pathological conditions. (1) It may be referable to massing of young ameboid parasites in the cerebral capillaries. (2) It may be referable to embolic processes with temporary occlusion of vessels in small areas of the brain, and without uniform massing of parasites in cerebral capillaries. (3) It may be referable to the general toxemia of the infection. Ewing failed to find the described chemical reactions of hematoidin of practical value, at least in hardened tissues, in distinguishing between malarial pigment and the granular and crystalline deposits derived from destruction of red bloodcells. Another difficulty in the identification of malarial pigment in tissues arises from the fact that the jaundice of infectious diseases may cause deposits of pigment that are indistinguishable, morphologically, and by all ordinary chemical procedures, from much malarial pigment. From a minute study of the appearance of intracellular pigment clumps in sections, and especially in smears of tissue, it is possible to follow degenerating parasites and red cells through all stages and to distinguish in many instances pigment derived from parasites from that resulting from the destruction of red cells. After a variable time all englobed pigment appears to concentrate in more compact perinuclear masses. When one compares the deposits of hemoglobin, which occur in inflamed tissues infiltrated with blood, with deposits of malarial pigment, certain characters are often distinctly apparent that serve to distinguish one from the other. Chief among these is the crystalline form of much of the pigment in the inflammatory deposits. The study of hepatic macrophages in malaria shows that englobed red cells may be reduced to hematoidin as well as to hemosiderin. [J. M. S.]

3.—Vedder and Duval have studied cases of dysentery in Philadelphia, Lancaster and New Haven. They find: (1) That several standard cultures used in their study are indistinguishable; a conclusion previously reached by Flexner. (2) That acute dysentery of the United States is due to a bacillus indistinguishable from that obtained from the epidemics of dysentery in several other parts of the world. (3) That the sporadic and the institutional outbreaks of acute dysentery are caused by the same microorganism and that this organism is identical with that causing acute epidemic dysentery. (4) That the cause of acute dysentery, whether sporadic, institutional, or epidemic, is the bacillus dysenteriæ, Shiga. The writers have succeeded in staining the flagella with which this organism is furnished. [J. M. S.]

ANNALS OF SURGERY.

February, 1903.

1. The Technique of Nephropexy, as an Operation per se and as modified by Combination with Lumbar Appendectomy and Lumbar Exploration of the Bile Passages. G. M. EDEBOHLS.
2. Note on the Distribution of the Branches of the Internal Iliac Artery and the Zones of Exsanguination Resulting from Deligation. B. ROBINSON.
3. Ligation of the Abdominal Aorta for Aneurysm. R. T. MORRIS.
4. The Symptomatology, Diagnosis and Treatment of Carcinoma of the Cecum, with a Report of Two Cases. C. G. CUMSTON and A. VANDERVEER.
5. Elbow Fractures in Children. Fractures of the Lower End of the Humerus; Lesions and End Results, and their Bearing on Treatment. F. J. COTTON.

1.—See Philadelphia Medical Journal, Vol. 9, No. 14, p. [illegible].

2.—Robinson describes the normal and typical anatomy of the internal iliac arteries and states that the distribution of their branches is so irregular that an operator cannot exsanguinate with certainty any definite pelvic area by ligation of one of the branches. The only ligature which will exsanguinate any area with certainty is the one which will exsanguinate all the pelvic viscera, ligature of the trunk of the internal iliac. [F. T. S.]

3.—See Philadelphia Medical Journal, Vol. 9, No. 9, p. 41.

4.—The symptoms of carcinoma of the cecum are pain, alternating diarrhea and constipation, emaciation, dyspeptic disorders, intestinal hemorrhage or the presence of pus in the stools and the detection of a tumor in the right iliac fossa, the size, shape and consistency of which vary. In a certain number of cases ascites may be present, in others edema of the right lower extremity may result from compression on the iliac vein, but it also may be the result of a thrombus in the iliac or femoral vein. It is impossible to say what may be the exact duration of the disease, but in all probability a carcinoma of the cecum does not in most cases take longer than a year or 18 months to accomplish its evolution. It may extend to and involve the muscles and skin of the abdominal wall become adherent to the environing pelvic structures, become disseminated over the general peritoneal cavity, cause a right-sided hemorrhagic pleurisy, when the diaphragmatic peritoneum is invaded, cause metastases in the lungs and liver, produce a septic peritonitis from perforation in the peritoneal cavity or a fecal fistula, if it opens anteriorly, and an acute intestinal obstruction from narrowing of the lumen of the bowel from the growth or from an intussusception. In most of the cases a certain diagnosis may be made by exploratory incision. The only radical treatment is total excision; this is contraindicated when the patient is very weak, when the neoplasm adheres closely to the pelvic and abdominal structures, when metastases have taken place, when a chain of lymphatics can be made out by palpation, and when there is thrombosis of the femoral vessels. In many cases in which acute obstruction has occurred the proper procedure will consist in making an artificial anus, postponing resection to a later period. Resection, without reducing the invagination, is the best treatment when an intussusception has been produced by the carcinoma. Exclusion of the carcinomatous area by iliosigmoidostomy might be indicated in certain inoperable cases. The various methods of cecal resection together with the means of approximating the bowel to the ureter are given. Care should be taken that the iliac vessels are not injured and that the ureter is not wounded. If enlarged lymphatics exist, it is usually possible to remove them along with the mesentery but resection of too great an extent of mesentery is to be avoided because of the danger of gangrene of the intestinal stumps; when resection of a great area of mesentery would be necessary in order to remove the lymphglands, it is better to shell each gland out separately. Two cases are reported,

both of which succumbed to the operation, and a résumé of all recorded cases is appended to the paper. [F. T. S.]

5.—Will be abstracted when concluded.

ANNALS OF SURGERY.

March, 1902.

1. Suture of the Abdominal Wall. C. DAVISON.
2. Epiplopexy in Cirrhosis of the Liver with Ascites. G. TORRANCE.
3. On Splanchnoptosis and its Surgical Treatment with Report of a Case. J. A. INGALLS.
4. Abdominal Contusions Associated with Rupture of the Intestine. H. GAGE.
5. Traumatic Rupture of the Mesenteric Arteries. C. J. ALDRICH.
6. The Surgical Treatment of Some of the Remote Results of Inflammation of the Gall-Bladder and Bile-Ducts. H. D. NILES.
7. An Instrument for Facilitating Intestinal Anastomosis. O. H. ALLIS.
8. Misapplied Mechanical Support to Weak Ankles of Children. H. A. WILSON.
9. Elbow Fractures in Children. Fractures of the Lower End of the Humerus; Lesions and End Results, and their Bearing on Treatment. R. J. COTTON.

1.—The ideal method of **approximating the abdominal wall after section** is that of layer to layer, and the ideal suture material is one that can be rendered sterile by boiling and that will cease to exist in the tissues when healing is complete. Absorbable sutures and permanent buried nonabsorbable sutures do not meet these indications. Davison closes each layer with a continuous silkwormgut suture the ends of which are left hanging out from the angles of the wound so that they may be removed by traction when the healing is complete. When the suturing of a layer is begun, a small reverse bow-knot is tied 4 or 5 inches from the end of the strand; this prevents the silkwormgut from slipping through the stitch hole when the suture is drawn taught and is readily untied by pulling on the strand which emerges from the end of the wound; after the running suture is completed, a similar knot is tied at the other end of the strand and the end allowed to emerge from the angle of the wound. The sutures which close the peritoneum, fascia, and skin (subcuticular) may be differentiated by coloring one black with silver nitrate, one red with carbol-fuchsin, and leaving the remaining one white. The advantages of this method are the certainty that the sutures are sterile, the accurate approximation of the layers, the removal of the sutures when the wound has healed, capillary drainage from each layer, safety of the intestines from injury during the suturing process, rapidity of application, mimimum line of irritation on the peritoneal surface and consequent adhesions to the viscera, slight scar in the skin because of the absence of needle punctures, no danger of sinus formation from retention of nonabsorbable suture, and all the advantages of an absorbable suture without its disadvantages. [F. T. S.]

2.—Torrance publishes an unsuccessful case of **epiplopexy for cirrhosis of the liver**, a summary of the reported cases, and the conclusions of the various writers. [F. T. S.]

3.—Ingalls reports a case of **splanchnoptosis** which he treated by suturing the round and falciform ligaments of the liver to the anterior abdominal wall and to the costal margin; the patient is vastly improved. He emphasizes the fact that surgery offers material aid to individuals suffering from this condition and that the work should be complete in every detail, i. e., suture of the liver and kidney, shortening of the gastrohepatic omentum, fixation of the transverse colon, and general reconstruction of the abdominal wall. [F. T. S.]

4.—See Philadelphia Medical Journal, Vol. 9, No. 14, p. 57.

5.—See Philadelphia Medical Journal, Vol. 9, No. 14, p. 57.

6.—Niles reports a case of chronic colitis produced by partial occlusion of the colon at its hepatic flexure by **adhesions, the results of cholelithiasis**, a case of chronic cholecystitis producing mild systemic infection, a case of [illegible] the gall-bladder produced symptoms resembling gastric ulcer. These cases were all operated upon and were enormously improved after the separation of the adhesions. [F. T. S.]

7.—Allis describes two instruments to aid in **intestinal anastomosis**, one is a pair of forceps, the end of one blade being shaped like a tenaculum which fits into a loop in the end of the other blade; the second instrument is a pair of specially constructed rat-tooth forceps. The tenaculum or basting forceps is used to hold the edges of the intestine together while a running suture is applied, just as one would [illegible] them side by side. By moving the forceps and continuing the suture, almost the entire circumference of the intestine can be sewn, the sutures passing through all the coats of the bowel within the gut. The final closing of the gut-ends is done by means of the toothed forceps which grasp and invert the border of the gut while the suturing is completed. [F. T. S.]

8.—Wilson calls attention to the atrophy and weakness which follows the application of **mechanical support to the feet of children** and to the fact that such feet are more easily sprained and more liable to the formation of bunions, flat-foot, wabble-joints, etc. The foot best performs its functions when it is free from restraint, and the indiscriminate use of supports should be discouraged. In such cases which demand mechanical aid the individual requirements should be met and as much motion allowed as is advisable. [F. T. S.]

9.—Cotton, as the result of an extensive study of **elbow fractures in children**, concludes that the usual classification hardly expresses the conditions of the lesions as they usually exist and that the lesions frequently met are external condylar fracture, supracondylar fracture, epitrochlear separations, and separations of the whole epiphysis in the above order of frequency. Concerning the special forms of deformity associated with these lesions he states that the external condylar fracture frequently shows decided spur formation with or without displacement of the condyle itself; that the supracondylar fracture frequently shows gunstock deformity as well as backward displacement of the lower fragment; that epitrochlear separation shows displacement of the fragment downward and forward. The loss of motion from external condylar fracture is rarely considerable and consists in a loss of extension. Supracondylar fractures and separations of the epiphysis may show a loss of motion due to bony displacement, usually a loss of flexion from backward displacement. Epitrochlear separations may show a loss of extension apparently due to muscular shortening. Ankylosis or extreme loss of motion is rare in children, is practically independent of massage and passive motion, and is due to displacement of fragments and their union in the displaced position. Position in treatment is important only as it affects reduction and retention. Treatment is to be varied to fit the lesion and displacement found. For external condylar fracture reduction may be accomplished by flexion and pronation with lateral pressure and pressure to correct rotation. The limb is best dressed by retention at an acute angle. Supracondylar fractures may be reduced by traction and flexion and be dressed on a right angle splint with fixation by adhesive straps on the forearm to guard against backward displacement. After an interval, extension to 135° or thereabouts may be employed to detect and correct varus displacement. In epitrochlear fractures and separations the acutely flexed position best relaxes the muscles and allows reposition of the fragments, and a pad may be used to secure the best maintenance of reduction. The prospect of bony union is poor at the best, and since the result to be avoided is apparently a muscular shortening,

it would seem that in this form of fracture very early massage and early mobilization might properly find their places as a routine treatment. It is too early definitely to give the operative indications for poor results and irreducible displacements. In all compound cases, in cases in which reduction is impossible by ordinary means, and in cases showing marked disability or deformity after months of treatment, operation will be done much more frequently in the future than in the past. [F. T. S.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

January 7, 1902. (Vol. 49. No. 1).

1. Orthodiagraphic Investigations Upon the Heart. MORITZ.
2. Experimental Contribution to the Question of Hemolysis. M. MATTHES.
3. Further Experiences from Silk Changes. F. LANGE.
4. The Subcutaneous Injection of Gelatine in Melena Neonatorum. HOLTSCHMIDT.
5. Contribution to the Treatment of Rupture of the Uterus. G. WIENER.
6. The Biology of Fat. G. ROSENFELD.
7. Esophagoscopy, Gastroscopy, and Celioscopy. G. KELLING.
8. The Employment of Rolling Supports in Paralysis of the Lower Extremities. C. BRUNS.
9. Instruction in Pharmacology. M. CLOETTA.

1.—Moritz describes his method of outlining the area of the heart by means of the **orthodiagraph.** This consists essentially in the study of the outline of the heart by perpendicular Röntgen rays obtained by moving the tube in front of the patient's chest. The best method is to have the patient lying flat upon the table with the tube over him, movable in a horizontal plane. Moritz insists that the most important feature is to determine the relation of the heart to fixed points in the thorax, and not merely to determine the size of the heart. The outline of the heart is therefore sketched directly upon the chest, and at the same time the position of the sternum, ribs and nipples marked. The diagram is then transferred to glass and finally to paper. He gives a table showing the average maximum and minimum outlines of the heart measured from certain fixed points in the thorax in health, in adults and children and also a number of silhouettes indicating the alteration in size resulting from various forms of valvular disease, and in aneurysms of the aorta. Among the important precautions to be noted in the employment of this method are the correction for inspiration, that is, in some cases the heart changes its form during inspiration or the whole silhouette descends. The position of the heart also varies as a result of different positions of the subject. The condition of the stomach may influence the position and to a slight extent the size of the heart. It is interesting to note that the size of the heart does not appear to be increased by severe temporary exertion. One of the results is that the apparent increase in the size of the heart as determined by percussion is disproportionately large when controlled by the orthodiagraphic method; a fact that may be explained by the closer approximation of the moderately enlarged heart to the thoracic wall. Even the apex-beat may not be a certain indication of the position of the left side of the heart. [J. S.]

2.—Matthes has endeavored to prove why it is that under certain circumstances the red bloodcell becomes dissolved by ferments. It occurred to him that this can only take place when the cell is already dead, and in order to determine when death occurred he employed a proteolytic ferment extracted from the pancreas, basing his experiments upon the theory that such ferments do not attack living, but only dead tissues. Thus, the pancreatic solution mixed with normal salt solution and red bloodcells had no effect. When, however, the red bloodcorpuscles had been killed without destruction of their form by immersion in Hayem's solution, it was found that the pancreatic solution digested them very readily. Similar results were obtained with gastric juice withdrawn from the stomachs of crabs. It now remained to determine whether bloodcorpuscles capable of being agglutinated by serums containing the isolytic ferment were dead or not. A rabbit was injected with the blood from a guinea-pig, and in the course of a few days its serum developed hemolytic qualities for guinea-pig's blood. These were manifested not only in fresh blood but also in blood that had been fixed in Hayem's solution. Subsequent experiments showed that bloodcorpuscles treated with rabbit's serum that had been heated to 56° were not dissolved by the pancreatic extract, excepting after very considerable periods of time. The most interesting result of this experiment was that the serum of a rabbit's blood dissolved the corpuscles from the same blood that had been fixed in Hayem's solution. Matthes draws the conclusion that the digestive experiment enables us to determine whether or not the red bloodcorpuscle is still living, that the immune bodies of the sensibilizing substance of Bordet does not kill the erythrocytes and that bloodcells fixed in Hayem's solution may be dissolved in their own serum. [J. S.]

3.—Lang insists that the method devised by him for overcoming paralyses by the **transplantation of tendons** into the periosteum obviates the danger of subsequent elongation which is present when the tendons that hold the muscles are transplanted into those of paralytic muscles. He reports some interesting cases in which [illegible] method it was possible to restore paralytic limbs to almost complete functional activity. [J. S.]

4.—Holtschmidt reports 5 cases of **melena neonatorum** which he treated with subcutaneous injections of **gelatine,** all of which recovered. As the ordinary mortality from this disease is at least 50%, the excellent results must be ascribed to the treatment. In [illegible] any reaction nor apparent pain. The gelatine was readily absorbed and often the children slept immediately afterward. Two per cent. solutions were employed: the ordinary dose was 15 cc. For preparation he boiled the gelatine 5 to 6 hours and then allowed it to harden, the hardening being, in his opinion, the best proof of its purity. [J. S.]

5.—Wiener reports 2 cases of **rupture of the uterus.** The first was in a woman who at the birth of her [illegible] child had a severe post partum hemorrhage. The uterus was well contracted, but examination showed the presence of a deep tear in the cervix. The placenta was therefore extracted and the cavity of the uterus packed with iodoform gauze, and the tear in the cervix also packed. Finally, after repeated efforts, the hemorrhage was controlled, and the patient carried to the hospital. When brought to the hospital, the patient was in a state of partial collapse and the abdomen was very tense. Therefore the abdominal cavity was opened, the tear sutured and the patient finally recovered. Six months later the patient was again examined and found to be in the fourth or fifth month of pregnancy. The second case, a woman of 28, at the birth of her third child had a severe post partum hemorrhage. Examination showed that the uterus was torn and the placenta had escaped into the abdominal cavity. This however was withdrawn through the tear, the uterus packed with gauze and the patient carried to the hospital. She was in a state of collapse, extremely anemic, and there was evidence of blood in the abdominal cavity. There was immediate operation and the uterus was found to be torn as far as the insertion of the left tube, and was therefore removed. The patient recovered completely. In the first case the rupture was evidently due to the passage of the head into the superior canal. In the second case the uterus probably ruptured because the head could not enter the superior strait. Extraction was therefore accomplished by version, and the tear discovered. [J. S.]

6.—Rosenfeld has devoted himself to the study of **fat** in the animal kingdom. He found that fat ingested is ab-

sorbed as such and not transformed into the form of fat peculiar to the animal. Thus, if an animal is starved and then fed with cacao butter, this form of fat only is found in its tissues. If then such an animal is poisoned with phosphorus, this form of fat is found in the degenerated cells of the liver. Fat, however, may be transformed from the carbohydrates. It is probable that nearly all fat ingested is deposited in the body, the animal preferably burned up the albuminates to obtain force. He gives an interesting hypothetical explanation of the enormous accumulation of fat found in the whale, and shows how even the small quantity of fat found in its ordinary food suffices to account for its presence. There is no reason to suppose that fat is ever formed from albumins. [J. S]

7.—Kelling has performed **esophagoscopy** in 13 cases, in the majority of which a positive diagnosis could not have been reached by other means. In one of these cases 14 physicians had previously examined the patient and diagnosed carcinoma of the esophagus. Nevertheless, the esophagoscope showed that there was simple spasm. In 2 cases the diagnosis of spasm was corrected to carcinoma. In another case a syphilitic ulcer was recognized and cured by appropriate means. Three cases of carcinoma of the esophagus are particularly interesting. One in which the diagnosis could be made 4 weeks after the appearance of the symptoms; one in which a diagnosis of aortic aneurysm had been previously made, and one in which the symptoms were difficulty in deglutition and extreme sensitiveness to jars in the region of the stomach. In 13 cases Kelling has performed **gastroscopy.** In 6 cases he was able to eliminate carcinoma from the diagnosis. In one of these cases a subsequent exploratory laparotomy showed the cause of the disturbance to be gall stones. In 7 cases the diagnosis of carcinoma was confirmed. In 2 of these cases the gastroscope proved the uselessness of operation. In one case a small tumor situated upon the lesser curvature was recognized and removed. This case is particularly intersting, because the gastric contents contained free HCl and the only symptom was dyspepsia. The patient made a compiete recovery. In 14 cases exploratory laparotomy was performed. None of the patients suffered from the operation, and it was possible to correct the diagnosis in several cases, and in one, a small carcinoma of the pylorus, to perform a curative operation. Kelling concludes that in all cases of suspected carcinoma of the stomach we should be ready to perform an exploratory operation. In regard to the apparatus to be employed, Kelling recommends the esophagoscope, which consists of a series of hollow cylinders jointed together and covered with a rubber tube. In order to reach the constriction with this apparatus patience is usually required. The esophagoscope is probably less dangerous than the sound. The gastroscope consists usually of an elongated esophagoscope, the lower end of which is bent to an angle. Its application is no more dangerous than inflation of the stomach. Finally Kelling describes **celioscopy,** apparently a new method, which consists of inflating the peritoneal cavity with filtered air and inspecting with the cystoscope passed through a trocar. Hitherto this has been employed only upon animals. [J .S.]

8.—Bruns describes a number of forms of apparatus which consist essentially of a double set of wheels to the axles of which parallel bars are attached so that the patient can support himself by the hands while walking. In cases in which suspension is reduced, as in Pott's disease, this is readily attained by fastening a small scaffolding to the parallel bars to which the apparatus is attached. The benefit of exercise in the restoration of degenerated muscles is of course generally admitted. [J. S.]

9.—Cloetta urges the great need in modern medical education for instructing students in the nature and uses of drugs, and the increasing difficulty that is caused by pharmaceutical manufacturers who not only invent new chemical compounds to which they give varied names, but are in the habit of applying names to ordinary mixtures containing these compounds. In conclusion he pays his respects to the homeopathists and calls attention to the possibility that a remedy may cure a disease when it produces in a healthy individual similar symptoms, although proof that such is the case is entirely lacking. On the other hand, there is no reason to suppose in chemistry or in physics that the potency of any substance is increased by its dilution. He believes, therefore, that, although it is the right of every physician to practise homeopathy if he so wishes, it is neither right nor desirable that opportunities should be offered to obtain an education in such a thoroughly unscientific system. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

March 3, 1902. (39 Jahrgang, No. 9.)

1. The United Effect of Alexin. HANS SACHS.
2. Embolism of the Superior Mesenteric Artery. R. SIEVERS.
3. Alcohol in Hand Disinfection. R. SCHAEFFER.
4. The Sterilization of Milk at the Lowest Possible Temperature. ERWIN KOBRAK.
5. Acute Nephritis Early in Syphilis, with Enormous Albuminuria. ERICH HOFMANN and. E. SALKOWSKI.
6. Investigations in the Physiology and Pathology of the Renal Function. FRIEDRICH STRAUS.

2.—Sievers reports a case of **embolism of the superior mesenteric artery** in a woman of 56, who was well up to 6 years before. The pains began in the back and extremities, and for the last 6 months cough and dyspnea had been noted. Then edema of the feet appeared with slight cyanosis. The heart sounds were clear though irregular. There was slight ascites. She improved on strophanthus and diuretin. Suddenly, while moving her bowels, she felt severe abdominal pain, with nausea and vomiting, and her pulse became imperceptible. Her abdomen swelled, tenesmus and delirium followed, and she died in 29 hours. The autopsy showed an aneurysm of the descending aorta and an embolus, 6 cm. long, in the superior mesenteric artery. Except for a meter below the pylorus, all the intestines were red, distended with brownish-red liquid contents. The clinical symptoms suggested intestinal obstruction. Hemorrhage occurred in the intestines, but the patient died before this had been passed. The literature is fully quoted. [M. O.]

4.—After a review of the literature upon the effect of sterilization upon cow's milk given to infants under one year of age, Kobrak describes in full Oppenheimer's method of pasteurization. But this needs a thermomter to regulate it. In his **new apparatus,** Kobrak does away with the thermometer. By this means, the milk is kept between 65° and 60° C. for 1½ hours. This kills all common pathogenic bacteria. A detailed description of his apparatus, with photograph, follows. [M. O.]

5.—Hofmann gives the clinical history of an **early acute syphilitic nephiritis** in a man of 23. June 20, 1901, he acquired syphilis, a chancre appearing 4 weeks later. In August an eruption covered his entire body. Headache and pallor soon followed, with scanty, dark brown urine. The inguinal glands were much swollen, while all other lymph-glands were enlarged. The urine contained hyaline casts and 7% albumin. He was given mercurial inunctions and by October all symptoms had disappeared. There seems no doubt that the syphilis caused this early nephritis. It was severe in onset, with marked universal eruption, and the nephritis with enormous albuminuria. Such a high-grade albuminuria is very rare. When the urine stood some time, large flocculi of albumin settled. A few similar cases are cited from the literature. The mercury not only did no harm to the kidneys, but cured the inflammation. Permanent recovery occurred in several such cases. In December the patient returned with headache,

syphilitic roseola, and a trace of albumin and some hyaline casts in the urine. Upon mixed treatment he rapidly recovered. This Hofmann considered a recurrence. Salkowski describes the reactions of the urine from this patient upon admission to the hospital, with many details. [M. O.]

6.—Straus reports 39 experiments carried out on 9 patients, in investigating the **physiology and pathology of the renal function.** Among the diseases occurring in patients whose urine was examined were chronic urethritis, hysteria, hypertrophied prostate, movable kidney, nephralgia, pyonephrosis, tumors and tuberculosis of the kidney. His investigations included cryoscopy of the urine and blood, quantitative analyses of the chlorides, nitrogen phosphoric acid, and sugar after phloridzin injections. Catheterization of the ureters is necessary. In normal cases the results of all these investigations were exactly alike for the urine of both kidneys. Though both kidneys be physiologically active, this activity varies from time to time in each kidney. When pathologically disturbed, this activity was found increased. Unilateral nephralgia shows unilateral nephritis, with temporary functional disturbance. In such cases paroxysmal attacks of colic are due to paroxysmal increase in pressure without any obstruction to the outflow of urine. In a case of unilateral pyonephrosis, the pus from the ureter contained more sugar than the urine from the ureter of the well side, showing that some of the diseased kidney was still functionally active. When a renal tumor exists and both kidneys are functioning, the possibilities are that there is tuberculosis, that it may have healed, or that no tuberculosis exists. When giant cells are found, the last possibility drops out. As both kidneys now functionate equally, the tubercular process has probably healed. Several case-histories and detailed synopsis of investigations follow in full. [M. O.]

DEUTSCHE MEDICINISCHE WOCHENSCHRIFT.

January 30, 1902.

1. Blood Changes in Poisoning with Benzol Substances. L. MOHR.
2. The Nature of Fever. E. ARNOLDSOHN.
3. On the Alkalinity and the Alkali Tension of the Blood in Disease. BRANDENBURG.
4. A Case of Polyneuritic Korsakow's Psychosis with a Peculiar Condition of the Tendon Reflexes. WESTPHAL.
5. A Case of Partial Paresis of the Radial. R. SUCHIER.
6. A Case of Perforation of the Stomach with General Peritonitis; Operation 4 Days After Accident; Recovery. WIESINGER.

1.—Mohr reports 6 cases in which there was poisoning with benzol chloride from working in a chemical factory in which this substance was made. He also mentions 4 other cases that he has had an opportunity of observing, in which the conditions were rather similar. The general picture of poisoning by benzol has been known for a long time. It causes headache, vertigo, perhaps unconsciousness and general collapse. The pulse becomes rapid, the respirations grow rapid and superficial, the reflexes disappear, there are twitchings of the muscles, and—most important of all—there is the methemoglobinemia. As the result of this, there is a peculiar discoloration of the skin, which is of a bluish, cyanotic hue. In the cases that he reports, there had been in all but one instance decided alcoholism preceding the outbreak of the symptoms of poisoning; it is well-known that alcohol is dangerous for workers in aniline dyes. **The blood picture was a very striking one.** It showed marked degenerative and regenerative changes. Among the first were fragmentation of the red cells and a marked variation in their shape and size, and in their affinity for stains. In a number of instances the stroma of the red cells did not stain, while in the interior of the cells a nucleus-like body appeared—the so-called hemoglobinemic degeneration. Regenerative signs were found in the appearance of nucleated red cells. In all substances the blood contained methemoglobin. Mohr examined the urine in 2 cases for glycuronic acid, but was unable to find it in any considerable amounts; Brat had previously stated that glycuronic acid appears in the urine and is a warning to remove the subject from the danger of further intoxication. **Hematoporphyrin was found in the urine in all cases.** Alimentary glycosuria was tested for in 2 cases with negative results. All the cases showed marked soporosity. In 2, there was marked tremor of the muscles of the upper extremity; in one, a beginning optic neuritis was found. In the treatment, the author states that oxygen in large quantities was used with apparently good results. He believes that this improvement was, however, not due to increasing the oxidation directly, through the greater absorption of oxygen, but to the fact that the patients were led to breathe more deeply and regularly through the administration of the oxygen. [D. L. E.]

2.—Aronsohn gives a critical discussion of the recent work that has been done concerning the nature of fever, and concludes that it is a pathological increase in the irritation of the heat centers, which results in an increased production of heat through the motortrophic apparatus of the body muscles and the vascular muscles, and in a consequently increased use of oxygen, and in a disturbance in the dissipation of heat. The fever types are produced by the different forms of irritation. These are extremely variable in the different infectious diseases, and influence different centers and different organs. The basic type is direct mechanical, electrical or chemical irritation of the heat centers. [D. L. E.]

3.—Brandenburg describes the alkali tension of the blood as being equal to the percentage content of an alkaline fluid which, in contact with the blood, becomes neither richer nor poorer in alkali; in other words, if a dialyzer contains blood and the exterior vessel contains an alkaline fluid, the alkali tension of the blood is equal to that of a fluid containing alkali in such concentration that, when left in the dialyzer, neither the blood nor the fluid outside show any change in alkalinity. In a series of investigations, the author **has studied the alkali tension, the alkalinity, the amount of albumin, and the freezing point of the blood.** He used the Loewi-Zuntz method for alkalinity. He states that the alkalinity of the blood, in the series of diseases in which it has been found decreased, and even in those in which it has been found increased, is apparently dependent upon the actual concentration of the blood, though the concentration and the alkalinity do not run exactly parallel. The proportion between diffusible and total alkali is about 1 : 5, that is, about four-fifths of the alkali in the blood is in combination with albumin. This diffusible alkali was found much higher in anemia; and, in general, the diffusible alkali decreased as the albumin increased, and vice versa. Adding alkali to the blood caused but little change in the combined alkali. The higher the alkalinity, the lower the percentage of diffusible alkali and vice versa. With a standard value of 300 mm. of total alkalinity, the alkali tension equals about 60 mgm. in NaOH; that is, the latter figure indicates the normal alkali tension of the blood. One factor which increases the alkali tension is carbonic acid. This carries away the alkali from the albumin, and brings it in solution as alkaline carbonates. In several instances the alkali tension in disease has been found about normal; as, for instance, in typhoid fever. In pneumonia it was found a little low; and, in a case of uremia with coma, it was found decidedly low. The freezing point is lowered in proportion to the amount of diffusible alkali in the blood; and it is probable that it is the diffusible alkali which chiefly reduces the freezing point. The latter will, therefore, vary when other conditions than rentention are present. Brandenburg considers that, in order to appreciate

the value of the figures found by determining the alkalinity of the blood, one should also, as a measure of its concentration, determine the nitrogen. By comparing these 2 conditions, one may determine whether there has been any real increase in the amount of acids in the blood. The simple determination of its alkalinity has no notable biological importance. As to the importance of the alkali tension, the author believes that this has a good deal of influence upon infections, because an increase in the diffuse alkali increases the bactericidal action of the blood. Also, the alkali tension will be changed in case of acid intoxication. [D. L. E.]

4.—The case was interesting in that **the patellar reflexes on both sides were absent**; but, by a percussion of the patellar tendon, one could regularly bring out an **active contraction in the adductors of the opposite side.** [D. L. E.]

6.—Wiesinger reports an extremely interesting case. A man of 36, who had had gastric symptoms, was taken with symptoms of perforation of the stomach, and was brought into the hospital after 4 days had passed. He was at once operated upon, and **the abdominal cavity was found filled with foul fluid and great fibrinous masses.** After cleansing the abdominal cavity as well as possible, the perforation was searched for, and found on the lesser curvature. It was about the size of a bean. It was drawn in with stitches, and a Milkulicz tampon was introduced. At first the patient did remarkably well, but **infection of the wound** from the foul abdominal contents occurred and, 10 days later, the wound had to be opened. There was then marked improvement. Several days after this, **a number of folds of intestine escaped** through the wound, and had to be replaced under narcosis. Three days subsequently, there were **signs of obstruction.** The intestine was punctured, to relieve it from gas; and, as the intestine collapsed, pus escaped from the upper corner of the wound. **A large abscess was then opened,** and the signs of obstruction disappeared. Dulness afterward appeared on the lower part of the right thorax. **Subphrenic abscess** was suspected, but puncture was negative. A few days later the patient expectorated about half a pint of foul pus. Another puncture was then positive. Resection of the ninth rib was undertaken, and an abscess cavity containing about a liter of pus was opened. After this time the patient progressed continuously to entire recovery. The author also notes a case in which an apparent perforation of the stomach occurred, and there were symptoms of peritonitis for 6 weeks afterwards, at which time he saw the patient for the first time. The liver dulness has disappeared at this time, and the edge of that organ could be felt near the anterior superior spine. In the upper part of the abdomen, as far as the fourth rib, there was a loud tympanitic note. A puncture of the abdominal cavity removed a large quantity of gas, and after this followed pus. Operation showed a large cavity which contined 3 or 4 liters of purulent fluid. The patient entirely recovered after the operation. [D. L. E.]

JAHRBUCH FUER KINDERHEILKUNDE.

February, 1902. (Volume 55, No. 2.)

5. The Assimilation of the Newborn Infant. F. GAUS.
6. Buttermilk as an Infant Food. B. SALGE.
7. Tracheotomy and Intubation for Diphtheritic Stenosis of the Larynx. RAHN.
8. Alcoholic Cirrhosis of the Liver in Childhood. CARL BECK.

5.—After describing a number of tables which show the food in amount, the daily weight, food quotient, insensible perspiration, etc., during the first 10 days of life, with many interesting details, Gaus states that **among 100 breastfed infants** the physiological food quotient, that is the figure which expresses how much of the food ingested appears in the weight-increase, daily, up to the tenth day, is 27%. On an average this food quotient is about 10%. Among 100 breastfed infants, the lowest amount of food with physiological growth in the first 10 days of life was 1514 grams, with a food quotient of 21%. In the first 10 days of a breastfed child, physiological growth requires an energy quotient of 50 calories. Among 100 breastfed babies the lowest energy quotient of a newborn infant with a regular increase in weight up to the tenth day was never less than 40 calories. Among the 6 infants used in these experiments, the energy quotient up to the fourth day reached 48, up to the ninth day 82 calories. During the first days of the life of a breastfed infant, not only is the **energy value of the food, but also the quantity of water contained in it** of significance for the constant increase in weight normally necessary. [M. O.]

6.—Buttermilk is in common use in Holland as an infant food. Salge's first patient was an infant of 3½ months, with pyemia, so ill that nothing was digested. Buttermilk was given, and the child recovered gradually upon it. All gastro-intestinal symptoms disappeared. Buttermilk is made of sour cream, and contains ½ to 1% fat, 3 to 3½% sugar, and 2½ to 2.7% proteids. Salge found that it was especially adapted to infants with acute or chronic gastro-intestinal catarrh and infantile atrophy. Fifteen grams of farina and 60 grams of cane sugar are slowly added to one liter of buttermilk, while the mixture is heated for 15 or 20 minutes. The case-histories of many patients to whom buttermilk was given follow. His results were good and permanent. Even on other food, later, these infants continued to thrive. [M. O.]

7.—After a historical sketch of **intubation and tracheotomy in diphtheria,** Rahn shows that intubation has become more common since the introduction of antitoxin, for cases are less severe and tracheotomy does not so often become necessary. Primary tracheotomy is indicated in children under 1½ years with outspoken rickets, serious collapse, widespread pharyngeal ulceration, severe dyspnea and edema of the larynx, spasmodic or mechanical obstruction in the larynx, large edematous swellings such as subcutaneous emphysema of the neck, bronchial stenosis, or continued dyspnea after intubation. Secondary tracheotomy is indicated when the tube has been in several days and dyspnea continues after the fourth intubation; when membranes close the tube; when laryngeal abscess occurs; when the tube causes discomfort and pain; when the thymus or bronchial glands are enlarged; when frequently changing the tube gives no relief; when the child cannot swallow sufficient food; and when dyspnea follows extubation twice, 5 or 6 days after intubation, in children under 2 years. Intubation should be performed early; all indications for tracheotomy must be overcome; everything must be prepared for a possible tracheotomy; patients must be kept in a well-steamed atmosphere; the smallest tube should be introduced, but once; bromides should be given before extubation; and all should be ready for a new intubation when extubation is done. In children under 2 years, the tube is left in on an average of 2 to 4 days; from 2 to 4 years, 3 to 6 days; over 5 years, 3 to 4 days. Intubation may be done experimentally; preliminary to tracheotomy or during tracheotomy; and before or after closing the tracheotomy wound. In private practice, intubation is only justified when the physician has had experience, antitoxin has been given, and a good nurse secured. It is only indicated, then, when no bronchial stenosis exists, the larynx is not swollen or ulcerated, and no indications for tracheotomy are noted. The tube is left in as long as no indication for secondary tracheotomy appears, and the child bears it well. [M. O.].

8.—**Alcoholic cirrhosis of the liver** was formerly rare in childhood, but is gradually growing more frequent. The diagnosis is very difficult, as is shown by the case-history of a girl of 11, which follows in detail. Beck made the diagnosis of tuberculous peritonitis, but the autopsy showed atrophic cirrhosis of the liver, explained by the fact that she had always drunk as much beer as she wanted. The other causes of hepatic cirrhosis were excluded. Tuberculosis, typhoid fever, meningitis, etc., have been the diagnoses given in cases of this condition by several good clinicians. The main symptoms are the changes in the size of the liver, hypertrophy followed by atrophy, ascites, enlarged spleen and jaundice. Hydrothorax also occurs, as do nephritis, pyelitis, cystitis, cardiac and cerebral complications. Pathologically, interstitial hepatitis is found, while the surface of the liver is uneven. The prognosis is very

unfavorable, almost all cases ending fatally. All treatment seems to be without effect. Best of all is prophylaxis, not to give children alcohol. [M. O.]

REVUE MENSUELLE DES MALADIES DE L'ENFANCE.

February, 1902. (T. XX. No. 2.)

1. Riga's Disease. E. AUDARD.
2. Congenital Atrophy of the Sigmoid Flexure of the Colon and of the Rectum, with an Ampulla, and a Normally Formed Imperforate Anus. ALBERT MOUCHET and E. AUDARD.
3. A Note on Two Cases of Congenital Stridor. ROCAZ.

1.—Riga's disease is an affection of the nursling, particularly seen in Italy, which is characterized by the appearance, in the neighborhood of the frenum of the tongue, of a vegetating ulcer covered by diphtheroid exudate; it is not in any way related to whooping cough. Audard reports 2 cases of this disease. The first occurred in a child, aged 13 months. It was treated by tincture of iodine and silver nitrate for a month without result. The ulcer was then excised and the wound healed promptly. The second case was in a child, also 13 months old. The same treatment was employed with the same results. Microscopic examination of the ulcer showed an abrasion of the epithelium and of the papillæ of the tunica propria. The connective tissue presented inflammatory lesions. In the neighborhood of the ulceration the papillæ were more prominent than normal and the epithelial projections were thicker and longer than normal, and some of them were bifurcated or trifurcated at their extremities. The disease is one of early infancy; the sexes suffer from it equally; it is not hereditary, although several cases have been observed in the same family; these cases are due to the similar social, hygienic or alimentary conditions under which the children live. Opinion is divided as to the contagious nature of the disease. Among the local predisposing causes are the retention of food particles in the mouth and the habit of protruding the tongue rhythmically; but the eruption of the teeth is almost always the exciting cause of the disease. Clinically, there are 2 varieties of the disease, (1) that in which the lesion of the frenum is the only manifestation and (2) that in which the ulceration of the tongue is associated with gastro-intestinal disturbance. In the first variety the prognosis is good; in the second it should be guarded, since some cases have proved fatal. In the treatment of the condition local applications of tincture of iodine and silver nitrate are the most useful. If these applications fail, the ulcer should be excised. In the grave cases the diarrhea and the accompanying cachexia should be treated and attention should be given to the diet. General tonics, such as calcium carbonate, calcium phosphate, syrup of the protiodide of iron manganese phosphate, quinine and cod-liver oil are indicated. [J. M. S.]

2.—Mouchet and Audard report the case of a male infant who did not pass meconium after birth and who presented fecal vomiting. The examination of the perineum showed a normal anus which was guarded by a well-developed and physiologically active sphincter. Digital examination showed an ampulla 3 cm. long within the anus, which did not communicate with the lower portion of the rectum. An attempt to establish communication between the anus and the rectum through the perineum failed, and the child died 4 hours after the operation. At autopsy, the large intestine was found dilated and filled with meconium as far as the sigmoid flexure. This portion of the colon and the upper portion of the rectum were narrowed into a ribbon-like structure which terminated in a dilated pouch. This pouch was separated from the ampulla, determined by digital examination of the anus, by a thin septum. The condition is considered by the author to be a **congenital atrophy of the lower portion of the large intestine.** The case indicates a necessity for doing a medium celiotomy when a perineal operation is unsuccessful in a case of atresia of the rectum or anus. [J. M. S.]

3.—Rocaz reports a case of **congenital stridor** in a child aged 2 months. The mother of the child suffered from bone tuberculosis, scarlet fever and diphtheria in her childhood. She was moderately nervous. The father was alcoholic and quite nervous. The nervousness followed a bite by a mad dog for which he was treated in the *Institut Pasteur.* During inspiration the child made a musical sound similar to the clucking of a hen. The sound was continuous but of variable intensity. It became less when the child was asleep, but it never disappeared. The voice was normal and no abnormal signs were obtained on physical examination. The epiglottis was rolled upon itself from without inward. The aryteno-epiglottic folds were normal. The stridor began to diminish at the age of 5 months, and at the age of 14 months it was apparent only when the child cried loudly. With the disappearance of the bruit the epiglottis gradually unrolled. No treatment was employed. A second case occurred in the person of an 8-months-old child, who presented stridor from his birth. The child's mother had advanced tuberculosis and suffered from grave vomiting early in pregnancy and later from daily evening fever from which she died soon after the child was born. The child contracted bronchitis when he was 8 days old. The bronchitis resulted in bronchopneumonia, which caused his death. In this patient the same rolling of the epiglottis was demonstrated and, in addition, there was an hypertrophy of the aryteno-epiglottic folds. [J. M. S.]

ARCHIVES OF PEDIATRICS.

February, 1902. (19th. year, No. 2.)

1. A Contribution to the Symptomatology of Cretinism and Other Forms of Idiocy. HENRY KOPLIK and JACOB LICHTENSTEIN.
2. An Account of a Mild Epidemic of Uncertain Nature in Children. ROWLAND G. FREEMAN.
3. Multiple Arthritis in a Child Two Years Old Suffering from Gonorrheal Vulvovaginitis. GEORGE N. ACKER.
4. Hare-lip. B. K. RACHFORD.
5. General Subcutaneous Emphysema Complicating Pneumonia. SAMUEL PIERSON and WALTER LESTER CARR.

1.—**Stigmata of degeneration** are, as a rule, rarely found in the organs necessary to the maintenance of life. Many of these so-called stigmata are seen so frequently in persons in other respects normally developed that we can scarcely regard them as signs of degeneracy. Others, however, are truly **characteristic.** In the latter class Koplik and Lichtenstein include a prominence in the region of the hypothenar eminence over the situation of the pisiform bone. This prominence is immediately in front of the groove that separates the palm of the hand from the forearm. A similar prominence can be seen on the posterior surface of the forearm of the cat. The authors have found this sign in all cases of cretinism examined, in 2 cases of macrocephalia with porencephalia, in 2 cases of microcephalic idiocy, in an idiot of the hydrocephalic class, and in a dwarf of marked mental degeneracy with goiter. It was not found in a Mongolian idiot boy, in a patient in which there were certain physical signs seen in cretins, but in which the child was quite intelligent. [J. M. S.]

2.—See **Philadelphia Medical Journal,** Vol 7, No. 23, p. 1071.

3. Acker reports the case of a girl, aged 2 years, who had a profuse vaginal discharge in which gonococci were found. When the legs were handled they appeared to be painful but were not swollen. A few days later the ankles and knees were found to be markedly swollen and painful. Her temperature reached 103.4°. The urine contained a trace of albumin with many epithelial cells and leukocytes, but no casts. The patient recovered after treat-

ment with 5 grains of sodium salicylate every 4 hours; vaginal douches of warm saturated solution of boric acid every 3 hours, liquid diet and inunctions of 25% ichthyol ointment, twice daily, after which the joints were wrapped in cotton. After the symptoms began to subside, the vaginal douches were given twice daily, and in the intervals a tampon of gauze saturated with a 1 to 4 solution of ichthyol in glycerine was kept in the vagina. After the joint symptoms had subsided 5 drops of the tincture of iron were given 3 times a day. [J. M. S.]

4.—Rachford reports the history of a family into which 4 girls were born, each of whom had **hare-lips and cleft palates**, and 3 boys, none of whom showed any trace of these deformities. Both the mother and the father of the family had a history of tuberculosis. Later on, the mother developed tuberculosis and two of the boys and one of the girls died of this disease. [J. M. S.]

5.—Pierson and Carr report the case of a child, 4 years and 5 months old, whose grandmother died of tuberculosis of the lungs. In January, 1901, the child had an attack of **acute pneumonia** which involved the lower and middle lobes and part of the upper lobe of the right lung and almost the entire left lung. Thirteen days after the beginning of the disease, after an attack of coughing, the child developed **subcutaneous emphysema** which involved the head, the neck, the trunk, the upper extremities and the upper portions of the thighs. Within the next 5 days both lungs underwent complete resolution. The emphysema continued for 3 weeks and the patient was finally cured. The treatment consisted of stimulation with strychnine, nitroglycerine and whiskey. [J. M. S.]

JOURNAL DES PRATICIENS.

February 15, 1902. (16me. Année, No. 7.)

1. Chloroform for Patients with Heart Disease. HENRI HUCHARD.
2. A Case of Gastric Hernia. E. VIREY.

1.—Huchard believes that **chloroform** can be used **as an anesthetic for patients with valvular heart disease, myocarditis, aortic or coronary affections, etc.** without danger. It is much less dangerous for them than for patients with pulmonary affections associated with great dyspnea. The only contraindications are a state of asystole, toxi-alimentary dyspnea, acute pulmonary edema or marked general weakness. But these are only temporary; for, when improvement occurs, an operation may be performed under chloroform. Chloroform has been employed for the relief of stenocardia. As an anesthetic, chloroform must be given in continued minute doses without intermission, drop by drop until the palpebral reflex has totally disappeared, not using more than 3 to 5 drams for an operation of less than an hour. Death from chloroform anesthesia only occurs when the anesthetic is unskilfully administered. Nor are these accidents more frequent in patients with heart disease than in patients with other affections. Huchard concludes that chloroform, well prepared and prudently administered, never causes death. [M. O.]

2.—After briefly reviewing the literature, Virey reports a case of **hernia of the stomach** in a big, strong man of 39, who, slipping while helping to carry a heavy case, threw himself backward, noticed a severe sudden pain in the stomach, and became very pale, though he did not lose consciousness. Examination showed a mass as large as an orange below the xyphoid cartilage, to the left of the median line. This was reduced with difficulty, and recurred. The hernia increased when he stood up, and nausea, vomiting and hematemesis occurred, while melena was noted the next day. The pain continued for months, in spite of reduction with a bandage, opium, rest, etc. The point of the injury, the digestive symptoms and the pain show that the organ contained in the hernia is the stomach. Virey advises radical operation to return the stomach and to keep it in place. [M. O.]

Society Reports.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting May 6, Dr. Joseph Collins in the chair.

Dr. J. Ramsay Hunt presented a girl of 16 with **primary myopathy.** One and a half years ago difficulty in pronouncing words and a nasal twang was noticed. A few months later there was regurgitation through the nose, and she could not close her eyes completely. Examination showed marked deficiency of the muscles of the face on voluntary and emotional innervation. The orbicularis oris, orbicularis palpebrarum and the zygomatici were chiefly affected. The palatal muscles were motionless. Tendon reflexes were active, but there was no evidence of involvement, articulation becoming less distinct on prolonged effort.

Dr. Max Mailhouse, of New Haven, presented a **brain tumor** taken from a woman who had been admitted to the New Haven Hospital with a history of severe headache and considerable mental disturbance for a year and a half. Speech was incoherent and muttering. There were exaggenerated knee jerks, ankle clonus and increased plantar-reflexes. The optic nerves were atrophied and she could only distinguish light. She was so restless as to require restraint. During 6 weeks but 3 attacks of vomiting were noted. She complained constantly of headache and thirst; there was slight strabismus from weakness of the left internal rectus; the knee jerks were exaggerated and there was ankle clonus on both sides. Two days before death she became unconscious. The autopsy revealed a tumor in the interpeduncular space, which had either originated in or soon involved the optic chiasm. The tumor pressed upon the left third nerve, and upon the facial tracts above the pons, causing the spasmodic twitchings of the facial muscles.

Drs. Joseph Collins and I. Abrahamson presented a woman of 28 with **paralysis of the serratus magnus.** She had had an attack of suppurative tonsilitis, followed by suppuration of the glands at the posterior border of the sternomastoid. Seven weeks afterward the shoulder projected upward, and it was the seat of a throbbing pain. When seen, the left scapula presented a wing-like appearance, and there was isolated paralysis of the serratus magnus muscle. Some of the fibers of the supraspinatus and of the infraspinatus showed slight reaction to the faradic current and slight atrophy. The diagnosis was based upon the position of the scapula, the peculiar limitation of movement when the arm was brought forward at a right angle, the absence of sensory disturbances and of symptoms pointing to spinal origin, and the presence of the degeneration reactions. The lesion was evidently a postinfectious neuritis involving the posterior thoracic nerve, probably that portion in the body of the scalenus. Dr. W. M. Leszynsky said that most of these cases of serratus magnus paralysis were due to pressure or progressive dystrophy, but he had shown a case in which it had followed pneumonia.

Dr. Collins also showed a case of **atypical syringomyelia.** The patient was an engineer, 57 years old, who had lived a temperate and healthy life, not exposed to syphilitic or inorganic poisons. Three years ago he noticed that he tripped easily on going down stairs, and that he was clumsy in the use of his feet. He remarked that the little and ring fingers of both hands were becoming stiff. There was a flexor deformity of the second and third phalanges, which was gradually progressive, and which was dependent upon atrophy of the hypothenar muscles and the last interossei. At the same time loss of sensibility in the ulnar distribution increased. About a year ago an atypical perforating ulcer developed on the ball of the right foot. The patient presented paralysis of the hypothenar and last interossei muscles with deformity; glossiness of the skin of the hands; analgesia and thermo-anesthesia and partial tactile anesthesia in the little fingers and the ulnar halves of the ring fingers; thickening of the ulnar nerves, rendering them palpable; increase of mechanical irritability of the muscles of the upper extremities; typical perforating ulcer in the ball of the right foot; analgesia and thermo-anesthesia of the toes and the outer half of both feet; slight exaggeration of the knee jerks in the lower extremity; no deformity of the spine and no symptoms referable to the cranial nerves; no disturbance of the sphincters or of the sexual function. Dr. Collins said that the case was not typical

syringomyelia, but that diagnosis seemed more likely than any other. Dr. B. Onuf presented a young man with **Raynaud's disease** that had existed about 2 years. Sensation was normal during attacks. There was a history or articular rheumatism. In his work the tools used caused pressure on the right palm. The urine showed an abundant deposit of urates. He had not been improved by any method of treatment so far.

Dr. Ira Van Giesen read a paper on **mental dissociation in depressive delusional states** from work done in the New York Pathological Institute. A Russian, 26 years old, with good family history, had suffered from insomnia, headache, loss of appetite and had become despondent. His general health had rapidly deteriorated, and a physician stated that his trouble was largely indigestion, and that there were "lumps" in the bowel. This was the foundation of a delusion which the patient fondly cherished. He believed that there were worms in the intestine, which worked upon the lumps and broke them up into minor lumps, and sent the latter throughout the body. The patient believed that he was rescued from dire distress by 3 agencies, his spleen, soul and veins, the soul being the scavenger and the spleen the director. When the attention of the soul was distracted, this work was not well done. He was extremely depressed, and his physical condition suffered. He could only speak readily on his delusion. The loss of attention was marked except as regards the delusion. No gross motor disturbances were present. The patient reacted slowly to external stimuli. There were no sensory disturbances, no hallucinations and no tendency to self-destruction. He could fully realize his environment and his relations to space and time. On being hypnotized, a metamorphosis instantly occurred, the patient passing from depression to great exaltation. Despite this, the focal delusion persisted, and appeared far better organized. This clearly pointed to the fact that either the state of depression was one of secondary formation or the delusion, being secondary in its origin, had gained sufficient strength to stand, even after the emotional basis had been withdrawn. The latter alternative seemed more probable. He could vividly remember all that had taken place in his waking life, and he could later recall fairly well what happened while in the trance. Later the patient passed into a deeper trance, passing from a state of inexpressible delight to one of grave composure. In the last personality he could remember the experiences of the other trance personality and of the waking personality. Of the 3 personalities, the waking was pathological. The first trance personality was an exaltant, while the second trance personality approached closely to the patient's healthy condition. The course of these personalities resembled quite closely what was observed in circular insanity. These alternating personalities were, however, ephemeral. Soon the first personality shrunk and finally disappeared. In the course of time the first trance personality disappeared, and never returned. The mood of the second trance personality then lost some of its former seriousness. The tendency was for the intermediate personalities to disappear, and the last one to become the dominant one. The process of evolution of species in general was one great illustration of the process just described. Throughout all of these transformations, the central delusion, remained unshaken. The great assimilating power of this delusion was wonderful. Various suggestions were given to this patient; although designed to break up the delusion, they were turned about and fed the delusion. Direct suggestion during deep hypnosis was the usual method of breaking such a strong delusion, but the objection to this method was that it was apt to be only temporary. The method of emotional substitution was especially valuable in a case of this kind. During hypnosis, dreams were suggested to the patient, with the object of effecting changes in the central delusion. For example, in one of these dreams his father told him that these lumps would go away. These dreams impressed him deeply, though slowly. When the good dreams had become dominant, the spleen and soul began to drop out and then the galvanic current was substituted for the soul with great benefit. Small spots were next substituted for the lumps. The spots were gradually confined to certain definite areas instead of being vaguely disseminated. The patient's melancholia finally disappeared completely, and he has now resumed his original vocation. The case was regarded as a triumph of treatment, and was a type of many cases now in the State Hospitals for the Insane. The paper had been prepared by his former associates at the State Pathological Institute. The transition of the personalities had occurred spontaneously. This patient had been cured 18 months ago.

MANHATTAN DERMATOLOGICAL SOCIETY.

Meeting held May 2, Dr. W. S. Gottheil in the chair.

Dr. L. Weiss presented a woman of 65, about whose nose redness, induration and acne-like papules had appeared 3 years before. There are now marked redness, infiltration, desquamation, ulceration and areas of scar tissue. The upper lip shows the same condition. He considers it **lupus erythematosus.** He also showed a woman with an eruption confined to the extensor surfaces of the forearm, consisting of hard, somewhat flattened papules on a highly inflamed skin, in groups, cresentic in outline, and itching. He doubted whether it was erythema multiforme or acute lichen planus. The majority considered the eruption **lichen planus.** He reported a third case showing spindle-shaped swellings on one finger of each hand, almost symmetrical. They were hard and painful, and the skin showed slight ulceration. A radiograph shows that the process involves the bones and joints. Dr. Weiss called it **tuberculosis,** but admitted the possibility of its being specific. Dr. Geyser thought that the radiograph settled the diagnosis of tuberculosis.

Dr. R. Abrahams presented a woman of 35, showing circular, slightly elevated and infiltrated patches of redness, with scaling, on the forehead, face, chest, thighs and legs, which he called **eczema seborrhoeicum.** It resembles psoriasis, however. Dr. Bleiman said that psoriasis after treatment often resembles eczema seborrhoeicum, and that many cases of seborrheic eczema develop into well marked psoriasis later. A case of ulcerating gumma situated over the right trochanter was also presented by Dr. Abrahams.

Dr. Edwin Pisko showed a case of **lupus erythematosus** on the left malar region. The scalp had been healed with iodoform internally and 20% resorcin ointment locally. He also showed a case of total alopecia, the scalp being entirely bald.

Dr. Gottheil presented a case of **seborrhoea exfoliativa labialis,** the exfoliation confined to the upper lip. There were also chronic gingivitis and seborrhœa oleosa. Dr. Geyser showed a young man with edematous infiltration of the right leg of 7 years standing. The scrotum was also involved. Though diagnosed by other observers as elephantiasis, the case was regarded as edema due to lymphatic stasis. Dr. Oberndorfer showed a case of **lichen planus** confined to the left forearm, and the man in which he expects to try the biniodide treatment. Dr. Abrahams presented a young man with glandular swellings of the neck and submaxillary region. This case was looked upon as **beginning Hodgkin's disease.** Dr. Gottheil then presented a man of 41, in whom, 3 months before, a papule was observed over the right malar region. Now there is a distinct process about the size of a dime, slightly infiltrated with pale center, the margins gradually fading into normal skin. Dr. Gottheil wavered in his diagnosis between a **lupus erythematosus and erythema induræ.**

TWENTIETH GERMAN CONGRESS ON INTERNAL MEDICINE.

Wiesbaden, April 15-18, 1902.

(Continued from page 927.)

Penzoldt, Wiesbaden, read a paper on **dosage in physical treatment,** discussing the intensity, extent and duration of stimulation in this treatment. Kohnstamm, Konigstein discussed the center for salivary secretion in dogs that the fibers from the lingual nerve through the submaxillary ganglion to a nucleus under the facial roots in the lateral reticular nucleus. von Schrotter, Jr., Vienna, spoke of the **changes in the spinal cord in pemphigus and the pathogenesis** of the disease, reporting a case in a woman of 30,

He found an increase of the ependyma cells about the central canal, with numerous capillary hemorrhages in the gray matter. von Leube, Würzburg, also noted the nervous origin of pemphigus in a child with motor aphasia in the second week of typhoid fever. Webber, St. Johann, spoke upon the **antagonism between carbonic acid and consumption** and the method of treatment founded upon this. Hamburger has shown that the bactericidal power of venous blood is much greater than that of arterial. Upon this peculiarity rests the Bier method of venous hyperemia in the cure of bone tuberculosis. Heart disease, causing venous stasis, produces immunity to tuberculosis. Pregnancy stops the progress of phthisis, because carbonic acid from the fetus reaches the maternal lungs. Thus, too, half of the cases of diabetes die of phthisis, because the increased excretion of sugar causes a lack of carbonic acid gas. With the production of carbonic acid there is always a general deposit of fat. Loss of flesh, an early symptom of consumption, depends upon a failure of carbonic acid production. When recovery begins, an increase of fat is noted. When levulose is given, more carbonic acid results, with an increase of fat; therefore levulose acts as a specific in consumption. Rosenfeld, Breslau, protests against this theory, as it is neither well founded theoretically nor practically proved.

SIXTH SESSION.

Ziemssen, Wiesbaden, reported 2 cases of **aneurysm of the aorta** in syphilitic patients. Brat, Berlin, reported experiments on the **influence of albumin upon the coagulation of the blood.** Albumin and gelatine delay the time of coagulation of the blood. Koch and Fuchs, Aachen, spoke upon **hypnotics** and their physiological effects. The rapid effect of chloral is due to its rapid solution. Hoppe-Seyler, Kiel, read a paper upon the **pathology of transient glycosuria,** reporting 11 cases. The condition is found especially in tramps, who lead a wandering life upon insufficient nourishment. It disappears when sufficient food is taken. Not chronic alcoholism, however, but rather the absence of sufficient nourishment is the cause of glycosuria in these cases. von Noorden, Frankfort, called attention to the occurrence of glycosuria with anxiety, in patients who later showed no alimentary glycosuria. Strauss, Berlin, believed that not the liver, but the pancreas, is affected in these cases. Hezel, Wiesbaden, reported a case of **infantile central facial monoplegia** in a [illegible] months old. Lug nhuhl, Wiesbaden, believed that this might be congenital aplasia of the facial nucleus, which Heubner has already described. Volhard, Giessen, discusses **venous pulsation.** He said that the venous pulsation of the liver may be diastolic and negative, showing systole in the auricle, the expression of the compensatory accommdation of the auricular musculature to the increased exertion. Strubell, Vienna, discussed the **vasomotors** in the pulmonary vessels. The pneumovasomotor centers are weak, since their influence is regulated by the effect of the vagus, only appearing in full after the vagus has been paralyzed. Müller, Wiesbaden, presented a case of **multiple trophoneurotic gangrene of the skin,** in a woman of 24, following burns of 3 years before. It is possible that this patient may have syringomyelia. Müller, Leipsic, discussed the **influence of baths and douches upon the bloodpressure.** Fränkel, Badenweiler, read a paper upon the **cumulative effect of digitalis,** reporting experiments upon cats. Schott, Nauheim, read a paper on **the bloodpressure in acute cardiac overexertion,** and reports a number of experiments with Gärtner's tonometer which show an increase in bloodpressure until dyspnea or arrhythmia occur, when the bloodpressure falls. Hoffmann, Düsseldorf, said that arrhythmia alone was not a sign of dilatation.

SEVENTH SESSION.

Rothschild, Soden, spoke of the **function of the first rib,** which is moving the manubrium sterni. The operation of separating the first rib from the sternum he considers irrational. Rohden, Bad Lippspringe, read a paper upon the significance of silicic acid in the human organism and its relation to the lung tissue. The ability of silicic acid to make the elastic fibers more durable suggests its use therapeutically for increasing the resistance of the elastic tissue of the lungs to destructive processes. Sodium silicate, which has been deprived of its fluorine, used as an ointment, should assist the phthisical process in forming hard cicatrices and fibrous phthisis. von Criegern, Leipsic, read a paper on **poisoning by paraphenyldiamin preparations,** used in dyeing, which presents the clinical picture of bronchial asthma. It occurs in stages, the inflammation beginning in the skin, extending to the upper respiratory tract, and then to the lower. Typical attacks of dyspnea occur, the sputum containing Charcot-Leyden crystals and Curschmann-Unger spirals. About one-third of the workmen show symptoms. After one attack, the susceptibility to future attacks is increased. Bickel, Göttingen, reported his experiments upon the effect of **extirpation of the kidney upon electrical conductivity of the blood.** Steyrer, Graz, discussed the **osmotic analysis of the urine.** Scholtz, Graz, read a paper on the **study of cretinism,** reporting but poor success in the treatment of cretinism in childhood with thyroid preparations. On this account he believes that athyreosis can no longer be considered the cause of cretinism. On the other hand, in myxedema, in children as well as in adults, thyroid treatment is always successful. Blum, Frankfort, confirmed these experiments. Naunyn, Strassburg, believes that the failure of thyroid preparations in endemic cretinism is in marked contrast to its successful effect in sporadic cretinism. Kraus, Graz, also had good results in myxedema, but poor results in cretinism. Müller, Godesberg, discussed the treatment of morphinism. Goebel, Bielefeld, read a paper on **serumtherapy in exophthalmic goiter.** Blumenthal, Berlin, confirms the good result of this treatment, which consist in the use of milk and serum from goats, the thyroid glands of which have been removed.

(To be continued.)

Arteriosclerosis.—In a lecture delivered recently at the Laennec Hospital, Paris, Edgar Hirtz said that the causes of arteriosclerosis may be diathetic, toxic or infectious. Thus rheumatism, gout, lithemia, alcohol, lead, auto-intoxication, acute rheumatism, influenza, variola, typhoid fever, scarlet fever, tuberculosis, syphilis, etc., all cause arteriosclerosis. The idiosyncrasy of the individual plays some role, as does heredity. Among the physical signs are the deformed, firmwalled, tortuous bloodvessels, with arterial hypertension. The Duroziez crural double murmur is sometimes heard. There is cardiac hypertrophy, galop rhythm, accentuated second sound, tachycardia, muscle cramps, gangrene of the extremities, cerebral anemia, polyuria, pollakiuria, albuminuria and, finally, angina pectoris, Cheyne-Stokes breathing, etc.: The disease ends mechanically, by asytole, or toxically, by uremia. In the latter, cerebral, dyspneic or gastro-intestinal symptoms predominate, in old people. In young persons, cachexia and asytole are found, as a rule. Some patients die of acute pulmonary or angina pectoris. (*Médecine Moderne*, February 5, 1902.) [M. O.]

The Parasites of Cancer and Sarcoma in Human Beings.—Max Schüller, of Berlin, gives an analysis of his book upon the parasites of cancer and sarcoma in human beings, in *Médecine Moderne*. (February 12, 1902.) In collecting his material he kept the tissue, removed by operation and placed immediately in hermetically sealed bottles, in the abdomen of a living animal for 2 weeks. Later he used [illegible]. Specimens must be absolutely aseptic. His efforts resulted in the discovery of parasites, hitherto unknown, not yeast, bacteria, or cocci. A full description of the parasite found, its form, peculiarities, staining, inoculation, etc., is given with many details. [M. O.]

Special Article.

OBSERVATIONS ON LEPROSY IN THE HOLY LAND.

By DR. EINSLER,
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Translated from the German by
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Introductory Note by Dr. Holmes.

The original of this paper was given me on the occasion of a visit to the Leper Hospital, Jerusalem, in 1900. As it contains the careful observations and well-founded opinions of one who has had unusually large experience with leprosy and exceptional opportunities of observing this disease in all its relations, on its native soil, I thought it might be of interest to some of those who, for the most part, know it by name only; and so, with the kind permission of the author, I have translated his article, taking the liberty of occasionally abreviating, and omitting unimportant details of no special interest to the general reader. Dr. Einsler's paper was published in 1898. An interesting illustrated account of the Leper Hospital, and of the work done there by Dr. Jacob E. Schade, of St. Paul, may be found in the *Journal of the American Medical Association*, for April 13, 1901.

Dr. Einsler's Paper.

Every traveler to Jerusalem must have noticed, in addition to the ordinary street beggars, a still more unfortunate class outside the gates of the city, who carry the marks of their horrible condition with them, and try to arouse his sympathy. These are the outcasts—the lepers.

Stirred up by sympathy for the miserable condition of these wretched human beings, on her visit to the Holy Land in 1865, a Pomeranian noble woman (Freifrau von Kessenbrinck-Ascheraden of Nehringen) founded a permanent home for their support and the relief of their sufferings. This was the origin of our institution.*

It might have been supposed that the lepers would have thronged into this home, to receive there the care and treatment so freely offered them, but this was not the case. Accustomed to unlimited freedom, they would not give it up, to come into an institution where certain regulations had to be enforced. It was necessary to prohibit begging on the streets and to separate the sexes. These restrictions seemed very severe to the inmates, especially those who came from the leper houses supported by the Government in Siloam, Nablus and Ramleh, where begging and concubinage are allowed. The uneducated Arabs are like children and must be treated as such, finding their pleasures in little things and having no appreciation of the great work of charity done for them. A good home, good care and food, cannot compensate them for the money obtained by begging; the possession of money being to the Arab the greatest good.

With the fellaheen, especially the Bedouins, accustomed to unbounded freedom, it took years to educate them up to an appreciation of an institution. Among the Mohammedans, where polygamy exists, if the wife becomes afflicted with leprosy, she is sent away by her husband; if the man is affected he is compelled to leave the village by order of the community. Among the Christians the affected person is considered as dead, and therefore the marriage is annulled, but as the unaffected party is allowed to marry again, the leper is allowed the same privilege.

On account of the regulations prohibiting begging and concubinage, patients would not remain in the institution. They would come in to receive the care and medical attention, and as soon as they felt somewhat better would leave, frequently taking with them the clothes given them by the institution, to return in a short time in a still more miserable condition.

At present there are 29 inmates,* 17 men and 12 women; of these, 20 are Mohammedans (12 men, 8 women) and 9 are Christians (5 men, 4 women). Forty or fifty years ago the visitor to Jerusalem was little molested by lepers. Travelers in the Holy Land were at that time scarce, but since then their number has steadily increased; so the lepers came up to the city during the times of pilgrimage (Christmas and Easter) for the purpose of begging, and formed themselves into a society of beggars at Siloam (just outside the walls of the city), choosing a leader from their own number, and through him a certain amount of organization was instituted. Every leper who wishes to be admitted into this society is required to pay a certain sum, and is thus entitled to a share in the total earnings of the society and is compelled to beg for the same. Those who are unable to pay the required amount, or whose disease is so far advanced that they cannot earn anything for the society, are not admitted.

The Forms and Appearance of Leprosy.

Leprosy, as described in the Bible and by the old Greek and Arabian physicians, is a skin disease; but to my mind it is no more a skin disease than is syphilis or tuberculosis. It is a systemic affection of the human body, and that occurring in Palestine can be distinguished in no way from that found in other lands.

The forms which in this country come under observation may be divided into three classes:

1. The pure nodular form.
2. The pure nervous form.
3. The mixed form, in which one or another of the pure forms predominates.

The nodular form attacks the skin and mucous membranes, showing a predilection for the face, forearms, lower part of thighs and feet. In the early stages the skin is dry and shiny, later small nodules make their appearance, either in great numbers, increasing very little in size and remaining, perhaps for years, in about the same condition—this is the nodular variety; or few nodules appear

*The Leper Asylum "Jesus Hilfe" is the property of the Evangelical Unitarian Brethren and is managed by members of the Brotherhood, house elders and three deaconesses, and is dependent wholly on charity for its maintenance.

*[illegible] under [illegible] there are now in the institution [illegible] inmates.

and grow to the size of a pea or hazel-nut—this is the nodal variety. In some cases a severe erythematous dermatitis occurs, resembling erysipelas or lymphangitis; this condition is always associated with fever. Usually this inflammatory process comes to an end in a few days, and may be followed by an increase in the size of the nodes or nodules, the skin over which is of the same color as that of the surrounding area.

These nodes or nodules occur on the mucous membrane of the nose, eyes, and mouth, in the same manner as on the skin. Sometimes, as a result of a blow, or without any apparent cause, they become inflamed and ulcerate, forming sores of various sizes. This process is accompanied by fever. These sores either soon heal, or else, by extending into neighboring nodes, form an ever-increasing ulcerating surface which shows no tendency to heal, and so, by the continual drain on the system, results in death.

Not rarely both the nodal and nodular varieties occur in the same individual, larger nodes being visible on the surface, while by gentle pressure on the affected areas smaller nodules, which cannot be seen, may be felt deeper down in the tissues.

On account of these morbid changes the sweat glands are destroyed, and great dryness of the skin results. On the hairy parts of the face the follicles are destroyed and the hairs become dry and brittle, and fall out, till finally only a dry, shiny skin surface is left. I have seen cases in which the beard and eyebrows were completely destroyed, while on the healthy intervening skin the hair was preserved, but finally, by the slowly extending process, this was destroyed in the same manner. I have never noticed that the hair turned white over the diseased areas. On the mucous membranes the nodes are usually paler in color than on the surrounding skin, and they often remain many years without change. It is not positively known what causes the breaking down of the nodes in the mouth and nose, but apparently some slight irritation is sufficient to start up the process. On the mucous membranes, also, ulcerating surfaces occur which, by extending to neighboring nodes, continually enlarge and sometimes cause very extensive destruction of tissue. In this manner, in severe cases, the tip of the nose, the cartilages up to the nasal bones, the nasal mucous membrane and the soft palate may be destroyed, so that a large opening is formed between the nasal and buccal cavities. The pharynx and larynx may also be attacked by these ulcerating nodes, causing hoarseness or absolute loss of voice when the destruction involves the larynx. The tongue may also be affected. In many cases the gums are swollen and bleed easily, as in scurvy; the teeth become loose and can readily be removed by the fingers, without the use of instruments. In other cases they are not affected. Nodes also occur on the edges and outer surface of the eyelids, so that their margins are distorted and their closure is prevented. On the mucous membrane of the lids the nodes occur less frequently; they are more common, however, on the mucous membrane of the eyeball, and I have once seen a leprous node in the anterior chamber of the eye. The ocular mucous membrane is usually dry, white and shining; a gradually advancing disease of the cornea is set up, which slowly but surely leads on to total blindness. The lymphatic glands may also be affected, especially those of the neck; prolonged suppuration is set up and death occurs as the result of exhaustion.

2. Concerning the early stages of the nervous form I cannot speak from my own observations, for those thus affected never seek admission to the hospital till the disease is far advanced. Spots, associated with the phenomena of fever, make their appearance on the skin; severe pains, resembling those of rheumatism, occur in the limbs; and frequently, too, in the early stages, hyperesthesia of the skin is present.

In the advanced stages, in which they enter our institution, no changes in the skin are visible, except here and there more or less pigmented areas where sensation is impaired; as the stage of the disease advances, the sensibility of the skin progressively decreases, especially on the face and limbs. Peculiar cases, in which a return of pain occurs in the areas of complete insensibility, are occasionally met with. In those cases in which, for various reasons, amputation was required, which, on account of the complete insensibility of the skin, could be done without an anesthetic, I have noticed that the skin incision, usually so painful, caused no pain. Division of the deeply lying nerves, on the contrary, caused acute pain. In this variety of disease a form of muscular atrophy occurs, in which the muscles are reduced in size but present no true atrophy. This, however, is not the case in the face, hands and feet. The face assumes a staring expression, the eyelids cannot be completely closed, and as a result, eye diseases are set up which frequently lead to blindness.

The muscles of the feet and hands almost wholly disappear, and on account of the greater strength in the muscles of flexion the fingers and toes assume a permanently flexed condition, resembling claws. In the further course of the disease deep abscesses may form in the neighborhood of a joint, which is destroyed, and whole limbs may thus be separated, the stump subsequently going on to cicatrization. This form of separation is especially frequent in the fingers and toes. In other cases inflammation starts in the joint itself, associated with febrile phenomena, and goes on to suppuration, the limb finally becoming gangrenous and separating, the stump subsequently healing. Still another form is that associated with periostitis. One of the bones of the hand or foot becomes affected, an abscess forms and breaks externally, leaving a sinus (which has the appearance of having been punched out or made with a gouge) through which the dead bone can be felt. These sinuses remain open till the dead bone comes away, when healing takes place. Sometimes marked changes occur in the shape of the feet, the result of the destruction of one or more of the tarsal bones. In some cases, on account of the ex-

treme flexion, the dorsal surfaces of the toes may strike the ground in walking, causing such severe pain that amputation is required.

Both the previously mentioned forms of leprosy may occur in the same individual, sometimes the nervous, sometimes the nodular form predominating. The Mosaic law required prolonged and careful observation of those afflicted with leprosy. This was very necessary, for even in the present state of our knowledge it is often difficult to distinguish the nodular form from syphilis or lupus, and the nervous form from syringomyelia.

It is noteworthy that, though in the olden times leprosy was so common among the Jews, it no longer occurs in Israelitish families settled in Jerusalem. Of the three leprous Jews whom I have seen during my many years' practice in Jerusalem, one came from Salonika and two from Morocco.

Contagion or Heredity.

It is a very important question whether leprosy is or is not contagious. At the last conference in Berlin the different investigators could not agree on this point, though the majority were in favor of the theory of contagion. Since the discovery of the exciting cause of the disease (lepra bacillus) by the Swedish observers Danielson and Böck the theory of contagion has won many adherents at the expense of the theory of heredity. If, after many years' work among the lepers, I speak out in favor of the theory of heredity, it is for the following reasons:

1. That, in the 33 years of its existence, no case of direct contagion has occurred in one institution.

2. That the true cause of the disease has not as yet been positively determined.

3. Observation of the fact that the disease has a preference for those families in which it has occurred for generations.

With regard to the first reason, the fact that neither a nurse nor doctor has been attacked by the disease in this institution goes to show that if there is any danger of direct contagion it must be very slight indeed. The nurses come in very close contact with the disease in cleansing and dressing the frequently very extensive suppurating sores, and in washing the clothes of the lepers. The physicians not infrequently have operations to perform on the lepers, such as teeth extraction, opening abscesses or removing limbs. No case of direct contagion has ever come to my knowledge. The few cases that have been brought to me for a diagnosis have all come from localities where leprosy is known to flourish or from the seaports of the Mediterranean. In spite of the fact that the law prohibits lepers from coming within the walls of Jerusalem, every opportunity is afforded for contagion. I know of several women, who, before the disease had advanced far enough to make it necessary for them to leave the villages in which they lived, used regularly to bring fruit, vegetables, milk, etc., into the city, and sell them. For over 7 years one man has been connected with leprous settlements in Siloam, bringing provisions, cleaning the rooms and being in close relationship with the lepers, without so far showing any signs of the disease. In one village (Nablus) there is an Arab family paid by the lepers to take care of them, and in spite of the close intercourse and the total absence of any precautions, not a single case of contagion has occurred.

With regard to the second point, I may say that, so far as I know, no investigator has succeeded in securing a pure culture of the so-called bacillus lepræ, nor has the disease ever been communicated to an animal. According to Professor Koch, these two conditions are necessary before we can determine positively the cause of an infectious disease, so that it may justly be doubted whether the bacillus discovered by Danielson and Böck can alone produce the disease, so long as the evidence already advanced against contagion cannot be disproved. The so-called lepra bacillus can scarcely be distinguished under the microscope from the organism found in tuberculosis and lupus. So true is this, that leprous nodules, from cases of undoubted leprosy, which I have sent to Europe for examination, have been reported as lupus, and not leprosy.

Finally with regard to the third statement it is very difficult to get any evidence from the lepers themselves. From the conditions of the institution from year to year and from the annual visits made to the relatives of inmates by the superintendent and chaplain, it has been found that they have relations afflicted with the same disease.

Both among the Mohammedan and Christian inhabitants of the villages it is the custom to marry relatives as closely connected as the law will allow. One is justified in believing that by means of this intermarrying, the hereditary tendency to leprosy may be kept up, since it has an undoubted tendency to reappear in the same families, just as is the case in certain nervous diseases. In this country (Palestine) where no case of direct contagion has ever been observed, this is all the more probable. If further investigations should result in the production of a pure culture of the lepra bacillus and the production of the disease in animals by inoculation, still I should ever believe that an hereditary tendency is necessary for the production of the disease in man.

In the face of this disease medical skill is up to the present time, powerless. A positive cure, in spite of the many methods of treatment, has never been obtained. We must, in the present state of our knowledge, confine ourselves to attempting to relieve the incurable sufferings of its unfortunate victims.

A Novel Use of the X-Rays. The *Gazeta Polska* quotes a newspaper report, stating that certain diamond mine-owners in Russia petitioned the Medical Council to permit them to utilize the X-rays in searching the workingmen for stolen diamonds. The Council declined to consider the petition in view of the harm that may result from the indiscriminate use of the X-rays.

Original Articles.

TUMORS OF THE NOSE AND NASOPHARYNX.

A CLINICAL LECTURE DELIVERED AT ST. BARTHOLOMEW'S HOSPITAL, FEBRUARY 10, 1902.

By ANTHONY BOWLBY, C. M. G., F. R. C. S.,
of London, England.
Lecturer on Surgery and on Diseases of the Throat at St. Bartholomew's Hospital.

Gentlemen:—Before we consider the question of tumors I want first of all to discuss very briefly those other diseases of the nose and nasopharynx which simulate tumors, so that we may dismiss such other conditions at once and get on to our subject proper. I have had brought down here specimens of those diseases which most often simulate tumors: a deviated septum, hypertrophic rhinitis; foreign bodies; and syphilitic and tubercular swellings. Any of these conditions may simulate tumors. In the first place you would suppose naturally that a deviated septum is in the last degree unlike any tumor that ever grew. But, let me tell you that I have seen a patient sent into this hospital, examined in the wards, and seen by the numerous observers who are in every surgical ward, and taken to a theatre and anesthetized for the removal of a tumor of the nose; and yet this was a case of very unusual displacement of the septum of the nose, with a great deal of thickening. The patient had no tumor. With regard to foreign bodies, these may cause a considerable swelling of the mucous membrane of the nose, so that this swelling may simulate a new growth. And there may be some blood-stained discharge, which may simulate the discharge from a tumor. On the other hand, you must remember that foreign bodies in the nose are rare except in children, and that, in children, tumors of the nares are exceedingly rare. Thirdly, we come to what I have mentioned as "hypertrophic rhinitis." This is a swelling of the turbinate body or bodies which may assume a considerable size, and which not infrequently is mistaken for one tumor of the nose, namely polypus. In a great many cases, until you have got the patient's nose cocainized, it is difficult to say for certain that some cases of hypertrophic rhinitis are not cases of polypus; so that this is a condition which is very likely to be mistaken for one of the common tumors of the nose.

Now we come to other conditions. At one of my last lectures I was speaking to you about the swellings which are due to syphilis, and I told you the importance of recognizing these while they were yet swellings and before there is ulceration. The only thing I will say about those conditions now is that sometimes the swelling which is due to syphilitic disease of the nose may appear as if it were due to growth. Lastly, there is tubercle. Now tubercular disease of the nose is rare, but when it does occur, because it is rare, it is all the more likely to be mistaken for something else. Some time ago a woman came to the throat department of this hospital with a swelling of the septum of the nose. It was of about the size of the end of one's finger. It was soft and bled easily. I thought at first it looked like a tumor. Malignant tumors do sometimes grow on the septum. This was "a tumor" in the broad sense of the term; there was a considerable vascular swelling, and this seemed to have destroyed the cartilage and subjacent bone, so that the septum was softened and yielding in this part. In that respect also it simulated tumor. On a little further investigation and after removal, I found that it was a case of tubercular disease of that part of the nose, of a quite limited extent, so that it was easily cured by operation. But certainly, when I first saw it, I thought it was a case of sarcomatous or epitheliomatous tumor of the septum.

We will then put aside the various conditions which may simulate tumors and pass on to consider what are the tumors of the nose and nasopharynx, and we will exclude for the present the tumors which occur on the surface of the skin of those parts. Of the tumors originating inside the nose by far the commonest is the mucous polypus. That is the common tumor of the nares. The next commonest is the myxofibromatous polypus, which often projects into the pharynx. That is only a variety of the myxomatous polypus which attains a considerably greater size and is of firmer consistence. Next there are the angiofibromata, or fibro-angiomata of the nasopharynx and nares. Lastly there are the sarcomatous and carcinomatous growths. Those sum up the common tumors of the nasopharynx, or those which are sufficiently common to merit our attention at the present time in this lecture. Of course, there are other, and rare, tumors, such as the adenomata, enchondromata, osteomata, and so on, but except about this last I shall say nothing, first of all because I do not think I have ever seen an enchondroma or an adenoma of the nose and I will only allude briefly to "diffuse osteoma" in that region. This is a disease of the nasal and adjacent bones in which there is an extensive overgrowth of bone, which affects not only the nasal bones but the adjacent bones as well. And in a certain number of cases there is a thickening of the bones which enter into the formation of the nose and of those bones alone. This condition may cause a general filling up of the nasal cavities, in very much the same way as a diffuse osteoma may fill up the antrum. It is a rare condition, and, as far as my memory serves me, we have only seen two or three cases among the throat department out-patients during the last nine or ten years. So diffuse osteoma must be of very considerable rarity.

As far as the tumors in the nose are concerned, I shall tell you in general terms what sort of symptoms they give rise to. I shall classify the symptoms of nasal tumors as coming under these heads: First, nasal obstruction; second nasal discharge; third, nasal hemorrhage; and fourth, deformity, that is to say, alteration in the shape of the nose. Under these four headings you may classify the symptoms of practically all nasal tumors. Those are the clinical conditions which you have to be on the lookout for when you believe you have a case of tumor of the nasopharynx.

In the next place let us approach the subject with regard to the patients in whom those tumors occur. I have already mentioned for your guidance a list of the diseases which you should have in your minds, and I have put down in a general way the symp-

toms which you have to remember in connection with these growths. Let us now divide our patients into three classes. (1) Children under ten. (2) Older children or young adults. (3) Adults and old people. What are the common tumors occurring in the nose in children under ten years of age? The answer to that question is very simple; there are none at all which are of common occurrence; there are no tumors which are often seen in young children unless you include that growth which is exceedingly common, but which is more often spoken of as hypertrophy than as a tumor, namely, adenoid vegetations. These are the commonest causes of nasal obstruction, nasal discharge, a certain amount of bleeding which is never serious and sometimes of some nasal deformity, in young children. But I think it would be straining the application of the term if we included adenoid vegetations under the heading of "tumors of the nose," and I think if you were speaking in general terms of "tumors of the nose" it would not be held to include adenoid growths. I shall have an opportunity of referring more in detail to these in another lecture. At present we may say that children under ten do not commonly have tumors of the nasopharynx or nose at all. I am not, of course, saying that there never has been a case of tumor in a child below the age of ten, but certainly there is no tumor commonly met with in children below that age.

Next, let us take the case of young adults. Young adults are liable to have one or two forms of nasal tumor. One is common—polypus—and the other is rare, namely, that which I mentioned to you just now as fibro-angioma or angiofibroma. Let me say a word here about polypi. These occur in young adults, but seldom before the age of fifteen. From that time onwards they become increasingly common, and after that, no age is exempt from them, for they may occur even in old age. If a young adult has nasal obstruction with discharge, you must consider then whether these symptoms arise from nasal polypi. I have mentioned to you the things which you have to exclude, namely, a deviated septum, hypertrophic rhinitis or the other rarer diseases I have referred to. These myxomatous tumors of the nose are ordinarily found in the neighborhood of the middle turbinate bone; they are often multiple; they often affect both nostrils. The symptoms are those I have mentioned—blocking of the nose, nasal discharge—generally in the form of a considerable quantity of mucus—but the third symptom, hemorrhage, is generally absent. Nasal deformity does occur as a result of polypi when they have existed for a long time, and in such case the whole shape of the nose may be altered and the bones bulged by the pressure of the soft growths continually applied. You would hardly think that a tumor as soft as a nasal polypus could stretch and alter the shape of the bones, but it does. So that of the four symptoms of nasal tumors which we mentioned, three may be present with polypi, hemorrhage being notable for its absence in most of the cases. I shall not speak to-day about the treatment of these cases, but shall hope to deal with them in another lecture.

Next, let us turn to that other class of tumors which occur in the nasopharynx of young adults, namely, fibro-angioma or angiofibroma. This is a much more rare disease than the last. I suppose that for every thousand cases of polypi there are not more than one or two of angiofibroma. But angiofibroma is a disease which it is of the greatest importance to recognize, so you must be clear as to the circumstances under which it is met with. It is almost exclusively met with in males; I have never seen a case in a girl or a woman. The patients are generally between eighteen and twenty-five years of age. What are the symptoms? There is nasal obstruction, generally marked, in both nostrils, and often of an equal degree of severity in each. On the other hand, nasal polypi are often, for some time at least, limited to one nostril. In a case of fibro-angioma then the patient has obstruction, and there is practically very little nasal discharge; there is nothing like the amount of mucus discharge that there is in mucous polypus. But what is of much greater importance is that there is serious bleeding from time to time, and that bleeding is out of all proportion to the amount of disease to be found in the nose. The bleeding is severe and may last for days and endanger life. Still, when once arrested it may stop for months, and even for years. Next, let us say a word about deformity. As these growths fill up the nasopharynx they tend to spread and sprout into the neighboring parts. Where do they spring from? They grow from the base of the skull, and from that part of it which is formed by the basilar process of the occipital bone and the body of the sphenoid. But as they extend they push their way along, underneath the periosteum, and become attached to many other parts as well. These growths may extend along the sphenoid bone and may become attached to various processes such as the pterygoid, and may push their way downward along the front of the vertebræ so that they become fixed to the bodies of the atlas and axis. They may push their way into the nasal cavities and bulge these. When they have filled up all the available space around them they proceed to make more space for themselves by pressure. By means of this pressure they cause atrophy of neighboring bones. The bones which come into contact with them more than any others are the superior maxillary and the palate bones, and these become flattened and altered in shape, as you will see in this specimen, which is called "a case of flattening of the antrum;" in which the thickness of the superior maxillary bone is gone, and it is not half its proper size. It was taken from a patient who had one of these very large fibro-angiomata of the nasopharynx. What else may happen? These tumors may extend so as to cause very considerable swelling of the face, they may bulge the bones forward, they may spread apart the nasal bones, may push in the wall of the antrum and push up the floor of the orbit, so that the orbit may be altered also. And by extension they may thin away the base of the skull and even extend into the skull itself, and by their bleeding and pressure they may cause the death of the patient. Therefore these are serious tumors, which need to be recognized com-

paratively early. When you look at these tumors you will say you could not see much more innocent looking growths in a bottle, and yet all these tumors have more or less threatened the lives of the patients from whom they have been taken. They all look like solid fibrous tumors, with the exception of this one, which you will see, has a cavity inside it. Those tumors which I have handed round were all taken from patients who were under my charge, and most of them came to the out-patient room of the throat department. They were all young males. In every case the patient was sent here on account of hemorrhage, and I will tell you briefly the story of one.

A man, aged about 19, was sent with a history that he had profuse hemorrhage from "a nasal polypus," that he had been to a hospital, and that a surgeon there had taken hold of a portion of this with forceps and torn some of it away, with the result that he had bled from it ever since. This was 10 days before he came here. When he came to the hospital he was still bleeding. His nose was plugged with cotton wool. On examining him as best one could, one found that his nose was altered in shape. It was useless to try to look inside it because of the bleeding and the blood clot which had collected. So I passed my finger into the back of his pharynx and there I found a large, sessile, rounded tumor, behind which I could not pass my finger. It was attached to the posterior wall of the pharynx and to the roof of the pharynx, which you will remember corresponds to the base of the skull. He had also a growth in his nose.

This, then, is how these tumors present themselves to you in many cases.

If you examine the patient and find that there is a so-called "nasal polypus," and you see something projecting into the nose, remember that the something which projects into the nose may be one of the branches or sprouts of this tumor which is in the pharynx, and you must therefore not at once assume, if you see something growing in the nose, that it is necessarily a simple nasal polypus. You will find that the true diagnosis of these cases is to be arrived at by passing the finger into the pharynx. There you will find attached to the posterior wall of the pharynx and to the roof of the pharynx a "sessile" growth. Of course, all intrapharyngeal tumors are not fibro-angiomata. There is another class of tumors which has been mixed up with them for many years, and is still mixed up, namely the myxofibromata or fibromyxomatous tumors. Here are some specimens of these true fibrous "polypi" which hang down in the nasopharynx. This, for instance, is a large pendulous growth that lay loose in the pharynx and hung down below the palate. You would find, in such a case, when you put your finger into the pharynx, not merely that there was a tumor there, but that it was pedunculated, that it was a true polypus, and that it was attached to the back of the nose and not to the base of the skull. Such growths do not bleed and occur in either sex, and affect one nostril only. The fibro-angiomata, on the other hand, affect males, cause bilateral obstruction, and have a history of hemorrhage; there may be actual bleeding at the time you see the patient and a growth is felt in the pharynx attached over a large area, not a polypus at all, but sessile.

Next, as to treatment. You have recognized that you have to do with a tumor of this latter class. It is not a polypus, it has no pedicle, and therefore there is no question in such a case of passing something round it in the way of a snare, because there is nothing to pass it round. What can you do for it? A patient from whom one of these specimens was taken was sent to me after having been under treatment for more than a year by a very capable surgeon who had treated it by electrolysis. The result was that the tumor was no smaller, that after some of the sittings for electrolysis it had bled profusely and that at the places where it had been treated by electrolysis it had become adherent to the palate. I believe electrolysis has never cured one of these tumors, and that the cases in which cure has been said to have been effected by electrolysis have been all cases of polypus of the fibromyxomatous variety, which may hang loose and free in the pharynx and which are altogether different in structure and attachment. As far as I know, no mere treatment by means of caustics or the cautery or electrolysis has ever cured one of these vascular growths. You have to do something large in the way of operation for them to bring about removal, and the first thing you have to consider is—if the growth is removed, will it recur? My own opinion is that if you remove one of these tumors it will not recur. These growths are often spoken of as being sarcomatous. But I believe there is a class of angiofibroma which has nothing to do with sarcoma, and which does not recur if the removal has been complete. What is the way in which it should be removed? It is in a most awkward place to get at, and it bleeds more than almost any tumor which you can think of. At the time of the operation, if you tear it, and there often comes a time when you do tear it, the gush of blood will be very great, and I have seen a patient die in the theatre here within twenty minutes after the rush of blood following an attempt at removal after excision of the superior maxillary bone. It is a growth which is widely attached, in an awkward position, and is fixed to bone. You must, therefore, have as good an exposure of it as possible, without, of course, doing more injury to the patient than you can help. One of these specimens which I show you was removed by an incision which divided the soft palate; afterwards the hard palate was cut away, and then the two sides of the divided palate were held apart by long threads of silk, which were placed on each side close to the uvula. When the tumor was so exposed, it was seen to be pulsating regularly and vigorously. This tumor is the one which I have handed you round and which you will see has a cavity in the center of it. After dividing the hard and soft palate, to expose the growth, I could press upon it and empty it, and found that it filled again by successive beats of the heart, just in the same way as an aneurysm does. It looked as though, if I were to tear it, the patient might bleed to death. But the tumor had to be removed; it had already threatened life by hemorrhage, and therefore the only thing was to take it away as quickly as possible and as bloodlessly. Having the remaining oozing arrested, I divided the mucous membrane below it with a pair of scissors, passed a strong curved raspatory down be-

neath the separated mucous membrane, and tore the tumor from its attachments to the base of the skull and to the body of the atlas. There was one furious rush of blood. I plugged the opening with a large sponge, and in about five minutes that sponge was removed and the bleeding had entirely ceased. I sewed up the man's palate, it united, and he recovered with no more trouble than if he had had an ordinary cleft palate operation performed. Remember, that was because we had a thoroughly free exposure and were able to tear the tumor away at one effort.

The next case was that of a lad of nineteen, who was sent up with a large swelling protruding from the maxillary bone on the left side, so that it looked as if he had a large tumor of the superior maxillary bone. That was the first impression one had. I took him into consultation here to raise the question as to what ought to be done. We decided that in any case it was worth while removing the tumor, although it had a short history and which might possibly be sarcomatous; so I began by removing the upper jaw on one side with unusual ease, and when I had taken it out I found why it came away so easily. It was a completely atrophied bone, atrophied by pressure, and the growth had certainly been there for some years. Having exposed the growth by taking out the maxillary bone, I found that I had to do with a very large angiofibroma, and it is the largest of the specimens which I have brought down from the museum. It weighed more than a quarter of a pound, and was attached to the pterygoid processes as well as to the base of the skull. I tore it away in two successive halves, because it gave way as I pulled at it. It bled furiously, and the bleeding continued two or three minutes more until I got the rest of the tumor away. After that the hemorrhage was stopped and there was no further trouble. I plugged the pharynx, and the lad recovered with that very slight amount of deformity which characterizes these operations, for the amount of the deformity is altogether out of proportion to the extent of the operation which has been done. Now, five years afterwards, wearing an artificial tooth plate on that side, I have shown him at my out-patient department and asked anybody to look at him and make a guess at what operation has been done. Nobody suggested that his superior maxillary bone had been removed, so slight was the deformity which existed. In both of these last patients I have referred to, the operation has been done about five years, and there is no sign of recurrence. Another patient was in the hospital only a few months ago. He was a soldier who was going to South Africa, and on board ship he had very severe epistaxis. There was great difficulty in stopping the bleeding, and it went on for a week. Afterwards, when he was out in Africa, he had recurrence of very severe bleeding, which necessitated his being sent home, because he could not serve. When he came under my care he had a large tumor in the nasopharynx, and some projecting portions of it inside his nose. I divided his soft palate, cut away some part of his hard palate, and tore it away. The hemorrhage was very severe and difficult to control, because in this case the tumor itself tore rather than its attachments to other structures. So on another occasion I had to do a second operation to remove the remainder of this growth, which I had been unable to detach at first. In this man the bleeding was very serious and dangerous for a short time, and it was only by plugging the whole of his pharynx through the divided palate with sponges and leaving them in the pharynx for twenty-four to forty-eight hours that I was able to stop the hemorrhage at the time of the operation. These cases will illustrate to you the histories and the line of treatment to be adopted in cases of intrapharyngeal fibro-angiomata.

Next, let us speak of older adults and old people. Older people may have nasal polypi; nasal polypi may come on at any age. In addition to these, there may be either sarcomatous or epitheliomatous growths in the nose and nasopharynx.

Sarcoma of the nares is rare; sarcoma of the nasopharynx is rare, and when it occurs it is liable to be a form of lymphosarcoma, the form of growth which you might rather expect in the nasopharynx, remembering that lymphoid tissue is common there. These tumors grow with much greater rapidity than the common fibro-angioma or myxoma; they infiltrate, they destroy, and extend into the bone. The next thing to remember is, that it is a very common thing to find malignant growths of the antrum extending into the nose. Not infrequently the first symptom that a person who has a tumor of the antrum complains of is a blocking of the nose, and a discharge from the nostril. You may find a patient come to the hospital on account of epistaxis and discharge and blocking of the nose, but complains of nothing beyond that. But when you come to examine him, you find that not only is there something in one nostril which is soft, and bleeds easily, but that there is something bulging the cheek on that side of the nose. You may next notice, when looking into the mouth, that some of the teeth are loose or have recently been removed. The patient says he "had a tooth-ache" and had a tooth out, or some of his teeth have been loose during the last few weeks. You thus find that the tumor is extending in two directions, downward through the teeth sockets, and inward into the nose, so that a sarcoma which you find inside the nose may originate not in the nose, and is not to be treated by operation inside the nose, but originates inside the antrum and grows into the nose and downwards into the alveolar process, destroying the teeth and displacing them. You must then be on the lookout for tumors of the antrum when you find a soft growth inside the nose which bleeds readily, for though your diagnosis of malignant disease in the nostril may be quite correct, for all that the disease may not originate in the nose; it may have nothing to do with the inside of the nares primarily, and the proper treatment may be the removal of the maxillary bone in which it originates.

I will say now only a very few words about epithelioma. Epithelioma of the nose may originate low down in the nose, in which case it is usually of the ordinary squamous-celled variety, and pre-

sents the ordinary appearances of squamous-celled epithelioma. Or it may originate in the roof of the nose, in which case it is a columnar-celled carcinoma. But neither of these is common. These tumors extend into the soft bones of the skull, so that very likely, by the time you see them, they have already destroyed some part of the ethmoid bone which intervenes between them and the membranes of the brain, and I have seen a patient who was brought here and operated upon for "polypus of the nose" die subsequently in consequence of a growth inside his skull. This man had a growth of a sarcomatous nature, which had grown through the bones of the nose up into his skull, and his death had been caused in that way. In other cases you find that the growth which extends into the skull is of the cylindrical or columnar-celled variety. These grow more slowly, they have less tendency to disseminate, they do not so widely infiltrate or destroy. Some years ago I had to do with an old woman who had had something wrong with her nose for more than a year. Under cocaine I found she had a large soft swelling in the upper part of her nose, which bled as soon as I touched it, and I concluded it was one of these malignant growths, and I thought I would find out exactly what it was before operation. So I had a small portion which I snipped off microscoped. It was a columnar-celled carcinoma, and under an anesthetic I therefore scraped away the growth gently, together with some of the softened neighboring bone, but taking care not to go too far. I cleared her nose out with very little trouble, and for eighteen months she remained clear. After that she came again and I removed more growth. At the end of three years from the time I first saw her she was alive, but the growth had extended into her orbit, and by that time it could not be removed. She would probably die of extension of the disease into the bones of her skull, and perhaps the growth would affect the membranes of her brain.

In this lecture I have dealt fully with only one particular class of tumor, so far as its treatment is concerned, namely fibro-angioma. I might say more about these other tumors, especially nasal and nasopharyngeal polypi, but I shall hope to return to that subject another day.

A CASE OF PERFORATION IN TYPHOID FEVER, WITH OPERATION.*

By GEORGE ERETY SHOEMAKER, M. D.,
of Philadelphia,
Surgeon to the Presbyterian Hospital.

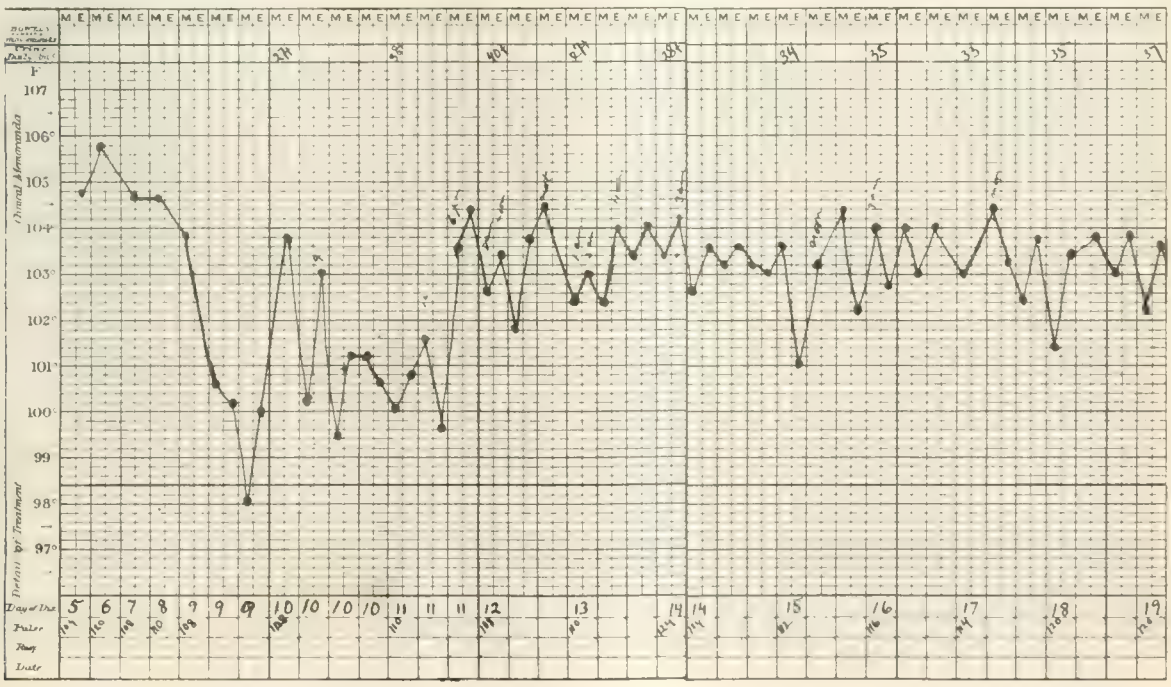
The time is so short since operation in typhoid cases was considered justifiable, and the cases are yet so few in number that even one of them may contribute to such future knowledge as shall make our position stronger in dealing with this most serious complication.

Briefly stated, this was a typical case of typhoid fever, severe from the first, with profound toxemia, wakeful delirium and active struggling resistance to all nurse attentions, deep excavating sacral bedsore and occipital cellulitis. On the 24th. day perforation occurred in the early morning hours. Operation 7 to 10 hours later. The cecum was punctured to relieve distension and stitched. The typhoid perforation was then found and stitched. The patient was temporarily relieved, but died on the seventh day (6 days and 5 hours) after operation, the thirty-first of the disease, exhausted by the continuance of the malady. She was a girl of 17, German, who had a slight physique, but had never previously been ill. There was no organic disease. Her mother died of phthisis. She was cared for in her home, under the observation of myself or of Dr. Longnecker.

The diagnosis of enteric fever was clear. It rested upon nosebleed and the usual prodromes. There was right pelvic gurgling, the temperature rose steadily to about 106° on the fifth day, and continued high. There were present, prior to perforation, tympany, spots, 2 to 11 characteristic stools a day, delirium and typhoid facies. There was a thickened patch about the point of perforation. The lungs and peritoneum showed no evidence of tuberculosis. The appendix was normal. Treatment had consisted of cold sponging and packs. The diet was chiefly of milk and the medication symptomatic.

The type of the disease previous to perforation was severe, as will be seen by reference to the

*Read before the College of Physicians of Philadelphia, April 2, 1902.



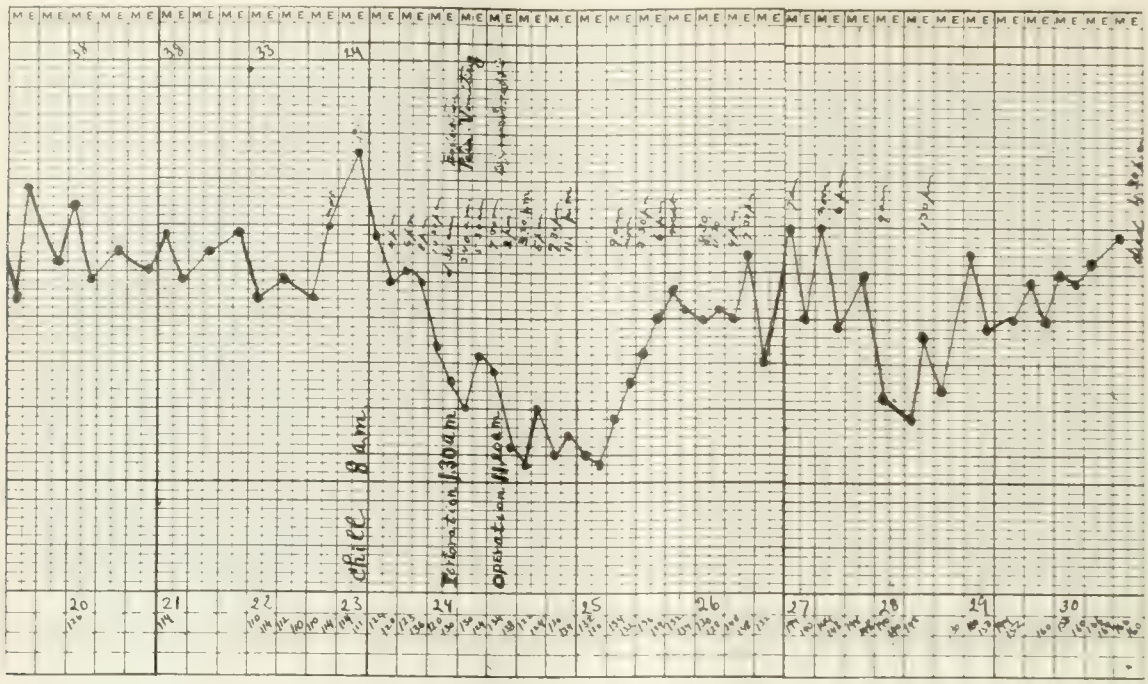


chart. The continued high temperature, a large deeply excavating sacral slough forming early in spite of good nursing, and spreading in spite of all care, contributed to the exhaustion of the patient. Persistent wakeful delirium and active resistance to all necessary attentions by the nurse were at times associated with terror and screaming. The skin and subcutaneous tissues over the occiput nearly, but not quite, broke down, there was much subsultus and some retraction of the head.

If such be the condition of a patient previous to perforation, and if to this be added a chill, rise to 105.4°, the onset of the persistent expulsive vomiting of peritonitis, the drop in temperature, pain, excessive tympany obliterating liver dulness and embarassing respiration; if after all this a patient may live over six days from the time of arrest of peritoneal symptoms by operation, the future of typhoid perforation must be somewhat hopeful, because cases of less severity must surely have a better chance.

I conceive that there was in this case a preperforative stage lasting 18 hours, from a period of chill and rise of temperature at 7.30 one morning to about 1.30 the next morning, when persistent pain and vomiting began. The operation was done 10 hours still later, or within 2 hours of my morning visit and the making of the diagnosis. The small amount of local plastic peritonitis, in the absence of well marked adhesions, found at the operation, indicated that the inflammation was short lived, and I cannot think that escape of intestinal contents had occurred 28 hours before.

The symptoms present in what I have called the preperforative stage were, chill lasting forty minutes, followed by violent tremor, slight rise to 105.4°, followed by slow descent to 103°, pulse 124-138, respiration 32-36, as contrasted with a previous average of 103°-104°, pulse 110-114, respiration 30-34. During the following day and evening once vomiting of curds, and once a complaint of pain were noted. She was seen several times, but as there was no increase in tympany, as bowel movement continued, as respiratory movement extended to the lowest portions of the abdomen and there was no local rigidity, as the single vomit of curd might have been due to a mineral acid, as the pain was transient and as several times earlier in the disease severe pain had occurred, it was decided that the evidence of perforation was not conclusive at this stage. Reliance was placed on the respiratory movements, the absence of muscle rigidity, vomiting and decided fall of temperature. At this time the ulceration was undoubtedly attacking the peritoneal coat at the point of later perforation, and nature was making a vigorous effort to head it off by an outside coating of lymph and possibly by an adhesive attachment. A frequently repeated white cell count during these hours might have shed some light, but it was not available. A single white cell count, unless very decidedly above 15,000, is not very reliable as evidence. A steadily ascending count, as has been pointed out by Dr. Osler, would be significant, if present. To have any value this observation would require the almost constant presence for many hours of a physician who was daily doing blood work and whose technique was good. Precious time may be thus wasted, especially if the early readings are negative. If, however, circumstances allow the gathering of this cumulative evidence, and if it is positive, it has much value. The unreliability of a single white cell count in the diagnosis of acute abdominal disease is illustrated by a recent case in which vomiting, rectal tenesmus and left-sided pain, with some fever, were features of an acute exacerbation of a chronic catarrhal colitis, without any tubal, appendiceal or other visceral disease. White cells were 16,000. The most careful and repeated physical search both before and after recovery, with and without ether, failed to show an inflammatory focus outside the mucous membrane of the bowel. The count fell in a few days to 6,200.

To return to the case under discussion. Eighteen hours after the chill steady pain began, soon becoming severe. A little later, at 4.30 A. M., she referred the pain to the right lower quadrant and said she had appendicitis. Vomiting became persistent, greenish, and expulsive, though 4 stools occurred in the night. The abdomen became more distended and when the patient was seen at 9.30 A. M. liver dulness was gone, the face was anxious, the pulse harder at 134, respiratory movements in the abdomen had ceased on account of extreme distension arching from pubis to sternum. The diagnosis was probably equally clear for some hours before my visit. Operation two hours later beside the patient's bed, with the assistance of Dr. Walter G. Elmer the other being skilfully given by Dr. Worden. On opening the peritoneum for 3½ inches over the cecum much gas and some watery brown fluid escaped. As nothing of bowel character appeared, the presenting coils of ileum and a few inches of tensely distended cecum were withdrawn through the wound. There was no evidence of peritonitis, and some presenting omentum showed only some vein engorgement. These parts had evidently come from above the wound, and as they were not injured and the point of departure in the search must be the ileocecal junction the necessity for returning them arose. The attempt to do this, of course, failed, owing to distension. The cecum was therefore incised with a knife and white water was poured over the parts, gas and feces were allowed to escape till the coils were flaccid. The nearness of the ileocecal valve allowing gas to escape from the ileum also

This opening was at once whipped over by 3 layers of continuous silk, and the intestine returned with ease. The base of the cecum being now found, the appendix was delivered and found normal. Tracing out the ileum from this as a starting point, an inflamed peritoneal region was reached about 8 inches along the gut. Two or three square inches of thick, yellow, unorganized, plastic lymph and injected peritoneum were found on nearby knuckles of gut. No adhesions requiring the slightest effort in their separation had yet formed. A well-defined perforation about ⅛ of an inch in diameter was found in the center of a hardened patch, evidently a Peyer's patch, from which gas and liquid feces escaped. The nearby lymph was pulled off by the fingers and the opening closed by three superimposed layers of fine silk suture. The chances of other perforations being small, no further search was made. As it was evident that there was no extravasation of the gas and fluid which had leaked out before operation the surrounding peritoneum was flushed. Iodoform gauze strips were placed in five different directions and a glass tube put in. Special care was taken to pack the intestine away from the pelvic wall as in appendicitis operations, and to place the sutured parts in this field so as to secure external drainage should the sutures fail to hold. The loose sutures supported the gauze packing, and otherwise the wound was left open. Salt solution under the breast. Two hours after operation the pulse was 138, temperature 99.2°, respiration 40. Before operation the record was 134-100.8°-36. There did not appear to be much shock and the patient looked better. Temperature did not drop below normal, nor did it rise above 100° for 24 hours. The peritoneal vomiting stopped at once and never returned. The tympany almost disappeared for several days and never again became marked. This was because letting gas out at the wound re-established free peristalsis, and flatus escaped freely. There was little pain, and that in the wound region. No effort to move the bowels was necessary, as much gas was passed the afternoon of the operation, and there were every day from one to four stools until her death, from exhaustion, on the seventh day following. There was never any fecal discharge or odor in the wound. All gauze was changed on third day, and clean intestine and omentum seen. Drainage tube out the fourth day. After this dressings dry. Urine was to pass. Urine was passed freely. But little nourishment was given during the first 24 hours, though it was rapidly increased, and by the fourth day she was taking 2 to 4 ounces of milk with whiskey every 2 hours. On the day of her death she took 4 ounces of milk 3 different times and slept five hours, but in spite of salt solution under the skin, which caused temporary improvement whenever used, strength gradually failed and death occurred apparently from exhaustion, the typhoid process continuing.

The only available autopsy was through the open wound. The external dressing was dry and the light iodoform gauze packing was normally moist, clean and sweet. Healthy loose omental surfaces and intestine were seen in the wound, which was, of course, still open throughout. No intestinal leakage had occurred from the sutured points which had been disposed in the wound area. No attempt at healing of the external wound. In cases that recover this occurs after the typhoid process has subsided. This girl would likely have died of typhoid fever had she had no perforation. The operation simply prolonged her life six days, and would have saved a patient less seriously ill. It is encouraging that, after the onset of peritoneal vomiting, operation should be so well borne.

A few brief points as to management of such cases. A patient can not be moved to a hospital for operation. If in a private house, this must be done at the bedside. Every effort must be made to save time in operating. There must be no handling of distended bowel outside the abdomen. Once escaped this cannot usually be returned without an amount of trauma which is most fatal. Inflamed visceral peritoneum splits and peels off with the greatest ease. A short incision of the bowel made under constant irrigation is by far the less of two evils, and may be quickly and safely repaired. An intestinal leakage has already occurred so that the additional danger of soiling the peritoneum may be disregarded. The external incision should be located as for appendicitis. The point of departure for search should be the ileocecal junction, as the majority of perforations occur in this neighborhood. If possible, the lateral abdominal wall should be made to form one side of the area packed and drained. Infusion of salt solution is useful as a stimulant. It will tide a weak patient over dangerous periods of depression and probably also assist in the elimination of typhoid products by the kidneys. The external wound should not be closed. Other things being equal, the patient most likely to recover will be the one to whom the least is done. Even establishing drainage along with a fecal fistula would be far better than prolonged manipulation which is sure to kill.

ATTEMPTED SELF-CASTRATION IN AN INSANE PATIENT.*

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The subject of this report, a man, 29 years of age, unmarried, a designer by occupation, was admitted to the Pennsylvania Hospital for the Insane in February, 1902. His father died of alcoholism; his mother is living and well; other members of his family are in good health. For more than a year he had been depressed and worried on account of differences between himself and other workmen at their place of employment; and for fully three months he had steadily lost flesh, during which time he had been irregular in his work which he abandoned about two weeks before his admission. At first suspicious of his companions at the factory, he came to imagine they were conspiring and talking against him, then he accused his family of wronging him, and he believed he might receive bodily harm at the hands of strangers and others. He called on people at two o'clock in the morning, to rehearse his troubles; and to prevent going to sleep he dashed water into his face, for he imagined if he slept he would never awaken. In obedience to hallucinations of hearing and the delusions growing out of them, he took to walking the streets at night, and on one occasion he went to a distant city, where he had no friends nor purpose, and he remained until the following day. When brought to the hospital and searched, a loaded revolver and two ounces of laudanum were found in his possession. He said he had these so that if the people who followed him and made remarks to and about him, "cornered" him, he might kill himself rather than surrender to their hands. His mental reflexes were acute, but his pupils were dilated and slowly responsive, his circulation was sluggish and his extremities were livid and cold. He was constipated and showed signs of marked malnutrition. For several days, under tonics, massage and baths, he seemed comfortable, ate ravenously and slept well. One morning, ten days after admission, without premonitory signs of disturbance, he suddenly pounded his head against the wall, broke his pitcher and tried to beat his head with the fragments, whereupon he was dressed in a restraint suit and put in bed. On the morning of the second day following the above described episode he was as usual placed upon the commode, and returned to bed. Thirty minutes later he asked to get up again, when the nurse noticed that his clothing was bloody, and that his right testicle was larger by several inches of exposed cord through a wound in his scrotum. My associate, Dr. Horace Phillips, washed the cord and gland in warm bichloride solution, returned them to the scrotum, and stitched up the wound which was three inches in length. The stitches sloughed out, but under the doctor's skilful care granulation was rapid and the healing was complete. The mutilation was made with a safety pin, which the pa-

* Read before the Philadelphia Neurological Society at its meeting in April, 1902.

tient's mother had used in fastening a piece of flannel to the inside of his shirt to keep his back warm. This he secured after being returned to bed, thirty minutes previously, and which he was able to reach after cutting a hole through the moleskin restraint suit with his finger nails. The patient said at the time that the mutilation was not premeditated, but was done because people in passing his door made signs and remarks. He has stated recently that the parts were uncomfortable, and he thought bad women might trouble him, hence the injury. He has not admitted that the hallucinations were in the form of orders to him, and he is not clear as to whether they are audible voices or only impressions: nor has he admitted any unnatural or morbid religious ideas which are so often present in the insane who mutilate themselves.

Cases of this kind are fortunately rare, though similar ones have from time to time been reported. In an extensive hospital experience, covering many thousand cases, this is the only patient who has attempted castration.

It, however, adds one to the list of methods of self-injury in a class of patients of the depressive type with persecutory delusions, who are a constant source of anxiety to those having them in charge.

In a small proportion of cases improvement is rapid after self-injury.

I have seen recovery from melancholia occur before a cut throat had healed.

Our patient has remained stationary. He has continued to refuse food, which he declined after his first demonstration, and he is regularly fed by means of a nasal tube. He has recently spat a good deal, and he probably has hallucination of taste as well as of hearing.

ON CYSTOSCOPY, ITS VALUE AND DANGERS.*

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Fellow of the Academy of Medicine; Corresponding Member of the French Association of Genito-Urinary Surgery.

When your honorable chairman invited me to prepare a paper to be read before you, he suggested that I speak to you about cystoscopy. In accepting the invitation, I realized that the field of cystoscopy, with its offshoots, has become so broad, within recent years, and is, in its finer details, to so great an extent work which falls within the province of the specialist, that it would be an utter impossibility for me to do more than cover the topics in a general way. I have, therefore, determined to confine myself to a presentation of the uses, dangers, method of employment, and difficulties encountered in cystoscopic examination, with a few remarks relative to ureteral catheterization, etc.

Time will not permit me to go into details with regard to the merits, or demerits of various systems of examination. In the hands of some practitioners one system or the other has given the greatest degree of satisfaction. I shall, therefore, content myself with saying that, since the Nitze cystoscope and its modifications have, in my hands, given me the maximum of satisfaction, with the minimum of risk and discomfort to the patients, I have come to use this in preference to all others. I have employed it in adult males and females, and also in children of both sexes, and have come to the conclusion that, for width of its field of employment and generally satisfactory results, when in competent hands, it is to be preferred to all the others.

There has been a very great development in our instrumentarium in the period which has elapsed since Bozzini, in 1806, first proposed a method for examining the various canals of the body, by means of his so-called "light-carrier;" but it remained for Nitze and Leiter to develop, with the aid of an optician, Bénèche, the work of many, but notably of Desormeaux, Grünfeld and Bruck, and to give us, in 1879, the instrument which remains the model for all of the modern cystoscopes. You are, no doubt, familiar with the principles of its construction: It consists, as you know, of an elbowed tube, having, at the vesical end, in the elbow, an electric lamp, contained in a metal sheath which is fenestrated upon its anterior surface. Close to the elbow, upon the upper surface of the straight portion of the tube, is a prism, which lies so that the hypothenuse, which is silvered, forms a mirror, and reflects the rays of light entering the prism from the bladder, into the lumen of the cystoscopic tube, in which, by means of an arrangement of lenses similar to those of the telescope, these rays are transmitted to the eye applied to the outer, or ocular end of the cystoscope. Owing to the fact that a prism is employed as the mirror, we obtain an inverted image. This, at first, may lead to some confusion; but, after a little practice, it will be found that one grows sufficiently accustomed to this change to be able to disregard it entirely. To overcome the difficulty of dealing with the inverted image, the use of the straight-tube, telescopic cystoscope, minus the prism, has been advocated by Brenner and others. All the instruments of this type, while giving us an image in its proper relative position, have the disadvantage that there are parts of the bladder-wall which cannot be brought into the field of vision at all.

In addition to using a reliable cystoscope, much importance attaches to the source of the electrical current. This may be either a dip-battery, storage-battery, or the street current as used for incandescent lighting. Whatever the source, a proper rheostat must be connected with the source of the current, to regulate the supply which reaches the cystoscope. Personally, I prefer the storage-battery, freshly recharged at regular intervals, for outside work, while, for office work, or work in such houses, or hospitals as use the current for illumination, the latter, controlling the current, in this case, by means of the Wappler current controller. By means of this, and the affixation of lamps of different candle-powers to the controller, one is able to vary the current within the required bounds. Usually a 32 candle-power lamp suffices.

The general principles governing examination vary somewhat in the male and the female. In the former, owing to the greater length, the tortuous course and the greater sensitiveness of the canal, insertion of the instrument is more difficult than in the female. In the latter, however, the examination itself is apt to be more difficult, owing to the greater liability to distortion of the bladder by changes in the pelvic organs. In both, the first requisite for examination is that the urethral canal shall permit of the passage of the cystoscope. If a stricture be

*Read at a meeting of the New York Medical Union, March 25, 1902.

present, this must first be dilated to a sufficient extent. The meatus, in the male, at times has first to be enlarged. In the female, this may, at times, be so sensitive that it must be well cocainized before the cystoscope can be inserted. In but very few cases of females, whether adults or children, have I had to anesthetize the urethra. In males, adult and infant, it has been my custom to employ a few grams of 1% cocaine solution.

It is wise, in determining the question, whether the urethra is of sufficient caliber to admit of the insertion of the cystoscope, to employ, for the purpose of emptying the bladder, a catheter which is slightly larger than the instrument to be used. It is my custom, after cleansing the external genitals and irrigating the urethra, to draw off the urine with a sterilized catheter, for examination, or simple inspection.

For the purposes of irrigating and filling the bladder I employ a sterile 1% solution of boric acid, which has the advantage of being perfectly transparent, nonirritating and mildly antiseptic. In irrigating I prefer to employ the hand-syringe, which can be completely sterilized, and, where possible, employ no catheter. Irrigation must be continued until the fluid returns *clear*. This point is of the greatest importance, as many a bad result in these examinations is due to imperfect transparence of the filling-fluid. At times the process becomes very tedious, especially when a diseased kidney is at intervals spurting blood or pus into the bladder. This sudden turbidity of a fluid which had become almost clear on irrigation is, by the way, a diagnostic point of value in determining whether the source of the blood or pus be vesical, renal or ureteral. It occurs in the cases of renal or ureteral origin.

Another important requisite for the satisfactory illumination of the bladder is that it shall be capable of a sufficient degree of distension. In the male usually 150 cc. of fluid suffice, while in the female 200 to 250 cc. are better; in either case, a little more adds to the chances of success. In no case, however, should an attempt be made by any but an expert, to examine a bladder which contains less than 100 cc. in the male, and 150 cc. in the female. If too great a degree of sensitiveness be present, local, or general anesthesia may be employed. When even with these the bladder will not tolerate a sufficient quantity of fluid, it is wiser to postpone the examination for several days, and until gradual progressive distension of the bladder has been employed. In many instances of atrophy of the bladder-walls following long-continued cystitides, or incontinence, we find this inability to contain a sufficient amount of fluid, even under anesthesia, while in inflammatory conditions the condition disappears, to a great extent, when a local, or general anesthetic is employed.

Let us suppose that conditions are present which will permit us to examine our patient. How do we proceed to do this? First of all, our patient is placed upon the examining-table in such a position as to give him, or her, the greatest amount of comfort. This I find we are able to do by having the patient lying upon the back, with the body slightly elevated, the thighs slightly flexed upon the hips, and the knees resting upon the supports of our examining-table. The other preliminaries, of cleansing the genitals and irrigating and filling the bladder, having been attended to, the cystoscope, previously sterilized by lengthy immersion in an antiseptic solution, is connected with the current, and tested as to its proper condition, and also with the view of ascertaining the requisite quantity of current to employ. After this, the cystoscope is inserted, being passed through the urethral canal with the beak pointing upward, like a prostatic catheter, until one feels the beak enter the bladder. Doubt upon this point may be removed when one is able to turn the cystoscope freely and easily about its long axis, in position. After this, we again connect the current, and turn on an increasing quantity, until the picture presented is clear and distinct. Before doing this, however, in the case of female patients, I have found it a valuable precaution to test the limits of safe excursion in the bladder, by using the cystoscope as a sort of sound, to determine the position of the uterus. As this is the most frequent source of encroachment upon the bladder-cavity, in females, it proves the part at which cauterization with the cystoscope-lamp is most likely to occur, unless care be taken.

There is a certain routine of examination which gives the minimum of discomfort and the maximum of information. It is as follows: After turning on the current and satisfying ourselves that the light is of sufficient intensity to permit of clear vision, we examine first the lower margin of the sphincter, then the trigone, the ureters, locating these and noting their character and activity, as well as the character of the urine they discharge, then passing on to an examination of the lower posterior wall of the bladder. This completed, we turn to one, or other side, examining the lateral quadrant, in its entirety, completely and carefully. Thence to the upper and anterior wall, after which the other lateral wall completes the tour. In this way no part of the bladder-wall should escape inspection.

In children much the same technique and routine are employed as in the adult, the difference being that a much smaller instrument is used. I have cystoscoped in many instances, in children of both sexes, the youngest female being 5 years, the youngest male 5 8-12 years of age.

What can we learn with the cystoscope? In a word, so much and at so little risk to the patient, when properly performed, that it seems to me that no other method of examination should be employed until cystoscopy has been proven to be impossible. We are able to determine whether the sphincteral margin is normal or the seat of disease, such as inflammations, papillomatous formations, etc. Whether the trigone is normal or the seat of inflammations or new growths or whether foreign bodies or calculi (which occur, in the majority of cases, in this region) are present. The character and probable nature of new growths; the character and position of foreign bodies and calculi; the presence of prostatic hypertrophy, of cystocele; the condition of the wall of the bladder and whether this is the seat of hypertrophic bands or the scar-like contractions of pericystitis (which I have described in

another article); whether it is normal or the seat of inflammations, points of hemorrhage, ulcerations, nodules, new growths, vesicles or diverticula; whether the cavity of the bladder is encroached upon by other organs, as the uterus (enlarged, or displaced) or by pelvic tumor-masses or exudates; whether the ureteral orifices are both present, their location, shape and condition and whether they are both secreting urine normally and whether this urine is clear, purulent or bloody; whether blood or pus be of vesical or renal, origin.

Cystoscopy is not always easy of performance. Strictures may oppose the insertion of the instrument and may have to be removed before the examination is possible. There may be present spasmodic contraction of the compressor urethræ sufficiently severe to necessitate local or general anesthesia. An enlarged prostate may offer an almost insurmountable obstacle to examination, first by offering an impediment to the insertion of the cystoscope, and further, if the mucosa covering it be the seat of inflammation, by its tendency to bleed. So also, the displaced uterus or pelvic exudates or tumors may encroach upon the bladder to such an extent that the greatest care must be employed to avoid injury. In old cases of chronic cystitis or cases in which there has been long-standing pressure upon the bladder by tumor-masses or where there has occurred a limitation of the distensibility of the bladder through the contraction of perivesical exudates, there may occur contraction of the bladder to such an extent that, in order to permit of the distension of the bladder necessary for proper examination, it may be necessary to subject the patient to a preliminary treatment, having for its object the increasing of the capacity by gradual stretching or progressive distension of the viscus.

The dangers of cystoscopy have been much exaggerated, and, where disasters have resulted, I do not hesitate to say that they have occurred through faulty technique, or carelessness on the part of the examiners. Where a proper degree of asepsis is observed, cystoscopy should be no more dangerous than properly carried out catheterization, or the passage of a sound. The writer made the statement some months ago that, in his belief, where severe reaction and infection occur following cystoscopic examination, even in infected bladders, it is, in almost every case, due to a cauterization of the vesical wall with the cystoscope lamp. This can, however, be avoided by perfection in the technique of examination. The correctness of that statement was, at the time, disputed. I would say, in justification of the view, that I have made it a practice subsequently to examine everyone of the few cases which have shown any infection, or reaction, following cystoscopy at my hands, or those of my students, and that in only one case (and that in a pronounced neurasthenic, with chronic posterior urethritis and infiltrations, who showed similar reactions even after the passage of sounds) was such a cauterization-wound of the vesical wall missing. Strict asepsis should be observed. The external genitals should be cleansed, the urethra thoroughly irrigated, sterile solutions used and the instruments thoroughly sterilized. If these precautions be employed, cystoscopy is no more dangerous than catheterization.

The greatest advance developing from cystoscopy has been the catheterization of the ureters. Although attempts had been made to collect the urine from the kidneys separately, before the completion of the perfected ureter-cystoscope, it was only after this was completed that catheterization of the ureters was made possible without resorting to opening of the bladder, or to other uncertain, or dangerous procedures. Nitze, Casper, Albarran, Pawlik and Kelly are the ones to whom we owe the greatest thanks for making this field accessible to us; especially to the first two, whose instruments are available in both males and females. Other instruments, known as segregators, have been proposed and adopted by many. The original model of these, proposed by Neumann (Guben) in 1897, has been perfected by Harris and Downs and adopted by many. Personally, I believe that properly performed ureter catheterization is more certain and to be preferred.

The idea is to pass a small catheter through a cannula in the cystoscope into the bladder and thence, under control of the eye, into the ureter. Once in it is possible to collect the urine from the kidney of this side, entirely separate from any admixture with the bladder-contents or with the urine of the opposite side. Recently instruments have been presented by Casper, Tilden Brown, Ellis and myself to permit of the simultaneous catheterization of both ureters. It will be readily seen how very valuable such a procedure must be. If carefully carried out, it is possible to tell, by this means, whether the kidneys are secreting urine, as also the relative and total quantities in a given time; whether this be clear or turbid as a result of pus or blood; the microscopical character of the urine thus gained and its chemical composition. Also, whether there be any obstruction along the course of the ureter and, if so, whether this be of calculous or strictural character as well as its location (where calculi are suspected, Kelly's wax coated catheters or sounds are of value in diagnosis). And, in those cases in which the methylene-blue test, or the phloridzin test is to be applied to determine the relative condition or the functional powers of the kidneys, it is easily seen of what great importance ureter catheterization becomes. Only by its aid can we obtain *definite* data for comparison.

At times it becomes necessary to leave the catheter in the ureter for hours; it has been, in many instances, left for days. If stricture of the ureter be found, this may be treated by progressive dilatation by suitable ureteral sounds. And lastly, in ureteral inflammation and pyelitis irrigations for therapeutic purposes may be advantageously employed. I believe that the near future will see pelvic lavage recognized as that form of treatment indicated in cases of noncalculous pyelitis.

If cystoscopy has been combated as dangerous, this is much more the case with ureter catheterization. But undeservedly so. Just as the dangers of properly performed cystoscopy have been far overrated, so also have those of catheterization of the ureters. I say *properly performed* cystoscopy and

ureter catheterization, for I realize that when carelessly or improperly done both may be made operations of grave danger to the patient. In addition to the care prescribed above for the operation of cystoscopy are the careful sterilization of the ureter catheter before and asepsis during its employment. Furthermore, care must be employed in inserting it into the ureter, to avoid wounding its wall. Besides opening the way for ascending infections, lacerations of the walls of the ureter lead to uncertainty in diagnosis, owing to the resulting admixture of blood with the urine. A reliable preventive of infection I have found to be the irrigation of the ureter, prior to the withdrawal of the catheter, with nitrate of silver solution, 1-5000 (Casper recommends 1-1000). I have catheterized the ureters in over 475 instances and in no case can I say that an infection resulted therefrom. I feel that I cannot do better, in leaving this topic, than to quote the words of Casper: "I do not hesitate to state that, for him who has mastered the technique and the methods of disinfection of this delicate procedure, the danger of infection does not exist. The inexperienced should keep their hands from it. Of them I can readily believe than they can do more harm than good thereby."

A further advance in intravesical therapeutics has been the perfection of the operation cystoscope. With this it is possible to do much *intravesically*, which formerly could only be done after the bladder had been opened. We can now remove small, or moderate-sized tumors with the snare (cold or cautery), cauterize bleeding points, remove foreign bodies and crush small calculi, all under the direct control of the eye. The writer and A. Freudenberg, of Berlin, have devised a cystoscopic prostatic incisor, which permits of visual control in the Bottini operation. Wossidlo, of Berlin, has devised a somewhat similar instrument for the same purpose. And, finally, both Nitze and Casper have devised camera cystoscopes, which enable us to obtain photographical reproductions of the interior of the bladder.

While the more intricate and delicate cystoscopic manipulations must remain in the hands of those whose experience has given them command over the necessary *finesse* in technique, it seems to me that the use of the simple, examination cystoscope has not reached the general application that it deserves. Especially is this true of this country. When properly employed, it is of so little danger, and still is capable of being of such great aid to us in the diagnosis of obscure conditions affecting the genito-urinary tract, that its field of usefulness should, and undoubtedly will, be very greatly broadened in the near future.

Investigations Upon the Drainage of Wounds.—Paul Vignard believes that moist antiseptic dressings assist infection. A rubber drainage tube is best, whenever possible. When this is impossible, however, some aseptic gauze must be used for drainage. His researches show that plain sterile gauze has greater absorbing power than gauze treated with iodoform, solol, etc. This, however, is useless when the fluid to be drained off is purulent, of greater consistency than water, serum, etc. Yet for the drainage of wounds, simple sterile gauze is excellent. (*Le Bulletin Medical*, March 15, 1902). [M. O.]

TWO CASES OF FOLIE DU DOUTE.*

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of Philadelphia
Neurologist to the St. Agnes Hospital; Assistant Physician to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases; Physician to the Home for Incurables, etc.

The patient, a woman, 24 years of age, married, applied to the clinic for nervous diseases at St. Agnes Hospital, complaining of an interesting form of mental disorder. She described her condition to be one in which she could not resist the impulse to "want to do everything over again," to use her own words.

The symptoms began when the patient was 16 years of age, preceding a short time the onset of the menstrual period. She was working at that time in a factory, measuring tin, but was obliged to resign this position, as she was never able to make any headway with her work. She was always in doubt whether she had measured the strips of tin correctly or not, and her time was entirely taken up with continually remeasuring it.

The first symptom of which she complained was a vague idea that she had committed a sin, the character of which she was never able to define. When some thought occurred to her, she felt it was necessary "to follow this out to the end" in order to study its exact nature. After saying her prayers, her mind was possessed with an uncontrollable unrest, springing from an inability to convince herself that she had said them properly. She was obliged to return to this duty once or twice before she could satisfy her doubts. After confession she became the prey of the most depressing fears that perhaps all her sins had not been enumerated, and she would have returned to reiterate her confession should the laws of the church have permitted. In the routine of household duties, the chair was repeatedly dusted, the bed was remade, the room reswept, the dishes washed and rewashed, until, in a state of doubt and confusion, the day was occupied in endeavoring to straighten out the duties which to her seemed never to have been accomplished or, if at all, only improperly.

This impulse to repeat manifested itself also in conversation and in reading. She was impelled to repeat sentences in reading or in talking, until she quite satisfied herself that they were correct. Should she inadvertently read a sign while walking along the street, she must return and read it again before she could go on in peace. Sometimes she found it necessary to repeat twice, sometimes three times before she was satisfied. At one time an even number was necessary, at another an odd number. If she offered any opposition to these impulses she committed a great sin. When she repeated the act frequently enough to remove the doubts the sin was averted. At first the symptoms manifested themselves periodically, which is characteristic of this disease, and lasted from a day to a week, after which there was an interval of a few days of comparative mental comfort, then again some new thought would occur to occupy her attention for another period of similar duration.

Her intelligence seemed in other respects good. She was conscious of her condition, recognizing that the symptoms which she described were abnormal, but always felt that she was powerless to control them. She had frequently experienced the feeling that she might become insane. Emotionalism was quite marked. She had never had suicidal impulses, nor had the thought of self-destruction ever occurred to her.

There is no history of insanity in the family. The father is well; the mother is a very nervous woman, who is horribly frightened at thunder-storms, during the progress of which she constantly prays. One sister, 19 years of age, is so afraid of the dark, that she refuses to enter a dark room alone. The remaining family history is entirely negative.

The patient has had one child, who is well, and she has never had a miscarriage. Her previous history is good, having enjoyed fairly good health with the exception of scarlatina and diphtheria at 2 years of age, from which disease she suffered no sequelae. At 16 years of age she began to menstruate, the periods being of 2 days' duration and accompanied with severe cramps.

She has always had a great fear of lightning, and during thunder-storms always rushed hysterically into the air.

Her condition upon examination was as follows:

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*Read before the Section on General Medicine of the College of Physicians of Philadelphia, Jan. 13, 1902.

She was poorly nourished, the mucous membranes pale, appetite poor, her digestion deranged, and she was constipated. There was no abnormality of the heart except that the sounds were feeble, and her lungs healthy. The knee jerks were normal, the arm jerks could be elicited, but there was no clonus.

The eye examination, beyond showing some slight refractive error, revealed nothing of importance. The color fields were not abnormal, nor was there any change in the eye-grounds.

The second case illustrates a different and more interesting form of this disease. The history is given here incompletely, as the patient came under my care only a few days ago, and I have not, thus far, had the opportunity to study the case fully.

The patient is a single woman, 40 years of age, a seamstress by occupation. There is nothing in the family history bearing on the case. She had never had any sickness that she could recall, until the onset of the present disease. This began when she was 20 years of age, two years after her menophania. The first symptoms of her disease she described as a "strain on the brain." The history of the symptoms at this time is vague, as it is impossible to get a clear description of them. She probably remained fairly well until five years ago, when she developed delusions of contamination which lasted for five months. (From these she largely recovered). At this time she felt that it was necessary to wash her hands constantly, especially after stool, after blowing her nose or handling medicine bottles. She had to discontinue saying her prayers, as so many repetitions were necessary, that she was never able to satisfy herself that she had finished them. In receiving change, she had to count and recount it, before she was convinced that the amount returned was correct.

At the onset of her symptoms she was obliged to discontinue her occupation, because the doubts that her work was improperly performed made her examine and re-examine it so frequently that she never made any progress. She often ripped up her work because of these doubts. Her next occupation was housework, but she was "too particular;" she rubbed and scrubbed things too much and finally last Spring gave up doing any kind of work whatever, because she says her whole attention was given to an examination of every little detail of her duties, and a fear consequent upon a doubt that some part of her work might be neglected. At present she is absorbed with the one thought of keeping herself free from contamination. The poison under her finger nails requires constant washing, as do also her hands after the use of her handkerchief, many of which she uses daily. She is careful in walking to avoid stepping on any refuse matter or expectoration. And so from one thing to another her day is filled with useless and futile endeavors to dispel her many doubts. She has no hallucinations, has committed no sin and has no bad thoughts. Her general health is poor. She has lost flesh, she eats and sleeps well, her bowels are regular, and her tongue is clean. Her station is good, her knee-jerks slightly increased, her pupils react normally, and the examination of her heart and and lungs is negative. The urine is normal.

These cases illustrate a disease which has been described under the title of folie du doute. In 1838 Esquirol, first described this disease which he termed "Monomaine raisonante." He says in his treatise on insanity, translated by E. K. Hunt, 1845, p. 342, "that it is a disease afflicting those who are not irrational, whose ideas maintain their natural condition, whose reasonings are logical, and whose discourses are often spiritual and intellectual." Since then it has been variously described by Baillanger, "monomaine avec conscience;" by Falret under the title of "alienation partielle avec predominance de la crainte du contact d' objects extérieurs" by la Grande du Saulle as "folie du doute avec délire du toucher"; by the Germans as "Grübelsucht."

Ball, in Tukes Dictionary of Psychological Medicine, gives an elaborate description of this disease in which he considers it a distinct form of insanity, characterized by a disposition to cross-examine one's-self, dependent upon a doubt or a fear of contact with external things. The predominating symptoms are repetition and doubt. The real basis of this mental affection, he says, is a general tendency of the intelligence to recur unceasingly to the same ideas or to the same acts, to experience the perpetual necessity of repeating the same words, or to accomplish the same actions, the patient never being able to satisfy himself or convince himself even on undoubted evidence. He speaks of this condition as "cerebral pruritis," a metaphysical unrest.

The onset he states is rarely sudden. The initial symptoms are characterized by queer scruples. He further states that characteristic symptoms of this disease are (a) that the patient is conscious of his condition, (b) that hallucinations are absent, (c) that the desire to have the doubts removed by a bystander is present. He believes the disease to be incurable.

In discussing the etiology he states that it is said to be a form of hereditary insanity, though he does not corroborate this statement; that it begins at puberty; that intellectual anxiety and worry enter into the causes; that females are more prone to it than males; serious illness may cause it; that it sometimes follows the puerperal state and rheumatism.

Kraft-Ebing describes two forms of folie du doute (a) the maniacal, and (b) the melancholy type. "Its essential feature," according to Connelly Norman[1], "is an obsession of the mind, an imperative mode of thought, taking the form of perpetual interrogation, a constant morbid impulse to inquire into and to investigate everything, an incapacity to accept contentedly the logical postulates of knowledge, and finally a total inability to fix the vision upon anything except the spinning of the endless web of meaningless questions."

The recent works on insanity do not, however, give any place to folie du doute as a distinct form of mental disease, such as are melancholia, mania, etc. Berkley describes the "délire du toucher et du doute" as one of the forms of neurasthenia. I am myself inclined to agree with the conception of this disease as held by Kavalewsky[2], who believes folie du doute to be a degenerative psychosis, and divides this condition into three stages. He considers first neurasthenia the foundation upon which it may develop; a second stage which is characterized by pathophobias; and in a third stage which he calls folie du doute itself. He is of the opinion (1) that neurasthenia engenders neuroses in various forms and degenerative psychoses; (2) that in many cases the disease is limited to a neurasthenia, but that, in some, neurasthenia enters into a second stage, i. e., elementary mental disorders; (3) that these mental disorders either have a happy issue or enter into a third stage—organized neuroses and psychoses; (4) that, in exceptional cases, neurasthenia can engender pathophobia, which, in connection with uncontrollable obsessions, can degenerate into folie du doute; (5) the delusions of doubt may appear in its pure form or in connection with other forms of

1. Journal of Mental Science, 1888-89, p. 70.
2. Journal of Mental Science, Vol. 3, p. 28.

degenerative psychoses, hypochondriacal delusions, etc.

Doyen[4] also claimed that a close relationship existed between folie du doute as described by Falret and morbid terrors, thus pointing out the resemblance to neurasthenic mental states. He claims that the imperative ideas of the anxious neurasthenics assume forms such as the "délire du toucher et du doute," and folie du doute.

I think it may be concluded that folie du doute, i. e. a train of symptoms in which doubt and fear of contact with external things predominate, may be a manifestation of neurasthenia, with the same prognosis as this disease, or that it may be a distinct form of mental disorder of degenerative type, having some relation to neurasthenia, but incurable, with remittent symptoms, occurring mainly in women, and beginning about the menophania.

The symptoms of folie du doute may be observed also in certain forms of insanities such as hypochondriasis, melancholia and in syphilitic insanities.

1. Esquirol. Treatise on Insanity. Translated by E. K. Hunt, 1845, page 342.
2. Falret. "De la folie morale," 1866.
3. Ball. L' encephale, 1882, No. 2, page 232.
4. Doyen. L' encephale, 1885, page 458.
5. Charcot. La Semaine Medical 1888, page 125.
6. Lloyd. Journal Nervous and Mental Diseases, 1887.
7. Connelly, Norman. Journal of Mental Science, 1888-89.
8. Regis, in Practical Manual of Mental Medicine, by Barrister, 1894.
9. Kraft-Ebing. Lehrbuch der Psychiatrie, 1897, page 362.
10. Bevan, Lewis. Mental Diseases, 1899, page 219, 2nd. edition.
11. Church and Peterson. Mental Diseases, 1901.
12. Blanford. 20th. Century Practice of Medicine, Vol. XII.
13. Ball, in Hack Tuke's Dictionary of Psychological Medicine.
14. Kavalewsky. Journal of Mental Science, Vol. 33, page 309.

CENTRALBLATT FUER INNERE MEDICIN.

February 15, 1902.

Therapy with Specific Human Blood Serum from Convalescents from Acute Infectious Diseases.

E. WALGER.

Walger gives a series of conclusions as a preliminary communication concerning the results of some work done during the past several years. The **local changes in acute infectious diseases** are not the essence of the disease, but **the evidence of the attempt of the organism to get rid of the toxins and the toxin-producing** substances. In the attempt to break down the toxins, heat is produced, and shows itself as fever. The excretion of the toxins occurs through all excretions and secretions; and through these attempts at excretion, also, heat is produced, and fever is increased. Another method of producing fever is through the chemical processes which alter the toxins into harmless substances. This change of the toxins is the result of the irritation of the tissues set up by the micro-organisms themselves. When the toxins are destroyed, the micro-organisms in that region lose their activity and produce no more toxins. The author states, therefore, that we do **not have to do with antitoxins; but, at most, with bactericidal substances.** After the toxins have been altered, the blood serum can be used for therapeutic purposes. If this altered toxin is injected into another individual, it interferes with the activity of the micro-organisms in his body; but a case successfully treated with serum does not itself furnish an active serum. After the serum injection, the body still has to excrete the toxins contained in it; hence, fever often continues. The cases that furnish active serum are themselves immune, but those successfully treated with serum are not. [D. L. E.]

February 22, 1902.

The Differentiation of Cystitis and Pyelitis.

GEORG ROSENFELD.

Rosenfeld refers to his previous statement that **cystitis can be distinguished from pyelitis by the reaction of the urine, the form of the white and red bloodcells found, and the relation between the amount of albumin and the amount of pus.** The reaction of the urine in pyelitis is acid, if no cystitis is present. This, of course, is helpful only when the urine is acid; and it may sometimes be acid in cystitis. The form of the white bloodcells, the author considers, is very important. They are round when from the bladder; ameboid and irregular in form, when from the pelvis of the kidney. The same forms are found in the red cells when from these 2 sources. The most important point is the relation between the albumin and the pus. In cystitis, the amount of albumin is never more than 0.1 to 0.15 per cent. in fluid which has been fairly well freed from sediment; in pyelitis, on the contrary, one always finds as much as this, and usually decidedly more. The characteristic in pyelitis is the discovery of comparatively small amounts of pus with relatively large quantities of albumin; for instance, if there is but little pus discovered by the microscope, albumin will not be present in cases of cystitis, while it will still be readily discoverable in pyelitis. A case which seems to demonstrate that this view is usually correct is that of a man of 37, who had a hydronephrosis. The urine was emptied from this sac by operation. Pyeloplication was carried out and the patient soon recovered. For some days after the operation, however, he passed an acid urine, which contained ameboid, irregular leukocytes; some pale, irregular bloodcells; and 0.175 per cent. of albumin. The conditions were, therefore, characteristic of pyelitis, according to Rosenfeld's scheme. The urine soon cleared up. [D. L. E.]

March 1, 1902.

1. The Relation between Dyspeptic Disturbances and Disorders of the Female Genital Apparatus. A. SOMMERS.
2. The Curative Action of Anesthetics. G. SPIESS.

1.—The frequency of dyspeptic disturbances in gynecological cases is known to everyone. There have been but few complete studies of the conditions of the stomach in gynecological cases, however. The author reports 23 instances in which he administered either a Riegel dinner or a meal consisting of one roll, a cup of tea, and 60 gm. of ham, removing the stomach contents 4 hours afterward, if the first meal was given, or from one to 2 hours if the second meal was used. He then determined the total acidity and the total free HCl. Those cases in which organic disease of the stomach was thought to be present were excluded, although there were 3 instances in which the stomach was much dilated. Gastroptosis was found to be extremely frequent. Whether ptosis of the abdominal organs has any relation to the position of the uterus cannot yet be determined, although retroflexion seems to be quite frequently associated with gastroptosis. In 2 instances the gastric contents showed subacidity, (which was not influenced by gynecological treatment), one case showed normal acidity; 4 others showed very high normal acidity; and all the rest showed very marked hyperchlorhydria; hence, the symptoms are attributable, to a considerable extent, to the hyperchlorhydria. In only 2 cases was improvement in the gynecological condition accompanied by a decrease in the gastric symptoms; in one, they became worse. [D. L. E.]

2.—Spiess states that he has repeatedly noticed that, after using cocaine, orthoform and other anesthetics, wounds healed with extreme rapidity and with very slight reaction. Through this he was led to use anesthetics in various inflammatory processes, both those following operative wounds and those due to other causes. He states he regularly found that the anesthesia was accompanied by a reduction in the signs of inflammation and an extremely rapid occurrence of entire healing. This has been his experience throughout a number of years. He believes that the anesthesia influences the vasomotors reflexly, and thus reduces the hyperemia. This is merely a preliminary communication. [D. L. E.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ending May 23, 1902:

SMALLPOX—United States.			C.	D.
CALIFORNIA:	Los Angeles.	May 3-10.	3	
	San Francisco.	May 4-11.	4	
COLORADO:	Denver.	May 3-10.	7	
DISTRICT OF COLUMBIA:	Washington.	May 10-17.	1	
FLORIDA:	Jacksonville.	May 10-17.	2	
ILLINOIS:	Belleville.	May 10-17.	2	
	Chicago.	May 10-17.	19	1
	Freeport.	May 10-17.	4	
	Galesburg.	May 10-17.	4	
INDIANA:	Indianapolis.	May 10-17.	23	
	South Bend.	May 10-17.	3	
	Terre Haute.	May 3-17.	4	
KANSAS:	Wichita.	May 10-17.	5	
LOUISIANA:	New Orleans.	May 10-17.	1	
MASSACHUSETTS:	Boston.	May 10-17.	16	6
	Brockton.	May 10-17.	1	
	Chelsea.	May 10-17.	2	
	Everett.	May 10-17.	1	1
	Fall River.	May 10-17.	3	
	Lowell.	May 10-17.	3	
	Malden.	May 10-17.	6	
	Newton.	May 10-17.	1	
	Somerville.	May 10-17.		1
MICHIGAN:	Detroit.	May 10-17.	2	
	Ludington.	May 10-17.	21	1
MINNESOTA:	Winona.	May 3-17.	4	
MISSOURI:	St. Louis.	May 11-18.	43	
MONTANA:	Butte.	May 4-11.	6	
NEBRASKA:	Omaha.	May 10-17.	6	
NEW JERSEY:	Camden.	May 10-17.	3	
	Hudson county, including Jersey City	May 4-18.	74	17
	Newark.	May 10-17.	54	9
	Plainfield.	May 10-17.		1
NEW YORK:	Elmira.	May 10-17.	2	
	New York.	May 10-17.	46	7
OHIO:	Cincinnati.	May 9-16.	7	
	Hamilton.	May 10-17.	1	
	Toledo.	May 10-17.	1	
PENNSYLVANIA:	Columbia.	Apr. 28-May 5	21	
	Erie.	May 10-17.	12	
	McKeesport.	May 10-17.	1	
	Philadelphia.	May 10-17.	12	1
	Pittsburg.	May 10-17.	9	2
	Scranton.	May 10-17.	2	
RHODE ISLAND:	Providence.	May 10-17.	1	
TENNESSEE:	Memphis.	May 10-17.	2	1
WASHINGTON:	Tacoma.	May 4-11.	1	
WISCONSIN:	Green Bay.	May 11-18.	5	

SMALLPOX—Insular.				
PORTO RICO:	Arecibo.	Apr. 19-May 3	75	
	Caguas.	Apr. 19-May 3	36	
	Camuy.	Apr. 19-May 3.	56	
	Hatillos.	Apr. 19-May 3	7	
	Ponce.	Apr. 19-May 3.	30	
	San Juan.	Apr. 19-May 3.	40	

SMALLPOX—Foreign.				
AUSTRIA:	Prague.	Apr. 12-May 3	19	
BELGIUM:	Antwerp.	Apr. 19-May 3	25	2
	Ghent.	Apr. 7-May 3		3
BRAZIL:	Pernambuco.	Mar. 15-Apr. 15.		52
	Rio de Janeiro.	Apr. 6-20.		11
CANADA:	Halifax.	May 3-17.	4	
	Winnipeg.	Apr. 26-May 10	11	1
CHINA:	Hongkong.	Mar. 29-Apr. 12	6	6
COLOMBIA:	Cartagena.	Apr. 2-27.	2	
	Panama.	Apr. 29-May 12	80	
FRANCE:	Paris.	Apr. 5-12.		2
	"	Apr. 19-26.		1
GREAT BRITAIN:	Dundee.	Apr. 26-May 3	2	
	Glasgow.	May 3-9.	2	1
	Liverpool.	Apr. 19-26.	3	
	London.	Apr. 19-26.	357	42
	"	Apr. 26-May 3	270	43
	North Shields.	Apr. 19-26.	23	
	South Shields.	Apr. 19-26.	9	
INDIA:	Bombay.	Apr. 15-22.		5
	Calcutta.	Apr. 12-19.		10
	Karachi.	Apr. 13-20.	7	2
	Madras.	Apr. 1-18.		5
ITALY:	Palermo.	Apr. 12-May 3.	65	16
	Rome.	Mar. 22-29.		1
MEXICO:	Vera Cruz.	Apr. 26-May 3	1	1
RUSSIA:	Moscow.	Apr. 12-26.	10	5
	Odessa.	Apr. 13-May 3	19	12
	St. Petersburg.	Apr. 12-26.	16	3
	Warsaw.	Apr. 5-12.		1
STRAITS SETTLEMENTS:	Singapore.	Mar. 1-29.		1
SWITZERLAND:	Geneva.	Apr. 7-19.	2	
URUGUAY:	Montevideo.	Apr. 15-22.	15	2

YELLOW FEVER.			
BRAZIL:	Pernambuco.	Mar. 15-Apr. 15	1
	Rio de Janeiro.	Apr. 6-20.	67
COSTA RICO:	Port Limon.	May 4-[illegible] cases suspected	
MEXICO:	Vera Cruz.	Apr. 26-May 3	7

CHOLERA.			
CHINA:	Hongkong.	Mar. 29-Apr. 12	76
INDIA:	Bombay.	Apr. 15-22.	2
	Calcutta.	Apr. 12-19.	135
STRAITS SETTLEMENTS:	Singapore.	Mar. 15-29.	17

PLAGUE—Insular.			
HAWAII:	Honolulu.	May 7.	1
	"	May 8.	1

PLAGUE—Foreign.				
BRAZIL:	Pernambuco.	Mar. 15-Apr. 15	34	
CHINA:	Hongkong.	Mar. 29-Apr. 12	7	7
INDIA:	Bombay.	Apr. 15-22.	608	
	Calcutta.	Apr. 12-19.	788	
	Karachi.	Apr. 13-20.	132	

BOLNITSCHNAIA GAZETA BOTKINA.

February 13, 1902. (Vol. XIII, No. 7.)

1. On the Influence of Disturbed Renal Function on the Secretion and Composition of Bile.
   M. V. POLIANSKI.
2. Concerning the Medicosanitary Organization Between the Districts and Governments in Russia.
   F. KASTORSKI.

February 20, 1902. (Vol. XIII, No. 8.)

1. Concerning the Employment of Atropine in Intestinal Obstruction. E. DIATCHENKO.
2. Concerning the Medicosanitary Organization Between the Districts and Governments in Russia.
   F. KASTORSKI.
3. On the Influence of Disturbed Renal Function on the Secretion and Composition of Bile.
   M. V. POLIANSKI.

1.—Will be abstracted when concluded.

3.—Polianski conducted a series of experiments on animals with a view of determining **the influence of disturbed renal function on the secretion and composition of bile.** Having ligated the left ureter and established a fistula in the gall-bladder, he collected the bile at the end of each hour and subjected it to a chemical examination. The experiment lasted from 3 to 60 days when the animals were killed and the tissues examined histologically. The chemical examination included the determination of water, total solids, substances insoluble in absolute alcohol, substances soluble in absolute alcohol, substances soluble in absolute alcohol but insoluble in ether, and substances soluble both in absolute alcohol and ether. He found that both the absolute and relative amounts of bile are greater in animals with a ligated ureter. The bile becomes more fluid, i. e., it contains more water, while solids diminish in an inverse proportion. The amount of substances insoluble in alcohol is in direct proportion to the total solids; those soluble in alcohol are increased, and a similar increase takes place in the other solid constituents. The increase, however, takes place during the first few days of the experiment. As the kidney with the pervious ureter becomes sufficiently hypertrophied to take up the work of the nonfunctionating left kidney the solids become more normal in proportion. The general conclusion to be drawn from these experiments is that in **an organism with a nonfunctionating kidney, the liver takes up the extra work of elimination of deleterious substances.** [A. R.]

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See Advertising Page 8.

VOL. IX, NO. 23 JUNE 7, 1902 $5.00 PER ANNUM

A National Examining Board.—In respect to this matter of licensing practitioners, the various states are in a position somewhat similar to a group of banks—they need a clearing house. The plan of a Central or National Examining Board meets this requirement better than any that has yet been suggested; the details of it alone require to be worked out. The whole situation is full of embarrassments, and nothing is gained by ignoring that fact, or by claiming to have a panacea for it. Therefore, we do not intend, in this Journal, to claim that we have necessarily a panacea in full sight. But what we do claim is that the establishment of some such Central or National Examining Board is the most practical and rational scheme that has yet been suggested.

This plan is in effect a system of reciprocity, and it is one that promises to be both practical and effective. By such a scheme the various states would not exactly "pool" their licensing powers, but they would delegate some of them for the general good. The plan is in accord with the methods by which political government in its wider sense, as well as government of large commercial and social organizations in this country, is conducted; it contemplates a central, effective body that shall, as it were, represent and equalize the interests of all concerned. There is nothing in it antagonistic to our "spirit of government."

Any other system of so-called interstate reciprocity would be, so far as we can see it, cumbersome and ineffective. A plan of reciprocity might work well enough between contiguous states, which have about the same standard, but it would be almost impossible of achievement between widely separated states, the standards of which are widely unequal. Reciprocity means a lowering of standards all over the United States. By it all have got to seek a common level, and that level would, we fear, not be a high one.

Dr. Rodman submits a second paper on his plan of a National Examining Board, and we take pleasure in presenting it in this number of the **Journal.** We are convinced that it contains the key to the whole situation, and we trust it will be given most careful consideration at Saratoga. The demand is becoming more and more urgent in this country for a license that will permit a physician to go and practise medicine wherever he pleases. This demand is reasonable and just, and it will not do to ignore it.

Dr. Stewart's Case of Myelorrhaphy.—The case of severed spinal cord, in which Dr. F. T. Stewart performed the operation of myelorrhaphy—a report of which is published in this number of the **Journal**—is one of exceptional importance. So far as we know, it is the first case in the human subject to be reported. Dr. Stewart has made such a complete report, and has reviewed the literature so fully, that extended comment is hardly called for. We desire, however, to call particular attention to his paper. It is one that is bound to take a prominent place in the literature of spinal surgery. The operation was at once daring and conservative, and the measure of success, which the author reports for it, is its ample justification.

Dr. Stewart's case occurred in a young woman who was shot by her lover, the pistol ball entering the dorsal cord. That the cord was entirely severed is fully vouched for not only by the operator but by several medical witnesses of the operation. The severed ends of the cord were sutured together.

The question of the repair of nerve tissue is still in an unsettled state. Within very recent years there has been a distinct return to the old idea that the axis-cylinders in the distal segment of the divided nerve may be regenerated by a proliferation of entirely new axis-cylinders from the cells in the neurilemma or sheath of Schwann. This view, based upon accurate observation, has been championed by Bethe, and more recently by Charles Ballance and Purves Stewart in their admirable monograph on the Healing of Nerves. These latter observers, who subjected this subject to experimental proof, announce their unqualified adherence to this view. For them the regenerated axis-cylinder, instead of being a mere prolongation of a neuron, is in fact a chain of neurilemma-cells fused together end to end.

The subject presents a somewhat different aspect as it concerns the regeneration of divided nerve

fibers in the spinal cord. In the central nervous system the structure and function of the neurilemma are not so plainly susceptible of such regenerative growth. On this subject, however, much remains to be investigated and proved. Dr. Stewart discusses this subject in the light of the literature of it. His patient is reported as presenting indubitable evidence of return of function, and the case stands as one that is unique in the records of the surgery of the spinal cord.

Certified Milk.—It is by no means generally known that the term "certified milk" originated in New Jersey, with the Essex County Medical Commission, in 1893. This commission was organized for furnishing the medical profession with a milk properly prepared and properly handled, suitable for clinical purposes. The eighteenth report of this commission, which has just been received, demonstrates how stringently the dairyman, with whom their contract was made nine years ago, has adhered to the standards required, the milk showing the lack of micro-organisms in large numbers and the entire absence of pathogenic varieties; an unvarying resistance to early fermentative changes, so that it may be kept under ordinary conditions without extraordinary care; and a constant nutritive value of known chemical composition, with a uniform relation between the percentage of fats, proteids and carbohydrates. A chemist, bacteriologist, physician and three veterinarians are employed by the commission to regulate matters of hygiene, sanitation, etc. The buildings on the farm are well-constructed, drained and ventilated; the fodder, which is of exceptional quality, is kept apart from all sources of contamination; there is a good water supply; and everything is kept scrupulously clean continually. There are no stagnant pools in the neighborhood; no fowl, hogs, horses or other live stock on the farm; no sick or excited cows; and no animal bred through consanguinity within a period of 3 generations. The stables are so frequently cleaned that no animal odors are noticeable. The cows are thoroughly milked in a clean building, after their udders have been cleaned and the milker, having put on clean overalls, has washed his hands.

The milk is at once transferred to sterilized, dry cooling cans, after passing through a sieve with no less than 100 meshes to the linear inch. The milk is cooled in a separate building, to between 40° and 50° F., inside of 45 minutes after milking. It is then packed in glass jars, which have been cleansed and sterilized, and is hermetically sealed. These are ready for shipment and are delivered before the milk is 24 hours old. Montreal, New York, Philadelphia and other cities of the United States have taken this commission for a model and now produce "certified milk" prepared upon the same lines. The next generation will be able to look back with amazement upon the methods now prevalent for the destruction of the bacteria in milk, pasteurization and sterilization of the milk, both undoubtedly harmful procedures which will have become useless by the progress of cleanliness alone.

Surgical Operations in the Presence of Glycosuria and Diabetes.—Revision of rules and views is as constantly taking place in science as in theology, but probably nowhere has this been more evident than in surgery during the past few years. The revelation of antisepsis and asepsis is responsible for much of the overturning of old rules and theories, and has made the surgery of to-day a far different art from that of half a century ago. One has but to think of the former dread of the peritoneum to appreciate this fact. A dread more lasting, however, to the operator has been that of sugar in the urine, and yet we now are learning more about this condition, and every year scores of operations are performed in its presence with impunity. Until quite recently the general surgical teaching has been to avoid, when possible, any surgical interference if sugar is found in the urine, and in order to impress the importance of this, the fatal coma, which would follow any deviation from the rule, was pictured to the student. Any one interested in this important subject will read with great profit the excellent paper on "The Surgical Aspects of Glycosuria and Diabetes" by Llewellyn Phillips, of Cairo, Egypt, which appeared in the *Lancet* of May 10th and 17th. The author shows that the surgeon is no longer warranted in turning his back upon every operable condition because of the presence of sugar in the urine. Cases of glycosuria are divided into four classes: (1) Those in which the glycosuria is caused by the surgical lesion; (2) those in which the glycosuria causes the surgical lesion; (3) those in which the glycosuria and the surgical lesion exist independently and do not influence each other; (4) those in which the glycosuria exerts a baneful influence upon the injury or surgical lesion. In the first class are placed injury and sepsis, and the author presents many instances showing that in addition to injury certain inflammatory conditions, such as appendicitis, pyosalpinx, strangulated hernia, etc., are capable of producing a temporary glycosuria. Regarding the second class it is stated as doubtful whether glycosuria can produce any condition requiring surgical treatment except balanoposthitis and cataract. Diabetic gangrene is caused only indirectly by the diabetes through an arteriosclerosis or a nerve degeneration. The third class presents

the most interesting cases; it is illustrated by a table of 92 instances of operations done upon all parts of the body with a mortality which is surprisingly small. At first glance the mortality, 23 deaths out of 83 patients, would appear high, but this is not the case when the conditions for which the operations were done and the patients' condition at the time of operation are considered. It is shown that the percentage of sugar is no criterion as to fatal results; albuminuria is considered a serious complication and greatly interferes with the recovery. Abnormal substances, such as acetone or aceto-acetic and oxybutyric acids, and with them an increase in the ammount of ammonia excreted, are of significance and, if unreduced by treatment, render prognosis very unfavorable. It is important before deciding upon treatment to consider carefully a thorough analysis of the urine. The total amount of ammonia should always be estimated and no operation should be performed except one of extreme urgency if there is more than one gm. of ammonia excreted in the 24 hours. Operation should be postponed if aceto-acetic acid is present in the urine; the same is true if much albumin is present. Operation should be avoided if serious disease of other organs, such as the liver, is present. Operation should be undertaken (1) for malignant disease, if such would be deemed suitable in the absence of diabetes; (2) in the case of large abdominal tumors, especially in females; (3) in diabetics in good general health when there is no extensive arterial or nerve degenration, for cosmetic purposes, especially in females; and (4) in all emergencies regardless of the condition of the urine. It is shown, furthermore, that many of the contra-indications to operation can be removed by proper preliminary treatment. Certainly this extensive investigation of the subject by Phillips would tend to show a much larger field for surgery in diabetic patients than has heretofore been allowed.

The Küstner Incision.—The advocates of vaginal celiotomy advance as one of the strongest arguments in favor of of their method of operating, the absence of a disfiguring abdominal scar. While, as one of the French writers has said, a suprapubic scar is not incompatible with décolleté attire, this argument appeals to the esthetic woman. An unsightly cicatrix with its myriapod radiations is well calculated to repel a delicate and timid woman and make her willing to grasp at any straw in order to avoid such disfigurement. Naturally this state of affairs has stimulated the abdominal surgeon to seek for remedies to correct this well-founded objection. Much of the repulsiveness of the median scar has been obviated by the introduction of tier-suturing with the concluding subcuticular stitch. This suture, by making close and accurate apposition of the cutaneous edges without puncturing of the surface beyond the line of incision, yields a delicate cicatrix that, in the smaller incisions, almost escapes detection. It remained for Pfannenstiel and Küstner to suggest a transverse incision in certain pelvic operations, notably hysteropexy, just at or above the hair-margin as a further step in this direction. The growth of pubic hair together with the natural transverse creasing of the abdominal parietes would theoretically render such an incision almost, if not quite, indistinct. Practically, this suggestion has not always resulted as favorably as might be desired. In fat women suppuration is very prone to follow such an incision, and because of its low situation infection in the pubic region is more readily transmitted. Again, the incision is limited necessarily to those operations which do not require extensive manipulation of the pelvic viscera or the breaking up of numerous and dense adhesions. Obviously it cannot be employed in the removal of large growths extending up to or beyond the umbilicus. The Küstner incision, as it is now generally known, is theoretically the thing to be desired; practically it has been found to have many limitations and can be employed in only a very small minority of cases. The subarticular stitch in the closing of the vertical incision, which should be made as short as possible in the given case, has a larger field from a cosmetic point of view.

The Reflexes in Childhood.—In a recent number of the *Jahrbuch für Kinderheilkunde* (April, 1902, page 458), Dr. Cesare Cattaneo, of Parma, has thoroughly reviewed the results of his investigations upon the reflexes of 180 children under 2 years of age. He found that extension of the toes occurred instead of flexion in 30 per cent. of all infants examined; that this was most frequent during the first 3 months of life, least frequent in the second half of the second year. The Babinski reflex he noted in one-third of the cases with increased knee-jerks and in one-quarter of the cases with increased plantar reflexes. He found that it might occur without either tendon or skin reflexes, and was present more often in healthy than in diseased infants. He believes that it is of no pathological value during the first 2 years of life. The opinion expressed by Muggia (*La Pediatria*, October, 1900), that the Babinski reflex occurs relatively more frequently in rachitic children, was not substantiated by Cattaneo. The Schäfer reflex was found in over 80 per cent. of the infants examined, flexion of the toes always resulting, whether the Babinski reflex was present or not.

The plantar reflexes and the knee jerks were almost always present at birth. This proves that the statement made by J. Lovett Morse, that the plantar reflex is only noted after the second year, is not true. In children with infantile atrophy the plantar reflex is very faint. The patellar tendon reflexes were especially active during the first few days of life, when the muscle tone was increased, thus confirming Jendrassik's observation (Neurological section, XIII. International Medical Congress, 1900). Yet, in a few cases an increased knee-jerk was noted with lowered muscle tone. In rachitic children both plantar and patellar reflexes were especially lively. The abdominal reflexes were observed in about one-half of the cases. They were very faint during the first month, more noticeable during the second month, and became frequent after the first year. They were relatively more frequent among rachitic infants. He found the cremaster reflexes very rarely in the first year, and then only after the third month. Cattaneo therefore concludes, in absolute contradiction to Muggia, that on account of their almost constant presence the absence of the plantar or the patellar reflexes is alone of pathological significance in early childhood.

A Legal Triumph.—From the *Lancet* we have learned some details of the case of Mrs. Cathcart, who has recently been declared a lunatic. The case has more than usual interest from the fact that Mrs. Cathcart is the lady whom Sir Charles Russell a few years ago succeeded in having legally declared *not* a lunatic. Sir Charles Russell was one of the most powerful advocates at the English bar, and he made Mrs. Cathcart's case conspicuous by rescuing her from the clutches of the authorities when they wanted to put her in an asylum. In spite of overwhelming proof by the medical experts that the woman was insane, this able lawyer had her set free; and he was thought at the time to have scored a great triumph. The case had many of the characteristics of a sensation. There was the poor persecuted patient; the cruel doctors; the terrible asylum; and, lastly, the gallant and eloquent lawyer, who figured as a sort of knight errant going to the rescue.

But the sequel is not romantic. Ever since the first trial Mrs. Cathcart has been under the influence of delusions, and has been getting into lawsuits, squandering her money and behaving in general like a lunatic. She wound up in Holloway Prison for contempt of court, and there she had to stay for many months, because she was too crazy to "purge her contempt," while, on the other hand, having been declared legally not a lunatic, she was not crazy enough to be let go. This legal dilemma has finally been solved; and now, after another inquiry, the poor distracted woman is finally declared a lunatic and her property and person put under a wise control. And so it should have been years ago, and would have been but for the "brilliant" triumph of Sir Charles Russell.

Hygiene and Theology.—An extraordinary discussion is reported to have taken place last week at a convention of clergymen in the interior of Pennsylvania. One of the pastors wanted permission to introduce individual communion cups in his congregation, but the plan met with heated opposition. Some of the younger ministers said that their church members would secede from them unless the individual cups were granted; but the appeal was in vain. "Let them go" was the answer, and the synod voted that "we unqualifiedly condemn the introduction of individual communion cups." A spirited debate was kept up, however, and the question was finally referred to the professors in the Theological Seminary.

This would seem rather funny, if it were not theological. The right to use one's own cup, instead of the cup that is owned and mouthed over by a whole congregation, would seem to be an inherent right. When the professors in the Theological Seminary have wrestled with this knotty problem for a while, perhaps it will dawn upon them that it is not a question in theology, but simply one in hygiene. Physicians in many churches have been recommending, and successfully agitating for, the individual cup for a long while, and, as in most other things, the theologians are following after them at a safe distance.

Dr. George R. Fowler, of Brooklyn, deserves the applause of all members of the medical profession. He is suing some of his hospital patients for the fees for his services. These well-to-do individuals thought they were free patients, and the hospital authorities thought so, too. Dr. Fowler intends to prove that they are liable for his fees. No greater "hospital abuse" exists than this trick of "beating" the doctors; and it is connived at by the authorities in some hospitals

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At the coming meeting of the American Medical Association it may be well for the members not to indulge in too much conviviality. Perhaps a child may be present taking notes, and, faith, he may print them. We trust there will be no horse-races or base-ball games to distract the attention, and that champagne suppers will only be given "on the quiet."

Current Comment.

DISINFECTION VERSUS VACCINATION.

The time has now come when we must no longer postpone the execution of our duty to the public by again urging the absolute necessity of general vaccination. Our Health Officer—Dr. Martin Friedrich—has given us a magnificent demonstration of the power of thorough disinfection in staying the progress of an epidemic of smallpox. In Philadelphia there has lately been once more given to the world an equally marked demonstration of the power of vaccination to arrest the spread of an epidemic. The employment of Dr. Friedrich's method has the very great disadvantage of leaving amongst us a large proportion of persons susceptible to the infection of smallpox, while vaccination, in addition to cutting short the epidemic, renders the soil sterile to future infection. Philadelphia, therefore, is now infinitely better prepared for future outbreaks of smallpox than is Cleveland.

—*The Cleveland Medical Journal.*

A NASTY CUSTOM.

We have for many years contended that the oath by kissing a book has nothing to commend it, while it is nasty and may become a means of propagation of disease, and we have seen with regret that the statutory permission to swear in the Scotch fashion was, as a rule, not known by witnesses and frequently, also, that Judges, Coroners and Magistrates were ignorant of it.

The form of swearing by kissing a book is purely one of custom. There is no direct authority for it in any Act of Parliament, or rule or book of practice. The date also of its introduction is unknown, but this is not because it has been lost in the mists of antiquity, for it is fairly certain that, so recently as at the end of the seventeenth century, if the form existed it was not in any general use.

—*The Lancet.*

THE CHEERFULNESS OF DOCTORS.

A reason for the cheerful temperament which characterizes so many doctors is probably to be found in the type of man entering the medical profession. The nervous, the timid, the dyspeptic and the invalid do not readily take to the doctor's calling. It demands too much energy, fortitude and capacity for human intercourse. Only those endowed with strong and virile temperaments are fitted for the profession or likely to embrace it. The intensity and superabundance of this initial virility is powerfully exemplefied in medical students, who are not notable for the repose of their manners or the gentleness of their instincts. How much of the residuum of high animal spirits remains in matured and aged members of the medical fraternity is often shown at the annual functions of our medical societies, in which long repressed hilariousness assumes a form of uproariousness. It is because medical men are, as a class, of a peculiar virile nature that they are cheerful and resourceful.

—*Indian Medical Record.*

Correspondence.

ELECTROTHERMIC HYSTERECTOMY; A CORRECTION.

By Andrew J. Downes, M. D., of Philadelphia.

To the Editor of the **Philadelphia Medical Journal:**

In the abstract of my recently published paper "Electrothermic Hemostasis in Vaginal Hysterectomy for Cancer," which appeared in your journal, May 31, the abstractor states that I performed Dr. Byrne's operation. His operation is a cervix amputation by means of a cautery knife. In my operations as reported this is one step only in the total removal of the malignant uterus. The completed operation consists in the application of the wide blades of the electrothermic angiotribe to the broad ligaments with section through the white desiccated track; no ligatures and a practically bloodless procedure. There seems to be such a general lack of accurate knowledge concerning electrothermic hysterectomy that I take the liberty of correcting this abstract.

Reviews.

Typhoid and Typhus Fevers. By Dr. H. Curschmann, of Leipzig. Edited, with additions, by William Osler, M. D., Professor of the Principles and Practice of Medicine, Johns Hopkins University. Handsome octavo of 646 pages, illustrated, including a number of valuable temperature charts and two full-page colored plates. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

Nothnagel's Special Pathology and Therapy is the most complete and exhaustive work on medicine in any language. The name of the editor, Professor Hermann Nothnagel is sufficient guaranty of this fact. It was a great undertaking on the part of the publishers, Messrs. Saunders & Co., to bring out this important work in the English language. The Germans have always been the leaders in clinical medicine as is evidenced by the fact that the most important works upon practice in German have been translated into the English language. We are all familiar with Strümpell, Eichhorst, Liebermeister, Niemeyer, von Ziemssen, etc. It cannot be said that this work is an encyclopedia; it is simply an exhaustive work regarding internal medicine and its allied sciences. That an author of the prominence of Prof. Osler should have undertaken the editing of Typhoid and Typhus fevers is a sufficient warrant of the importance of Prof. Curschmann's work. Curschmann is a leader among the German clinicians of the present day. His experience in typhoid and typhus fever has been especially large and the entire work breathes with his personal observations.

The American edition is thoroughly up-to-date, containing many references which are not contained in the original German edition. Typographically the American edition is superior to the German. We regret, however, to find that the temperature charts have not been changed, and that the Fahrenheit scale has not been added, which renders their understanding more difficult for the English and American reader.

The work upon typhus fever is a translation of the German, nothing new having been added to this part of the work. It would have been well, even in typhus fever, to spread the references throughout the body of the work as was done in typhoid fever, instead of adding them at the end of the volume. [J. L. S.]

Variola, Vaccination, Varicella, Cholera, Erysipelas, Whooping Cough, Hay Fever. Variola (including Vaccination). By Dr. H. Immermann, of Basle. Varicella. By Dr. Th. von Jürgensen, of Tübingen. Cholera Asiatica and Cholera Nostras. By. Dr. C. Liebermeister, of Tübingen. Erysipelas and Erysipeloid. By Dr. H. Lenhartz, of Hamburg. Whooping Cough and Hay Fever, by Dr. G. Sticker, of Giessen. Edited, with ad-

ditions, by Sir J. W. Moore, B. A., M. D., F. R. C. P. I., Professor of the Practice of Medicine, Royal College of Surgeons, Ireland. Handsome octavo volume of 682 pages, illustrated. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $5.00 net; Half Morocco, $6.00 net.

This volume may be termed a series of monographs upon variola, vaccination, varicella, cholera, erysipelas, whooping cough and hay fever. Very few changes from the German have been found necessary by the English editor. Here and there sentences and paragraphs have been added which have been thought necessary to elucidate and add to the German text. Here again we do not find the temperature charts changed according to the Fahrenheit scale. We hope this will be corrected in the future editions which unquestionably will be called for. All that has been said of the excellence of the work in general is also true of this volume.

[J. L. S.]

Psychology, Normal and Morbid. By Charles A. Mercier, M. B., M. R. C. P., F. R. C. S. Lecturer on Insanity at the Westminster Hospital Medical School, etc., London. Swan, Sonnenschein & Co. New York. The Macmillan Co. 1901.

This very voluminous treatise on psychology is intended for medical readers, and yet such readers would be mistaken if they were to suppose that it is in any sense a work on insanity. It is, in fact, as its title indicates, a discourse on psychology, but it has constantly in view the deviations from normal mental processes that go to form the substrata of psychiatry. It is thus quite unlike any medical treatise of which we have knowledge, and must take rank with purely philosophical works rather than with practical textbooks on mental diseases. It is almost entirely lacking in clinical elements, and it does not include any descriptions of the various types of insanity.

Dr. Mercier is a profound and accurate reasoner, but his style is rather diffuse and will hardly commend itself to medical readers. Such readers, if they desire to consult such a work, would probably prefer to have its matter in a more condensed and even elementary form than they will find in this laborious treatise. We could hardly imagine many of them devoting themselves to reading a profound psychological work, including much logic and even some metaphysics, as a help in mastering the problems of insanity or the practical care of the insane. We would not like to say that such a work is useless, for we like to think that psychiatrists are interested in the principles of normal psychology, but we think that Dr Mercier's book is written over the heads and outside of the sphere of most of them. If it is added to the library of the asylum, however, it will serve to round out the collection of books in psychiatrical literature, and may be referred to with profit by such studious alienists as like to pursue the problems of insanity into the wider domains of psychology and philosophy..

[J. H. L.]

The Surgery of the Rectum. By Charles B. Kelsey, A. M., M. D. Sixth Edition. Wm. Wood & Co. New York.

The fact that this is the sixth edition of this work speaks well for its worth. It is a book which every surgeon and gynecologist should know, as it is full of valuable information and reflects the experience of many years of work in this field. In the first chapter which deals with Examination and Diagnosis great stress is properly laid upon the necessity of making a careful examination of all pelvic organs in every case of rectal trouble. This first chapter is one which every man doing rectal work will do well to consider. At first glance one might feel inclined to criticise the introduction of considerable gynecology into a book of this nature, but its perusal will convince him of the propriety of discussing certain diseases of the other pelvic organs together with those of the rectum. The author's views on most subjects dealt with are strong, but are arrived at after a careful and fair consideration of the matter. This statement is well illustrated in the chapter on hemorrhoids. The chapter on cancer of the rectum is extensive and up-to-date, containing minute descriptions of the various operative procedures for its relief.

The illustrations are sufficiently frequent, but occasionally indistinct. We feel that the book fills well its place in surgical literature, and will be found a most satisfactory guide in the treatment of every variety of rectal trouble.

[J. H. G.]

Practical Medicine Series of Year Books. Vol. V. Obstetrics. Edited by Reuben Peterson, M. D., Professor of Obstetrics and Gynecology, University of Michigan, and Henry F. Lewis, A. B., M. D., Instructor in Obstetrics and Gynecology in Rush Medical College, April, 1902. Chicago. The Year Book Publishers. Pages 233.

In this volume the editors have selected for abstracting not necessarily the articles written by the best known men, but those which in their opinion best exemplify the thought of the period. By adopting such a system as this they have presented in a very condensed form some excellent material in recent obstetrical literature, including such up-to-date subjects as spinal anesthesia, the blood and urine in eclampsia, and the modern pathology of the placenta. Full space is given to the excellent work of Webster on Human Placentation, which has done so much toward enriching our knowledge of placental development. Labor and its abnormalities have been well covered and the modern teaching in puerperal sepsis is presented in an acceptable form. There are not very many editorial comments, we regret to say, and should the editors intend to continue the work they have commenced, we trust they will discriminate more, in order that the more valuable methods reported may be emphasized. [W. A. N. D.]

Tuberculosis of Both Kidneys.—A remarkable case of double renal tuberculosis in an adjutant, aged 38, who during the 2 years of its evolution, lost not one day of service, is reported in the *Archives de Médecine et de Pharmacie Militaires* (January, 1902), by Monéger. He entered the hospital 10 days before death, with a history of hematuria and lumbar pains off and on for 2 years, lasting a few days at a time. He had not had syphilis, but used tobacco and alcohol excessively. Meningitic symptoms appeared and death followed quickly. The autopsy showed 2 large pus sacs in the place of the kidneys, thickened ureters, tuberculous cystitis, tubercles in the prostate and spleen, and tuberculous meningitis. The fact is rare that a man whose kidneys were so diseased should have kept at hard military service. [M. O.]

Adenoids in French Children.—In the *Bulletin Medical* (December 7, 1901), Aristide Malherbe discusses the occurrence of adenoids in children in France. In three months and a half, 860 children were brought to the dispensary, 670 of them showing some rhinopharyngeal affection. He divides them into four groups, the respiratory type, with adenoids, 462; the auricular type, with otitis media, 153; the glandular type, with adenitis, 49; and the reflex type with spasmodic laryngitis, bronchitis, etc., 6. Adenoids were removed alone from 206 patients, and the tonsils from 68. The presence of adenoids was recognized by inserting the finger. The details and technique of the operations follow. Over a third of the cases received surgical treatment. Curettement for adenoids was done under general anesthesia, with ethyl chloride, in Rose's position. All treated surgically showed marked improvement. [M. O.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Jefferson Medical College.—At the meeting of the Board of Trustees, held May 24th., Dr. Julius L. Salinger and Dr. Thomas G. Ashton were elected professors of clinical medicine. Drs. F. J. Kalteyer and J. C. Da Costa, Jr., were appointed demonstrators in clinical medicine and chiefs of the medical clinic.—At the 77th. annual commencement exercises, held May 29, 140 physicians were graduated. The honorary degree of Sc. D. was conferred upon Dr. Charles Finlay, of Havana, a graduate of Jefferson College in 1855, in recognition of his investigations in the cause of yellow fever.

Municipal Hospital.—Protests were heard against the new Municipal Hospital site by the Councils' committee, June 2. A number of medical men and property owners in the neighborhood of the proposed hospital protested against the erection of the hospital on the proposed site. The renewal of the hospital agitation and the tremendous opposition that has developed against the site in the 35th. ward has caused a revival of interest in the Macalister site in the 28th. ward between the New Cathedral and Greenmount cemeteries. The western boundary is the Newtown railroad, and on the eastern side there is a large stretch of unoccupied land. This site is approached by Nicetown Lane, Rising Sun Lane, Erie Avenue and Fifth Street, and is 2½ miles nearer the city than the Green Lane site. The price is the same as that of the Green Lane site, $115,000.

Rush Hospital, Philadelphia.—A country branch of the Rush Hospital for the Treatment of Consumption and Allied Diseases has been opened at Malvern, Pa.

Woman's Medical College.—Dr. A. E. Broomall, professor of obstetrics, has resigned on account of advancing years and pressure of private practice. Dr. E. B. Everitt has been elected professor of gynecology, which chair was recently made vacant by the resignation of Dr. H. T. Croasdale. Dr. Broomall has held the chair of obstetrics since 1878, having followed Dr. E. H. Cleveland.

The Health of Philadelphia.—All contagious diseases have shown a marked decrease during the past 2 weeks. Measles, however, has broken out among the residents of Whitehall, Frankford, and is not only confined to children, many adults being afflicted.

Fire in the Municipal Hospital.—Fire broke out on the afternoon of June 3 in the main building of the Municipal Hospital, Philadelphia, but was extinguished without much trouble. The flames were discovered on the third floor by the hospital steward, who at once turned in an alarm. The clang of the bells caused a panic among the patients, but the nurses blocked the exits and made the patients return to bed. No one was hurt and the loss was insignificant.

NEW YORK AND NEW JERSEY.

American Medical Association.—At the 53rd. annual meeting, to be held at Saratoga, June 10-13, it is likely that 2000 physicians will be in attendance, out of a membership of almost 12,000. Among the more prominent foreigners expected is Dr. Haab, of Zurich, the ophthalmologist. Business sections will be held in the evening, not interfering at all with the scientific work of the 12 different sections of this association. At the same time that this meeting is held will occur meetings of the American Academy of Medicine, American Association of Life Insurance Examining Surgeons, American Proctological Association, Association of American Medical Colleges, and National Confederation of State Medical Examining and Licensing Boards.

Sea Bathing.—Dr. J. H. Grannis, president of the Connecticut State Medical Association, in his address delivered May 31, stated that long observation has convinced him of the dangers of frequent sea bathing. That salt water bathing is a panacea for all ills seems to be a prevailing impression. People living inland are particularly convinced of this, yet he is sure, from personal observation, that sea bathing is overdone. For an average child or adult the maximum of benefit is obtained from not more than one-half hour a week, 5 minutes on every day or 10 minutes on alternate days; and further, if after thorough rubbing there remains a feeling of lassitude, an inclination to lie down, or the desire for a stimulant, the time should be shortened to that point at which, after the bath, the bather exhibits a full reaction and a desire to resume play or work immediately.

American Gynecological Society.—At the 17th. annual meeting, held in Atlantic City, N. J., May 27-29, the following officers were elected for the ensuing year: Dr. J. E. Janvrin, of New York, president; Drs. E. W. Jenks, Detroit, and A. T. Dudley, New York, vice-presidents; Dr. J. Riddle Goffe, New York, secretary, and Dr. J. M. Baldy, Philadelphia, treasurer. Dr. P. A. Harris, of Paterson, N.J., gave the visiting physicians a lunch at the Garden Hotel, and Dr. C. P. Penrose, of Philadelphia, gave a smoker in their honor at Ventnor.

College of Physicians and Surgeons, New York.—Dr. L. Emmet Holt has been made clinical professor of the diseases of children to succeed Dr. Jacobi, who has been made an emeritus professor of the College of Physicians and Surgeons, the medical department of Columbia University.

NEW ENGLAND.

Antivaccinationists Contract Smallpox.—Two physicians in the neighborhood of Boston, one in Winchester, the other in Newton, both well known physicians of the old school, but strong opponents of vaccination, have contracted smallpox recently from attending patients with the disease.

American Pediatric Society.—At the annual meeting held under the presidency of Dr. W. S. Christopher, of Chicago, in Boston, May 26 to 28, Dr. J. P. Crozer Griffith, of Philadelphia, was elected president, and Dr. H. D. Chapin, of New York, vice-president for the ensuing year. The other officers of the society were re-elected.

Mosquitoes in Brookline, Mass.—Dr. Chase has shown that Brookline is infected with the malaria-breeding mosquito. As agent of the Health Board, he has recently issued a circular upon the prevention of malaria, 4 cases of which have already occurred this season. War has been declared against the mosquito, and low grade petroleum is to be poured upon the waters of ponds and springs in the neighborhood of Brookline.

The American Dermatological Association announces its next meeting for September 18-20, at Boston. The subject for general discussion is to be acne vulgaris. Dr. Gilchrist, of Baltimore, will discuss the etiology and pathology; Dr. Fox, of New York, the symptoms and treatment.

WESTERN STATES.

National Conference of Charities and Correction.—In a paper read June 2, at the meeting held in Detroit, Dr. S. A. Knopf, of New York, read a paper on the consumptive poor, taking a very optimistic view of tuberculosis and its curability. He declared that it was only transmitted from generation to generation in rare instances, and that it was not infectious. It is curable in special sanatoria for tuberculosis alone, and to such institutions the consumptive poor should be removed. Fresh air, sunshine, good food and sanitary surroundings form the necessary treatment. He suggested that philanthropists stop endowing colleges and building libraries to devote their wealth to the erection of such sanatoria. Good homes, model tenements, and good food are the best preventives of the disease. Sanatoria at the seashore are especially urged for tuberculous children. Dr. V. C. Vaughan, of the University of Michigan, said that with such treatment tuberculosis could be eradicated in 200 years. Dr. G. M. Dock, of Ann Arbor, Mich., also agreed with Dr. Knopf as to the curability of tuberculosis.

University of Nebraska.—The Omaha Medical College has recently become the medical department of the University of Nebraska.

A New Dubuque Hospital.—It is announced that Abraham Slimmer, of Waverly, Iowa, who has recently offered the city of Milwaukee $25,000 for erecting a nonsectarian hospital, has given his palatial home, worth $30,000, to the

Sisters of Mercy of Dubuque, for the establishment of a hospital.

Wisconsin State Medical Society.—The 56th. annual meeting was held in Milwaukee June 4 to 6. Dr. Harvey Cushing, of Johns Hopkins University, gave a surgical clinic at Trinity Hospital during the meeting.

Suicides in Chicago.—During the month of May, 50 persons committed suicide in Chicago. According to the Health Department, this is the greatest number ever recorded.

National Sanatorium for Disabled Volunteer Soldiers.—The Senate bill for the establishment of a National Sanatorium for Disabled Volunteer Soldiers at Hot Springs, S. D., has passed the House of Representatives with some amendments. Hot Springs, which has an elevation of 3400 feet above sea level, is situated in a sheltered valley on the Southern slope of the Black Hills. The surroundings are attractive, the climate is healthful, and the State Soldiers' Home of South Dakota has already been built there. $150,000 were appropriated for the necessary buildings and $20,000 for the transportation of patients.

Mississippi Valley Medical Association.—At the 28th. annual meeting, to be held at Kansas City, Mo., October 15-17, 1902, Dr. C. B. Parker, of Cleveland, Ohio, will deliver the address on surgery, and Dr. H. T. Patrick, of Chicago, the address on medicine. The president of the association is Dr. S. P. Collins, of Hot Springs, Ark., Dr. H. B. Tuley, of Louisville, Ky., being the secretary.

Chinese Leper Cured.—News comes from St. Louis that the Chinese leper, who has for 9 months occupied an isolation pavilion near the St. Louis quarantine station, has apparently recovered from his disease. The only treatment administered was chaulmoogra oil, the product of an East Indian tree. Unless a recurrence is noted, the former leper will be released from quarantine within 2 months.

Kankakee Insane Asylum, Illinois.—Dr. Enos, until recently superintendent of the Insane Asylum at Kankakee, has developed mania and is being guarded by 3 attendants. When he resigned last February, he discussed his case with his assistants, foretold exactly what would develop, and, fearing that there was no hope for recovery, thought it best to leave the hospital. Arrangements are now being made to have him enter, as a patient, the hospital where he was formerly chief of the medical staff. He is 35 years old and a graduate of the Rush Medical College.

American Roentgen Ray Society.—The next annual meeting will be held in Chicago, September 10-11, 1902. The committee having the meeting in charge consists of Drs. R. R. Campbell, J. B. Murphy, L. E. Schmidt, M. L. Harris, W. L. Baum, H. G. Anthony and W. A. Pusey, of Chicago.

Arsenic in the United States.—The manufacture of arsenic is one of our new industries, having been begun in 1901 by the Puget Sound Reduction Company, at Seattle, Washington. This firm delivered 300 tons during the year. Previous to this, most of the arsenic used throughout the world came from English and German mines, in Cornwall and Devon, England, and in Freiburg, Germany.

Fire in a Hospital.—Fire broke out in the City Hospital, Cincinnati, May 24, causing 3 deaths among the hospital attendants. All the patients, however, were saved in spite of the panic which resulted. The upper stories of the building alone were burned.

SOUTHERN STATES.

Association of Military Surgeons of the United States.—At the 11th. annual meeting, which was held in Washington, June 5-7, a number of prominent foreigners were in attendance. Among them was Dr. S. Kimura, of Tokio, surgeon inspector of the Imperial Japanese Navy. After attending the congress, Dr. Kimura, whose first visit this is to the United States, will go to Brooklyn and Norfolk to inspect the Navy Yards there. France was represented by Dr. H. Nimier, chief surgeon of the first class of the Army, professor in one of the French military schools.

American Laryngological, Rhinological and Otological Society.—At the 8th. annual meeting, held under the presidency of Dr. C. W. Richardson, of Washington, Surgeon-General Sternberg delivered the opening address June 2. A reception was given to the members by Dr. and Mrs. Richardson on the evening of June 2, and the annual banquet was held June 3.

The Extermination of Mosquitoes.—The Baltimore City Council's committee has favorably reported the ordinance appropriating $15,000 for exterminating mosquitoes with kerosene. Should this pass, the marshes about the city will be sprinkled with kerosene in large quantities.

An Interesting Case.—A Frenchman died recently in the Maryland University Hospital, aged 64 years, from an aortic aneurysm which had been discovered 24 years ago. He was exhibited in numerous cities, his history having been extensively written up. He absolutely refused to have the aneurysm wired, believing that there was no cure for his condition. He had read much about his disease and was proud of the fact that he had lived so long in spite of the aneurysm of the aorta.

Sternberg Promotion Bill.—The House of Representatives has refused to suspend its rules in order to take up the bill providing for the retirement of Surgeon-General Sternberg with the rank of Major-General, the motion being defeated June 2 by a vote of 103 to 68.

Rigid Regulations for Milk and Dairy Products in the District of Columbia.—Senator Stewart has proposed an amendment to the expense bill for the Government of the District of Columbia, providing more rigid regulations in regard to the milk and dairy products consumed in Washington. The amendment provides for 6 inspectors of dairy products, 2 of them to be veterinarians, at a salary of $1500 each. They are to visit all farms from which milk is shipped, to inspect cattle, barns and appliances; to visit, examine and inspect all dairies and places from which milk is sold; and to assist the health officers in enforcing all laws and regulations relative to milk and cream in the District of Columbia. These regulations will prevent the sale of unclean or adulterated milk and cream, and of milk and cream containing any foreign substance.

MISCELLANEOUS.

Cholera in the Philippines.—Two American officers, Captain C. E. Russell, of the Eighth Infantry, and Lieutenant O. H. Rask, of the Marine Corps, died last week of cholera, the former at Lagona, Luzon, May 27, the latter at Baccoor, Luzon, May 29. Of the fatal cases in Manila, 30 were in white people, 20 Americans and 10 Europeans, which, considering the proportion of natives to white people, is unusually large. The official reports to the Marine-Hospital Bureau show a startling number of cases in the city of Manila, and this has begun to cause alarm among officials in Washington. Extraordinary vigilance will be observed at the ports of the Western parts of the United States to prevent the introduction of the disease in the United States. It is the announced intention of the War Department to bring home as fast as possible all soldiers in the Philippines not absolutely needed for further service. Within a few months 3000 soldiers will be brought to the United States. Everything possible is being done in Manila to stamp out the disease. Surgeon General Wyman says that the authorities in the Philippines expect soon to gain control, although they have not made the progress they anticipated.

Yellow Fever.—Under date of May 22 comes the news of a fresh outbreak of yellow fever in Vera Cruz, Mexico. 19 out of 100 workingmen were affected in one week, 10 of them dying. The city government is taking active precautions to prevent the spread of the disease. Forty deaths from yellow fever occurred at Rio de Janeiro, Brazil, during the week ending April 20.

Bubonic Plague.—News has arrived containing the information that the plague was epidemic in Kityang, Taileung and Canton.—Two more deaths from plague occurred in Honolulu, H. I., May 11 and one May 13, making 19 deaths since the epidemic began.—Thirty-three deaths from plague are reported for the 2 weeks ending April 15 at Pernambuco, Brazil.—The United States consul at Sydney, N. S. W., writes that bubonic plague is not considered contagious there, nor transmissible except by inoculation. It originates with rats and is communicated to human beings by fleas from dead rats. On this account rats are being destroyed by the Board of Health, and incoming and outgoing ships are fumigated.

Tuberculosis Statistics.—During the first 3 months of the present year 163 deaths occurred in Genoa, Italy, from tuberculosis, out of a total population of 221,774, with a total number of deaths of 1513.—For 2 weeks ending April 26, 18 cities and towns of Switzerland, with a total population of 770,000, show 93 deaths from phthisis out of a total of 540 deaths.—For the first 3 months of the present year St. Thomas, D. W. I., with a total population of 11,012, gives a total number of deaths of 107, 14 of them from tuberculosis.

Women Physicians.—The number of female physicians throughout the entire world is almost 8000, 6000 of whom live in America. In Russia there are 700, in England 400, in France 85 and in Italy 20. In the hospitals of India there are 133 women physicians on duty.

Obituary.—Dr. S. R. S. Smith, at Bryn Mawr, Pa., June 1, aged 80 years.—Dr. T. J. Brown at Baltimore, Md., May 26, aged 39 years.—Dr. Edward L. Thurman, at St. Louis, Mo., May 25.—Dr. Cloyes W. Gleason, at Philadelphia, May 30, aged 81 years.—Dr. Thomas F. Corson, at Philadelphia, Pa, May 29, aged 62 years.—Dr. Merwin Leslie, at Denver, Col., May 27, aged 58 years.—Dr. Samuel C. Fitzgerald, at Washington, D. C. June 1.—Dr. J. Newton Arnold, at Clyde, N. Y., May 17, aged 65 years.—Dr. William H. Andrews, at Springfield, Mass., May 19, aged 47 years.—Dr. John H. Morgan, at Terre Haute, Ind., May 11.—Dr. E. Boylston Jackson, at St. Paul, Minn., May 14, aged 75 years.—Dr. Charles Y. Lord, at Portland, Me., May 12, aged 47 years.—Dr. George W. McCoy, at Chrisney, Ind., May 16, aged 48 years.—Dr. Nathan E. Hooper, at Mexia, Texas, May 10.

GREAT BRITAIN, ETC.

Convalescent Home for Epileptic Patients.—An anonymous donor has given $17,500 to the National Society for the Employment of Epileptics, for erecting a special convalescent home for epileptic patients at Chalfont St. Peter. The home, which will be in connection with the epileptic colony at Chalfont, will accommodate 24 male patients.

Recent English Addresses.—Professor J. Rose Bradford delivered an address on the relation of biology to medicine at the meeting of the University Hospital Medical Society in London, May 21.—Dr. Stephen Mackenzie delivered the oration at the annual meeting of the London Medical Society, May 26.—It is announced that the Cavendish lecture, before the West London Medico-Chirurgical Society, will be delivered June 20 by Sir Frederick Treves, upon certain phases of appendicitis.

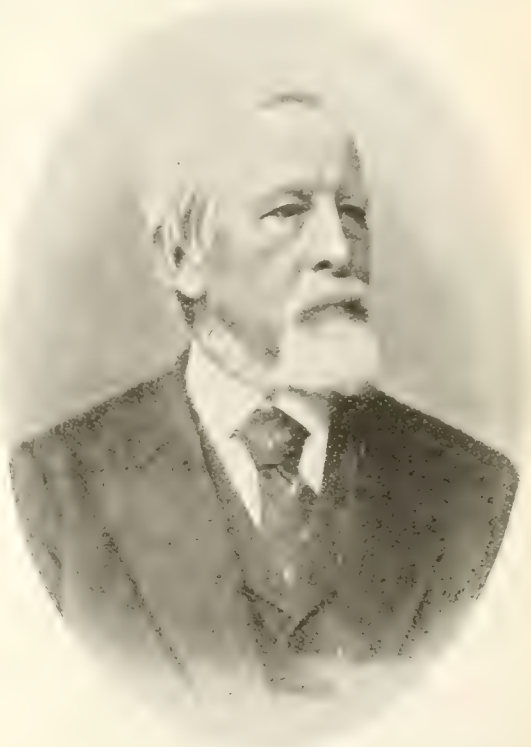
Death of Dr. Ord.—William Miller Ord, a graduate of London University in 1857 and of St. Thomas' Hospital, where he was house surgeon and surgical registrar, died May 14, in Salisbury, aged 67 years. After practising for a number of years at Streatham, he was appointed lecturer on zoology; in 1871 he became assistant physician at St. Thomas' Hospital, then lecturer on physiology and later lecturer on medicine. He became fellow of the Royal College of Physicians in 1875 and physician at St. Thomas' Hospital in 1877 which chair he relinquished in 1894, continuing, however, teaching in the wards until 1898, when he became consulting physician.

CONTINENTAL EUROPE.

Malaria in Italy.—Next to Sardinia, the province of Basilicata, near Naples, is the largest malarious tract in Italy. In killing the larvæ of mosquitoes an analine dye is used, which is efficient even when diluted to the extent of 0.00031 per 1000. A powder is also used, made from the flowers of the *pyrethrum roseum*, cultivated near Caprano. Valerian root mixed with this renders it more efficacious. Professor Grassi, following experiments with a compound called *esanofele*, composed of quinine, arsenic, iron and bitter herbs, 6 pills of which were given daily, speaks highly of his results.

The Ordinary Physician's Fee.—The Paris courts have settled by legal decision the ordinary fee for the visit of a physician. A man called in a woman physician to treat his wife, and afterward received a bill charging $4 for the first visit, and $2 for each of the others. In the lawsuit which followed, the court gave judgment in favor of the patient, stating that $2 is the customary fee in Paris for people in the medium station of life.

In von Leyden's Honor.—To celebrate the seventieth birthday of Dr. Ernst von Leyden, an "*Internationale Beiträge zur inneren Medicin*," in 2 volumes, has just appeared, containing 90 scientific articles by his former pupils and friends from over the entire world. The value of this "Festschrift" is far above any previous work of the kind. Among the 90 collaborators may be mentioned Nothnagel, Edinger, Goldscheider, Heubner, von Bechterew, Marie, Marinesco, Ehrlich, Wassermann, Huber, Knopf, von Koranyi, Broadbent, Renvers, Ewald, Babes, Celli, Courmont, Karamitsas, Kernig, von Schrötter, Senator, Bouchard, Quincke, Fraenkel, Baginsky, Pel, Naunyn, Stokvis, Eichhorst, Kraus, Metschnikoff, Salkowski, von Jaksch, Klemperer, Wolgemuth, Schaper, Gerhardt and Michaelis.



Death of Professor Kussmaul.—Adolf Kussmaul, emeritus professor of theory and practice of medicine in the University of Heidelberg, who 3 years ago published "*Jugenderinnerungen eines alten Arztes*," which has already reached its fourth edition, died in Heidelberg May 28, 1902. He was born in Graben near Carlsruhe, February 22, 1822, and studied in Heidelberg from 1840 to 1845, when he became assistant to Naegele, and in 1846 assistant to Pfeufer. During 1847 and 1848 he visited Vienna and Prague; then he became military surgeon in Kandern until 1849, and practised medicine there until 1853. As his health had failed, he went to Würzburg, where he did some work with Virchow, Kölliker and Scherer for one year. He then spent some time at Illenau, studying insanity before going back to Heidelberg in 1855. Here he became extraordinary professor in 1857; left for Erlangen in 1859 as ordinary professor of internal medicine; was called to Freiburg in 1863 to a similar position; and to Strassburg in 1876. There he stayed until 1888, when he moved back to Heidelberg, becoming professor emeritus. He has lived in Heidelberg until his death. His first scientific work was upon ophthalmology in 1844, when he busied himself with attempts at ophthalmoscopy, a procedure then unknown. Later he wrote upon all subjects connected with physiology, psychiatry, toxicology and internal medicine, especially the last. In 1867 he first used the stomach pump, which he introduced into medicine in his work entitled "*Ueber die Behandlung der Magenerweiterung durch eine neue Methode*," which was published in Freiburg. On February 22, 1902, the seventy-third volume of the *Deutsches Archiv für klinische Medicin* appeared as a "Festschrift" in honor of his eightieth birthday. All medical Germany joined in that celebration, and now, just 3 months later, comes the news of his death, a great loss to the entire medical world.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

May 17, 1902.

1. A Clinical Lecture on Dysmenorrhea. G. ERNEST HERMAN.
2. The Problem of the Premature Infant. J. W. BALLANTYNE.
3. An Analysis of Forty-six cases of Cancer of the Breast, which have been Operated upon and Survived the Operation from 5 to 32 Years, etc. THOMAS BRYANT.
4. A Note on the Operation for Removal of Malignant Disease of the Breast. DOUGLAS DREW.
5. Case of Vesicovaginal Fistula, Cured by a Method Believed to be New. With Remarks on the Surgical Treatment of Vesicovaginal Fistula. F. J. McCANN.
6. A Case of Premature Senility of the Uterus. A. W. ADDINSELL.
7. Case of Inversion of the Uterus. C. G. HOYSTED.

1.—Herman, in speaking of **dysmenorrhea**, states that only about 40% of women menstruate without discomfort; 60% have some pain; in about 11 or 12% of young married women the pain is bad enough to lay them up each month. There are two kinds of pain from which women may suffer when they menstruate. One pain is that produced by the physiological congestion of the pelvic organs which precedes menstruation. The other pain is caused by the contraction of the uterus which should expel its contents. The first pain is the commoner, and is felt more or less by most women when they menstruate. It is a general aching diffused over the whole pelvic region and often down the thighs. It may be accompanied by aching of the breasts. It is continuous. The severity of pain depends not solely on its local cause, but also on the sensitiveness of the patient. The uterine contractions which expel the menstrual flow are little or not at all felt by most women, but in a few they are painful, and this is dysmenorrhea in the literal sense of the word. This pain may be the result of obstruction; it may be due to the discharge of fragments of mucous membrane to stricture of the os internum (this is probably theoretical), and to imperfect development of the uterus. This spasmodic dysmenorrhea is far more severe than any other kind of menstrual pain, and has no tendency to spontaneous cure. The best drugs for the relief of uterine colic are antipyrine and phenacetine. Occasionally guaiacum will relieve the pain. The local treatment of spasmodic dysmenorrhea is dilatation of the cervix, which is best done by the passage of bougies. Dilatation, however, does not invariably cure. If all other treatments should fail and the dysmenorrhea should still be severe, the ovaries should be removed. [W. A. N. D.]

2.—Ballantyne says that a **premature infant** is born with the skin and the skeleton and the organs of a seven months fetus. He is called upon to play the part of a newborn infant with the **personalia** of the fetus. He is admirably fitted to continue living in the uterus, but is ill provided to meet the exigencies of an extra-uterine existence. He is forced into surroundings of a kind which impose upon him urgent calls to which he is little able to respond. Upon the obstetrician falls the responsibility of aiding the prematurely born child in his struggle with the exigencies of his new environment. His weight varies from 3 to 4½ pounds and his length is about 16 inches. The premature infant is a fetus lacking the placenta membranes and liquor amnii which together go to make up the fetal annexa. This is a distinct danger to the premature infant. There is a tendency to subnormal temperature. This must be kept to the normal. The dry mouth and the weak digestion and the frequency of gastro-intestinal disorders in the prematurely born are matters of every day observation. Some have placed the morbidity of premature infants as not far from 100 per cent. and the mortality at 50 per cent. This is probably not exaggerated. In the management of these babies an effort should be made to prolong the fetal phase of life after birth has occurred. This includes the use of the incubator, and the proper feeding of the infant. The problem of the premature infant is urgent. [W. A. N. D.]

3.—Bryant's routine operation for **cancer of the breast** consists in the removal of the whole gland with the skin and fat over the diseased area; when the axillary glands are enlarged, he dissects out the axilla and subpectoral spaces. An incision is always made into the axilla to examine it, but the glands are not removed unless they are enlarged. The pectoral muscle is not removed unless it is invaded by the morbid process. Of the 46 cases analyzed, 17 are alive or have died without evidence of recurrence. Of the 17 which are now alive one has remaind free for 5 years, one for 6 years, 3 for 8 years 3 for 9 years, 2 for 10 years, 2 for 14 years and one for 16 years. Of the 4 which died one perished from an accident after 5 years, one died of senility after 20 years, one from intestinal obstruction after 13 years, and one from acute jaundice 14 years after operation. Early operation is of more importance than tremendous operations upon practically hopeless cases. In the early cases an incision was always made into the small tumor for the purpose of diagnosis before radical operation was proceeded with. Out of every 4 cases of breast disease more or less simulating cancer, one will prove to be an example of cyst disease. Of the 19 cases in which recurrence took place, 3 recurred in the scar of the primary operation, and a second operation was performed one year after the primary; 2 of these 3 cases were well 4 years later and the third was in good health at the end of 10 years. In 9 recurrence occurred from 3 to 7 years after primary operation. In 6 of these 9 a second operation was performed and life prolonged from 3 to 12 years. Of the other 7 of this group recurrence occurred after intervals of from 10 to 30 years. In group 3 are included 10 cases in which the recurrence occurred in the opposite breast after intervals of from 2 to 24 years. [F. T. S.]

4.—Drew believes we should remove both pectoral muscles in all operations for **carcinoma of the breast**, because it facilitates the clearing of the axilla, allows the wound to be more easily closed, and because, when the pectoralis minor is left, the lower border of it is apt to form a prominent cord of indurated tissue which overhangs the axilla and causes at times considerable discomfort. From the point of view of the movements of the arm the pectoralis minor has practically no influence owing to its insertion into the coracoid process. If the muscles are preserved, it is important to avoid injury to the anterior thoracic nerves. [F. T. S.]

5.—McCann remarks that in closing an opening in any hollow viscus, as for instance in the cure of a **vesicovaginal fistula**, two important surgical principles must be born in mind: (1) To avoid all tension on the stitches: (2) to avoid passing the suture material through the inner lining of the viscus. In operating on vesicovaginal fistulæ the principle to be adopted should be a free separation of the bladder from the uterus and vaginal wall in order to remove all tension, and separate suture of the opening of the bladder with the Lembert sutures. The bladder sutures should be inserted transversely while the vaginal walls should be stitched in a longitudinal direction. The operation of paring the edges of the fistulæ should be given up. When the fistula has existed for some time, the vesical and vaginal mucous membranes

become continuous around the orifice and the bladder is adherent in this situation. The latter must be freed in these cases before the fistula can be properly closed. The author records a case operated upon in this manner. [W. A. N. D.]

6.—Addinsell reports a case of **premature senility of the uterus** occurring in a young woman, 26 years of age. He presents some cases gathered from literature of amenorrhea following shock and associated at times with atrophy of the uterus. [W. A. N. D.]

7.—Hoysted reports a case of **inversion of the uterus** following traction on the cord and vigorous efforts at fundal manipulation by a midwife. The uterus was replaced and the patient made a good recovery. Saline solution was injected into the rectum with a gratifying effect upon the pulse. [W. A. N. D.]

LANCET.

May 17, 1902.

1. A Clinical Lecture on the Nature of Discharges and of Douches. WYATT WINGRAVE.
2. A Clinical Lecture on Polyarthritis. G. A. WRIGHT.
3. The Diagnosis of Malaria from the Standpoint of the Practitioner in England. PATRICK MANSON.
4. Remarks on the Subsequent History of Children born whilst the Mother was Insane. A. F. TREDGOLD.
5. Liquid Air as a Freezing Medium in the Laboratory. W. H. B. STODDART.
6. Some of the Surgical Aspects of Glycosuria and Diabetes. (Concluded.) LLEWELLYN C. PHILLIPS.
7. Some Notes from an Inquiry into the Action of Dinitro Benzene upon the Urine of man, etc. R. PROSSER WHITE, JOHN HAY and W. J. ORSMAN.

1.—Wyatt Wingrave, in a clinical lecture, discusses **the nature of discharges and douches.** The objects of douches and irrigation are (1) for the mechanical removal of morbid secretions, accumulations and foreign bodies; (2) for antiseptic purposes; and (3) for diagnosis. He describes the character of discharges commonly encountered in diseases of the nose, nasopharynx and ear and the proper strength and ingredients of douches which are indicated for these conditions. Formulæ of various douches are also mentioned and the instruments which may be employed in giving irrigations for the nose and throat. [F. J. K.]

2.—G. A. Wright delivered a clinical lecture on **septic polyarthritis** at the Manchester Royal Infirmary on January 23, 1902. Three cases of this condition are reported. Case 1.—A married woman, 35 years of age, was admitted to the Manchester Hospital on October 3, 1901, complaining of stiffness of all of her joints. The illness dated back to July, 1895, when, 7 weeks after the delivery of a stillborn child, her knees and the small joints of her wrists became swollen, painful and inflamed. Four months later the joints of her great toes became similarly involved. A continuous purulent vaginal discharge developed after her confinement. In 1896, the joints of her feet and ankles became inflamed and swollen. In the course of about a year the joints of the cervical spine, jaws, hips and shoulders became involved. In 1897, there was general rigidity of nearly all of her joints, leaving the patient completely helpless. This condition of almost complete ankylosis of nearly all of the joints continued until 1899, when the hot air treatment was employed, producing slight improvement in the movements of the jaw, neck and knees. The vaginal discharge ceased in 1899. On admission to the hospital her general condition was fairly good, but nearly all of her joints were ankylosed. Case 2.—A single woman, 29 years of age, gave a history of having been perfectly healthy until she was 24 years of age. Her illness is said to have begun after a heavy day's work of washing. At this time she was menstruating. On the following day the left knee became swollen and painful. The condition of this joint did not yield to treatment and after a year she was admitted into the Edinburgh Infirmary when the knee was ankylosed. Some months after, the other knee became swollen and painful and, later, the joints of the right knee and of the fingers of the right hand. In rapid succession all of the other joints of the limbs became involved. The patient became completely helpless and at the time of this report (1902) she was only able to move her head, and even that motion was limited. During her illness irregular menstruation occurred but never leukorrhea. Case 3.—A single woman, 22 years of age, with a tuberculous family history, was admitted into the Manchester Infirmary on January 1, 1902, complaining of pain and swelling in the right ankle. When 14 years old, she had leukorrhea which lasted for 12 months. Three years before admission into the hospital the left foot and ankle became swollen and painful. Four months later the right foot became involved and has remained so. Acute inflammation lasted for 3 or 4 days. At times she has had swelling of the wrists and left shoulder. On admission there was a slight vaginal discharge which ceased after treatment. The author thinks that these cases are examples of septic arthritis due to absorption of the ordinary septic micro-organisms from some unhealthy or enfeebled area. Two of these cases he classifies as **ankylosing leukorrheal polyarthritis** and case 2 as an example of absorption of poisonous material from the genital organs by reason of menstrual disturbances due to fatigue and cold. Discussing the treatment of these conditions, he thinks that measures should be directed to get rid of the septic focus as soon as possible and that the joints should be put at rest; soothing applications employed at first, and, later, massage inunction of oleate of mercury and a course of potassium iodide are probably the best measures. [F. J. K.]

3.—Will be treated editorially.

4.—A. F. Tregold, in an article entitled **remarks on the subsequent history of children born whilst the mother was insane,** reaches the following conclusions: (1) The mental and physical condition of the child is in no wise influenced by the mere fact of the mother being insane during pregnancy; (2) neither is the condition of the child influenced by the variety of insanity, the duration of the attack or the age of the mother, nor even directly by the number of attacks from which the mother may have suffered; but that (3) this condition is directly dependent upon the presence or absence of morbid hereditary influences. [F. J. K.]

5.—W. H. B. Stoddart has found liquid air a most useful substance as the freezing medium in the laboratory. He thinks that it possesses so many advantages that he has no hesitation in commending its use to other pathologists. [F. J. K.]

7.—R. Prosser White, John Hay and W. J. Orsman contribute **notes from an inquiry into the action of dinitrobenzene upon the urine of man.** These observers have found that in acute cases of poisoning from this substance there are no evidences of bloodcorpuscles or hemoglobin in the urine. In subacute chronic cases the dark tawney color of the urine is always well marked and is probably due to some pigmentary derivatives but not to free hemoglobin. They maintain that probably long continued dosage by the mouth to man would produce hemolysis and exudation of blood into the tubules of the kidneys and into the intestines. They also believe that it is generally through absorption by the skin that cases of poisoning occur during the industrial manipulation of this substance. [F. J. K.]

MEDICAL RECORD.

May 31, 1902.

1. The Treatment of Cholelithiasis. HOWARD LILIENTHAL.
2. Acroparesthesia (the Paresthetic Neurosis), the Analysis of One Hundred Cases. JOSEPH COLLINS.

3. The Symptoms of Chronic Nonalcoholic Gastritis. GEORGE ROE LOCKWOOD.

1.—Howard Lilienthal contributes a paper on the **treatment of cholelithiasis** with the reports of 10 illustrative cases including one of cholelithiasis in a child, 11 years old. He discusses the **causes of biliary calculi** and states that the formation of the gall-stone may to a certain extent be prevented by exercise and the promotion of regularity of intestinal action. Stones having formed in the gall-bladder, however, it is impossible, so far as our present knowledge goes, (except in rare instances when the stones are very small) to dissolve them or remove them by medical means alone. The next point considered is the result of the presence of gall-stones. Knowledge of the existence of latent cholelithiasis should put us on our guard against the various complications and sequelæ which may occur. Medical means may do much towards keeping the disease latent and averting attacks of colic. As soon, however, as severe or frequent attacks occur, or, whenever complications arise, the case becomes one for the surgeon, and a delay on the part of the physician may be considered fully as culpable as delay in appendicitis. His list of operations includes **cholecystotomy,** with drainage; **ideal cholecystotomy,** in which the stones are removed and the gall-bladder closed by suture; **cysticotomy,** or incision of the cystic duct; **choledochotomy,** the incision of the common duct; and, lastly, **cholecystectomy,** the complete removal of the offending viscus. The indications for these various operations are discussed. [T. L. C.]

2.—Joseph Collins presents an **analysis of 100 cases of acroparesthesia (the paresthetic neurosis).** The paper includes considerable information regarding the etiology and detailed symptomatology as well as treatment pursued in these cases. [T. L. C.]

3.—Lockwood discusses **chronic nonalcoholic gastritis,** and includes reports of a series of cases representing the various types described. His conclusions are as follows: (1) In uncomplicated chronic gastritis not of alcoholic origin, if the muscular power of the stomach be good, the only symptom apt to be referred to the stomach is acidity. This occurs in about half of the hyperacid cases, but may be observed in the cases of complete achylia. Cases with normal acidity, and the vast majority of cases of anacidity, give no gastric symptoms. (2) The hyperacidity cases may give a course resembling that of a neurosis in that the symptoms are intermittent and are easily influenced by nervous conditions. It would seem, however, that a long continued gastric neurosis was exceedingly rare, and that the great majority of such neuroses were rarely the neurotic outbreak of an organic lesion. (3) In gastritis, contrary to the accepted teachings, the following negative facts are to be noted: (a) The appetite is good. The few exceptions are observed in advanced atony, when the quantity of food is not well born, and in cases of neurasthenia. In neither case, however, is the gastritis itself the cause of anorexia. (b) Pain occurs in 2 ways, (1) from acidity, differing in no way from similar pain in cases of nervous hyperacidity, (2) from gas. This latter pain differs in no way from that observed in cases of simple atony without gastritis, so that pain does not seem to be a symptom of gastritis proper. (c) Nausea does not occur in relation to meals. Patients with atony, and those who are neurasthenic, may complain of nausea, but the nausea is not related to meals and does not interfere with a normal appetite. It usually occurs when the patient is tired or nervous. (d) Vomiting does not occur in the nonalcoholic cases. (e) Unless there be diarrhea the nutrition is good, and, as a rule, the patients are not anemic. Exceptions may be made in cases of atony, but in these cases the anemia may well be the primary condition. (4) If the muscular power be poor, gas is present as a prominent symptom. This is more apt to occur in hyperacid cases and is probably due to swallowed air. As this same symptom is observed in a similar number of cases of simple atony, the symptom is not directly due to the gastritis. Gastritis may give rise to severe and long continued diarrhea and emaciation, which may be mistaken for cases of malignant disease of the colon. The diagnosis however should present no difficulty if a careful examination be made. These cases are more common than is usually supposed, and occur both in hyperacid and in anacid cases. Between the two a diagnosis is possible only by gastric analysis. (6) Biliousness and its allied symptom-complexes are rarely, if ever, due to primary functional [illegible] of the liver but are almost [illegible] due to an intestinal toxemia, traceable to some derangement of gastric chemistry, whereby improperly prepared chyme enters the intestines. (7) Anemia and constipation are the chief and only symptoms in a great many cases of even well-marked gastritis, and their continuance without apparent cause should justify an analysis of the gastric contents. [T. L. C.]

MEDICAL NEWS.

May 31, 1902 (Vol. [illegible] No. 22)

1. A Contribution to the Subject of Infant Feeding. S. HENRY DESSAU.
2. The Bacterial Pathology, Symptomatology, Diagnosis, Treatment and Quarantine of Tonsillar Inflammations. WILLIAM G. BISSELL.
3. The Diagnostic Uses of the [illegible]. E. D. BONDURANT.
4. Poisoning by Aconite (the Condon Case) and the Physiological Analysis of Alkaloids. WILLIAM SEABROVE MAGILL.
5. Some Suggestions Relative to the Treatment of Tuberculosis. F. M. POTTINGER.
6. The Smallpox Problem. ERNEST WENDE.

1.—S. H. Dessau lays importance (1) on the great responsibility the medical attendant is compelled to assume in adopting and advising any methods that later can possibly be perverted by the masses or lower classes of the community to the subsequent detriment of infant health and life; (2) the development of the fact that the action of a certain degree of heat from 140° to 160° F. when applied to cow's milk, renders the casein or curd more digestible, without injury to other valuable nutritious elements at the same time rendering the food practically free from contamination of any disease germs it might accidentally convey. For infants of all classes the author advises as the cheapest and best food for daily use a fair average quality of cow's milk diluted with water, according to the age and digestive capacity of the child. The "top milk," or the upper portion of milk that has been allowed to stand in a vessel at a temperature not above 60° F., is sometimes preferable. The proportion of fat to proteids is much greater in such milk and will better bear diluting. A pinch of either table salt or phosphate of sodium is added, because cow's milk contains no sodium salts, while human milk does, and a heaping teaspoonful of raw cane sugar to the quart. The mixture is placed in a double cooker with cold water in the outer vessel and allowed to remain on the fire for 10 minutes after the water has begun to boil. The advantages of this method are that it is cheap, the utensils can easily be kept clean, there is no risk of losing the milk from breakage as when a heated glass bottle is set in a pot or crock. Moreover, the inner vessel, containing the milk, can at once be removed and the milk rapidly cooled by immersing it in cold water, meanwhile stirring the milk. It can then be poured into the ordinary milk-bottle and kept upon ice until required for use, when it is again warmed to 98° F. in a nursing bottle by immersing for five minutes in hot water. [T. M. T.]

2.—W. G. Bissell desires to call attention to the nomenclature in general use. The term "follicular tonsillitis" in the majority of instances is used to describe that inflammation of the tonsil in which the exudate, if any, is slight in amount and confined to the follicles. Such a term is misleading. A "tonsillitis" is an inflammation of the tonsil, irrespective of its causal factor. A "follicular tonsillitis" merely emphasizes that the condition is localized as described. It has been amply demonstrated that such localization of inflammatory tonsillar processes

can be either of a communicable or a noncommunicable type. In view of this fact it would seem advisable that a nomenclature be adopted by which a more exact knowledge of the micro-organismal pathology be described. In those conditions without such a causal factor affix the term "simplex." If the etiological factor be due to the Klebs-Löffler bacilli, affix "diphtheriticus;" if due to the streptococcus pyogenes, the Latin term ending for that organism, etc. The author gives the minimum dose of antitoxin as 2,000 units, repeated at intervals of 6, 12 or more hours, as indicated by persistent constitutional depression or other evidence of toxemia. It has been found that, when antitoxin is administered on the first day, the average length of illness was 10 days; on the second day, 12 days; on the third day, 15 days; on the fourth day, 16 days; and on the fifth day, about 20 days. When antitoxin is not administered and the patient recovers, the length of illness is about 27 days. For disinfecting purposes the paraformaldehyde candle has been recommended and disinfection is produced in the following manner: (1) The room made as nearly airtight as possible; (2) the use of one small candle to each 300 cubic feet of air space, and not depending upon this means of surface disinfection in the apartments containing more than 3,000 cubic feet; (3) the surfaces of the articles to be disinfected to be so arranged as to allow free exposure to the gas; (4) the room to remain for from 6 to 12 hours; (5) a cleansing process to supplement the procedure. [T. M. T.]

3.—E. D. Bondurant states that the culture test, when carefully carried out, is much more accurate and more delicate than the most skilfully conducted microscopical examination, often revealing the presence of gonococci when prolonged search with the microscope in stained preparations had given only a negative result. By cultural means gonococci have been detected in the blood, in joint effusions, in salpingitic pus, on the heart valves and in old gleety discharges which were seemingly free from gonococci. [T. M. T.]

5.—F. M. Pottinger says it must be remembered that the tuberculous patient is a sick man, whether he has cavities in the lung and his vitality has been sapped by prolonged absorption, or whether he is in the incipient stage, with a small crop of tubercles in one apex, a slight loss of vitality and an elevated temperature of one-half to one degree. The patient who has lost one-third of his body weight, whose cheek is flushed from hectic fever and whose strength is so nearly gone that the least exertion tires him, was once in the incipient stage, and had his disease been discovered at that time and had proper treatment been instituted, he would have been cured and saved this prolonged suffering and rescued from impending death. The author also says instead of making light of incipient tuberculosis and allowing the patient to fritter away his chances of recovery, we must institute curative treatment. Instead of ignorantly carrying the patient to the grave, we must guide him intelligently to health and life. Care without climate is better than climate without care. [T. M. T.]

6.—E. Wende gives the special obstacles confronting the investigator of the smallpox problem and the most important data bearing upon the subject as follows: (1) The extreme and continued ignorance of the public generally respecting the disease and the means which modify and remove it, as well as in regard to vaccination; (2) the injurious interference of antivaccination, Christian Science and vaccinophobia, due to ignorance, dishonesty and insanity, are certain to disturb, obstruct and overwhelm the normal order of prevention and safety; (3) ignorance respecting the efficacy of isolation, quarantine and disinfection, or a lack of appreciation of the preventive value; also allowing the anxiety, wishes, hopes, fears or other natural emotions of the patient or his friends to be paramount; (4) the misconceptions and misappreciations of the members of the medical profession of the importance of the principles advanced by sanitation, also the established fact that many are wonderfully slow in recognizing the real nature of the disease; (5) the lack of uniformity in sanitary laws and the indifference shown by many authorities in their enforcement; (6) the employment and countenance of physicians as health officers who, for political reasons, have obtained the reputation of greater activity and boldness through their very ignorance of the true character and indispensable requirements of sanitation. [T. M. T.]

NEW YORK MEDICAL JOURNAL.

May 31, 1902. (Vol. LXXV, No. 22.)

1. The Surgical Treatment of Prostatic Hypertrophy. CHARLES H. CHETWOOD.
2. How to Conduct a Normal Labor. JAMES MORAN.
3. Conservatism in Abdominal and Pelvic Surgery. EDWIN RICKETTS.
4. Colon Bacillus Infection. J. HOLCOMB BURCH.
5. Fractures of the Upper Third of the Femur. W. BURT.

1.—C. H. Chetwood, in his article on prostatic hypertrophy, says: (1) Palliative measures should not be persisted in, when they fail after reasonable trial to produce and maintain an abatement of symptoms; (2) a first infection of the bladder is not alone sufficient excuse for operation unless palliative measures fail promptly to subdue inflammatory conditions; (3) recurring infection of the bladder or ascending infection of the kidney is sufficient warrant for operative interference; (4) there is a growing tendency toward earlier operation than was formerly practised; (5) the greater number of cases of prostatic hypertrophy can be satisfactorily reached through a perineal incision; (6) in the large majority of cases, the requirements of any operation upon the prostate consist in the removal of the obstructing area and depressing the bladder opening into the prostate, so that the *bas fond* may be properly drained; (6) in many cases the obstruction area of the hypertrophied gland can be satisfactorily reached and eventually removed through a perineal opening by means of galvanocaustic incisions. [T. M. T.]

2.—J. Moran gives the outfit for patient and child in his article as follows: One rubber sheet or oilcloth large enough to cover the entire width of the bed; a second piece of oilcloth about 4 feet square; 6 abdominal binders one yard and a quarter long and a half a yard wide, made of the cheapest grade of unbleached muslin; 4 bed pads, each 4 feet square and 2 or 3 inches thick, made of cheese-cloth and stuffed with nonabsorbent cotton. They should be stitched and tufted enough to prevent the cotton from slipping; one pound of absorbent cotton; 24 vulvar pads or napkins, sterilized; 24 baby napkins; one small blanket to wrap the baby in; 3-quart or 4-quart fountain syringe and bed pan; 2 or 3 wash basins and from half a dozen to a dozen clean towels; from 6 to 12 clean sheets; rug or oilcloth to protect the carpet at the bedside; 8 ounces of olive oil and a cake of ivory or castile soap; one new nail brush; 24 large and 24 small safety pins; 3 clean aprons; one pot or kettle of boiling water and a pot of cold water boiled and covered with a towel. [T. M. T.]

3.—E. Ricketts does not advise the opening of a rectal abscess one day and of the abdomen the next. He says no one can do it without the greatest risk of infecting the abdominal cavity, no matter how well he tries to antisepticize and rubberglove himself. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

May 29, 1902.

1. An Abstract of some of the Prevailing Opinions on the Periods of Incubation, Observation and Isolation of some of the Infectious Diseases. (Concluded.) ELBRIDGE G. CUTLER.
2. Remarks on Intestinal Obstruction by Bands, Following Operations on the Peritoneal Cavity, with Report of Cases. F. B. LUND.

1.—Elbridge G. Cutler, in an article entitled an abstract of some of the prevailing opinions on the periods of incubation, observation and isolation of some of the infectious diseases, presents the following conclusions, signed by a committee consisting of Drs. Samuel H. Durgin, chairman; J. H. McCollom, Elbridge G. Cutler, John Lovett Morse and Richard C. Cabot: Typhoid Fever, (1) The period of incubation is most often 12 to 14 days, frequently 9 or 10 days, occasionally 8 and possibly less. In rare cases it is prolonged to 15, 18 or even 23 days. (2) The period of observation is uncertain, and under some circumstances should extend over 28 days, namely when the water supply cannot be changed. (3) The period of isolation, in the ordinary acceptation of the term, should extend through the

period of convalescence; and proper disinfection of the stools and urine, and possibly of the sputum, should be practised for at least a month after the symptoms have ended. (Recent observations have shown that the bacilli may persist in the urine for a much longer time, hence to ensure absolute safety the patient should be considered a possible source of danger until the bacilli have disappeared from the urine.) **Mumps.** (1) The usual period of incubation is 3 weeks. The shortest period is probably 14 days. The longest period known is 25 days. (2) The period of observaton should be 25 days. (3) The period of isolation should be 28 days, and, if all glandular swellings have subsided and there is no tenderness of the breasts or other parts of the body, the patient may be released. **Scarlet Fever.** (1) The period of incubation is 2 to 3 days, as a rule, but it may be 8 (and possibly 20—McCollom). (2) The period of observation should be 10 days, provided there is absence of fever and sore throat and all fomites are disinfected. (3) The period of isolation, so far as danger to others is concerned, should be from the appearance of the eruption until desquamation has ceased, the nose and throat should be healthy, all complications should be over; thorough disinfection of house, patient and belongings should have been done before the patient is released. **Whooping Cough.** (1) The duration of the incubation stage is 4 to 10 days. (2) The period of observation should be 21 days. (3) The period of isolation should be from the commencement of the whooping or spasmodic stage, and should last till the characteristic cough has ceased. **Measles.** (1) The incubation period is 11 or 12 days. It may be 10 or, possibly, shorter. On the other hand, it may be as long as 14 days. (2) The period of observation should be 16 days. (3) The period of isolation should last till desquamation and catarrhal symptoms have come to an end. **Chicken-pox.** (1) The period of incubation is usually 14 days. It may be from 11 to 19 days. (2) The period of observation should be 20 days. (3) Infectiousness lasts until convalescence is over, and all scabs, especially of the scalp, have been detached. This, then, should be the period of isolation. **German Measles** (Rötheln). (1) The incubation period is 18 days, usually, but it may be possibly 5 to 21 days. (2) The period of observation should be 23 days. (3) The isolation period should be 14 to 21 days, according to the severity of the attack. **Smallpox.** (1) The stage of incubation is 11 or 12 days, usually. It may be 8 days and perhaps 20 days. (2) The period of observation should be 3 weeks. (3) The patient may be released from isolation when all primary crusts have fallen off and patient's hair and skin surface has been thoroughly disinfected as well as all infected articles. **Diphtheria.** (1) The period of incubation of diphtheria of the throat or larynx is usually 2 days. It does not often exceed 4 days, but, occasionally, reaches 7. (2) For a single exposure the period of observation should be 12 days. (3) The period of isolation after an attack of diphtheria should last till 2 consecutive negative cultures from the nose and from the throat have been obtained before release of the patient. **Influenza.** (1) The period of incubation is 2 or 3 days usually. (2) The period of observation after exposure should be 6 or 7 days, according to the virulence of the epidemic. (3) The period of isolation of the sick should last till catarrhal symptoms are ended. [M. R. D.]

2.—F. B. Lund contributes an article on **intestinal obstruction by bands, following operations on the peritoneal cavity, with report of cases.** The first patient represented a case of acute obstruction due to a band which extended from one portion of the intestine to another, and coming on 3 weeks after the abdominal section. The operation was performed 12 hours after the appearance of the first symptoms, and on opening the abdomen it was found that a coil of intestine, about 30 inches long, had slipped beneath the band which extended between 2 portions of the small intestine. After division of the band and closure of the abdominal wound, recovery ensued, the patient being discharged from the hospital in good condition 17 days after the operation. In the second case there existed an obstruction of the upper part of the small intestine by a band, 8 weeks after an operation for acute appendicitis. There was also gangrene of a narrow ring of intestine beneath the obstructing band. After division of the band, an inversion of the gangrenous portion of the bowel, an uninterrupted recovery resulted with subsequent improvement in the general condition of the patient. In the third case, which was previously reported with reference to a gastric ulcer, there also existed in this instance a band which was attached at one end to the border of the jejunum, and, at the other, to the inner surface of a small scar which resulted from a previous operation that had been performed for the purpose of draining the pelvis. The band was divided, but an incision of the bowel itself had to be resorted to before the desired result was obtained. In this case there was also an uninterrupted recovery. In the fourth case there was an intestinal obstruction caused by a band, 6 months after an operation for peritoneal cysts. There was also rapid gangrene of the intestines. An operation performed 24 hours after the first symptom, and a resection of the gangrenous intestine, resulted in a rapid and uneventful recovery. In this case the portion of the bowel which was removed measured 21 inches in length. [M. R. D.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

May 31, 1902.

1. Need of Much More Accurate Knowledge Concerning both the Immediate and Remote Effects of the Remedial Agents in General Use. N. S. DAVIS.
2. Transient Monocular Blindness. WILLIAM CAMPBELL POSEY.
3. Perforating Wounds of the Eyeball and Sympathetic Inflammation. H. GRANDLE.
4. Action of Silver Nitrate and Chromic Acid on Chronic Glossitis, Under the Influence of the Electric Current. M. L. RAVITCH.
5. Foreign Body within the Orbit. ALBERT B. HALE.
6. Some Atypical Forms of Disease. JAMES L. TAYLOR.
7. A Case in which a Large Bone Cavity was Healed by Means of Thiersch Grafts. JOHN PRENTISS LORD.
8. The Value of State Control and Vaccination in the Management of Smallpox. J. N. McCORMACK.
9. The Lung Development of the Child. J. ALLEN GILBERT.
10. Rotary Lateral Curvature and Pott's Disease of the Spine. DANIEL W. MARSTON.
11. Surgical Conservatism of the Ovaries and Fallopian Tubes. EDWIN RICKETTS.

1.—N. S. Davis thinks **there is need of much more accurate knowledge** concerning both the immediate and remote effects of the remedial agents in general use. He contends that the most important defects in practical medicine at the present day are (1) failure to appreciate the fact that diseases are deviations from the natural standard of action, or of the structures in some part, or in the whole of the body, induced either by physical or mental influences progressing towards death or recovery in accordance with known laws of vital resistance; (2) the lack of knowledge of the physiological processes that make up the vital resistance of living bodies to the action of various causes of disease; and (3) inadequate knowledge of the action and uses of many important remedies in the materia medica. The remainder of the article deals with important and interesting topics relating to drugs and their action. [F. J. K.]

2.—Wililam Campbell Posey discusses **transient monocular blindness.** He states that transient loss of vision limited to one eye is uncommon, excluding cases caused by the blurring of vision from a tired ciliary muscle or the partial blindness which accompanies migraine or the periodic dimness of vision which is so frequently a precursor of glaucoma. He reports several cases of transient blindness; one occurring in an elderly clergyman who had 3 attacks of this condition. The right eye was always affected, loss of sight was always complete and recovery, which began in the temporal field, was rapid. Headache, nausea and other general symptoms did not accompany the attacks. Another case occurred in a lawyer 30 years of age, who came under the observation of the author 7 years ago on account of twitching in the lids after prolonged work. About a year later he noticed on 2 occasions that the lower half of objects became sud-

denly obscure. A month later an attack of absolute blindness involving the right eye occurred which lasted for about 15 minutes. After 3 months he had an attack of partial blindness involving the right eye which persisted for a half hour. Another attack occurred a month later, which produced total blindness in the upper half of his right eye, lasting for 15 minutes. Six months later the lower half of the same eye became blind for 5 minutes. A number of attacks followed, but vision was always restored completely. He reports a third case, occurring in a man, 50 years of age, who had a number of attacks of sudden blindness involving the right and the left eyes. The author, in addition to these reported cases, mentions 2 others, one occurring in an epileptic, the other in a young woman, 20 years of age. He carefully reviews the literature pertaining to this subject. He thinks that the prognosis in all of these cases should be most guarded. It will appear impossible to predict what the outcome of any one of them might be, whether the blindness be due to spasm of the bloodvessels, whether it be due to embolism, or whether it results from long continued spasm; finally he discusses the treatment of this disease. [F. J. K.]

3.—H. Grandle discusses the question of **perforating wounds of the eyeball**, showing the seriousness of these injuries and reviewing their mechanical consequences. The question of foreign bodies in the orbit and their treatment is also discussed. Particular attention is given to the treatment of infection and sympathetic extension to the other eye. [J. H. G.]

4.—M. L. Ravitch has **had excellent results from the action of silver nitrate and chromic acid** under the influence of electric current in the treatment of chronic glossitis. Under the name of glossitis he includes the following conditions: Leukoma, leukoplakia, glossitis desiccans, ichthyosis, tylosis or eczema and keratosis. He employed a 15 per cent. solution of nitrate of silver or a 5 per cent. solution of chromic acid. The solution is painted upon the tongue after which the patient is told to hold the wet positive sponge electrode in one hand, while the negative metal electrode is rubbed over the diseased area for from 10 to 15 minutes. A short report of 5 cases of this disease is included in his article. [F. J. K.]

5.—Albert B. Hale discusses the **modern methods of treatment for foreign bodies within the orbit** and reports an interesting case. [J. H. G.]

6.—James L. Taylor contributes an article on **some atypical forms of disease.** He discusses the deviations from typical attacks of smallpox and diphtheria. In 1888 he observed an epidemic of scarlatina which was so mild that the most of the children attacked continued to attend school. He remarks that the mild endemic disease which has prevailed so extensively throughout the Ohio Valley during the past season was in reality typhoid fever; probably due to the contaminated water supply. [F. J. K.]

7.—J. P. Lord describes **a case of osteomyelitis** occurring in a man, 60 years of age. A few weeks after operation, when the bone cavity was lined by healthy granulation tissue, he was enabled to get skin lining for the bone cavity by the implantation of Thiersch grafts. The cavity, when healing was complete, was about 3 cm. deep. Lord thinks that his method will be found to be a quicker and more satisfactory method, when cosmetic results are not to be considered, than the older method of allowing the cavity to fill with new bone. [J. H. G.]

8.—J. N. McCormack discusses **the value of state control and vaccination in the management of smallpox.** He contends that the neglect to enforce vaccination at the present day is a serious reflection upon any individual or community having smallpox. The author's experience leads him to believe that smallpox is slightly, if at all, contagious until the beginning of the pustular stage, and he thinks that, if the patient with smallpox can be removed from the house or the other inmates separated from the patient before the pustular stage, the danger of communicating the disease is scarcely worth considering. He further believes that if the other members of the family can be thoroughly vaccinated and enough points used to make the results certain within 48 hours after the beginning of the pustular stage of the first case, they will be almost certainly saved an attack. In his article he also refers to the method of vaccination and the selection of vaccine virus. He contends that vaccination is the most important operation that most people have ever had performed and that, if imperfectly performed, it can only give rise to a false sense of security and that usually, if properly done, it protects against smallpox for a lifetime and is devoid of danger. [F. J. K.]

9.—J. Allen Gilbert thinks that **the proper development of the lung in a child** is of the greatest importance in the prevention of infections of the pulmonary structure. He thinks that the majority of the diseases of the respiratory system con be traced to insufficient consumption of fresh air. [F. J. K.]

10.—D. W. Marston reaches the following conclusions regarding **rotary lateral curvature in Pott's disease of the spine:** (1) Mechanical support and proper gymnastic exercises are to be combined. (2) The exercises are to be taken while the patient wears the support. (3) The apparatus is removed while the patient sleeps. (4) When the deviation is more than half the diameter of the vertebræ, an unyielding support is imperative. (5) After absorption of bone has taken place, the primary curve can not be eradicated; the "cure" lying in the establishment of compensating curves, which maintain the equilibrium of the spinal column. In tuberculosis of the spine, on the other hand, remember the importance of the following: (1) Fixation and extension are to be employed. (2) The existence of sinuses and abscesses does not contraindicate the immediate application of proper immobilizing apparatus. (3) Forcible correction of deformity is advised only in selected cases. (4) Finally, the success or failure in the treatment of either of these diseases is dependent largely upon the intelligence and willingness on the part of the patient, the care and help of the parents or friends and prolonged watchfulness at regular intervals on the part of the surgeon. [J. H. G.]

11.—Ricketts remarks that pathological **lesions of one or both ovaries and Fallopian tubes** may be so serious as to call for the most radical surgical measures, even extirpation. There are, however, cases in which extirpation is practised unnecessarily by operators of limited experience, and the conservation of these organs has not received the attention it deserves. Conservatism is now accepted by the best practitioners as the proper course to pursue, in hydrosalpinx, for instance, the ovary or tube or both being saved by resorting to vaginal cul-de-sac drainage. He who always resorts to hysterectomy for fibroids, whether large or small, should not be regarded as a conservatist in pelvic surgery. Myomectomy under such circumstances may, in many instances, be chosen as the operation of election.

[W. A. N. D.]

AMERICAN MEDICINE.

May 31, 1902.

1. Report of the Presence of Anguillula Aceti in the Urine of Two Patients Mistaken for Strongyloides Intestinalis. FRANK BILLINS and JOSEPH L. MILLER.
2. Pneumococcus Arthritis. RUFUS I. COLE.
3. Some Modifications of the Author's Original V-Shaped Operation for Correction of Deflection of the Septum. D. BRANDEN KYLE.
4. Bubonic Plague. JOSEPH J. CURRY.
5. Mensuration as an Aid to the Diagnosis of Pulmonary Tuberculosis. CHARLES R. UPSON.
6. A Case of Parovarian Cyst Complicated by the Presence of a Myomatous Uterus Filling the Pelvis, etc. G. H. BROWN.

7. The District of Columbia Cancer Record for Twenty Years. CLARENCE A. SMITH.

1.—Frank Billings and J. L. Miller present a report of the presence of anguillula aceti, which were mistaken for strongyloides intestinalis in the urine of 2 patients. They stated that the anguillula aceti or vinegar eel resembles very closely, judging from descriptions and drawings, the A. stercoralis. The chief point of difference in the males of these 2 species is one of length, the A. aceti being slightly longer. The young forms differ in that the esophageal enlargement does not appear so early in the A. aceti. The females of the free form of A. stercoralis are less than half the length of the females of the A. aceti. They possess, however, the same esophageal enlargement. The females of the parasitic generation correspond in length with the A. aceti, but do not have the esophageal enlargement. The neamatode found in the urine resembles in every particular the A. aceti, and one seems justified in these 2 cases in saying that the worm present was the A. aceti or vinegar eel. [T. L. C.]

2.—R. I. Cole contributes an article on pneumococcus arthritis in which the clinical notes of 8 cases are given and discussed. He concludes that in pneumococcus arthritis in general there is a tendency to involvement of the larger joints, though the small joints may be involved. (2) A tendency to the involvement of more than one joint (13 out of 41 cases). (3) A tendency to involvement of joints already the seat of chronic affection. (4) the effusion is usually purulent, but may be serous. The mortality is high, 28 deaths, 13 recoveries. The clinical features of the condition and the prognosis depend more on the septicopyemia, of which it is usually but a manifestation, than on the joint lesion itself. (5) When recovery occurs, the course is usually a long, slow one and usually ankylosis of the joint results. (6) The local treatment should consist in free opening and drainage of the joint. The fact that in a few cases of mild infection of the smaller joints spontaneous recovery has occurred might justify one in adapting conservative methods in such cases. Considerable experimental work has been done on the artificial production of pneumococcus arthritis in animals. He quotes Cave's summary of this work. [T. L. C.]

3.—D. B. Kyle presents some **modifications of his original V-shaped operation for correction of the deflection of the nasal septum.** He advises the use of the V-shaped file-saw recently devised by Dr. George Feterolf. The instrument can be made at any angle desired so that a large or small piece of tissue may be removed. The operation is thus shortened very much. The advantage of the saw-cut in controlling the line of fracture when the bony septum is involved cannot be overestimated. [T. L. C.]

4.—J. J. Curry presents remarks on the **diagnosis and dissemination of the bacillus pestis and prophylaxis,** with report of a case. He discusses the 3 classes or types into which plague is usually divided: (1) **Pestis bubonica or bubonic plague,** (this is the most frequent type and occurs in from 65% to 90% of all cases studied). (2) **Pestis siderans** is so rapidly fatal that no enlargement of the glands is apparent. (3) **Pulmonic plague.** He also describes **"walking" plague or pestis minor,** which is a mild type and shows a very low mortality. The symptomatology, diagnosis and mode of dissemination are also considered. As to prophylaxis, **cleanliness, destruction of rats and mice and protection of food and drink** from possible contamination by ants, flies and other insects are most important measures. [T. L. C.]

5.—C. R. Upson presents a study of the **value of mensuration as an aid to the diagnosis of pulmonary tuberculosis.** He describes his mode of taking measurements which he follows as a routine practice and which he regards as of great value. He states that he has not infrequently found decided impairment of chest movement and consequently diminution of vital capacity and respiratory power in persons showing but few other signs of tuberculosis. A comparision of the chest movements of the 2 sides may furnish signs of considerable value in cases of suspected tuberculosis. [T. L. C.]

7.—C. A. Smith has studied the **District of Columbia cancer record for 20 years** and from his analysis concludes as follows: (1) On the basis of comparing cancer deaths with those of 30 years and over, no increase of the disease is found in the last decade over the proceding. (2) Classification of cases into accessible and inaccessible reveals practically no increase in the former, but entirely in the latter, probably the result of improved diagnosis and certification of deaths. (3) Aside from cases of the female generative organs, the sexes are equally liable to the disease. (4) The white and colored races are alike subject to cancer, the latter showing a greater increase in cases of the uterus and liver. (5) While cancer deaths during the last decade have increased over those of the previous decade by a larger percentage than those from any other disease, we are not justified in attributing this to an increase in the disease itself. [T. L. C.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

January 14, 1902. (Vol. 49. No. 2).

1. The Collection of the Cases of Tuberculosis upon Which Autopsies were Performed in the Pathological Institution of Geneva During 25 years, With a Special Consideration of Primary and Secondary Tuberculosis of the Intestines, and the Frequency of Amyloid Degeneration. F. W. ZAHN.
2. The Relation Between the Islands of Langerhans in the Pancreas and Diabetes Mellitus. M. SCHMIDT.
3. Pleural Adhesions and Related Conditions, With Reference to Diascopic Diagnosis. von CRIEGERN.
4. Soxhlet's Nutritive Sugar: A New Nutriment for Children. FRUCHT.
5. The Reciprocal Relations of the Physical and Psychological Disturbances in Hysteria. P. TESDORPF.
6. The Technique of Graphic Registration of the Pulse. A. JAQUET.
7. Behring's Latest Diphtheria Theory. F. SCHANZ.
8. A Case of Gangrene Following Scarlet Fever. R. SEUBERT.
9. Hemorrhagic Purpura in Pulmonary Tuberculosis. W. ROEMISCH.

1.—Zahn having been impressed by the decreasing frequency of **amyloid degeneration** at the autopsies performed in Geneva, undertook careful statistical studies of the post mortem records for 25 years. Altogether there were 6320 necropsies of which 32½% showed tuberculosis. The majority of these were cases of chronic tuberculosis without marked lesions. The condition was more common in men than in women. Zahn discusses the distribution of the lesions in different parts of the body, and calls attention to the frequency with which primary infections of the intestines occur. An interesting fact was that tuberculosis and carcinoma occurred simultaneously in 76 cases, that is, 3.7% of all cases of tuberculosis. Tuberculosis and sarcoma occurred simultaneously in 6 cases, that is, in 3% of all cases of tuberculosis. Amyloid degeneration was present in 105 cases. The majority of them showed tuberculosis, although 7 showed no tuberculosis at all. It appears, therefore, that amyloid degeneration is a comparatively rare lesion, although it is not definitely stated that it has become more rare than formerly. Zahn believes that in Geneva and its neighborhood the people are so well nourished that amyloid degeneration will not occur. [J. S.]

2.—Schmidt having tried various histological methods in order to discover something regarding the function of the islands of Langerhans, has undertaken a careful examination of them under pathological conditions and particularly in diabetes. In 23 cases of this disease, on mi-

croscopical investigation of the pancreas, he found the islands unchanged in 8 cases. In one case there was simple atrophy of the organ, such as not infrequently occurs in nondiabetic subjects. In other cases there were focal areas of inflammation, but in all these the changes were so slight that they certainly had no effect upon the functional activity of the glands. In no case was there diminution in the number of the islands, or their entire absence. In 3 cases he was able to determine the presence of chronic interstitial pancreatitis affecting particularly the islands of Langerhans, and causing their partial or complete transformation into fibrous connective tissue. However, a somewhat similar change has been observed in extreme cases of senile atrophy of the pancreas.

[J .S.]

3.—von Criegern discusses the technique of what he calls the diascopic examination of the chest, that is examination with the Röntgen ray with a fluorescent screen. In order to recognize shadows that may be produced by pleuritic adhesions it is desirable to have a screen with a narrow slit, so that the shadows of the organs above and below are excluded. These thickenings of the pleura are best recognized by the fact that the ribs passing over them have slightly sharper edges, and the outline of the lung is not quite so clear. Further, any alteration in the manifestation of functional activty of the thorax is of significance, and sometimes the hypertrophy of the muscle of the diaphragm can be detected and is also of significance for the diagnosis of these adhesions. Therefore, **diascopy** is a valuable aid to the ordinary methods of physical investigation. The symptoms of pleural adhesions are, according to von Criegern, not so insignificant as is generally supposed. The course is afebrile or slightly febrile; there are pains in the breast, moving from one side to the other, and often a painful cough, particularly if the patient inspires deeply. Usually the symptoms gradually disappear, but the diascopic changes are persistent. Of course, the method is more valuable in eliminating dry pleurisy in cases in which the symptoms might lead to its diagnosis. He mentions 2 or 3 interesting cases in which diascopy helped to establish a correct diagnosis. [J. S.]

4.—Frucht has used **Soxhlet's nutritive sugar**, a preparation of starch that has been chemically altered into maltose and dextrin in equal parts, to replace the hydrocarbons and carbohydrates ordinarily found in infants' foods. The children varied in age from 4 weeks to 4 months. In all the stools became normal, the weight increased, and the nutrition was greatly improved. The proportions were in one case—a child of 4 months—½ liter of milk, ½ liter of water, and 50 gm. of nutrient sugar. In a child of 6 weeks: 400 gm. of milk, 400 gm. of water, and 40 gm. of sugar. A child of 8 weeks: 250 gm. of milk, 500 gm. of water, 25 gm. of nutrient sugar, gradually increasing the proportion of milk. In a child of 32 weeks: 250 gm. of milk, 750 gm. of water, and 25 gm. of nutrient sugar, gradually increasing the milk. In a child of 4 weeks: 250 gm. of milk, 50 gm. of water, and 25 gm. of nutrient sugar. This is particularly valuable in home modified milks. [J. S.]

5.—The principle upon which Tesdorpf bases his article is that if in **hysteria** we have certain manifestations at the periphery as a result of disturbances of the cerebral cortex, then these manifestations occurring at the periphery may cause disturbances in the cortex similar to those that could have produced them in a diseased cortex. It appears that in this way it is possible to attain a more satisfactory explanation for some of the psychical manifestations of hysteria, particularly the perversity that patients not infrequently manifest. Moreover, the hysterical manifestations in an arm, that has recently been injured or been fatigued, can be explained upon this basis. The persistent action and reaction of the cortex upon the periphery, and the reverse, may be supposed to give rise at any time to the hysterical manifestations. The practical application to be drawn from these theories is that local treatment is often efficient in ameliorating hysterical manifestatons. [J. S.]

6.—Jaquet has introduced the following ingenious arrangement into the **mechanism of the sphygmograph.** As is well known, the lever consists essentially of 2 arms of unequal length bent at right angles, the apex being the fulcrum, and the power being applied to the shorter arm. The upper arm acts upon a long rod which is fixed at its upper end, and has a freely moving needle attached to its lower end, the power being so applied that the movements of the longer arm of the lever are greatly magnified. The chief defect is in the way the long arm acts upon the rod to which the needle is attached. Jaquet, in order to overcome this, arranges the lever as follows: The lever of the long arm to which the needle is attached is made in one solid piece in the form of an incomplete triangle. This is pivoted at the apex, and the power acts as before upon the short end of the lever which is sustained by a long spring attached to a fixed part of the apparatus. A spring is also introduced into the long arm of the lever. The mathematical relations of the parts are very carefully worked out. The value of this apparatus has been carefully estimated by Bätke. The greater part of the work was done upon the artificial pulse and the results differ somewhat from those obtained by the Dudgeon apparatus, but probably represent more closely the true character of the pulse. [J. S.]

7.—Schanz insists that he has shown conclusively that the pseudodiphtheria bacillus and the xerosus bacillus are identical, and that they resemble the diphtheria bacillus in all respects excepting in pathogenicity. This he does not believe is sufficient to render them distinct species. He hopes that, in the future, efforts will be made to distinguish these 2 micro-organisms by morphological characteristics. Schanz explains the nonpathogenicity of the xerosa bacillus in certain cases by supposing that many individuals contain in their blood antitoxin, even if they have never had diphtheria. This, of course, completely confirms the opinion of the identity of the 2 forms.

[J .S.]

8.—Seubert reports a case of **scarlet fever** occurring in a child of 7 that during convalescence developed **gangrene** of the left leg, preceded by sypmtoms of obstruction of the vein. The gangrene involved the vulva also. Amputation was necessary and the child made a complete recovery. Streptococci were found in the tissues. [J. S.]

9.—Römisch reports a case of tuberculosis of the lungs that devloped hemoptysis, and later a purpuric eruption over the forearms and hands. There were no purpuric spots upon the visible mucous membranes. A second attack of purpura involved the hips, thighs, shoulders and arms. The patient later improved. [J. S.]

REVUE DE MEDECINE.

(February 10, 1902. 21me. Année, No. 2.)

1. Method in the Clinic. R. LEPINE.
2. Potato Cure in Diabetes Mellitus and Diabetic Complications. A. MOSSE.
3. Pathogenic Unity of Dysentery. The Specificity of Its Germ. Serotherapeutic Indications. TH. MOREUL AND RIEUX.
4. Asymmetry of Facial Tic of Otic Origin in Nervous Pathology. M. LANNOIS and G. PAUTET.
5. Contribution to the Study of Pneumotyphoid. BUSQUET.
6. The Diseases Observed in the Doubtful Ward of the Children's Hospital of Paris, From March 1, to September 1, 1901. BACALOGLU.
7. Three Cases of Malarial Polyneuritis. C. MATHIS.

2.—Will be abstracted when finished.

3.—The bacillus which causes dysentery belongs to the group of colon bacilli and has been placed by Shiga be-

tween the bacillus coli communis and the bacillus typhosus. It has the following characters: It does not produce indol, it does not produce gas in glucose agar and it does not ferment milk. It is agglutinated by the serum from a dysenteric patient; but this serum will agglutinate neither the bacillus typhosus, nor the bacillus coli communis. It is to be found in the stools, in the intestinal mucous membrane and in the mesenteric lymph-nodes of a patient attacked by dysentery and by no other disease. Moreul and Rieux consider that the etiology of dysentery is established and that the dysentery of temperate climates, as well as tropical dysentery, endemic and epidemic dysentery, grave and benign, is due to a specific bacillus. In the first part of their paper, the authors report 6 cases of dysentery. In these 6 cases they have failed to find the ameba coli in the stools. In one case anguillula stercoralis was found in the stool. Numerous nonpathogenic micro-organisms were found in the feces from these patients, but the authors claim that these organisms are to be found in the benign cases only or better in cases of dysenteric diarrhea. The bacillus coli communis was associated with the bacillus of dysentery in 2 cases. The association of other pathogenic organisms with the bacillus of dysentery is rare, but the authors do not deny that this symbiosis may exist. If there is a symbiosis, the associated organisms are always present in smaller numbers than is the bacillus of dysentery, producing a mixed infection similar to the mixed infections seen in tuberculosis and in pneumonia. The authors then describe the cultural, morphological, and microchemical characteristics of the bacillus of dysentery. They have found that the serum of a receptive animal causes agglutination of the bacillus of dysentery. There is a tendency also for this serum to agglutinate the bacillus typhosus; but it is absolutely without action on the bacillus coli communis. Antityphoid serum and anticolibacillary serum have no action on the bacillus of dysentery. Furthermore, the serum of an immunized guinea-pig has, in time, immunizing properties and possesses an antitoxic action that is both preventive and curative. This serum has no action in relation to the toxins of the typhoid bacillus or of the bacillus coli communis. Senoble has shown that the bacillus of dysentery exists in water and one of the authors has found it in the cesspool into which a private water-closet emptied from a house in which there were 7 cases of benign dysentery. The authors succeeded in immunizing a horse with the bacillus of dysentery. The injections of the toxin produced local edema, tremors, sweating and anorexia. The serum from this animal was tested on July 9, it showed positive antitoxic properties of an immunizing and curative nature and it was in itself atoxic. It presented true bactericidal properties both *in vitro* and in *vivo*. In the latter instance it produced a momentary immunity and a leukocytic phagocytosis. The anti-infectious property was also plain in relation to the bacillus coli communis and the bacillus typhosus. On the other hand, the antidysenteric serum had no action upon the toxins of either of these organisms. The authors have not tested the serum on a human subject, but they believe that it is capable of therapeutic application in human medicine. They suggest that it may be advantageously administered by rectal injection into the colon. They believe that the serum coming in contact with the bacillus of dysentery in the diseased large intestine will exercise its bactericidal property to advantage. The large intestine should first be washed out with boiled water, then an injection of tincture of opium, 4 drops, and cocaine, 0.02 gm. (one-third grain) should be administered so that the bowel will be rendered anesthetic and will retain the serum when injected. The anti-infectious property of the serum may result in a stimulation of phagocytosis in the substance of the inflamed mucous membrane. [J. M. S.]

4.—Lannois and Pautet conclude that the frequence of facial paralysis, of simple paralysis and of spasms of otic origin detracts, in great part, from the value of unilateral disorders of facial contraction as a sign of degeneration or as a symptom of inequality of the cerebral hemispheres. In any case in which an examination is made of a patient who presents these troubles, the state of the ear should be noted. [J. M. S.]

5.—Busquet reports the case of a soldier who was admitted to hospital suffering from a frank pneumonia. The association of an eruption of rose spots caused a suspicion of enteric fever to be entertained; a suspicion which was confirmed by a positive serum-reaction. Bacteriological examination of the blood showed the presence of both pneumococci and the bacillus typhosus. He reports a second case in which the patient was suffering from typhoid fever. At the end of the first week symptoms of pneumonia at the left base were noted. The pneumonia cleared up in 5 days and the typhoid syndrome was the only apparent disease from which the patient was suffering; 8 days later, however, without apparent cause, a second attack of pneumonia developed. In this case the bacillus typhosus and the pneumococcus were isolated from the blood during the first attack of pneumonia and the bacillus typhosus only at the beginning of the second attack of pneumonia. In a third patient the symptoms of typhoid fever were clear and, on the fifth day, there was a marked attack of pneumonia involving the right base. The pneumonia disappeared after several days and the typhoid fever continued its course, proving fatal on the fifteenth day. During life both the pneumococcus and the bacillus typhosus were isolated from the blood. But after death only the bacillus typhosus was obtained on culture from the heart's blood, the liver and the spleen. In a series of 21 cases of typhoid fever Busquet has demonstrated the presence of the bacillus typhosus in the blood 21 times. The paper contains a description of the technique and the author believes that the bacillus is present in the circulating blood in all cases during the period of infection and during the height of the disease. The simultaneous presence of the bacillus of Eberth and of the pneumococcus in the blood of patients suffering from pneumotyphoid appears to indicate clearly that this affection is due to the association of these two pathogenic agents. In some cases pneumonia is the first disease developed and the typhoid infection is superadded; in other instances the reverse is true. [J. M. S.]

6.—Bacaloglu continues the description of cases treated in the doubtful ward of the Children's Hospital of Paris. He has found that antitoxin is efficacious in diphtheria, whether the organism obtained by bacteriological examination is of the long or of the short variety. He uses serum as soon as the clinical diagnosis is made and does not wait for a bacteriological report. Wherever the diphtheritic membrane is situated, the treatment includes [illegible] dioxide diluted with an equal quantity of water. He has never had a serious accident after the use of antitoxic serum, although several cases of scarlatiniform or urticarial [illegible] and 2 cases of arthralgia have been observed. In the treatment of tonsillar abscesses he never uses a knife; but gives as an emetic 20 to 60 gm. (5 to 15 drams)) syrup of [illegible] after which the abscess will open spontaneously. All cases have been perfectly cured without incision. In cases of aphthous angina he applies a solution of one gm. of [illegible] salicylic acid in 30 gm. each of [illegible] glycerine. This treatment usually results in speedy cure. In the treatment of whooping cough he uses a few drops of the following tincture in a little water as an antiseptic wash for the nose and mouth daily: Tincture of [illegible] root, tincture of drosera and tincture of belladonna, of each, 10 gm. [illegible] drams). Bromoform gives good results but it is necessary to watch it with care. He uses the following formula: Bromoform, 1.50 gm. (22 grains); 70% alcohol, 30 gm. (1 oz. ounce); simple syrup, 100 gm. (3 ounces). He gives from 1 to 3 teaspoonfuls of this mixture daily, according to the age of the child. [J. M. S.]

7.- Out of 40 cases of neuritis of malarial origin some found in the literature and some personal observations,

Mathis has found 24 in which the ulnar nerve was more or less affected. He reports the case of a soldier, aged 25 years, who had several attacks of malarial fever during his service in Madagascar, one of which was pernicious. During his return voyage to France he had an attack of bilious hemoglobinuric fever. He presented a marked atrophy and a distinct paralysis of the muscles of the hand supplied by the ulnar nerve and a slight atrophy and paralysis of the muscles of the fore-arm, supplied by the same nerve. There was some paresis of the muscles of the hand and of the forearm supplied by the median nerve. There were also sensory disorders in the area of cutaneous distribution of the ulnar nerve. He reports the case of a convict who had several attacks of malaria in French Guiana. He suffered from peripheral polyneuritis with involvement of the ulnar nerve. He reports the case of a soldier, aged 24 years, who had attacks of malaria in Cochin China, and in Crete. The patient suffered from a neuritis of the circumflex, the musculocutaneous nerves. Mathis believes that these were cases of malarial polyneuritis. [J. M. S.]

JOURNAL OF NERVOUS AND MENTAL DISEASES...

February, 1902. (Vol XXIX.)

1. A Case of Myasthenia Gravis. EDWIN A. DOWN.
2. Report of a Case of Exceedingly Rapid and Very Slow Respiration, with Pauses in Respiration Varying from Twenty Seconds to Two Minutes in Duration, in a Patient Suffering from Tuberculous Meningitis, Syphilitic Peri-arteritis of the Pons and Medulla and from Hysteria. D. J. T. ESKRIDGE.

1.—Edwin A. Down reports a case of **myasthenia gravis**, the seventh supposed to be reported in America, and gives two theories regarding the pathology of the disease: (1) That the muscles having a bulbar innervation are the ones the functions of which are the most disturbed; (2) that the cortical centers are responsible in a greater degree. The *diagnosis* depends upon two factors, viz.: the rapid exhaustion of the voluntary muscles on exertion and the myasthenic reaction. The *prognosis* is unfavorable in most cases, and almost invariably so in cases in which the respiratory muscles are involved. Two years is the average duration in those cases proving fatal. The *treatment* is very satisfactory. In addition to that of restoring impaired function and cell-nutrition in a routine fashion, animal extracts have been employed, but with little success. [T. M. T.]

2.—J. T. Eskridge concludes his article with the following statements: (1) That when we find a case of hysteria, we perceive the veil that obscures or the cloak that hides the symptoms of organic disease or gravely disordered functions, of some important organ; (2) that respiration, which is more rapid while the patient is asleep, is strong, if not positive, evidence of organic disease of the brain in the region of the respiratory centers. [T. M. T.]

Pylorectomy for Gastric Cancer.—Professor Folet, of Lille, recently presented a case of cancer of the stomach in a man, in perfect health 18 months after pylorectomy. (*Bulletin Médical*, January 18, 1902.) A man of 43, with symptoms of cancer of the pylorus, entered the hospital June 16, 1900, and was operated upon June 20, the entire carcinomatous pylorus being removed. On examination, this was found to be true cylindrical epithelioma. During the first 5 months after operation he gained 58 pounds. Folet believes that exploratory laparotomy is always indicated in these cases, and when annular cancer of the pylorus exists, pylorectomy is to be performed, not gastro-enterostomy. [M. O.]

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Section on Orthopedic Surgery.

Meeting held April 18, Dr. G. R. Elliott, in the chair.

Dr. J. H. Waterman presented a child with **congenital elevation of the left scapula.** The X-rays revealed the elevation and a bony plate running from the spine of the scapula to the seventh cervical or first dorsal vertebra. Dr. H. A. Wilson, of Philadelphia, has reported 2 cases treated by operation. In standing, the elevation of the shoulder was marked and the head was slightly inclined to the left side. Dr. R. A. Hibbs advised operation in the case presented, by dividing the bony attachment.

Dr. Royal Whitman presented 10 cases illustrating the **treatment of congenital dislocation of the hip,** demonstrating the curability of the affection. There had not been a relapse. With one exception the patients had been operated upon by the bloodless method of Lorenz, slightly modified in certain instances. At present it was impossible to say which limb had been treated. In one case, on removal of the spica bandage, a limp had persisted for many months, accompanied by slight outward rotation of the foot. If the limb were rotated slightly inward, the X-ray picture showed an apparently normal joint. The persistence of the limp was due apparently to laxity of the capsule and to slight anterior twist of the upper extremity of the femur. To his surprise the child had steadily improved and at present, more than a year and a half after the discontinuance of treatment, there is practically no trace of disability. In another case of bilateral displacement, after a lapse of nearly 2½ years, there was no shortening and but a slight limp. The head of the bone was apparently secure in a position anterior and external to the normal. This result was far better than after ordinary transposition. The patient in whom arthrotomy was performed was not only of interest as showing the perfection of the cure obtained by this method, but also in that he is one of 3 children of one mother, each having congenital dislocation of the left hip. The eldest child, now about 18 years of age, was untreated and presents a shortening of the limb of 3 inches. The second child, after 3 unsuccessful attempts by the bloodless method, was operated upon by the Hoffa-Lorenz method, with excavation of the acetabulum, at the age of 5 years. The final result was very satisfactory. Dr. R. H. Sayre considered that the result of the cases presented a great advance in the treatment of congenital dislocation. Dr. G. R. Elliott noted that the patients were under 4 years of age at the time of operation. A very large percentage could be cured at that age. The Lorenz method certainly did no harm, and was warranted in older cases before operation. Dr. Whitman stated that in bilateral displacement both hips were treated at one sitting. He had modified the Lorenz method in that he usually extended the plaster bandage below the knee, the leg being flexed upon the thigh at a right angle, with the object of fixing the part more securely. At the end of 2 months the leg portion of the bandage was removed. In certain instances the femur was rotated slightly inward, in order to fix the head of the bone directly beneath, or slightly internal to, the femoral artery. Dr. Whitman also presented a boy, about 7½ years old, illustrating the cure of **coxa vara** by cuneiform osteotomy at the base of the trochanter. The patient had limped ever since he began to walk. Although operation was performed but 5 months ago, functional cure was perfect.

Dr. Elliott presented a boy of 12, who, 3 years ago, began to have swelling of the joints of the fingers and wrist. The right wrist, the distal joints of the fingers of both hands and the distal joints of the first and second toes were involved. The liver and spleen were enlarged and there was slight enlargement of the lymphatic glands. The mother stated that she had given him whiskey daily for about 1½ years. **Alcoholic arthritis** was Dr. Elliott's diagnosis. Under proper nourishment with little general medication the symptoms had nearly all disappeared. Heberden nodes still persisted, something very rare in children.

Dr. Hibbs presented a boy of 11, first seen 18 months

ago with **deformity of the right tibia** following a severe fall. The deformity was corrected by osteotomy. He suspected that the lower epiphysis of the tibia had been injured and this was corroborated by recurrence of the deformity after operation. Dr. Whitman said that a member of the American Orthopedic Association suffered from a disability similar to the case reported, that his fibula was 2 inches longer than the tibia, yet the disability and deformity were so slight that he had advised against operation. Dr. Sayre thought destroying the epiphysis of the fibula as suggested by Dr. Hibbs would not result in as useful an extremity as by leaving the limb untreated. He suggested slitting the tibia lengthwise, sliding the pieces past each other and so lengthening the tibia sufficiently to bring the articular surfaces parallel with the ground. Dr. Hibbs also presented a child of 3, who had been operated upon for **osteomyelitis of the lower end of the right femur.** This was followed by complete paralysis of the quadriceps extensor. This paralysis persisted with no response to either electrical current. As no other muscle was affected, it was believed to be due to division of the tendon or muscle with failure to unite.

Dr. Elliott presented a specimen of a **fractured vertebral column** removed from a man of 29, first seen in 1897. The patient attempted to hold a quarter of beef, which had slipped from its pin, and immediately felt a severe pain in his back. During one year gradually increasing motor and sensory paralysis of both lower extremities occurred and marked kyphosis at the tenth dorsal vertebra developed. He was operated upon by Dr. Gerster at Mount Sinai Hospital and a fracture was found with bony fragments pressing upon the cord. The patient finally died and the cord was found completely severed. The reflexes were lost. Dr. W. M. Leszynsky thought that it was hardly probable that anyone would have made a diagnosis of fracture. He thought there was a slight injury to the cord and dura which set up a myelitis secondarily, becoming finally complete with ultimate destruction of the cord. It was well established now that complete division of the cord produced loss of all reflexes below the site of section. He cited a case of his own, of a patient who had fallen from a height of 20 feet, fracturing the tenth, eleventh and twelfth dorsal vertebræ with immediate paralysis and complete loss of reflex action, sensory and motor power.

Dr. A. B. Judson reported a case of **varus** of the left foot in a boy of 5. Leverage by braces cured the varus but could not remove the paralysis. The riser was omitted from the inner side, where it had given leverage against the varus and the upright was made of one piece with the tread which was shaped to the instep and could readily be bent down or up as the boy required more or less "toe" in walking. With this brace he walked without a trace of lameness. Deformity had been prevented and fibers developed, which, without early locomotor activity, would have disappeared. Dr. C. H. Jaeger presented a specially made gouge, devised by a French surgeon, for scooping out the acetabulum in operating upon congenital dislocation of the hip.

TWENTIETH GERMAN CONGRESS ON INTERNAL MEDICINE.

Wiesbaden, April 15-18, 1902.

(Continued from page 973.)

Mayer, Carlsbad, read a paper upon the **reaction of the 3 stereo-isomeric mannoses** in the bodies of animals, reporting his experiments with carbohydrates. Of especial interest is his study upon the influence of configuration in hexoses. The different isomeric forms of the mannoses react differently in the body. Part of them become glucose, while all 3 form glycogen. He shows that sugar is able to change from one form to another in the body, being excreted as levulose or becoming milk sugar in the mammary glands. Rosenfeld, Breslau, stated that the destruction of one sugar probably exerts some influence upon the destruction of the others. Clemm, Darmstadt, spoke of the **significance of the different sugars** in the healthy or diseased individual. He has already shown that the saliva, after 3 days' excretion, instead of forming maltose, gives detrose as its final product. Bacteria may cause the formation of galactose instead of glucose, the aldehyde of dulcite instead of that of glucite. With the increased glandular activity of the initial stages of tuberculosis, sugar is found which limits the flow of the gastric juice and contains acid, levulose only appearing in patients far advanced in the disease. With achylia gastrica, on account of the prolonged effect of the salivary ptyalin, sugar containing double molecules is converted into a sugar containing but single molecules.

Blum, Frankfort, spoke upon **suprarenal diabetes.** The supararenal capsules contain a substance which, when it reaches the circulation, even in very small doses, causes glycosuria. Suprarenin and adrenalin also possess this quality, as is shown by experiments. He believes that the liver is somewhat affected by this. It is quite probable that, in some kind of human diabetes, the suprarenal capsule must be considered etiologically, especially in the so-called bronzed diabetes. Bial, Kissingen, spoke upon the **excretion** of glycuronic acid, which has so far only been found in the urine and the blood. He found it in feces, using the Huber isolation method. Mayer, Carlsbad, noted an increase in glycuronic acid in cases which he has already reported. Vogt, Strassburg, read a paper on phloridzin diabetes and alimentary glycosuria, reporting his experiments upon animals. Lennhoff, Berlin, discussed traumatic nephroptosis, injury to the kidney very often resulting in nephroptosis. He reported 6 almost similar cases, following overexertion.

Acute Uremia with Meningeal Hemorrhage.—In a recent lecture Chauffard presented a case of acute uremia in a man of 40, a painter who had had 4 attacks of lead colic, now pale, restless, with vague pains which he could not localize. He answered only in monosyllables. For 2 years he had had albuminuria. He also was addicted to an excess of alcohol. He had recently fallen upon his head, soon after which accident cerebral symptoms had first appeared. He had a general convulsion, which recurred twice. Three hundred grams of cerebrospinal fluid were removed by lumbar puncture, yet he died in coma in 2 days. The kidneys showed marked sclerosis, and, on opening the cranium, a large meningeal hemorrhage was found, subarachnoidal in position. This, the probable cause of death, was the result of the convulsions. His perspiration was found to contain a large amount of urea. Thus Chauffard diagnosed this case to be acute uremia resulting from long-standing saturnine nephritis, causing meningeal hemorrhage. This case showed how atypical acute uremia frequently is. (*La Bulletin Medical*, March 1, 1902.) [M. O.]

Chronic Lead-Poisoning in Electricians.—At a recent clinic Professor Debove said that while lead-poisoning was formerly common among painters, they take precautions now. Nowadays workmen in the factories where electric batteries are made furnish the majority of the cases of saturnism. Symptoms of poisoning appear in days, weeks or a few months only, and are severe. For lead plates are used, and after making holes in them, these are filled with lead oxide, and the plates ar dipped into sulphuric acid. As the lead oxide is used dry, there is much dust, which is inhaled. Debove believes that laws should be passed to make the owners of factories safeguard their workmen. (*Medecine Moderne*, January 15, 1902.) [M. O.]

Special Article.

THE IMMIGRATION OF THE DEFECTIVE CLASSES.

The tide of immigration to the United States has reached an unprecedented height during the past winter and spring. There are two causes assigned for this—the industrial depression in Europe and the prosperity in this country. For the first four months of the current year the number of immigrants who arrived at New York was about 179,000. This is an enormous influx of population. According to the *Literary Digest*, the figures for these four months exceeded those of any previous year for the same period. The *Chicago Tribune*, commenting on these figures, says that a large proportion of the new comers are from Southern Italy and Eastern Europe. The percentage of illiteracy is high. So is that of unskilled labor. The New York *Journal of Commerce* analyses the figures and finds that this horde of immigrants is mostly destined, not for the agricultural, but for the industrial States. The two great States of New York and Pennsylvania receive far more than their share.

From the medical and sociological standpoint it is necessary to be alert to the significance of this immigration. In the first place, however, a narrow-minded view should be avoided. The fact must be recognized, both by physicians and sanitarians, that the immigration of cheap, unskilled labor has been of immense advantage to this country. During the past quarter of a century especially these people have contributed vastly to the wealth of the United States. In public works, on the railroads, in the mines and to some extent in the fields, the cheap European laborer has been much in evidence—especially the laborer from Italy and Eastern Europe. We cannot expect to have the advantages of this labor without having also some of its disadvantages—and among these disadvantages is the immigration of a large admixture of the defective classes.

Dr. H. E. Allison, in the *American Journal of Insanity*, has some very pertinent comments on this subject. He calls attention to the bill, now before the Unites States Senate, providing for an immigrant fund to be collected by a tax on the transportation companies for every alien passenger. All idiots, insane persons and paupers, persons liable to become a public charge and those afflicted with loathsome or dangerous contagious diseases are excluded. The interpretation of the law is left to a board of special inquiry, whose decision, based upon a certificate of a medical officer of the United States Public Health and Marine-Hospital Service, shall be final. The bill excludes criminals and prostitutes. It also proscribes anarchists, or persons advocating the overthrow of all forms of government and the assassination of public officials. Secretary of State Hay, in his memorial address on President McKinley, said, "Our minds cannot discern the origin or conceive the extent of wickedness so perverse and so cruel; but this does not exempt us from the duty to control and to counteract it." Legislation against anarchists is already under way, not only in Congress, but also in some of the State Legislatures. These villains are to be excluded or deported. One bill provides for the appointment of agents to go abroad and inquire into the antecedents of these persons. Such inquiries would probably reveal the fact that some anarchists are veritable lunatics. The same intense egotism is developed in them as in paranoiacs. All such immigrants may be returned to the country of their nativity.

An important feature of the bill is the extension of the term of probation to five years. Aliens who during this term are found to have landed in violation of the law or to have become public charges may be returned to their own country. The bill provides for the inspection of all immigrants by medical officers of the Public Health and Marine-Hospital Service. The Commissioner-General of Immigration may from time to time secure information as to the aliens who are committed to penal and charitable institutions, and shall inform the officers of such institutions of the law providing for the deportation of such aliens.

Such are some of the provisions contemplated for preventing the immigration of the defective classes. The subject is full of difficulties, but from the medical standpoint the necessity is clear for this country to protect itself. Our policy has always been to keep an open door for all European immigrants, but we should except, as far as possible, the defective classes. We must reflect, however, that there are certain claims of humanity. Family ties should not be ruthlessly broken. The aged and infirm cannot always be left behind by the immigrants. But the vicious, the criminal and the insane should be inexorably kept out.

Two Epidemics of Dysentery in the Camp of Chalons, France.—In the *Archives de Medecine et de Pharmacie Militaires* for January, 1902, Comte reports the epidemics of dysentery in the camp at Chalons in 1899 and 1900. Forty cases occurred in 1899, some imported, and all benign. In 1900 over 576 cases occurred, with 19 deaths. After describing the epidemics fully, he concludes that dysentery germs from a former epidemic return to life with the hot weather; that other cases follow by direct contagion; that dust and insects spread the germs; that the period of incubation is about one week; that in these epidemics the water played no part; that most cases occurred among the artillery, which was quartered in tents; that the enteritis which occurred in the children was due to the same germs; and that, finally, the colon bacillus seemed to have been the cause of the epidemic. [M. O.]

Traumatic Hematoma of the Dura Mater.—Professor Raymond recently demonstrated a case of traumatic hematoma of the dura mater in a man of 38. (*Medecine Moderne*, January 22, 1902.) After a fall of 6 feet, upon his head, he was unconscious for 12 hours. After a rest of 5 days, comatose, he developed delirium. He grew pale and did not improve. Slight contractures were noted in the legs and neck. In the middle of the parietal region was a very tender point, and Kernig's sign was positive. On account of the slow onset of symptoms, the diagnosis of traumatic hematoma of the cerebral meninges was made, and he was trephined through the tender spot. On incising the dura a glass and a half of blood was evacuated. The patient recovered rapidly. His slow pulse was one important sign of cerebral hematoma. [M. O.]

Original Articles.

THE PROPOSED NATIONAL EXAMINING BOARD. A SECOND PAPER.

By WILLIAM L. RODMAN, M. D.,

Professor of Surgery and Clinical Surgery in the Medico-Chirurgical College of Philadelphia, and Professor of Surgery and Clinical Surgery in the Women's Medical College of Pennsylvania.

There being a little misconception as to the exact purpose of a Voluntary National Board of Examiners, which I advocated at the April meeting of the Committee on National Legislation representing the American Medical Association, in the City of Washington, I will explain the plan more fully.

Some have thought that such a board could only benefit recent graduates, and that it fails to give relief to practitioners. Good as it is for the recent graduates, it is much better, and was really more intended to aid and benefit practitioners, who from ill health, on account of consultation practice, professional calls, or any cause whatsoever, may wish a license in another state. My own experience, upon removal to Pennsylvania, has caused me to work at the problem of reciprocity for the past three years, and I have constantly agitated the subject as a member of the Committee on National Legislation. The President and other members of the Pennsylvania State Board were anxious to exempt me from examination and tender a complimentary license, but, after consultation, found such a course impracticable. The law is mandatory and not at all elastic. All candidates for license must submit to an examination in certain branches, and *each branch is specifically named*. Although I had limited my work to general surgery for years before moving to Philadelphia, and intended doing so in this city, I was examined in obstetries, hygiene, physiology, chemistry; in fact all the branches, just as a neophyte. While the Board was compelled to insist that I comply with the forms of law, they were most courteous and kind to me, doing all in their power, and I would not have any one think me antagonistic to State Boards. On the contrary, it is my belief that they have done more than all other influences combined to elevate and make possible the present high standard of medical education. I feel, and have said on many former occasions, that every teacher in this country does better work now than he did before there were State Boards to examine the candidates whose diplomas he signed. Recognizing the good work done by State Boards, and believing them to be capable of doing even better work in the future, I would like to see a member of this Voluntary National Board a representative of the National Confederation of State Medical Examining and Licensing Boards. A National Board, such as I advocate, could have discretionary power, giving a practitioner a practical and largely clinical examination. In case one is recognized as a specialist, and has limited his practice to such specialty for years, and means to do so in the future, I cannot see any good reason for exacting of him an examination in general medicine and surgery.

The plan for a National Board was fully discussed, unanimously endorsed, and recommended to the House of Delegates at the Saratoga meeting by the Committee on National Legislation and the representatives of the various states meeting with it.

The plan is as follows: the Board is to consist of 7 members; namely, the Surgeons-General of the Army, Navy and Marine-Hospital Service and four equally representative civil practitioners: two to be elected by the House of Delegates of the American Medical Association; one by the American Congress of Physicians and Surgeons and one by the National Confederation of State Medical Examining and Licensing Boards. In my first communication I said that a seventh *might* be added; I now say *should*, because I am convinced that it will strengthen the National Board to have one of its members a representative of the Confederation of State Boards. The National and State Boards would thus walk hand in hand, and the representative of the former board could report annually at the meeting of the State Boards the character of work that was being done by the central body. Confidence would necessarily follow, and such a board would at once have the support of the profession, as it would be comprised of able men absolutely above suspicion.

The time of meeting should be from June the first to July the first, so as to accommodate the greatest number of graduates of all schools. The examination should be both theoretical and practical. Applicants should be taken into the wards of hospitals and be given opportunities to make diagnoses, examine urine, sputum and blood, as well as to outline courses of treatment. The examination should be so comprehensive as to be at least equal, if not superior, to that required by any state.

A different time and place might, if thought best, be decided upon for the examination of practitioners. Certainly abundant clinical material and cadavers would be needed, and the Board would go where it could be best accommodated, and also be accessible to the greatest number of applicants. These examinations should be almost entirely practical and clinical; supplemented, if need be, by operative work upon the cadaver. It is both unnecessary and unfair to examine men of experience and merit upon such branches as chemistry, physiology, histology, etc. Such a Board could have discretionary power and give the kind of examination necessary to ascertain if the applicant is competent to practise general medicine and surgery, or even a specialty, if one is *recognized* as a specialist. Is it fair to expect an ophthalmologist to submit to an examination in obstetrics? Yet, under the state laws, no exception can be made in his favor. Many state laws, the majority perhaps, recognize the right of one board to accept the license of another whose standard in every way equals its own. Herein is the trouble; the standards of fifty states and territories vary so widely—no two of them being alike—that a state with a high standard finds it safer to recognize *no* other state, for by this course embarrassments are avoided. All can, however, agree to recognize a central National Board, just as all now recognize the commissions of medical officers of the Army, Navy and Marine-Hospital Service. Therefore, it points out a path to reciprocity that all may follow, and is the only attainable method, based as it is upon equity. As it is now, reciprocity can only be based

upon geographical, political and financial considerations. Intellectual qualifications alone should govern.

The board should meet, as a rule, in Washington, provided its hospital facilities are both adequate and available. It is desirable, however, to vary the place of meeting from time to time so as to make the Board truly a national one in fact as well as in name, thereby subserving the interests of the greatest number of applicants. There is no doubt that the medical schools and hospitals in any of our large cities would furnish quarters and facilities for conducting the examinations with the least possible friction. I have been surprised that one gentleman took exception to my plan, because he thought that all examinations were to be held in Washington. The headquarters of the board should certainly be at the National Capital, as at least three of the numbers will reside there, and a fourth—constituting a majority—should be selected within a reasonable distance of Washington, so that, if necessary, he could at once join his colleagues for consultation. If the Bureau of Health is established by this Congress, which seems reasonably certain, I have it from an authoritative source that quarters and every facility for conducting the examination etc., would be furnished the Board.

The fee should be twenty-five dollars for the first year, the same to be reduced when the number of applicants justifies it, which I take it would be the second or third year. I should like to see it not more than ten dollars. The expenses of the Board have to be met, and some fee will be necessary.

The inducement to recent graduates to take such an examination would be to obtain a diploma which should be recognized by all states and territories, so that its possessor could be allowed, like the constitution, to follow the flag, and practise medicine and surgery anywhere within our domains. There would be other inducements; there are many positions within the gift of the Federal government, such as contract surgeons in the Army, Navy and Marine-Hospital Service, physicians to Indian agencies, and members of pension boards of examiners in all parts of the country requiring the services of more than average men. Any one holding the diploma or certificate of such a National Board would at once have the advantage over any one less fortunate. In truth, in nearly all such cases a further examination could, with perfect justice to the government, be waived. So manifest are its advantages that each year there would undoubtedly be a larger number of applicants, and in time sub-boards would be necessary to accommodate the number applying; each to meet in some large city with abundant hospital facilities and accessible to many applicants. Perhaps it would be better to have more frequent sittings of *one board* rather than several sub-boards. Experience will determine.

A voluntary board is better for the profession than a compulsory one, even were the latter possible, which under our form of government is not the case, —for its standard can reasonably be made higher and its certificate be a diploma "cum laude." Letters read at the conference, before referred to, from prominent senators and representatives convinced all who were present of the impossibility of a compulsory National Board. I had been so convinced before, as I had written to and talked the matter over with several of my friends in both the House and Senate. Should the fees be insufficient to secure and retain the services of the best men, the American Medical Association, the Congress of Physicians and Surgeons, and the National Confederation of Examiners should add a sufficient honorarium to their appointees. The representatives of the Army, Navy, and Marine-Hospital Service would be stopped from accepting compensation, but, of course, their expenses would be paid.

All practitioners wishing to change their location or to receive license to practise in other states would prefer appearing before the Voluntary National Board, and nearly all would make it convenient to do so. Of recent graduates there would be an increasing number applying from year to year, as it would soon become apparent to them that their best interests were subserved by doing so.

I have little doubt, however, that the fees would be sufficient to pay expenses even the *first year*. If the examination should be held in Washington, it would be very accessible to all Eastern schools, representing, we will say, a thousand graduates. There will be more, as Philadelphia alone has each year about 400. The Eastern schools are of such standard that they would encourage their graduates to go before the Voluntary National Board, and it would be safe to count upon ten per cent. (100) of the graduates of Washington, Baltimore, Philadelphia, New York, Richmond and Charlottesville, (University of Va.) and other cities adjacent to the Capital doing so. $2500 should thus be assured; the expenses would be nominal and all over and above expenses would be divided between the four examiners. This ten per cent. could be probably doubled by the Board meeting in Washington one week, and then spending a week in each of the large cities adjacent to it: viz., Baltimore, Philadelphia and New York. The medical schools in these cities would willingly furnish quarters and facilities for conducting the examinations, and the hospitals would furnish all necessary clinical advantages.

An objection which might and will be raised, is that the Surgeons-General of the Army, Navy and Marine-Hospital Service cannot leave Washington, and perhaps would not be able to discharge the duties even when the sittings of the board were at the Capital. General Wyman and Admiral Rixey are very much in sympathy with the plan; will serve if they can; and, if not, detail the best man in their respective services. General Sternberg I knew, retires June the eighth, before the Association meets. I was assured by those in authority in his office, however, that there was no doubt that his successor, whoever he may be, would do everything in his power to co-operate with the other Surgeons-General and the profession in so important a matter It is a great thing to have the moral support of our three representative medical services in any medical matter.

This plan has been unanimously endorsed by the delegates from the several states meeting with the Committee on National Legislation, and will be recommended to the House of Delegates at the coming meeting of the American Medical Association.

It is hoped that it will be carefully considered and either it or a better plan at once inaugurated; as something should be done to encourage both a reasonable reciprocity for practitioners, and a higher and a better medical education for those entering the profession, and to give in return something in the way of privileges and professional standing to those possessing it.

OPERATIONS UPON THE "GREEN GROIN."*

By JOSEPH PRICE, M. D.
of Philadelphia.

Appendicitis is a name clearly understood nowadays by both the laity and the profession. Fortunately all the ancient names have about vanished, and there is little discussion now as to the nature of the disease and its true pathology. Even the older practitioners accept the present pathology and agree largely with the modern methods of treatment. The persistent administration of calomel and rochelle salts with starvation and hot or cold applications is a method of treatment largely used, but, unfortunately, too great confidence is put in the same, so that by favoring delay it is still responsible for a few deaths.

In the class of cases I intend to discuss under the title of "*green groin*," *gangrenous appendix* would be a better name than appendicitis. Even though prompt surgical interference has been sought and an early operation resorted to, we find the appendix gangrenous and sloughing with one or more perforations and free leakage, a large section of the right groin full of lemon-colored or septic fluids, a puddle of filth underneath the cecum and ileum, the omentum fixed with a cluster of bowel adhesions beneath, varying in extent from six to many inches, occasionally the pelvic basin full of filth, or a "derby hat" abdomen with the entire peritoneal cavity charged with bowel contents, lymph and other inflammatory products. If the clinician would only see these operations and smell these cases more often, he would realize the very great importance of the earliest possible interference and be impressed with the absolute hopelessness of delay and therapeutics. The telephone to-day, by lessening that delay, saves many lives.

The general practitioner, with few exceptions, I am glad to say, cares nothing about a consultation. The diagnosis is easily made, and he is quite familiar with the early symptoms. A few years ago the teachers were counseling him always to associate a surgeon with himself early in the disease, that the two might study the case together.

This often resulted in fatal delay. Now the good literature on the subject, good papers and good discussions have done much to educate the active practitioner. If we can only impress the absolute worthlessness of anything but surgical interference upon the two chairs of medicine and surgery, and hammer out of them the confidence they have in remedies, the mortality will be reduced to nothing, and it *should be nothing*. For more than a quarter of a century we have labored to educate the profession up to the importance of primary surgical interference as soon as the diagnosis is made, so that it will realize that there is only one treatment, but this education must begin in the schools and with the professors, and not be postponed for later acquisition in the hospital. The surgeons who have had the most practical experience in appendicitis now admit that "each new case has some new lesson in the living pathology of the disease." One is soon impressed by this fact if he receives his early lessons at the operating table, and the fact that the professors do not yet emphasize these truths simply shows that they are attempting to teach others before they have obtained that practical and practical knowledge which should be indispensable in their vocation. It is a reproach to us all, but it is true, that a good number of these present teachers should be taught or should have a practical apprenticeship themselves, though none of them have yet made this admission. They place their reliance on book-learning and will sit down with six books open before them to compile a seventh, rather than go to the operating table, there to get the object lesson that would be of some real advantage to themselves and to the world at large. Just note how much value is placed upon laboratory work and post mortem knowledge acquired in our early education, but just as important is the ante mortem pathology to be learned at the operating table. Many of the professors are influenced by the statistics of Nothnagel. It is very unfortunate that they were ever published. They have never influenced any one with precise surgical knowledge of the natural history and pathology of appendicitis, and surely they are worthless if they do not appeal to the very men who ought to know, and do know the most about the subject under discussion.

The fact that we can save in good numbers even the neglected and greatly complicated cases, when the appendix is wholly gangrenous and the groin green, and when the infection is just at its height and the conditions look hopeless before, during and after operation, simply demonstrates how easy it would be to save them all before such unfavorable complications occur. These good results are possible, because at present in the desperate class of cases referred to, the operations are twice more complete and thorough in surgical detail, toilet and drainage than they were a few years ago or early in the history of the subject. Most surgeons excuse a death in the so-called fulminating cases, but the early symptoms in such cases are sufficiently prominent to give warning, and so to demand the prompt surgical interference that should be given to all cases, and, if this is given, many will recover; so they should not be classed as hopeless by any one.

The diagnosis of appendicitis is usually easy, the prominent symptoms are so few and so marked that there is no excuse for forgetting them or overlooking them, as long as a clinician possesses his faculties. Some differentiation is required in women and in young girls about the period of menstrual accession. The menstrual pain and discomfort is

*Read at the Meeting of the Philadelphia County Medical Society, April 23, 1902.

commonly pelvic, bilateral and paroxysmal, while the localized pain and tenderness and the unilateral fixed muscle are absent, but in appendicitis there is the unilateral pain and tenderness high up, and the fixed muscle with rigidity on the right side. In the childbearing woman these same symptoms are present and a pelvic examination will dismiss suppurating appendages, an inflamed or suppurating dermoid and extra-uterine pregnancy with its natural history. In some cases, however, diagnosis is difficult. Some time ago I warned the profession several times that some of the cases they were treating as typhoid were in reality cases of appendicitis. At the time some good operators ridiculed this idea, that appendicitis ever simulated typhoid, but now they admit that in some cases they are most difficult to distinguish.

Some years ago, while caring for a young woman, from whom I had removed a large cyst, her mother told me that she was nursing a son at home ill with typhoid, and asked me why he had so much pain and distress in his right groin. I remarked that probably he was suffering from appendicitis and not typhoid. She was greatly offended that I should off-hand and at long range make such a diagnosis when her son was in the care of two prominent physicians, the consultant a professor at one of our medical schools. Her son's convalescence was prolonged and never complete, until some eight months later I cleaned out his right groin, removed the appendix and a large quantity of filth, broke down the "walled off," freed all adhesions, repaired bowel lesions, made a toilet and drained. He recovered nicely in spite of his chronic sepsis. I could easily cite a number of cases of the same nature. I have now in bed a fine young man recovering with an open groin. Three days ago I viewed and permitted spectators to view extensive green surfaces in his groin. The appendix itself was dark green, contained three fecal concretions with constrictures between them, and was ruptured at these points. It was curled upon itself, the tip lying in front of the base and being completely enveloped by the omentum. The omentum itself was thick and infiltrated and firmly adherent to the appendix, for which it seemed to form a little nest, showing positive evidence of a previous attack. The cecum, too, showed a green patch near the base of the appendix, and above this coils of small intestine adherent to one another and covered with lymph, forming the walls of an abscess cavity which was full of pus and in the midst of which the little assassin held sway. After emptying the cavity of pus and washing it out with a pitcher full of water, I removed the appendix and the infected piece of omentum. The cavity looked clean, and I remarked to the doctors present that, if I had stopped there, they would all be satisfied and think that I had done a complete operation. I did not stop there, however, but ran my fingers down over the iliopectineal line, and there was a second gush of pus, showing a second abscess cavity which would have been overlooked entirely by the incomplete procedures so commonly practised. The remaining bowel adhesions were then completely broken up, the small intestines were lifted from the abdominal cavity and thoroughly washed, the lymph being scrubbed off with gauze, and the abdominal cavity itself was flushed, thoroughly flushed, as was also the pelvis, with sterile water. The pelvis and abscess cavity were drained by carefully placed gauze wicks. The result of this complete procedure was that, whereas just before the operation the patient was vomiting at frequent intervals and had a pulse of 120 and a temperature of 102°, after the operation he vomited but twice, and the next morning his pulse was 80 and temperature normal. Since then he has not had a bad symptom, he passes flatus freely, his bowels have moved and he is well on the road to recovery. Now remember, eight months ago this boy was in bed eight weeks, treated for typhoid, his recovery was never complete, and now he has this very evident and virulent attack of appendicitis. The conclusion to be drawn is very plain: the illness eight months ago was his primary attack of appendicitis. Many such cases I have called chronic typhoids until the appendix has been removed, then note the changed condition of the patient, rosy cheeks, good appetite and speedy restoration to health. I started by saying that appendicitis was often mistaken for typhoid, but it might be more accurate to say that appendicitis occurs as a complication of typhoid. Why shouldn't it? Appendicitis simply means inflammation of the appendix, and what is typhoid fever? It is a general infection of the system characterized by local inflammatory areas progressing to the point of ulceration at various points of the intestine. Now, if one of these points happens to be the appendix, and there is no reason why it should not be, appendicitis will be present with its usual symptoms, as a complication to the original typhoid and it may go on to perforation and produce the "green groin" about which this paper is written. Usually an appendicitis is caused by the bacillus coli communis, but Eberth's bacillus may at times usurp its place.

For a quarter of a century I have been operating for appendicitis, hammering away at the subject, trying to perfect my technique so as to get the very best results possible. From the very first I have urged surgical interference early, late and all the time, but I have met with some opposition in almost every consideration of the subject. There are some who still use the treatment of Alonzo Clark or Willard Parker, though they are much less frequently referred to now than formerly. Both methods give complications and unfortunate pathological conditions, simply making the surgery that will have to be done later more difficult and trying than it would otherwise have been. The opium treatment has no place in the management of intraperitoneal pathology, and even as an adjunct to surgery it is needless and positively harmful. Patients are more comfortable, rational and co-operative without it. Opium favors restlessness and apprehension, and blunts centers that should not be blunted. Whenever, in looking over the literature of peritonitis, you find opium used, you find a mortality of

25 per cent., and I am surprised that it is not a little higher, but good toilets and drainage prove their efficacy in spite of the opium.

The Willard Parker incision is nothing more than lancing a boil; it is commonly followed by fecal fistula and occasionally by bowel obstruction. The diseased appendix and bowel adhesions still remain and will have to be relieved subsequently by good surgery in order to save the patient. Many of these operations in so-called fulminating cases, in which simple incision and drainage are practised, had just as well not be done. A very good rule to follow is to adopt one of two methods in the *fulminating cases*. If there is bowel obstruction and persistent vomiting with evidences of a general peritonitis, operate through the central incision, free all adhesions, remove the appendix, make a good toilet and drain. The toilet can be made more thorough through a central than through a lateral incision. If cathartics act freely before operation and general symptoms are not prominent, then the lateral incision should be your choice. Some good operators are now using the small high incision in the right rectus for the removal of the dirty appendix, but it is just as difficult to get the appendix from this point as from the central incision, so it is to be hoped that they will try this latter incision and by means of it renew their efforts to save those cases formerly permitted to die, operation having been declined as "too late," "hopeless."

At the present time, when discussing treatment, it is a mistake even to mention the deadly nature of some of the forms of peritoneal infection. The nature of the infection, whether streptococcic, staphylococcic, gonococcic, etc., cannot possibly be precisely determined either before or during operation, so the information comes too late to be of any practical value in the treatment. Many authors quote Senn and say that, in streptococcic infections, sepsis is sometimes so rapidly fatal that no gross pathological lesions are found, but if the cases reported by Douglas, E. A. Smith, Deaver and others are carefully examined, it will be found that gross pathological lesions are present in almost all cases, and that they are not so rapidly fatal as sometimes represented.

Clinicians give too much prominence to circumscribed forms of appendicitis, using this as an excuse for delay and forgetting that, whether the peritonitis be circumscribed or general, the indications are precisely the same, prompt and thorough surgery. Though lately the general surgeon has become so much interested in pelvic and abdominal surgery, yet he has still neglected the importance of learning how to deal with adherent viscera, how to make toilets and how to drain. One of the best of this class gives a mortality of 10 per cent. in the "green groin" class of cases. If he will improve his toilet, place his drains carefully without any sutures in the abdominal wound, and practise simply an *arrest* of sepsis, he can greatly reduce that mortality.

I have repeatedly criticised the imperfect toilets so commonly practised. What men call irrigations are usually local and not general. I have recently, in two cases, removed all the bowel from the abdominal cavity, then washed and scrubbed the bowel with gauze and flushed the cavity before replacing the bowel. The cases seemed perfectly hopeless to operator, assistant, nurses and spectators, and the anesthesia was withdrawn to avoid death on the table. The cleansing, however, was most thorough and complete, drains, large cofferdams, no sutures. I remarked after the operations that if these cases recovered I should never refuse to operate while I could feel the pulse at the carotid. They have both recovered, and many similar cases before.

Dr. E. A. Smith reports: 10 cases, general peritonitis, 2 deaths, 25 per cent. mortality; 10 cases gangrenous but not perforated appendix, with septic fluid in pelvis, no deaths, 0 per cent. mortality; 7 cases bowel obstruction, 4 deaths, 57 1-7 per cent. mortality. In all of these cases very free irrigation was used, demonstrating what can be accomplished even in late cases, but these records also show the great difference between the early operations, with mortality *nil*, and the latter, with 25 per cent., and furnish thus the strongest possible plea for early operation as soon as the diagnosis of appendicitis is made.

It is in these apparently desperate cases that surgery wins triumphs more remarkable than at any other point of the body. Yet some accuse us of advising operation so that we can obtain a good fee. Richardson, the past-master in appendiceal surgery, gives his average remuneration in a great group of appendiceal cases as $7.50, not a coachman's or a gardener's wages. So we soon learn the truth of the remark that "the better type of physician and surgeon tries to go to the bottom of his cases without regard to the money return." This is at no time more true than when operating upon the "green groin."

A CASE OF SEVERED SPINAL CORD IN WHICH MYELORRHAPHY WAS FOLLOWED BY PARTIAL RETURN OF FUNCTION.

By FRANCIS T. STEWART, M. D.

Read before the American Surgical Association, Albany, June 3, 1902.

By RICHARD H. HARTE, M. D.,

It is universally conceded that severed peripheral nerve-trunks implanted after the cells have been removed from their regeneration of the central nervous system occurs is denied by practically all writers and investigators; and most of the few who have claimed, merely question. The reasons for this non-regeneration are not clear. Some theorize that it is due to the absence of the neuroglia sustentacular tissue through the agency of which regeneration is accomplished; others hold that the axis-cylinders are severed by the cells which are not present in the cord[2]; it has been

asserted that new nerve fibers are built by the connective tissue cells, and it has been claimed that they are formed by the colorless bloodcorpuscles[3], Fickler[4] believes that, if the normal circulation of blood and lymph is restored, the axis cylinders may grow. If we accept the theory of the "central school," to which the overwhelming majority of observers belong and who teach that regeneration occurs by the outgrowth of the old axones of the central stump of a divided nerve, there is no apparent obstacle to regeneration of the fibers composing the spinal cord.

Voit[5] obtained a regeneration and partial return of function after ablating the cerebral hemispheres of a pigeon. Vitzou,[6] as the result of experimental research, concludes that there may be an actual new formation of nervecells in the brain and that restitution of any of the functions after removing the hemispheres is due to such regeneration; and Tedeschi[7] asserts that he has demonstrated the possibility of a regeneration of the nervecells.

Müller[8] amputated the tails of lizards and tritons and proved that regeneration, both anatomical and physiological, may occur in the new tail. Masius and Vanlair[9] excised sections of the spinal cord in the frog; motility and sensibility were restored and nervecells and fibers were demonstrated in the cicatrix.

Brown-Séquard[10] observed a return of function after dividing the cord in doves and guinea-pigs, complete return in the former, partial in the latter.

Dentan[11] obtained a partial return of function after cutting the cord in dogs. Eichhorst and Naunyn[12] experimented upon very young dogs by cutting or crushing the lower dorsal cord; voluntary movements, together with sensation, occurred, and a limited number of nervefibres were found in the tissue between the ends of the cord. Schmaus-Sacki[13] observed young fibers scantily distributed at the periphery of the cord in certain cases of experimental section of the cord.

Stroebe[14], as the result of experiments on rabbits, found that the axis cylinders of the dorsal roots, that were crushed at the level of the cord injury, made an attempt to pierce the cicatricial tissue in the cord. Kahler[15] crushed the posterior roots of the sixth and seventh lumbar and first and second sacral nerves in dogs; after several months a squeeze of the toes seemed to cause pain. As the result of experiments conducted on the second cervical nerve of the dog, Baer, Dawson and Marshall[16] conclude that after severance of the fibers of the dorsal root of the spinal nerves between the ganglion and cord, regeneration of the fibers into the cord will take place under proper conditions, so that normal reflexes through the respiratory, cardiac, and vasomotor centers may be obtained and that, if the posterior root fibers can thus be regenerated in the posterior columns of the cord, there seems reason to hope that the fibers in the other tracts may possess the same property and that therefore it is not impossible that with proper technique a severed spinal cord might be made to regenerate its broken tracts both ascending and descending. Dawson and Riggins[17] cut the spinal cord of a dog with a sharp knife at the level of the lowest dorsal segment and allowed the dog to live 112 days. The authors report that there was never any conclusive evidence of conscious sensation or of voluntary motion in the hind dog. "Regarding motion (these observations apply to the period just before the death of the animal), if the animal were placed on all fours it would stand just like a normal animal. If the front dog began to walk, the hind dog would follow, flexing and extending one leg and then the other. There was no co-ordination between the movements of the front and hind legs, any irregularity in the movement of the front dog throwing the hind dog quite off its balance. As long as it was pulled forward slowly and steadily, the hind dog would walk. This is what I regard as a reflex."[18]

From the standpoint of workers among human beings one positive clinical case neutralizes many negative neuropathological investigations and cancels innumerable physiological experiments on animals. Thus far no satisfactory clinical case has been reported in which return of function has followed a total transverse division of the spinal cord in man, although the following cases cited by Lidell[19], are highly presumptive of such an event subsequent to partial lesions. Peniston[20] relates a case of stab wound between the eleventh and twelfth dorsal vertebræ which was attended by paralysis of the right leg; the patient was able to walk with the aid of a cane at the end of 8 months. Vigues[21] reports a stab wound between the ninth and tenth dorsal vertebræ which was followed by paraplegia, retention of urine and feces, and bed-sores. Voluntary motion returned at the end of 2 months, and the patient was able to walk with the aid of a cane at the expiration of 4 months. Morgagni[22] records a stab wound of the neck accompanied by abolition of motion and sensation below the injured segment. At the end of 40 days sensation and motion were present, but the patient was not able to walk for 4 months. Hurd[23] narrates a case of chisel wound of the lower dorsal region which was followed by immediate loss of sensation and motion below the wounded part; the patient recovered sensation and imperfect use of his limbs. Meryon[24] publishes a case of stab wound between the tenth and eleventh dorsal vertebræ which caused a paralysis of the right leg. Complete recovery took place.

Robson[25] reports a case in which he implanted 2 inches of a rabbit's spinal cord between the proximal and distal segments of a severed median nerve; sensation began to appear in the median area 8 days later.

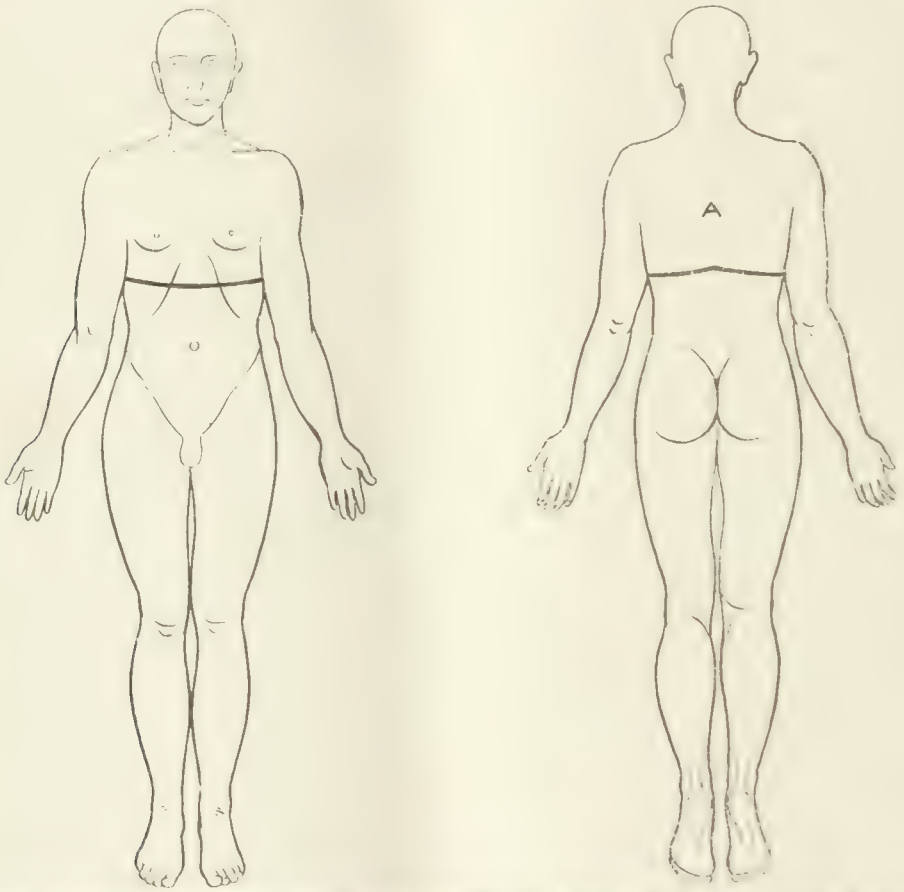
Fickler[4] has published 2 cases of compression of the spinal cord from caries of the vertebræ, in which he found a number of delicate, well constructed fibers emerging above the point of compression and entering the cord below. As no such fibers occur normally at these points, and as one case had showed marked improvement in symptoms after the affection had persisted a certain length of time, he accepted them as newly formed axones, and as evidence of the regenerative power of the spinal cord.

Bielschowsky[26] has recently reported a similar discovery in a case of compression of the spinal cord, but he concluded that the fibers in his case were a split-off portion of the pyramidal tract, that the fibers observed by Fickler must have been of the same nature, and that the spinal cord cannot regenerate. Dercum and Spiller[27] claim to have shown that such fibers may be present in the spinal pia when there is no reason for believing that they are regenerated axis cylinders. Fickler, however, states that such fibers have never been discovered except at the compressed point.

It seems to us that the course of many surgical spinal lesions strongly suggests the probability of regeneration of the axones of the cord. Certain it is that any considerable compression must destroy numberless axis cylinders either as the result of the compression itself or of the ensuing myelitis, and it is equally certain that many of these cases fully recover. Schiff[28] attempts to explain this by stating that the intact portion of the cord, in partial lesions, assumes the function of the destroyed portion, a "functional reparation" of the lesion. But there are cases in which every indication points to a complete crush of the cord and in which recovery ensues; these cases are regarded by some neurologists as only partial lesions, their belief being that it is frequently impossible to diagnosticate a total transverse destruction of the cord unless the paralyses, etc., persist; if sensation and motion return, the question of regeneration is never even thought of, for this return is considered as conclusive evidence that the axones were not cut or crushed.

We submit the following case, which we believe to be the first myelorrhaphy performed in man, as evidence of the power of the spinal axones to regenerate:

C. N., aged 26 years, white, waitress, was admitted to Dr. Thos. G. Morton's service, Pennsylvania Hospital, January 21, 1901, having been shot twice with a 32 caliber revolver. At the time of the accident the pain of a bullet was felt, then a mighty contraction of the lower extremities, and finally a sensation as if the lower portion of the body had been lost; consciousness was retained. One ball entered about one inch to the right of the seventh dorsal spine and passed directly into the spinal canal; the other lodged beneath the skin in the right lumbar region and was easily removed through the wound of entrance. There was immediate and complete abolition of motion and sensation below a line transecting the lower part of the tenth dorsal spine and a point 3¼ inches above the umbilicus, the distance between the ensiform and the umbilicus being 5 inches. This line of demarcation was sharply defined and was superimposed by a belt of hyperesthesia reaching as high as the ensiform cartilage; just before operation this layer of hyperesthesia also became anesthetic. The superficial and deep reflexes of the lower limbs could not be elicited. The temperature was 97°, the pulse 120 and fair in volume, and the mind was clear. Three hours after the accident, during the temporary absence of Dr. Morton, to whom the writer (Stewart) is deeply indebted for the privilege of operating upon and reporting this case, the patient was etherized and an incision about 3 inches long made over the dorsal spines with the eighth dorsal spine for its center. After dissecting back the muscles on either side, the right lamina of the seventh dorsal vertebra was found to be crushed in and the left lamina of the same vertebra factured at its base. With the aid of for-



A case of severed spinal cord. Heavy line showing limit of anesthesia before operation. A, level of injury to cord.

ceps the spines and lamina of the seventh and eighth dorsal vertebræ were removed and the rent in the membranes, through which could be seen the leaden bullet and a number of small fragments of bone lying between the ends of the severed spinal cord, exposed. After removing the bullet, the fragments of bone, and the lacerated nervous tissue, the distance between the segments of the cord was ¾ of an inch; this statement was verified by the assistants, Drs. Mitchell and Van Meter, by the etherizer, Dr. Fraley, and by Dr. Newlin, who was watching the operation. The wound was flushed with salt solution and the ends of the cord approximated with 3 chromicized catgut sutures passed by means of a small staphylorrhaphy needle, one suture being passed anteroposteriorly through the entire thickness of the cord and the other two being passed transversely. This part of the operation was attended with unusual difficulties because of the narrow space in which the suturing was conducted, because of the consistency of the cord, and because of the wide interval between the fragments, the catgut frequently tearing out before the ends were finally brought together. The dura mater could not be approximated. A small gauze drain, which was allowed to remain 24 hours, was carried down to the cord because of the oozing, the muscles were united with deep sutures of catgut, and the skin closed with silkworm gut. The patient was in better condition after, than before, the operation. During the first 24 hours after operation there was sharp pain over the front of the chest and in the vicinity of the wound. The patient complained of nausea but could not vomit.

Fifth day.—Complained of pain in the right knee, of thrills traveling up and down the extremities, and of cramps in the legs. Can feel a squeeze of the calf as a pulling sensation in the back. The surface is anesthetic to ½ inch below the costal margin on the right side anteriorly and to the ribs on the left. Posteriorly the anesthesia ceases at the level of the iliac crest on the right and on the left at the twelfth rib. There is retention of urine and incontinence of feces.

Seventh day.—Dr. Harte assumes charge of the case. Hard pressure on the anterior crural nerve is felt in the middorsal region, but elicits no reflex muscular contraction. Pin prick of the soles of the feet is felt in the mid-back and is followed by a feeble contraction of the leg muscles. The wound in the back has closed without mishap and the stitches are removed.

Fourteenth day.—Flexion of the foot is recognized as such and followed by a powerful leg contraction. Pulling the large toe toward the trunk felt in the ankle. Has "goose flesh" on exposure to cold. Feels deep pressure over limbs and abdomen.

Twenty-first day.—Urine in the bladder felt, but cannot be voided. Feels pin prick as far as the umbilicus and behind as far as the sacrum, but cannot localize it. Patellar reflex detected for the first time.

Thirtieth day.—The urine now dribbles constantly from the bladder and there is a small quantity of pus in the urine.

Thirty-fourth day.—Complains of pain in the right heel on which a smaller blister has developed. There are involuntary contractions of the legs spontaneous in origin. Pin prick followed by a reflex contraction of the muscles can be felt as low as the pubes and Poupart's ligament in front and posteriorly over the sacrum.

Forty-second day.—Pin point felt several inches below the iliac crests on each thigh; massage distinctly felt over the legs. Can voluntarily extend the right big toe and also the left leg slightly. Can tell when the bowels are going to move, but has no control over them.

Sixtieth day.—Is out of bed in a wheeling-chair; moves the right big toe quite readily and with great effort can feebly flex the knees. Pus has disappeared from the urine.

Third month.—The knee-jerks are reinforced by strongly contracting the muscles of the arms and making a grimace.

Fourth month.—The patient has received a superficial burn of the lower abdomen; this healed quickly and without reaction.

Fifth month.—Patient is able to slide out of bed into her chair without aid.

Sixth month.—During the absence of her nurse patient made an effort to stand and fell on the floor causing a hematoma to form in the lower lumbar region; the skin did not break, however, and the blood was gradually absorbed. Sensation has become more acute and motion better.

Seventh month.—Menses, which have been absent since the accident, have returned, there is no accompanying pain or discomfort.

Eighth month.—Used bed pan and urinal for the first time. Is able to stand supported by person between the seat and a chair.

Ninth month.—Can feel floor under feet and appreciates dependent position of feet. Controls bowels except when the feces are liquid and rarely soils herself with urine.

Tenth month.—Menses are now preceded by severe pains in the legs and cramps in the lower abdomen.

Eleventh month.—Has had a bilious attack; vomiting associated with retching, but accomplished without great effort.

Twelfth month.—While sliding out of bed, right leg became twisted and the right patella dislocated outwards; there was intense pain in the right knee for 24 hours.

Fourteenth month.—Patient takes a tub bath, can feel the water on the lower extremities, and can distinguish between the water from the hot and cold spigots.

Sixteenth month (May, 1902).—The general health is, as it always has been, excellent. The patient voluntarily flexes the toes, flexes and extends the legs, flexes and extends the thighs, and rotates the thighs. While sitting, the extended leg can be raised from the floor. Flexion is more powerful than extension and any movement is increased by strongly contracting the muscles of the upper extremities at the time of making an effort to move the lower extremities. The patient slides out of bed into her chair by her own efforts and is able to stand with either hand on the back of a chair, thus supporting much of the weight of the body. The bowels move every second day and are under perfect control, excepting the presence of diarrhea. About one pint of urine is passed 3 times during the 24 hours; there is sometimes incontinence during sleep. The menses are regular, preceded by sharp pains in the lower limbs and accompanied by cramps in the lower abdomen. The patient has the sense of touch, temperature, pain and position all over. The difference between heat and cold is not satisfactorily elicited when small test-tubes filled with hot and cold water are used; the best results are obtained with a hot water bag and a large piece of ice. When a greater area is thus covered, the patient is invariably able not only to distinguish the heat and cold when applied separately, but also when the ice is placed on one leg at the same time the hot water bag is placed on the other, one leg feeling cold and the other hot. A pin prick can be localized as low as a line running transversely through a point 2½ inches below the umbilicus. A pin prick can be differentiated from several pin pricks and the pin pricks from a sharp blow from a pencil as far as the knee, but the localization of these sensations is not accurate. The muscles are moderately rigid and there is present on both sides marked but easily exhausted ankle and patellar clonus. The deep reflexes elicited by tapping the tendo Achillis, the ligamentum patellæ, and the hamstring tendons, are marked and may be reinforced by muscular exertion of the face and arms and by painful sensations, such as a sharp pinch, in the arms. On tickling the sole of the feet the big toe flexes, the little toe abducts, and there is a feeble contraction of the flexalis antitus, the hamstring muscles and the tensor vaginæ femoris. The rectus abdominus reflex is seen on both sides of the abdomen. There are no reactions of degeneration and no trophic changes in the skin or nails. The temperature has always been below 100 except on the fifth day after operation when the thermometer registered 101. Although the patient has been bruised and burned, no bedsores have developed. That this has been accomplished in the postoperative course of this case must be credited equally to the unfaltering attentiveness and devotion of the patient and to the diligence and devotion of the nurses of the Pennsylvania Hospital.

We especially urge the above case with a view to the fact that all cases of fractured spine should be treated as are cases of fractured skull, if there be symptoms, immediate operation is imperative. One would not hesitate to operate on a case of fractured cranium with paresis or paralysis, even though we know that the condition may be due to concussion

and be transient, yet we are advised in cases of fractured vertebræ to wait until it be demonstrated whether or not the symptoms are really due to pressure or to concussion of the cord. When the cord is divided or crushed, the maxim of spinal surgery is "no interference," but who can say that the cord is divided without inspecting it? Abolition of motion, sensation, and reflexes is no sure guide, and if the cord be exposed and found severed, why not suture it? No harm can be done, and much good may result. It has been suggested that the nerve supply might be carried around the destroyed area by utilizing the posterior roots, but no success has followed the experiment.[29]

The operation of myelorrhaphy will be specially indicated in cases in which the cord has been cut by a sharp instrument or severed by a projectile. In cases in which the cord is crushed we have, at present, no infallible method of determining whether or not all the tracts have been destroyed.

While the distance between the ends of the severed cord in our case was three-quarters of an inch and the apposition was extremely difficult, we have been able to hold the segments of the cord in place after excising one inch in the cadaver. Guidone conducted a series of experiments on animals and demonstrated that the spinal cord might be sutured after one centimeter had been resected. The results concerning the return of function were unsatisfactory.

The axiom of spinal surgery is "that compression, and compression only without injury to the cord, can be benefited by operation," but sufficient compression to produce anæsthesia or paralysis must be accompanied by the rupture, crushing or tearing of thousands of axis cylinders and, if axis cylinders once injured never recover, the removal of pressure or of a spicule of bone sticking into the cord can do no good and all operations are contra-indicated except to control hæmorrhage or combat sepsis.

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AVULSION OF THE SCALP. WITH REPORT OF A CASE.

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of New York.

Injuries of the head may be classed, topographically, as superficial or extracranial, cranial and intracranial. These may occur independently or may variously complicate each other. In this paper I shall consider the most formidable and characteristic of the extracranial or superficial injuries of the head, namely: avulsions.

In consulting the literature on this subject I have been fortunate enough to discover an article entitled "Remarks on the Management of Scalped-head" by the late Felix Robertson, M. D., which was published in the *Philadelphia Medical and Physical Journal* years ago, from which I quote the following, feeling confident it will prove interesting reading to the student of modern surgery.

"In the year 1777, Fred Calvit was badly wounded and nearly the whole of his head skinned. Dr. Vance of the Long Islands, of Holsteins, was sent for and stayed several days with him. The skull bone was quite rotted and began to turn black in places, and as Dr. Vance was about to leave Calvit, he directed me, (as I was stationed in the same fort with him) to bore his skull as it got black, and he bored a few holes himself to show the manner of doing it. I have found that a flat pointed straight (shoe maker's) awl is the best instrument to bore with, as the skull is thick and somewhat difficult to penetrate. When the awl is nearly through, the perforation should be more lightly bored upon. The time to quit boring, is when a reddish fluid appears on the point of the awl. I bore at first about one inch apart, and as the flesh appeared to rise in these holes, I bored a number more between the first. The flesh will rise considerably above the skull and sometimes puts a black scale from, or about the thickness of common writing paper. It is well to assist in getting off the scales of bone with the awl. These scales sometimes as large as a dollar, sometimes even twice as large. It will take at most two weeks from the time of boring for it to scale. When the scale is taken off, at the proper time, all beneath it will appear flesh like what we call proud-flesh as if there was no bone under it. The scalped head grows very slowly and if this kind of flesh rises in places above the common level, touch it with blue stone and dress it once or twice a day, putting a coat of lint over it every time you dress it, with a narrow plate of ointment. It skins over remarkably slow."

"In 1788, I saw a young man in South Carolina, who had been scalped eight years before that time, and about twice the size of a dollar of the back of his head was perfectly bare, dry and black. I am persuaded that had his skull even then been bored, he might have recovered of the wound, which put an end to his life about one year after I saw him. The naked portion of the bone round it mortified and exposed the substance of his brain, a very considerable quantity of which issued out at the time of his death."

If we contrast Dr. Vance, with his humble shoemaker's awl the forerunner of our modern cranial

trephine)—a man without the slightest knowledge of antisepsis or asepsis, or the important part germ-life plays in the successful termination of surgical injuries, who never had a thought of the possibilites of skingrafting; if we contrast him with the surgeon of to-day, armed with the most approved and modern surgical instruments and fortified by a thorough knowledge of bacteriology and the art of skin-grafting, we can appreciate the many difficulties under which he labored, causing him to give vent to such statements as "the scalped head cures very slowly"—"It skins over remarkably slow, etc."

In persons with long hair the same may become entangled in rapidly revolving machinery, resulting in a partial or complete avulsion of the scalp. The flap in these cases consists usually of skin and aponeurosis, with or without the muscles of the frontal, temporal or occipital regions, and at times the periosteum is torn from the bones, leaving them exposed over a large or small area, as the case may be.

Complete avulsions of the scalp are sometimes attended with shock and hemorrhage of such a severe character as to cause death. If the patient survives the immediate effect of the accident, death may result later on from exhaustion or infection with resulting meningitis, cerebritis and sinus thrombosis.

In those cases of avulsion, in which the scalp is attached to the remaining soft parts by a sufficiently broad pedicle, we usually get very rapid healing by primary union; if the wound surface has been thoroughly cleansed. The results are, of course, much less favorable in case the entire scalp has been detached. In such a case, before the possibility of skin-grafting was demonstrated by Ollier, of Lyons, in 1872, and perfected by Thiersch, of Leipzig, two years later, the skinning over of the denuded area was prolonged and tedious, requiring, in several instances, years, and too often death claimed the victim on account of long-continued suppuration, meningitis or erysipelas.

Modern surgery has taught us that a more favorable prognosis can be given in scalp injuries, than formerly, even in complete avulsions of the scalp on account of the aseptic method of procedure and the employment of skin-grafts, which hasten recovery, prevent cicatricial contractions of the skin and lessen disfigurement.

Skin-Grafting Has Been Divided Into:

1. *Auto-epidermic*:—When the epithelial cells are taken from the patient and it includes (a) scrapings from healthy skin—(b) corn shavings—(c) pellicles from blisters—(d) the Ollier-Thiersch method, in which one half the skin thickness (epidermis, rete and part of the cutis proper) is required and (e), the Krause method, in which the whole thickness of the skin is used as grafts.

2. *Hetero-epidermic*:—When the epithelial cells are furnished by another person.

3. *Zoodermic*:—When the skin is removed from lower species as the use of (a) small pieces of sponge (b) frog skin, (c) inner membrane of hens eggs, (d) inner surface of pullets wings, (e) skin of pups, (f) guinea-pigs and (g) rabbits.

It is claimed that pure cuticle obtained by vesication can be sterilized and, if kept dry, is capable of growth as living epithelium, for an indefinite time. Growth after a period of 418 days is claimed by Z. J. Lusk. The skin from amputations, when in a healthy condition, (if kept warm) may be employed as grafts within 96 hours after the operation.

When the scalp is completely torn away, Gussenbauer recommends the transplantation of pieces of the avulsed scalp on the wound, provided, of course, that it is in viable condition. In one of his cases of entire avulsion, twenty months were required for complete healing, owing to the continual breaking-down of the cicatrices. In this case, 340 pieces of skin were grafted, 270 of which healed in place. In another of his cases of complete avulsion, in a girl of 16 years, death resulted eleven months and twenty-three days after the injury. Dr. Abbe, of New York, has reported a case at St. Luke's Hospital, in which 12,000 grafts were planted in four years.

After careful and systematic research I have been able to find but thirteen cases of scalp avulsions recorded, several of these were incomplete in character in so far as the scalp was only partially detached. Of the thirteen cases:

One case was reported by Hyrtl.
Two cases were " " Gussenbauer,
Two cases " " " Robertson,
One case was " " Sutliff,
One case " " " Warren, (J. C.).
One case " " " Warren, (J. M.).
One case " " " Lucas,
One case " " " Gerok (M)
One case " " " Abbe,
One case " " " Sick,
One case, (under treatment) in Gouverneur Hospital.

In conclusion I submit the following case: (in the management of which I was associated with Drs. C. P. Gordon and J. C. Bivings, of Dalton, Ga.) which is both interesting and unique, on account of numerous complications and absence of troublesome sequelæ.

Lilly S. Age 14. White. U. S. Family history.—Father and mother alive and well; one sister and brother suffering from whooping cough.

Past History.—Had scarlet fever when 2 years old. For the past week has been suffering from a severe cough.

Present History.—On the afternoon of October 24th., while working in a cotton mill, patient's hair was caught in a pair of rapidly revolving steel rollers, resulting in a complete avulsion of the scalp, together with the periosteum, covering both the parietal and a part of the occipital bones. She was unconscious when first seen, suffering from marked concussion, with some hemorrhage from branches of the temporal, posterior auricular and occipital arteries. The scalp was recovered after having passed through several sets of steel rollers, but was in such a pultaceous condition that it was thought inadvisable to attempt to replace it. The wound-surface was covered with cotton waste and a dirty black grease from the rollers. After having controlled hemorrhage and applied temporary sterile dressings to the head, the child was removed to the operating room. The edges of the wound were shaved and the grease and dirt removed by the free use of turpentine, after which the whole head was thoroughly scrubbed with green soap and sterile water. It was then rinsed with alcohol and ether, equal parts, and a 1-5000 solution of mercuric bichloride, and finally the wound was dressed in a wet dressing of aluminum acetate and covered with

oiled muslin. The child was now put to bed, having a pulse 140, temperature 100°, and respiration 30, the following being ordered: Ice helmet to the head, free saline purge, strychnine sulphate, gr. 1/120, and liquid diet. The next morning, October 25th., patient was perfectly rational, complained of very little pain, cough was growing more troublesome—T. P. R.—100.6°, 84, 22. October 30th., temperature rose to 102.6°, the head was then dressed, the wound appeared to be perfectly clean, no pus, some blood clot, which was removed and aluminum acetate was again used to keep the dressings moist. There was no longer any doubt that the patient had whooping cough, for the cough was in paroxysms, followed by the characteristic whoop and ejection of a thick mucus from the bronchi. In about 2 weeks from the time of accident, the outer table of the bones, denuded of periosteum, began to necrose, eventually requiring complete removal. From this time on the head was dressed every third day. On November 30th., the temperature rose to 105.3°, pulse 100, respiration 38, slight delirium present. Upon removal of dressing, head was found in excellent condition; all the necrosed bone had been removed and the head was covered with healthy granulating tissue and absolutely free from pus. It was evident that a further search was necessary to find the cause of the rise in temperture. A thorough physical examination of the chest was now made; numerous fine rales, mostly subcrepitant in character, were heard over the bases of both lungs. The breathing was harsh and there were several areas of slight dulness made out on percussion. A bilateral bronchopneumonia was anything but a pleasant complication with which to deal just at this time. After a hard struggle of 5 days, the patient began to improve gradually, her temperature reaching normal November 30th., leaving her, however, very weak and enfeebled, but, under appropriate treatment, patient's general health improved very rapidly, and it was only a short time until it was necessary to undertake the transplantation of the skin upon the denuded surface. In



FIG. 1.—Head after first skin-grafting operation, showing islands of skin.

all, three skingrafting operations were performed, eventually covering with skin the entire granulating surface. In the first operation, which was done after the Thiersch method, strips of skin about one inch wide by three inches long, were cut from the father's thighs, the majority of which grew very nicely. The second operation was a combination of the Krause and Reverdins method; the skin was taken from the thighs of a lad about 18 years of age, none of which grew. I next tried the skin from the inside of several eggs, but all to no purpose, likewise the skin from the belly of two large frogs, but with equally as poor success. Lusk's method was resorted to, but failed. Patient now developed a bilateral parotiditis (epidemic in character), followed by an acute membranous colitis, as a result of which all operative work had to be suspended for some time. Again it looked as if she would surely die, but she finally rallied and made an uninterrupted recovery. On January 1st., the third and last operation was performed, the Thiersch method again being adopted.



FIG. 2.—Head prior to the third and last operation.

There now remained to be covered a little more than one-half the original surface. The granulations had by this time become soft and flabby; with numerous varicosities of the diploic veins. Three days before the operation, all this soft granulating tissue was removed with a curette, leaving a firm base on which to place strips of skin. The bleeding was controlled by gauze compresses, held in place by a roller bandage. The skin for this operation was taken from the thighs of the patient, she being in splendid condition for the operation. The whole surface of the wound was covered with pieces of skin one inch wide by 3 inches long, and held in position by strips of rubber tissue, placed in lattice work arrangement, after which sterile dressings wet in normal salt solution were applied and re-



FIG. 3.—Head completely covered with skin after third operation.

tained by a snug-fitting skull-cap bandage. In two weeks from the time of the last operation, the head was entirely covered with skin, not one of the grafts having failed to take, and the little sufferer was discharged sound and well, weighing exactly 10 pounds more than she ever weighed in her life.

The writer would like to emphasize the following points:

1st. The benefit of shaving, thoroughly scrubbing and rendering scalp wounds as aseptic as possible at the first dressing, thereby securing freedom from virulent bacteria and preventing meningitis, cerebritis, etc., by extention per diploic veins.

2nd. The superiority of the Thiersch method of skingrafting over all other methods tried.

3rd. The fact that skin-grafts taken from the body of the patient grow far better than grafts from the skin of other people.

4th. The error of always attributing in surgical work a rise in temperature to wound infection, and to suggest a thorough physical examination for some existing complication.

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TWO CASES OF PROGRESSIVE MUSCULAR DYSTROPHY IN BROTHER AND SISTER.*

By AUGUSTUS A. ESHNER, M. D.,
of Philadelphia.
Professor of Clinical Medicine in the Philadelphia Polyclinic; Physician to the Philadelphia Hospital; Assistant Physician to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases.

There was brought to me at the Polyclinic Hospital on April 20, 1901, by Dr. G. P. Rishel, a white boy, 13 years old, presenting bilateral talipes equinus approximation of the knees, a peculiar oscillating and stepping gait, with a tendency to fall, and an increase in the normal curves of the spine, in conjunction with general muscular weakness. It soon developed that the case was one of progressive muscular dystrophy, and inquiry revealed that a sister had for many years presented a comparable train of symptoms.

The boy had been delivered without complication at term, after a normal pregnancy, and he appeared healthy at birth. He was nursed at the breast for two years. Dentition commenced early and was marked by no untoward event. The child learned to speak and to walk at the usual time and no peculiarity was noted in his manner of progression; nor did he fall more than other children. Somewhere about the fifth year prickling sensations, with numbness, appeared in the legs. The boy then had an attack of whooping cough, followed by one of measles and one of chickenpox and finally a second attack of chickenpox. Then the present symptoms developed gradually and progressively. The heels became drawn upward and the boy was compelled to walk on the ball of his foot. He fell often and he assumed a peculiar attitude, with the head thrown back, the abdomen and chest forward, the hips projecting backward and the knees directed toward each other. He was able, however, to go to school, and he has exhibited no mental inferiority whatever. He draws and writes well. He controls his sphincters perfectly.

The calves of the legs became large and hard, but on manipulation they grew somewhat softer, though they are still unduly firm and full. The right now measures 27, the left 26 cm. in circumference. The inner aspect of the lower extremity of each thigh apparently just above the inner condyle presents an enlargement that seems to arise from the bone and which is greater upon the right. The general nutrition has not suffered conspicuously, although there is appreciable general wasting and distinct weakness. The boy is able to dress himself, but he cannot cross the knees without the aid of his hands, and the knee-jerks cannot be elicited. He has some difficulty in changing from the erect to the recumbent posture. He arises from the dorsal decubitus only with the greatest effort, rolling over upon one side, then getting on his hands and knees, but not being able to go further without grasping hold of some object, such as a chair, on which he rests his elbows and then pulls himself up with a great effort. Having gained the upright position, and being told to be seated, he falls into the chair with a flop. He arises from the chair with a sudden jump, climbing upon his thighs.

There is especial difficulty in going upstairs. The gait exhibits a peculiar, springing, stepping character, the feet being raised rather high and implanted on the ball. The feet maintain a position of slight varus, greater on the right. The plantar, the cremasteric and the abdominal reflexes are preserved, while the muscle-jerks in the upper extremities are but feebly developed. The grasp is much impaired on each side. There is slight right lateral curvature of the spine in the upper dorsal region and slight left lateral curvature in the dorso-lumbar re-



Progressive Muscular Dystrophy

*Read before the Medical Society of the State of Pennsylvania, Sept. 24, 1901.

gion and also marked anterior curvature in the dorso-lumbar region. The right scapula exhibits a slight tendency to assume a winged position, with merely a suggestion of this on the left. The hands appear unduly full and round. The face exhibits no peculiarity, nor is there further evidence of local muscular wasting or enlargment. The disorder appears the more marked on the right side of the body.

The accompanying reproductions of photographs portray the appearance of the patient at the present writing, especially the spinal curvature, the winged scapulæ, the enlarged calves and the attitude in standing upon the toes. (Figs 1 and 2).

Of the parents the mother is fifty-three, the father seventy. The latter when a youth of sixteen, fell from a barn and fractured his skull. It is thought the skull was opened and a plate (possibly a bone removed by trephining) inserted, but there is now to be seen only a scar in the scalp over a prominent, smooth, parietal eminence. During the past seven years he has had, at first at frequent intervals, but of late at periods of perhaps one month, attacks of vertigo preceded by a feeling described as pleasant and attended with transitory loss of consciousness, slight rigidity and convulsive movements and followed at times by nausea and drowsiness. He has fallen in some of these attacks, which are said now to be slighter than formerly.



Progressive Muscular Dystrophy.

There are two other children, a sister of thirty-two, who exhibits a more advanced stage of the same disorder as the boy; and, a second sister, twenty-five years old, who is perfectly well. In the case of the former also there was no difficulty in pregnancy nor in parturition and no peculiarity was observed at birth nor during early childhood. She learned to speak and to walk without delay. She had chickenpox at six, scarlet fever at seven, whooping-cough at nine, measles at thirteen, and mumps at fourteen. In her eighth year she fell down a flight of stairs, striking the end of her spine and it is thought that her symptoms began shortly after this, although it is recalled that her fine-looking calves had been a subject of comment during childhood. She first attended school in her seventh year and continued until fourteen, doing well and stopping only on account of her difficulty in locomotion. At about the age of nine her gait was noticed to be waddling, with the head and shoulders thrown back. Her condition grew gradually worse until at the age of nineteen she was entirely unable to get about. The weakness has extended also to the upper extremities, so that now the girl is unable to lift either arm or forearm although she still has considerable power in her fingers and hands and she is able to sew and write fairly well. In fact, until a few years ago she did much of the household sewing, using a sewing machine with facility, but within this period her activities have been greatly restricted by shortening of the Achilles tendons and stiffness of the feet, resulting in bilateral equinovarus. The calves are still firm and full, the right over her stocking measuring 31, the left 31¼ cm. in circumference. The patient is unable to extend the legs or flex the thighs, but she has some slight power of flexing the legs. There exists some flexor contracture. She is unable to get up and to stand, although she can in part dress herself. Her time is spent seated in a rolling chair. The knee-jerks cannot be elicited and the muscle-jerks in the upper extremities, as well as the chin-jerk, are feeble and ill-sustained. There is perfect control of the sphincters, and menstruation exhibits no abnormality. Sensibility also appears preserved. There has been no intercurrent illness since the attack of mumps at fourteen. The patient has never had diplopia or subjective impairment of vision. She is of large frame and appears heavy, although this may be due to her muscular atony. I should judge her weight to be not less than 150 pounds. She is perfectly intelligent and philosophically reconciled to her condition.

A brother died of scarlet fever. There is no further neurotic or psychotic family history, nor of any other instance of similar disease. The patient's father, however, had three sisters, one of whom is 79 and perfectly well, but weighs 250 pounds; a second, who also is well, but weighs 225 pounds, and the third, who is 63, and weighs 267 pounds, although at one time she weighed over 325 pounds. A fourth sister, who is dead of pneumonia, weighed 250 pounds. The father has, besides, two brothers, neither of whom is unduly stout, although it is said that nearly all the fifteen children in the family are large.

The two cases here reported are interesting, apart from the relative rarity of the disorder of which they are typical instances, because of their occurrence in members of the same family, of the history of another dystrophy in the collateral ancestry and of the presence of a traumatic cerebral disorder in the father. Of twenty cases of progressive muscular dystrophy that I recorded several years ago, (*American Journal of the Medical Sciences*, September 1898) in only two could it be learned definitely that the same disease existed in other members of the same family. Of 220 cases collected from various sources by Gowers[2] 102 were isolated, while the remaining 118 occurred in 39 families, Gowers cites a family[3] in which eight brothers suffered from the disease. Erb[4] gives the proportion of hereditary and familial cases as fifty-six. In six among eighty-four cases collected by Poole[5] other members of the family had suffered from similar disease.

The muscular dystrophies belong in the group of hereditary or familial diseases. They are sometimes congenital, though as a rule they make their appearance during the first decade of life. Of my twenty cases[6] the first symptoms are re-

2. Pseudohypertrophic Muscular Paralysis. London, 1879.
3. Heryon, Med. Chir. Trans., 1852.
4. Dystrophia Muscularis Progressiva. Leipsic, 1891.
5. N. Y. Med. Jour., 1875, xxi, p. 589.
6. [illegible]

corded as having been noted at birth in two, during the first five years in eight, and during the second five years in ten. The disorder appears to occur more commonly in males than in females. Of my twenty cases sixteen occurred in males and four in females. Of twenty-four cases seen personally by Gowers,[7] twenty-one occurred in males and three in females, while of 220 cases collected from various sources 190 were in males and 30 in females. Among the 84 cases of Poole[8], 73 were in males and 11 in females. Eichhorst[9] quotes Seydel as having found among 125 cases, 103 in boys and 22 in girls. The disorder is rare if it occurs at all in blacks.[10]

The essential lesion of the progressive muscular dystrophies so far as is known consists in degenerative changes in the muscle-fibers, some of which are increased, while others are diminished, in size, together with more or less hyperplasia of the interstitial connective and fatty tissues. The etiology is obscure; but the most plausible explanation would seem to be that which attributes them to some developmental defect—resulting in replacement of muscular by fatty and fibrous tissue, with the secondary motor disability and the consequent deformities.

Two cases lately reported lend confirmation to this view. In that of Dr. Jeno Kollarits (*Deutsches Archiv für klinische Medicin*, 70. B., 1. u. 2. Heft, p. 157), occurring in a boy ten years old, who presented the hypertrophic type of progressive muscular dystrophy, and had been helpless and unable to walk for more than two years, there were found after death—in addition to characteristic changes in the muscles—various alterations in the nervous system, but these, with the exception of diminutiveness of the ganglion-cells in the anterior horns of the spinal cord, were undistinctive, so that it may be concluded that all of the changes were due to some congenital defect in development. In a case of similar character reported by Drs. B. Sachs and Harlow Brooks (*American Journal of the Medical Sciences*, July 1901, p. 54) degenerative changes were found in some of the cells of the posterior root-ganglia, which it is thought might be a secondary result of the disease of the muscles. In connection with this case the opinion is expressed that the disease may be due to some defect in embryonal structure, preventing satisfactory development of the muscular system.

The occurrence in other members of the family of obesity, which presents certain points of analogy and likewise is to be considered a dystrophy, seems worthy of note. It is not likely, on the other hand, that there is any relation between the cerebral disease in the father and the muscular disorder in the children. The fall in the case of the older patient at the age of eight was probably a result rather than the cause of her disease.

The disorder unfortunately is progressive in character, though at times protracted in course, although it does not cause death directly, which results rather from intercurrent affections. The therapeutic outlook is not hopeful. Thyroid and thymus preparations have been recommended in treatment, but I know of no success from their use. Massage and electricity may be helpful to preserve such muscular tissue as has not already been destroyed, and also to prevent contractures and deformities. When the latter develop tenotomy may be justifiable. Mechanical support or means of locomotion may be required to aid the patient in getting about and applying the physiological stimulus to muscular nutrition and function, namely, intelligent exercise.

7. op. cit.
8. op. cit.
9. Handb. d. spec. Path. u. Therap. B.V. III, 4 Aufl., 1891.
10. Eshner, op. cit.

DIRECTIONS TO PATIENTS SUFFERING FROM VENEREAL DISEASES.

USED IN DR. GUITERAS' GENITO-URINARY CLINIC AT THE POST-GRADUATE MEDICAL SCHOOL, NEW YORK.

By COLIN LUKE BEGG, A. B., M. D.,
First Assistant in the Clinic.

SYPHILIS

1. *Syphilis* is a *contagious disease*, involving in all cases the patient's *general system*. It is usually ushered in first by a sore on the genitals; then follow headaches, pains in the bones, an eruption spreading over a large part of the body, sore throat, patches in the mouth, and sometimes loss of hair and inflammation of the eyes. Of these, with the exception of the sore on the genitals, the patches in the mouth are most contagious, and the inflammation in the eyes the most dangerous, while the most severe skin troubles, when they do occur, give rise to scars which never disappear. It must be remembered, however, that cases vary greatly in severity, and that all the above mentioned symptoms need not necessarily be present.

2. *The Cure of Syphilis* can almost always be assured in a healthy individual who will place himself in the hands of his physician and obey him implicitly. The time required for the treatment is *two years*. After the first few months, usually almost no symptoms are noticed, but they *will probably show themselves* if the treatment be stopped.

3. *Unfavorable Cases*:—In patients suffering from tuberculosis, Bright's disease, diabetes, alcoholism, anemia, malaria, or any other constitutional disease, syphilis is usually more severe, does not lend itself so well to treatment, and the outlook for cure is not so favorable.

4. *Mercury*:—The patient should be treated by mercury, usually in the form of pills, or else rubbed into the skin in the form of an ointment. If the patient is getting too much mercury, he may have symptoms that are often worse than those of the disease itself. They are, sore gums, loose teeth, bad breath, and sometimes colicky pains and diarrhea. In such cases the patient should stop taking the medicine until the symptoms disappear, and, when he begins to take the mercury again, should take not more than three-quarters of the dose which he formerly had been taking.

5. *When to see the Doctor*:—The patient should report to the doctor if any fresh local troubles develop, or if there be any cause for worry which is not understood. In order to have his case care-

fully watched, as it should be, the patient should report to the doctor every week for the first three months, every two weeks for the next nine months, and every month for the second year, or oftener if the doctor so directs.

The Contagion of Syphilis:—The patient must be careful not to give the disease to others by kissing women and children on the mouth. He should not drink from a common cup or glass with others, nor use the same towels, scissors, or other toilet articles. The discharge from the first sore, (chancre) and the saliva and discharge from the patches in the mouth and throat are the most contagious things about the patient. Therefore he should be careful to keep his fingers out of his mouth, and to wash his hands thoroughly after touching any of the contagious places. He should keep his hands clean and touch others as little as possible. He should sleep in a separate bed, and should remember that he may be a source of danger to others about him, especially during the first year after the development of the chancre. He should therefore train himself to think of this danger of contagion to others and act accordingly.

The patient should not have sexual intercourse at all during the two years of treatment. If unmarried, he should not consider marriage for at least three years after the development of the chancre. Intercourse during these years should be considered a crime. If the patient is married, he should also abstain from intercourse with his wife, and should separate himself from her, and confess to her, in order to prevent disaster. If he infects his wife, it means that she will have to go through the disease, and that the offspring will be miscarried, or stillborn, or that the child, if brought up, will be sickly, deformed, or weak-minded, and therefore a burden to the parents as well as to the community.

7. *Care of the Body*:—The skin should be kept in good condition. Tepid baths should be taken in the morning, followed by a good rub, if no eruption be present. A hot bath should be taken every two or three days. Sometimes a hot shower, followed by a cold one, is of benefit. Turkish baths may be taken once or twice a week, if no active skin troubles be present. Patients who work in hot places, and perspire freely, can as a rule stand the largest amount of mercury. For the same reason more mercury can be borne in summer than in winter.

The genitals should be kept scrupulously clean, also the cleft between the thighs, and in case of the appearance of any undue moisture, irritation or of an eruption on these parts, they should be dusted with some bland powder and covered with a thin pad of cotton.

8. *Care of the Mouth and Teeth*:—This is very important. As soon as the patient knows that he has the disease, he should have a dentist put his teeth in order. Sharp edges should be filed down, cavities filled, and stumps pulled. The teeth should be brushed with a soft brush after each meal. Tooth-powder should not be used more than once a day. Particles may be removed from the crevices between the teeth with silk floss. The mouth should be washed out after brushing the teeth with a mouth-wash, consisting of borolyptol and water.

9. *Mode of Life*:—Exercise moderately, enough to produce perspiration without tiring. Live regularly, taking meals at prescribed times. Go to bed early and sleep at least eight hours. Avoid all excesses, and do not give way to unnecessary worry. Wear flannels of varying weights, both in winter and in summer. Be careful not to expose yourself to cold or wet.

10. *What to Eat*:—The following rules for diet should be observed:

Diet List:

Soups:—Puree, oxtail, chicken, mock-turtle, green turtle, and vegetable soups.

Fish:—All fresh fish, boiled, baked, or broiled. Raw oysters; scallops (stewed) crabs and lobsters.

Meat:—Beef, mutton, roasted or broiled, poultry; game; lamb-chops or cutlets, eggs, soft boiled, scrambled, poached, raw or in omelettes.

Farinaceous:—Cracked wheat, oatmeal, mush; sago, tapioca, rice, hominy, barley, macaroni, vermicelli, whole wheat bread, stale or toasted wheat bread, brown bread, milk toast, corn bread.

Vegetables:—Green peas, string beans, parsnips, turnips, spinach, onions, cauliflower, mushrooms, celery, lettuce, asparagus, sweet potatoes, white potatoes in moderation, preferably baked.

Desserts:—Custards, rice or cornstarch puddings, blanc mangé.

Drinks:—Water, plain, or aerated, cocoa, chocolate, milk, koumyss. At the physician's discretion a small amount of red wine with dinner, and a limited amount of coffee may be given when no active symptoms are present.

Smoking:—Tobacco in any form should be prohibited if there are sores in the mouth. At other times two cigars a day are allowed. Chewing tobacco, cigarrettes and pipes are interdicted. Tobacco irritates the mouth and throat, and is injurious to the system.

Avoid:—Eating anything fried, or any pickled, salted, canned or preserved meat or fish. Avoid fruits, pickles, condiments and alcoholic drinks, tea pork, veal, pastry and clams.

Special Note:—Let the animal food predominate over the starchy, and let it form part of every meal.

Note:—Prevention of Syphilis.

In order to avoid contracting the disease avoid illicit intercourse.

Do not use soiled towels in public places, for any purpose not even wiping the hands, nor drink out of glasses or cups set for the use of the public in railroad stations, etc., unless you take the precaution not to touch the rim of the glass or cup with your lips.

URETHRITIS.

1. *Diet*.—Avoid all foods which give rise to irritating compounds in the urine, such as asparagus, tomatoes, rhubarb, and all sour, pickled, and spiced dishes, especially the condiments, such as pepper, peppersauce, catsup, chili sauce, etc.

2. *Drinks*.—Abstain from liquors, wines, beers, and ginger ale. Claret when mixed with water is the least harmful and is sometimes allowed in the later stages of the disease if the patient needs

strengthening. Coffee and tea, taken moderately, do no harm, but in large quantities they increase the nervousness naturally accompanying this trouble, and increase the local nervous irritability as well. Milk between meals is beneficial if the patient's appetite is poor, or a milk diet may be advised if there are any complications which indicate it.

3. *Tobacco* may be used in moderation. About one-third of the usual amount.

4. *The bowels* should be kept open, and if there be any tendency to constipation the patient should take Seidlitz powders, or salines, such as Apenta water, citrate of magnesia, or Rochelle salts, in the morning, half an hour before breakfast.

5. In order to *keep the urine bland* and diluted, so as not to cause irritation of the diseased parts in passing, the patient should drink large quantities of water, and if there be much burning, some of the alkaline mineral waters, such as Vichy, Seltzer, or Appolinaris, should be drunk.

6. *Sexual excitement* should be avoided by abstaining from medicines containing strychnine, phosphorus, quinine or other drugs which produce sexual stimulation. Sexual intercourse should be absolutely abstained from, as by exciting the deeper portions of the genital tract it is apt to give rise to complications and would infect the woman, giving her the disease, and perhaps causing some dangerous or even fatal complications, and further, if she be with child, causing an inflammation of the child's eyes, resulting in probable blindness. Many of the diseases peculiar to women, and much suffering which women go through, are caused by infection with the gonorrheal poison.

7. *Toilet.*—Bathe the parts, night and morning, with warm water. Keep a piece of cotton over the end of the organ, held in place by the prepuce drawn over it. This is to be changed for a fresh piece each time after urinating.

Suggestion is made that the patient be instructed to provide himself with a ½-oz. syringe with blunt nozzle, not the sharp-pointed which are sometimes given them by the druggists.

In case injections are prescribed, they are usually given four times daily, after urinating. The method of injection is as follows: Fill the syringe with warm water, and inject into the urethra, allowing it to escape immediately. Then fill the syringe with the injection fluid. Insert the tip of the syringe into the urethra; grasp the end of the organ and the tip of the syringe with the forefinger of the left hand bent in such a way as to form a ring around the former, so as not to allow any of the fluid to escape along the sides of the nozzle, as it would if the tip be grasped between the thumb and forefinger. Then press the piston slowly and steadily, forcing the fluid into the urethra, where it should be held for five minutes before it is allowed to escape.

The hands should be washed thoroughly after touching the parts, either for the purpose of urinating or injection, and care should be taken not to leave the towel where others may use it and dry their faces on it, as in this way they may introduce some of the contagion into their eyes and thus cause an inflammation which may result in loss of the eyesight. For the same reason be careful not to touch your own eyes with your fingers before washing them.

8. *Mode of Life.*—Dress warmly and do not expose yourself unnecessarily to cold or wet. Keep the feet dry and warm and wear rubbers in rainy or stormy weather. Exercise moderately to a degree that would tend to improve the physical condition and not to overstrain or overheat. Avoid bicycle and horseback riding.

9. *Complications.*—Remember that complications may occur which are far worse than the disease itself. They usually come on after the tenth day and are ushered in by frequency of urination and pain in the region of the rectum. If there be pain or a sense of weight in the external genitals, an Army and Navy suspensory bandage should be worn. In case of painful erections at night take a hot bath before going to bed and immerse the organ in hot water when the erection occurs. Standing on a cold floor, or holding one leg elevated in an extended position will usually suffice to cause an erection to subside. If you suddenly find that you cannot pass your urine, you should take a hot sitz bath. If this does not produce a flow of urine, you should call a physician.

10. *Prevention of gonorrheal infection* is best brought about by abstaining from intercourse.

N. B. *Cure.*—A patient is well when there is no more discharge, when the urine shows no more shreds, and when there is no more frequency of urination nor feeling of discomfort in the parts. The patient should not drink beer or spirits, nor should he have intercourse for three weeks after the discharge has ceased, in order to avoid a recurrence.

Many men consider themselves well when the disagreeable acute symptoms have passed away, and when but a slight discharge is present. No man should discontinue treatment until his physician after careful examination pronounces him cured.

Climatotherapy. A long article upon the therapeutic use of the French climate has appeared in the *Bulletin Médical* (November 27, December 14, 18, 1901, and January 1, and 8, 1902), by Dr. A. Manquat, of Nice. The climate of a country depends on the combined geographic, telluric and atmospheric conditions which characterize the country. A therapeutic climate is one which improves functional activity or increases the resisting power of the organism. Climatology, the medical geography of climate is to climatotherapy what materia medica is to therapeutics. But a climate may lack variation, may be too far away, or may be unnecessary, since therapeutics alone will cure the condition. The main use of climatotherapy is as an adjuvant to ordinary therapeutics. The geography, including altitude, sea-shore, latitude, atmospheric pressure, temperature, purity of the atmosphere, configuration of the country, etc., the telluric conditions; the meteorological conditions, such as temperature, pressure, humidity, rain, snow, winds, etc.; the physiological action of different climates upon the skin, blood, circulation, respiration, nutrition, urine, digestion, nervous system, etc., are all fully discussed. Many most interesting details are given in this extensive article. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending May 31, 1902:

			Cases.	Deaths.
SMALLPOX—United States.				
CALIFORNIA:	Los Angeles	May 10-17.	5	
	San Francisco.	May 11-18.	1	
COLORADO:	Denver.	May 10-17.	1	
ILLINOIS	Chicago	May 17-24.	14	
KENTUCKY	Covington	May 10-24.	22	
	Louisville	May 10-17.	2	
LOUISIANA:	Shreveport.	May 17-24.	1	
MASSACHUSETTS:	Boston.	May 17-24.	28	6
	Fall River.	May 17-24.	1	1
	Lowell	May 17-24.	3	
	Malden.	May 17-24.	2	
	Melrose	May 17-24.	2	1
	Somerville.	May 17-24.	1	
MICHIGAN:	Detroit.	May 17-24.	6	
MINNESOTA:	Minneapolis.	Apr. 18-May 17.	3	
	Winona.	May 17-24.	4	
MISSOURI:	St. Joseph.	Apr. 1-30.	50	2
NEW HAMPSHIRE	Nashua	May 17-24.	2	
NEW JERSEY.	Camden	May 17-24.	2	
	Newark	May 17-24.	53	3
NEW YORK	New York.	May 17-24.	56	11
	Yonkers	May 10-24.	1	1
OHIO	Cincinnati	May 16-23.	14	
	Cleveland.	May 9-16.	8	1
	Dayton	May 17-24.	2	
PENNSYLVANIA	Johnstown	May 17-24.	4	
	Philadelphia.	May 17-24.	30	3
TENNESSEE:	Memphis.	May 17-24.	8	
UTAH.	Salt Lake City	May 10-17.	1	
WASHINGTON.	Tacoma.	May 11-18.	1	
SMALLPOX—Foreign.				
BELGIUM	Liege	Apr. 26-May 3.		1
CANADA	Winnipeg.	May 10-17.	3	1
FRANCE	Paris	Apr. 26-May 3.		1
	Rheims	Apr. 26-May 4.	2	
GREAT BRITAIN	Glasgow	May 9-16.	1	
	Jarrow on Tyne.	May 3-10.	2	
	London	May 3-10.	58	11
	New Castle on Tyne	May 3-10.	1	
	South Shields.	May 3-10.	6	
INDIA	Calcutta	Apr. 19-26.		6
	Madras	Apr. 19-26.		1
ITALY.	Palermo	May 3-10.	9	2
JAPAN	Formosa, Taihoku	Jan. 1-31.	15	
	Nokasaki	Apr. 21-30.	1	
MEXICO	Vera Cruz.	May 10-17.	6	5
RUSSIA:	Moscow.	Apr. 26-May 3.	8	1
	St. Petersburg	Apr. 26-May 3.	7	1
STRAITS SETTLEMENTS	Singapore	May 26-Apr. 12.		1
TURKEY.	Smyrna	Apr. 27-May 4.		2
YELLOW FEVER				
MEXICO.	Vera Cruz.	May 10-17.	14	8
CHOLERA.				
INDIA	Calcutta	Apr. 19-26.		145
STRAITS SETTLEMENTS	Singapore	Mar. 29-Apr. 12.		48
PLAGUE—Insular.				
HAWAII.	Honolulu	May 8-13.		5
PLAGUE—Foreign.				
CHINA	Canton	May 19.	Epidemic.	
	Yityang.	May 10.	Epidemic.	
	Tsiang	May 10.	Epidemic.	
INDIA	Calcutta	Apr. 19-26.		777
JAPAN.	Formosa, Taihoku	Jan. 1-31.	179	141

WIENER KLINISCHE WOCHENSCHRIFT.

February 20, 1902. (XV Jahrgang, No. 8.)

1. Perihernial Suppuration. GEORG LOTHIESSEN.
2. The Treatment of Cicatricial Stricture of the Esophagus. LUDWIG TELEKY.
3. An Accessory Thyroid at the Root of the Tongue. FRIEDRICH TEWELES.
4. Osteoplastic Trephining of the Skull for Brain Tumor. GUSSENBAUER.

1. Suppuration about a hernia is very seldom noted without inflammation in the hernial sac. Lothiessen calls this condition **perihernial suppuration**, no pus existing in the hernia, only about it. Nicalodoni has reported 2 such cases, and Lothiessen gives the case-histories of 3 more, of his own observation. The patients ranged from 40 to 74 years of age. The condition occurs about either femoral or inguinal herniæ. Bacteria reach the perihernial tissues through the lymphvessels. The only change noted in the hernia is a thickening of its outer coat. The hernia has, as a rule, existed for some time before symptoms of inflammation appear about it. It may be irreducible. The treatment of this condition consists in incision and evacuation of the abscess. After the wound has healed, the operation for the radical cure of the hernia should be done. [M. O.]

2.—The usual treatment of **cicatrical stricture of the esophagus** is gradual dilatation with bougies of increasing sizes, employed over a long period of time. One patient, a girl of 18, whose history is given, was so tired of passing bougies that, after gastrostomy, she continued to take [illegible] through the gastric fistula for 3 years, when some other illness caused her death. The history of a case in which perforation of the esophagus, with death, occurred, from the passage of bougies follows. Peri-esophageal abscess resulted. When this seems useless, Teleky employs thiosinamin, a syringe full of an alcoholic solution being injected subcutaneously in the intrascapular space twice a week. The effects of thiosinamin are noticed especially when the cicatrix swells after the passage of the bougie. Four case-histories follow in detail, all the patients doing well upon it. Death, followed its use in a [illegible] upon whom gastrostomy had been performed, the autopsy showing cancer of the esophagus, near the cricoid cartilage. This case-history is given in full. When the scar tissue is old, the effect of thiosinamin is good and lasting; when fresh, it may be good, but soon grows worse again. While it loosens old scar tissue, it destroys [illegible] scar tissue, and perforation occurs. It affects all connective tissue in the body, making them elastic and less permitting stretching. Thiosinamin is only advised when the scar is 6 months old or more. [M. O.]

3.—Teweles reports the case of a tumor, 5 cm. in diameter, at the root of the tongue, in a girl of 13, whose [illegible] tumor was first noticed 4 years previously. It was removed by operation, and found to resemble the thyroid gland in structure. The occurrence of an **accessory thyroid at the root of the tongue** is a rare condition, but 18 such cases having been reported in the literature. She recovered rapidly. [M. O.]

4.—Gussenbauer gives in great detail case-histories of **10 hospital and 7 private patients whom he trephined for brain tumor.** In spite of the localizing symptoms, the removal of a brain tumor by trephining presents great difficulties. The prognosis of gliosarcoma is favorable as far as concerns recurrence. In his case the first signs of recurrence were only noted 3 years after operation. But 2 of the tumors were in the cerebellum. Infection did not occur in a single case. The only death due to operation followed secondary hemorrhage. Ten days after operation, one patient died of pneumonia. Headache disappeared in all case immediately after operation, while in many cases vision returned temporarily, and motor and sensory disturbances grow less marked. In the [illegible] is still [illegible] employing the chisel and mallet. The cases are [illegible] described. [M. O.]

The Return to Walking in Locomotor Ataxia with Re-education.—G. Constantinesco (*La Semaine Médicale*, March 12, 1902) states that re-education in tabes causes a decrease in the sensory disturbances, the patient recovering his sense of position. His general condition improves as he walks better, and his general condition, appetite, respiration and nutrition, pick up as he becomes more active. The amount of amelioration possible varies. The patients may remain some indefinite time or may even be able to return to work. One patient at once offers by re-education is [illegible] the Argyll Robertson pupil and absence of reflexes persisting, yet without a trace of incoordination. Thus the treatment has brought about an almost complete recovery. [M. O.]

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See Advertising Page 8.

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The Oration on State Medicine.—American Medical Association, 1902. The oration on state medicine at the fifty-third annual meeting of the American Medical Association was delivered by J. M. Emmert, of Atlantic, Iowa. The author refers to the sanitary code of Moses, to the Justinian law and to the first quarantine which was established, in 1347, by Charles IV, of Germany. At that time suspected ships were required to keep quarantine for forty days, whence was derived the term now used to designate the detention of suspected vessels and persons. He traces the history of quarantine in the United States from the Act of the Pennsylvania Assembly, in 1700, to the present time. He then refers to the most extensive epidemics that have occurred in the United States, to the growth of Hospitals, and to the early rules governing autopsies. He speaks about the beginnings of legal medicine and the first pure-food-laws. The first American Anatomy law was passed in New York, in 1789, since when numerous other laws have been passed in different states and territories of the Union. He refers to the various phases of vivisection. He devotes considerable space to a discussion of tuberculosis and places himself in the ranks of those who believe that bovine tuberculosis is transmissible to man. He believes that tuberculous subjects, whether belonging to the genus homo or to the lower animals, should be subject to quarantine restrictions; that the expectoration of sputum in public places should be prohibited, and that Knopf's recommendation, that sanatoria for the treatment of the consumptive poor should be established, should be acted upon. He refers to the establishment of the National Board of Health and of Medical Examiners.

He thinks it is desirable to have a national law pertaining to marriage and divorce; he believes that the nation should pass laws governing the activities of anarchists, he refers to public baths and the restriction of venereal diseases, and says that the law governing the coroner is a relic of barbarism that he should like to see abolished.

"State Medicine is a creation of necessity in times of public danger, but its future development will be in proportion to the scientific character of its work, and to the appreciation on the part of the public of the economic and beneficent results of such work. The world's rapid transit and intercommunication brought on the high state of civilization, and made the whole human race one family, so that people of every color, clime, language, government and creed have become one brotherhood."

Dangers of Anesthesia.—The fact that danger attends the use of ether when gas or other flaming lights are about, is perfectly well recognized, and the profession hardly needs any further warning concerning this matter. In modern clinics the use of electric lights, or of lights which are well out of the danger region, makes the use of ether perfectly simple, by night as well as by day. In general, also, the profession in this country is united in the belief that ether is a much more satisfactory anesthetic than chloroform. A not inconsiderable number, however, prefer chloroform, particularly under especial circumstances; and some operators who have no well-equipped clinics at their command tend to use chloroform when working by artificial light, and particularly in ill-equipped houses. It is, however, known by most pharmacologists and by many others that chloroform has dangers when used by artificial light, but this fact is by no means generally recognized. Its importance is made evident by a brief article by Paul Gerlinger (*Arch. f. experim. Path. u. Pharmak.*, Bd. XLVII, Hefte 5 u. 6), in which he describes an occurrence which emphasizes this danger. An operation was undertaken by gas-light, chloroform being used as the anesthetic and the narcosis lasting over three hours. The case was one of gun-shot wound with difficult abdominal work. Two doctors and four of the hospital sisters were present. During the operation all six persons were attacked by severe spasmodic cough, but felt entirely well after the operation, with the access of fresh air. Three hours later, however, all showed more or less pronounced signs of poisoning, which consisted in cyanosis, difficulty in breathing, a sense

of suppression, and, in some instances, collapse. One of the sisters died 28 hours after the operation, and the patient also died, although, in the latter instance, it was impossible to say whether this was the result of the injury and operation or not. In both cases—that of the sister and that of the patient—the blood was investigated. It was found dark-red, coagulated and it contained no CO. The last-mentioned investigation was carried out, because it had been well determined that the cause of the poisoning in these cases is the decomposition of the chloroform in gas-light and the formation of $COCl_2$, which is an extremely irritating gas. This substance can be recognized to be present in these cases of poisoning, both by its peculiar odor and by the production of white clouds in moist air. The nature of its poisonous action has not been determined. The fact that this gas is produced under these circumstances may be readily demonstrated by a simple apparatus which Gerlinger describes. It has been attempted to overcome the danger of the production of this form of poisoning by placing soda or borax solution or milk of lime in the operating room; but these methods have been shown to be wholly insufficient and Gerlinger offers no suggestion as to the methods of preventing such poisoning.

Heart Suture Again.—In choosing the subject of his oration before the 53d. Annual Meeting of the American Medical Association, Harry M. Sherman made a happy choice in selecting The Suture of Heart Wounds. This is a subject which has lately been brought prominently before us by three cases operated upon by American surgeons, and we have editorially invited the attention of our readers to this interesting advance in surgery on four different occasions during the past 12 months. Sherman presents a table of 34 cases which have been operated upon since 1896. During that year there were 3 operations; in 1897, 2; in 1898, 4; in 1899, 11; in 1900, 3; in 1901, 9. During the present year 2 cases have already been reported. The wounds in all but 2 of the cases were punctured or incised wounds, the 2 exceptions being bullet wounds. In 32 instances the ventricles were injured; the left ventricle 17 times and the right 13 times. The right and left auricles were each injured once. In most of the cases the pleura was wounded and usually a hemothorax was found which was the result of overflow from the pericardium. But three of the operators employed catgut and in most of the cases an interrupted suture was used. In 7 instances the pericardium and pleura were both drained, and in 4 the pleura alone was drained. In most of the cases it is said that the wounds were closed without drainage or the matter is not mentioned. Of the 34 cases reported 5 died on the operating table of hemorrhage, and 10 died soon afterwards from the effects of hemorrhage or from shock. Of the 19 remaining cases 13 recovered and 6 died. Of those cases dying during the progress of the operation or soon afterwards it is thought that the operation did not add materially to the amount of blood lost and therefore did little to hasten death, which was from the beginning probably inevitable. In each of the 19 cases the suturing of the heart was successfully accomplished and in no instance was death due to secondary hemorrhage. The 6 patients who died did so because of infection; 4 of the patients who recovered did so in spite of infection. Sherman discusses the relative merits of silk and catgut sutures in the closure of heart wounds and is inclined to believe that catgut will be found as satisfactory as silk although it has not been so widely employed. Elsberg advises that silk should be used and that the suture should be an interrupted one and placed very superficially. Sherman has done 11 experimental operations upon dogs in order to develop the true merits of the various techniques suggested. In inflicting wounds of the heart muscle he found that a nonpenetrating wound of the heart wall would give forth during systole a spurt of blood so large that it might be mistaken for a hemorrhage from the heart cavity itself. Superficial sutures, sutures to, and sutures through the endocardium were each employed. Sherman found that the heart could be easily controlled during the process of suturing by two long suspension loops of silk which were carried by a needle well into the heart muscle. It was found impossible and quite unnecessary to perform the suturing during systole. Sherman shows that it was very difficult to introduce the suture through the endocardium in the one case in which he tried it. Post mortem this suture which penetrated the heart cavity was found surrounded by a globular clot which was quite firm and white. So far as his experiments went, it was found to be a matter of indifference whether continuous or interrupted sutures were employed. He was hampered in his work upon dogs by the fact that in these animals there is no mediastinum, the whole thorax being lined by one continuous membrane, and therefore the lungs collapsed as soon as the heart was exposed and artificial respiration had to be carried on. All of the dogs died of infection, but in every case there was early and firm agglutination of the wound edges. One interesting case referred to by Sherman is that of Izzi's in which the heart was wounded and was sutured and the patient

recovered, but, on the 28th. day after leaving the hospital, in attempting to lift a weight, he ruptured the cicatrix in the heart wall and died suddenly. In this case the wound of the heart muscle had been closed by a coagulum which later became organized, but there was no proper coaptation of the heart muscle. In discussing the question of injury of the pleura it is shown that, in order that a foreign body enter the pericardium without first perforating the pleura, it must enter the sixth interspace close to the external edge and be directed almost directly backward. The inability to obtain perfect rest of the parts surrounding the wound is considered a potent factor in the spread of infection. In 10 of the 19 cases which lived long enough for infection to take place this complication did develop, and in 6 of the 10 death took place. A study of the cases which were drained and those which were not shows that drainage influenced the mortality very little. Sherman, however, is inclined toward drainage both of the pericardium and of the pleura. The pleura may be drained through the same opening as the pericardium or in the posterior axillary line. Wounds of the ventricle do not bleed so profusely as those of the auricle and are much more readily sutured. Wounds of the right ventricle bleed more and are more difficult to suture than those of the left.

We believe with the orator that the surgery of the heart will be still more perfected and its field greatly extended.

The Medical Article of the Future.—The profession of medicine has passed the point of relying upon speculation in its efforts to solve the vast problems which the healthy and the diseased body present. But, however ominously speculation may be regarded as a means to an end in the diagnosis or treatment of a patient, we are safe to speculate at times upon the possible condition of medicine at any definite time in the future; and such speculation is not without profit. Many a practical philosopher has resorted to metaphor to emphasize the value of self-examination. The seeker after truth climbing up the narrow and rugged mountainside may well pause in his course, not only to gird himself anew for the struggle, but to look back and ponder well over the path he has hewn. What medicine is to-day, we, who are its devotees, have the book open to read; what medicine will be in the future we can only conjecture. But the ideal which every one has in mind must certainly be a high one. As one small phase of a problem which is not without interest it may not be unprofitable to inquire what will the medical article of the future be? It will not, of course, be ideal, but it should approach the ideal more closely than those which fill the pages of our journals at the present time. Those of us whose work is in the line of medical journalism have certain fixed convictions on this subject. These may perhaps be better expressed by a kindly criticism of many contemporaneous medical articles. In the first place many of these are too long. There seems to be a feeling on the part of medical writers that it is necessary in every case-report to give a summary of the literature of the particular subject under consideration. The result is, that some of these are well and some indifferently done. But the reader who is particularly interested in any one subject finds an almost endless amount of repetition. He even observes, often with considerable truth, that these summaries have a common fault, the reports of the cases cited are too often copied from a common source and he frequently notices the recurrence of the same error many times. In other words, the writers have been content to quote a quotation rather than seek the original source. He often observes, too, that the English is surely at fault, and that this general criticism of writings on scientific subjects is frequently justified even in the work of men who are regarded as authorities. There must be no "fine writing" in the medical article of the future. The old advice to beware of the *furor scribendi* must bear greater fruit than at present. In those halycon days to come when the medical writer mounts his Pegasus he will have his say and then, with the wisdom which some of us lack to-day, he will put aside his paper until the fire of his exuberance has burned out and and then relentlessly blue pencil it until the simple, bare facts alone remain, tersely and concisely expressed without even a superfluous word. At the onset he will have something worth the writing. He will place clearness above all things, and simplicity and conciseness will add to the jewels in his crown.

A Case of Successful Removal of a Tumor of the Spinal Cord.—The literature of this subject begins with the epoch-making case of Horsley and Gowers, in 1888. Several cases followed in rapid succession in America and elsewhere; and during the intervening 14 years the operation has gained a permanent place in the surgery of the cerebrospinal system. In 1899, Putnam and Warren, of Boston, collected 33 cases in which operation has been performed. Of these patients 7 recovered and 10 improved, 5 of these permanently; in 10 cases the operation hastened death, while in 9 the operation seems to have made but little difference in the progress of the case. In the **Philadelphia Medical Journal** for Feb-

ruary 8, 1902, Dr. Samuel Lloyd, of New York, presented a list of 51 cases, of which 16, or about 31%, recovered.

The latest addition to the list of successful cases has been made by Dr. James W. Putnam and Dr. William C. Krauss, of Buffalo. The tumor was diagnosed and located with great accuracy by these observers and was removed with much skill and complete success by Dr. Roswell Park. A report of the case was made at the recent meeting of the American Neurological Association in New York.

The case of Dr. Putnam and Dr. Krauss occurred in a man, 45 years old, who had been suffering for a year and a half with excruciating neuralgia, of an intermittent type, in the neck and occiput. Later paralysis both of sensation and motion in all four extremities came on. The anesthesia extended from the clavicles downwards. There was some interference with the phrenic nerve, as shown by embarrassed respiration. Dr. Park found a sarcomatous growth attached to the pia-arachnoid and making pressure on the cord at about the third and fourth cortical segments. The tumor was 2 cm. long and about three-fourths of a cm. wide. In appearance it resembled somewhat the choroid plexus.

In spite of great difficulties, due to the high location of the growth, Dr. Park removed it successfully. The patient almost succumbed on the table from involvement of respiration. At the time the report was made 5 weeks had elapsed, and the patient had recovered entirely from the operation. The pressure symptoms had improved, but had not entirely disappeared. The case is a most noteworthy one.

Prostitution in China.—We know so little about the social life of China that any information, especially bearing on medical subjects, presents unusual interest. The Russian soldiers stationed at Manchuria have been accused of bringing with them vice and venereal diseases into a country where these evils had been unknown. The accusation is refuted by a Russian physician, P. Rosanoff, who, in a letter to the *Russki Vratch*, (Vol. 1, No. 13,) furnishes some interesting data concerning the prevalence and character of prostitution in the limited area which came under his observation. The prevalence of venereal diseases among the Russian soldiers stationed in a Chinese village, Inkao, is really alarming. Of the 200 soldiers, 18 were affected during the past year with syphilis, 51 with chancroids and 82 with gonorrhea, making a total of 75.5%. These diseases, the writer claims, were contracted from the native prostitutes. To prove that the latter were primarily affected without the agency of the soldiers, instances are mentioned of gonorrhea being communicated by Chinese women, who were not prostitutes on their first intercourse with soldiers; also of cases of gonorrheal affections among the natives and gonorrheal ophthalmia in the new-born. In the village Inkao, there are about 80 houses of ill-fame, sheltering a large number of native prostitutes. Besides, the number of clandestine prostitutes is considerable, who choose this mode of prostitution to avoid taxation. Added to the abject filth in which the Chinese prostitute lives, there being no ablution practised nor separate rooms provided, there is the oriental modesty forbidding women to be examined and treated by male physicians. In consequence, venereal diseases are left untreated or are maltreated by women-quacks. The correspondent sees the causes of prostitution in China in the slavish position of women, forced marriages and extreme poverty. The inherent desire for freedom often forces the Chinese girl to abandon her home-prison, and, not being able to support herself in an honest way, she chooses the line of least resistance—prostitution. Frequently parents sell their daughter to get rid of a heavy burden and obtain whatever gain may result from the bargain. When bought, the poor girl, often not more than 15 years old, is treated as a slave, and, besides being miserably fed, is severely beaten for the slightest insubordiantion to the master's will.

An interesting fact mentioned by the writer is that the Chinese doctors possess highly efficient vegetable remedies for the cure of venereal diseases which they treat all alike without any regard to nosological distinctions. He was able by actual observation to convince himself of the prompt and efficient action of these remedies. There seems to be no doubt that the Chinese were familiar with syphilis long before Columbus discovered America.

The Radical Cure of Exophthalmic Goiter.—At the recent meeting of the American Neurological Association in New York, a very interesting paper on this subject was read by Dr. J. Arthur Booth.

Three classes of cases were recognized by the author. First, those probably due to a central lesion. Such a lesion is indicated by the disturbance of the vagus at its origin in the medulla oblongata, as shown by tachycardia; the occurrence of cases in which there is no goiter nor any lesion of the sympathetic; and the frequency of sudden death, attributable to minute hemorrhages. Second, those cases due to a lesion of the sympathetic, especially the inferior cervical ganglion (proved by the recovery of patients after operation on the sympathetic).

Third, those cases arising from passive or altered function of the thyroid gland itself. Many observers believe that the thyroid gland dominates the situation in all cases.

According to these observers thyroidectomy is naturally the radical cure for the disease. Renbach, of Breslau, reports from the clinic of Mikulicz 18 cases; 17 of which recovered from the operation; one died of hemorrhage; in 10 the cure was permanent, 8 of these having been observed for 4 years; of the 7 remaining cases all were improved.

Dr. Booth reported 8 cases in his paper, 6 of which were permanently cured, one was improved and one died. Among results to be feared is sudden death during or just after operation. Booth's conclusions are that cases of Graves's disease may be completely cured, both by thyroidectomy and by bilateral section of the sympathetic. He acknowledges that some few cases may be cured by internal medication. No theory of causation is adequate that ignores the function of the thyroid gland. His paper was one of great interest and of direct practical importance.

The Anonymous Assassin.—The man who writes an anonymous letter attacking the reputation of another man is fit only to associate with anarchists and assassins. He outlaws himself by his act while he escapes the just penalty of his crime by reason of his skulking behind his anonymity. We are inspired to these reflections by an anonymous letter which we have recently received in which the writer assails the reputation of a dead man under the pretense of discussing the disease of which a certain distinguished man died. It is fortunately our boast that in all our editorial experience this is the only instance we have seen of such treachery to the dead. Physicians stand guard over the reputations of many people, and they sometimes catch a glimpse of the abyss of degeneracy which, volcano-like, may open suddenly in the character of the man who is unworthy of confidence.

Mr. Clark Bell seems to have had hard luck with his "Congress of Tuberculosis." He was voted out of the office of Secretary and Treasurer, and must feel like the man without a country. This "Congress" was an ill-advised affair, and it would have been far wiser for all physicians who are sincerely interested in the subject to have taken no part in it.

Current Comment.

GENIUS AND INSANITY.

The **Philadelphia Medical Journal** seriously discusses in its latest issue the question of the late Cecil Rhodes' sanity, and reaches the conclusion that he did not really cross "the border line of insanity." The writer in the Journal thinks, however, that Rhodes' idea of founding a world unity by syndicating all creation through the agency of a secret society of millionaires modeled upon Loyola's Jesuit society "has something of an insane quality in it." If this notion on the part of Rhodes would convict him of a drift to insanity, it would not be difficult to argue from some of Napoleon's reported schemes and actions that he was daft at times. Some writers have gone so far as to hold that genius is only a form of insanity. It would not be difficult to make out a pretty strong case of intermittent insanity in the cases of Charles XII of Sweden and Peter the Great of Russia. Wolfe, who took Quebec, was so vainglorious in his language that the great War Minister Pitt thought him little better than a very vain fellow, who might take Quebec because he was aspiring fool enough to venture what a prudent soldier would not attempt. Lord Nelson is said to have never behaved with any credit to himself except when he was on his quarter deck leading a fleet into battle.

—*The Oregonian.*

THE DOCTOR IN POLITICS.

The doctor is in politics with a vengeance just now. It is doubtful if at any previous election so large a proportion of the candidates have been drawn from our profession.

Men entering the medical profession are probably much as other men—good, bad and indifferent—yet these men, as a result of their training, as a result of their close contact with suffering humanity, and as a result of the respect in which they are held and the confidences reposed in them, become not as other men. Sentiment is developed in them in a higher degree than in any other class, and sentiment is a quality which is more now than ever of value in this work-a-day world. For this reason we hope that a large number of the members of our profession who are candidates will be returned. They are more likely than others to counteract the materialistic tendency which sways the legislature as it does most bodies in this age.

—*Dominion Medical Monthly.*

THE SMOKE NUISANCE.

An important resolution was passed at the last meeting of the City Council of that town (Manchester) reducing the price of gas for power purposes from 2*s.* 9*d.* to 2*s.* per 1000 cubic feet within the city and from 3*s.* to 2*s.* 3*d.* without the city, separate fittings being provided by the customer. The reason given is the dread of the competition of Mond gas. It was stated by one of the members that the latter "could be produced at a tenth of a penny per horse-power per hour," and he thought that the corporation would do well to reduce the price for power to 1*s.* 6*d.* or even 1*s.* per 1000. Another speaker thought that the smoke pollution was caused mostly by cottages and that the encouragement of the use of "gas cookers" would tend more than anything to reduce the smoke nuisance. The small manufacturers who try "to get more power out of their machinery than their boiler-room would afford" were considered to be greater offenders than the larger ones, but when the great chimneys are pouring out their inky clouds we are reminded of the kettle calling the pot black. However the production of smoke is apportioned among these various agencies, the total results are disastrous to the amenities of town life and depressing to the health and vigor of many hundreds of thousands in Manchester and Salford. But habit brings indifference.

—*The Lancet.*

A GROWING EVIL.

On Thursday in last week Dr. Farquharson called the attention of the Home Secretary to the excessive speed at which motor cars were driven in and around London, and

suggested that the police should be instructed to enforce the law on the point of speed and that motor cars should be distinctly numbered for the purposes of identification. The Home Secretary in reply said, that strict orders had been given to the police in respect to the infringement of the law by motor cars and that prosecution would follow in all cases where possible. There was, however, very great difficulty in estimating correctly or even approximately the pace at which a car travelled.

—*The British Medical Journal.*

THE DOCTOR AND THE SOLDIER.

I am glad to see you gathered in this association, and just one word of warning: Pay all possible heed to the scientific side of your work. Perfect yourselves as scientific men, able to work with the best and most delicate apparatus, and never for one moment forget, especially the higher officers among you, that in time of need you will have to do your work with the scantest possible apparatus, and that then your usefulness will be proportioned not upon the adequacy of the complaint that you did not have apparatus enough, but upon the way you have done with what you have. Remember that, and remember also (this applies especially to the higher officers), that you have got to supplement in your calling the work of the surgeon with the work of the administrator. You have got to be doctors and military men and able administrators.

—*President Roosevelt to the Army Medical Men.*

Correspondence.

SUICIDE IN CHICAGO.

By C. S. N. HALLBERG, Ph. G., of Chicago.

To the Editor of the **Philadelphia Medical Journal:**

Anent your editorial comments in the **Journal** of May 31, on the cause of suicide in Chicago: One of the chief causes is the ease with which poisons of every kind and degree may be obtained.

There is practically no restriction on the sale of poison; none whatever on carbolic acid and its multitude of derivatives, known as headache cures, etc. Frequently 3 deaths have occurred in one day from carbolic acid. The authorities are absolutely indifferent and will take no steps to interfere with the sale of poisons. The local Health Department is too busy with its wonderful statistics, knowing that figures will not lie; and the pharmacists are wasting their time on the price-regulation of patent medicines. Chicago would make Romeo quickly leave Mantua, and would be the ideal residence for Mithridates.

THE PHILADELPHIA BOARD OF HEALTH.

By J. LEWIS GOOD, President of the Board.

To the Editor of the **Philadelphia Medical Journal:**

The very excellent paper written by Dr. Woodward, of Washington, has suggested the thought that a more intimate acquaintance on the part of physicians with the organization, management and practical work of our Health Bureau might assist in removing some of the difficulties encountered in prosecuting the work to the greatest advantage of the community. The citizen in his ignorance of sanitary matters turns naturally to the home physician for aid, and it may be that he, sharing the sometime expressed opinion of "meddlesome interference", has not been made fully alive to the potent friendly ally to be found in his Health Bureau.

The Health Bureau needs the good-will and assistance of the physician, and the physician may at any time need the friendly aid offered by the Health Department, hence there should be a mutual recognition of right and assistance in conserving the public health.

The Health Bureau of our city includes a legislative body (the Board of Health) and an executive head who is president of that body, and this is in accord with the best thought on the subject of organization. The working force includes inspection, bacteriological, chemical, vaccine, hospital and clerical service, and the practical work of these divisions is designed to assit the busy practitioner in the most signal manner. A note or telephone message brings to his aid among the poor, medical men skilled in the diagnosis of contagious diseases, or an inspector trained to examine and correct sanitary faults of a dwelling or its surroundings. Should culture-tubes for bacteriological examination, anti-toxin for diphtheria, or paper for the Widal test be needed, he will find them provided at every Station-house free of charge with a quick messenger to convey his wishes to the laboratory. The services of a competent chemist, and a finely equipped laboratory are his for the asking, and the man who sells other than good and lawful milk, will find it quite unprofitable if the milk inspectors have the physican's complaint. A hospital ambulance awaits his call for any suitable case, and a completely equipped disinfecting plant, with the service of trained disinfectors, will respond speedily to his desire.

Now, when it is remembered that this service is particularly designed to assist the physician in his work among the poor, where the righful fees of the profession could not be obtained, and well knowing the great value to medicine of reliable statistics, may we not be justified in hoping that every physician will aid the Bureau's work by providing prompt and accurate reports, and recognizing the high civic duty which a noble profession owes to its city and state, enter into a friendly relation with, and freely use for the public good, all the privileges afforded by a well-organized Bureau of Health.

SELF-CASTRATION IN THE INSANE.

By A. L. BENEDICT, M. D., of Buffalo, N. Y.

To the Editor of the **Philadelphia Medical Journal:**

Dr. A. R. Moulton's report of a case of self-castration reminds me of a similar one that occurred in Rochester, during my interne service in 1888-89. As I recall the case both testicles and the corresponding portions of the scrotum were slashed off with a fairly sharp knife, there being considerable hemorrhage and yet by no means so great flooding as might have been imagined. The patient was morbid and melancholy, but did not appear insane and, I believe, had not been so considered at any time. If this reference is inaccurate in some details, the essential point is emphasized and more intimate details can be obtained by referring to the orignal record, if any one cares to collect statistics of such mutilations.

In this general connection, some one may feel inclined to take up the problem of protecting morbid but recognized insane patients against suicide and others self-inflicted harm. I shall soon report a suicide due to the depression of movable kidney. In office practice, the specialist is particularly embarrassed to know how to deal with patients, with whom he is not familiar, who pay him for an opinion and advice, who must be dealt with carefully and yet who may be seriously affected by an unfavorable prognosis.

I have recently had an unpleasant experience with a patient who had a gastric ulcer, undoubtedly at the pylorus. After all danger from hemorrhage had passed, the patient was troubled with the belching of CO_2 gas from the duodenum. For this pylorectomy was advised, but rejected. After some time dissatisfaction was expressed because medical treatment did not effect a cure. The matter at last was explained and while it was admitted that some less spontaneous relief might ultimately be achieved, operation

was advised as the only speedy and certain method of relief. I am now informed, and possibly the presentation of a bill may have some etiologic connection, that my advice plunged the patient into a very serious nervous state from which she has only recently emerged; also that the belching has finally subsided.

Reviews.

The Roentgen Rays in Medicine and Surgery as an Aid in Diagnosis and as a Therapeutic Agent. Designed for the use of practitioners and students. By Francis H. Williams, M. D. (Harv.). New York, The MacMillan Company, 1902.

Although as yet the exact limitations of the X-rays in medicine and surgery have not been defined, still it is true that some reliable guide as to their use, mechanical and therapeutic, should be offered to the profession, and we feel that the present volume fills this want in a very satisfactory manner. The employment of the X-rays as a diagnostic or therapeutic means is too young for final conclusions, but it has won for itself a firm place and gives the prospect of greatly extending its usefulneess. The first portion of the volume under consideration is devoted to X-ray equipment and goes into the subject with considerable minuteness; the next portion deals extensively with matters of peculiar interest to the medical practitioner, containing lengthy chapters on the diagnosis of tuberculosis, pneumonia, diseases and malpositions of the heart, etc. It may be said in fact that about one-half of the book is devoted to diseases coming under the treatment of the medical practitioner. Probably the most interesting part deals with the therapeutic uses of the X-rays and here are presented numerous illustrations showing great improvement in such conditions as lupus and superficial cancer.

This second edition of the work shows an enlargement by the addition of an appendix of about 40 pages, which present the recent advances which have been made. The illustrations are all good and the subject is presented in a full and comprehensive manner. The only criticisms that we would offer are that the binding of the book is too light for the weight of its pages and that we think the price, $6.00, is rather high as compared with the prices of other medical works. In making this criticism we are not unmindful of the great amount of labor which the author has expended upon the work and the cost of reproducing so many skiagraphs. [J. H. G.]

Saunders' Medical Hand-Atlases. Atlas and Epitome of Operative Surgery. By Dr. Otto Zuckerkandl, Privatdocent in the University of Vienna. Edited, with additions, by J. Chalmers DaCosta, M. D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia, etc. Second edition, thoroughly revised and greatly enlarged. With 40 colored plates, 278 text illustrations, and 410 pages of text. Philadelphia and London, W. B. Saunders & Co., 1902. Cloth, $3.50 net.

The first edition of this popular work has already been reviewed at length in the **Journal**. The present edition, translated from the second revised and enlarged German edition, has been carefully overhauled and partly rewritten. Some of the newer operations are described and 16 lithographic plates in colors together with 61 text figures have been added.

The editor has accomplished a most difficult task in transfusing to the reader the thought, spirit and meaning of the author, rather than the words only, the notes which are found at the bottom of many of the pages complete the interpretation and thoroughly Americanize the work.

The names of Zuckerkandl and DaCosta, the fact that the book has been translated into 13 different languages,together with the knowedge that it is used in the United States Army and Navy, would be sufficient recommendation for most of us. We desire to mention especially that portion of the volume which depicts and describes amputations and disarticulations for its fullness and comprehensiveness. The various foot amputations, the ingenious methods of Bruns, the osteoplastic amputations of Gritti, Ssabanajeff, Djelitzyn, Abrashanow, Bier and Eiselsberg are elucidated with a clearness which baffles a misunderstanding.

It is to be regretted that the author has not devoted a section of the book to operations on the spine, the operation of laminectomy at least should be considered. The illustrations have been executed by the best German lithographers and the text has been written with the eloquence of condensation. The work is of a convenient size (5x7½ inches), is fully flush with the times, and will be invaluable to the student who works on the cadaver, to the man whose clinical facilities are scanty, and even to the skilled surgeon in active practice. [F. T. S.]

Practice of Medicine. Fourth Edition, by William Osler, M. D. Appleton & Company, New York.

This important practice of medicine is so well known that a review is scarcely necessary. It is remarkable that this practice of medicine which so largely reflects the experiences of a great clinical teacher has as yet not been translated into any foreign language. This new edition has much new material, the articles upon dysentery, yellow fever and plague have been entirely rewritten and the material has been brought up to our latest knowledge, especially as to etiology, prophylaxis and treatment. New points have also been added in regard to smallpox, cerebrospinal fever and rheumatic fever. It is hardly necessary to add that this addition only fulfils what has been promised in the earlier edition, that the work will remain the leader as a text-book of medicine in the English language. [J. L. S.]

Practice of Medicine. A text-book of medicine for students and practitioners, by Dr. Adolf Strümpell, Professor of Medicine and Director of the Medical Clinic at Erlangen. D. Appleton & Company, New York.

Professor Strümpell is one of the best known German clinicians. The fact that the original work has reached the 13th. edition is sufficient proof of its popularity and usefulness in German speaking countries. We regret to find that the latest knowledge in regard to the mode of transmission of relapsing fever and yellow fever is not yet included in this edition.

This work is especially valuable in its section on diseases of the nervous system. The style is clear, concise, the illustrations are good and the typography all that can be desired. It may be safely recommended as a guide to the American medical student. [J. L. S.]

The Crime of Credulity. By Herbert N. Casson. New York, Peter Eckler, Publisher.

In his preface the author of this book says, "Just as there is in every human being a vermiform appendix—a useless and dangerous remnant carried up from some lower stage of existence; so there are in our immature civilization similar survivals of medievalism and barbarism. These appendices may remain harmless and unnoticed for years; but they may at any time cause intense pain and possibly death. Neither the physical nor the social body are (*sic*) safe as long as these tag-ends are allowed to exist in it; and it is with the desire to prevent a threatened attack of national appendicitis that this book has been written."

The symptoms of this national malady are all sorts of crude beliefs and opinions that are now rampant in this country. The author seeks to eradicate them by means of a small paper-covered volume of 254 pages. [J. H. L.]

Out of the Pigeon-Holes. By E. S. Goodhue, M. D., Alma. The George F. Butler Publishing Company.

A series of essays on a variety of topics, nonmedical, but written by a physician. The prose is interlarded with a few original poems. The book indicates the growing tendencies of physicians to dabble in general literature—not always to their own advantage or to that of literature. Dr. Goodhue, however, has a lively style, and says a good thing on every page or two. We have read it with interest—and it is always to the credit of any book to be able to arouse interest. [J. H. L.]

Manual of Childbed Nursing with Notes on Infant Feeding. By Charles Jewett, A. M., M. D., Sc. D., Professor of Obstetrics and Diseases of Women in the Long Island College Hospital. Fifth Edition. Revised and Enlarged. New York. E. B. Treat & C., 1902. Pages 84. Price 80 cents.

In this little manual Professor Jewett has condensed all that a well-trained nurse should know while attending upon a puerperal case. The material is arranged in short paragraphs so as to be quite accessible. The section on Artificial Feeding in reality passes beyond the object of the book, and would be instructive to the physician as well as to the nurse. We do not doubt that the book will be of the utmost service to professional nurses and to obstetricians as well. [W. A. N. D.]

Proceedings of the Washington Academy of Sciences. Vols. III and IV.

Eight numbers of volumes III and IV of the Proceedings of the Washington Academy of Sciences are before us for review. These numbers are (1) by C. Hart Merriam on Seven new Mammals from Mexico, including a new genus of rodents; (2) by the same author on descriptions of twenty-three new harvest mice (genus Reithrodontomys); (3) by Nathan Banks, on Thysanura and Termitidæ, one of the papers from the Hopkins Stanford Galapagos Expedition of 1898-1899; (4) by Harriet Richardson on the Isopods, a paper from the same exposition; (5) by Frederick V. Colville, on Harrimanella, a new genus of heathers, a paper from the Harriman Alaska Expedition; (6) by C. Hart Merriam, on Preliminary revision of the Pumas; (7) by Nathan Banks on Arachnida, a paper from the Hopkins Stanford Galapagos Expedition, 1898-1899; and (8) by Justus Watson Folsom, on Apterygota, a paper from the Harriman Alaska Expedition. The fasciculi are printed on good paper and contain numerous excellent illustrations. The monographs are of much scientific importance. [J. M. S.]

Transactions of the Vermont State Medical Society 1900. Published by the Society. D. C. Hawley, M. D., Secretary. Annual Meeting in 1901, at Bellows Falls, October 10 and 11. Note.—Each article herein stands upon its own merits as the expression of its author's opinion, for which the Society does not hold itself responsible. Burlington: Free Press Association, Printers, Binders and Stationers. 1901.

This carefully arranged volume of 195 pages contains the report of the Eighty-seventh annual meeting of the Vermont State Medical Society, held at Rutland, Oct. 11 and 12, 1900. Reports of the various officers, the President's and Vice-President's annual address and original articles by some of the members of the Society are also included. The Constitution and By-Laws of the Vermont State Medical Society and a list of the members are also set forth in the text. The Secretary points out that, from year to year, on an average of from 15 to 20 new members are added to the enrollment of members in good standing. [F. J. K.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

American Orthopedic Association. The 16th. annual meeting was held in Philadelphia, June 5-7. One afternoon an excursion was made to the Corinthian Yacht Club for supper, and on the morning of June 7, after the business meeting, a visit was made to the Orthopedic Department of the University of Pennsylvania. The following officers were elected for the ensuing year: President, Dr. L. A. Weigel, Rochester, N. Y.; vice-presidents, Drs. R. H. Sayre, New York and R. T. Taylor, Baltimore; secretary, Dr. John Ridlon, Chicago, and treasurer, Dr. E. G. Brackett, Boston.

Bequests to Charity. By the will of the late F. G. Dreer, a sum, probably over $100,000, is to be divided after the lapse of 10 years among the Hayes Mechanics' Home, Home for Aged and Infirm Colored Persons, Frederick Douglass Hospital, Home of Industry, Presbyterian Home for Widows and Single Women, Presbyterian Hospital, German Hospital and other charities. Should his sons die without issue, over $200,000 are to be divided among a large number of hospitals, homes, etc.—The late Dr. Hulshizer left his library to St. Joseph's Hospital, with an additional bequest of $500 upon the death of his widow.—The late Mr. V. Geng, of Media, left $5000 each to St. Mary's Hospital, Presbyterian Hospital, German Hospital and Jewish Hospital, Philadelphia, and $1000 to the Chester Hospital, of Chester.

WESTERN STATES.

University of California. In our issue of May 24, we erroneously stated that students, who have taken the 3 years' premedical course at Berkeley, will no longer be admitted to the medical school of the University of California. This we find is not true, because the revision of the premedical course means simply that students spend 2 instead of 3 years in the academic department of Berkeley, and 4 in the medical department in San Francisco, receiving at the beginning of the clinical years the degree of B. S., and upon their completion the degree of M. D. The details of this new plan appear in the new announcement published by the University of California.

Scarlet Fever in Kenosha, Wis. So many new cases of scarlet fever have been reported during the past week that rigid quarantine measures have been taken to prevent the spread of the disease.

Borax in the United States. The only part in the United States in which borax is produced is in California and Nevada, from which 2 states more than a quarter of the world's production of this article is obtained. Most of the borax in California is found in what is known as the Death Valley. The presence of borax in this region was found by the discovery of the body of a woman who had died years before. Some prospectors coming upon the body, found it in a state of perfect preservation, due to the action of borax. The borax is found in balls, some as large as pumpkins, lying in the tough clay around the edge of the marshes, or in sand beds. Technically, this is calcium borate. Of the 23,000 tons produced annually in the world, California and Nevada produce 6,000.

A Leper Immigrant. Surgeon-General Wyman, U. S. P. H. and M.-H. S. has received the report of the attempted entrance into this country at Detroit, of a leper immigrant from Syria, who claimed that he landed at Halifax 2 months ago. He is said to have remained in Canada until May 26th. last.

The Disinfection of Libraries. The Minnesota State Library Commission has prepared a pamphlet describing how to disinfect books in libraries. Every librarian should provide an air-tight box in which books from quarantinable districts could be disinfected. Libraries should be closed during an epidemic and not be reopened until after fumigated. In the disinfection of books, formaldehyde gas is advised. This may be used in a steam moistened room for 24 hours, or it may be substituted by formalin in damp air.

SOUTHERN STATES.

Association of Surgeons of the Southern Railway. The seventh annual convention was held in Washington, June 5 and 6. Dr. Rhett Goode, of Mobile, Ala., first vice-president, presiding. Members of the association were received

by the President, and there was an excursion to Mount Vernon. The annual banquet was held June 6.

Army Medical Corps. The President has nominated Col. William H. Forwood, Assistant Surgeon-General, for the position of Surgeon-General with the rank of Brigadier General, in the place of Surgeon-General Sternberg, recently retired. Born in Delaware, Colonel Forwood graduated from the University of Pennsylvania, and entered the Army Medical Corps in 1861. He became Major in 1876 and Colonel in 1897. He will be retired September 7 next.

Smallpox in Wiliamsburg, Md. So great proportions has the epidemic of smallpox in Wililamsburg assumed that schools and churches have been closed and freight and express business has been suspended temporarily.

Association of Military Surgeons in the United States. At the 11th. annual meeting, held in Washington June 5-7, the opening address was delivered by President Roosevelt, who spoke highly of the good work done by the military surgeons whom he had watched working in the field hospitals. The address of welcome was made by Dr. S. S. Adams, president of the Medical Society of the District of Columbia. The Enno Sander Prize of $100 was awarded Lieutenant Colonel Valery Havard, for his thesis entitled: "The Most Practical Organization for the Medical Department of the United States Army in Active Service." Lieutenant Colonel J. V. R. Hoff spoke upon the broader mission of the association. Among the foreign representatives were: Medical inspector Kimura, of the Japanese Navy; Captain Tamura, of the Japanese Army; Colonel Exham, of the British Army; Colonel Nimier, of the French Army; Lieutenant Colonel Molina, of the Mexican Army; Lieutenant Colonel Neilson, of the Canadian Army, and Dr. Emerico Castelli, of the Royal Italian Army. A committee of 3 members was appointed to confer with the judiciary committees of Congress as to the best procedure for incorporating the association. The following officers were elected for the ensuing year: President, General R. A. Blood, Massachusetts; vice-presidents, Medical Director J. C. Wise, U. S. N., and Surgeon-General Walter Wyman, U. S. P. H. and M.-H. S.; secretary, Major J. E. Pilcher, Pennsylvania, and treasurer, Lieutenant H. A. Arnold, Pennsylvania.

The Medical Society of the District of Columbia inspected the Government Hospital for the Insane, June 4. Later the regular meeting of the society was held under the presidency of Dr. S. S Adams.

The Care of Infants. Dr. Bosley, Health Commissioner of Baltimore, has prepared a pamphlet recommending proper diet, frequent bathing, light clothing and fresh air for infants during hot weather. The details for the correct care of the baby during the summer are given in this interesting little book.

The American Laryngological, Rhinological and Otological Society elected the following officers for the ensuing year at the eighth annual meeting, held in Washington, June 2-4: President, Dr. J. A. Stucky, Lexington, Ky.; vice-presidents, Drs. M. R. Ward, Pittsburg, L. C. Cline, Indianapolis, C. D. Roy, Atlanta and P. F. Gildea, Colorado Springs; secretary, Dr. W. C. Philips, New York, and treasurer, Dr. E. W. Day, Pittsburg.

Death of Dr. King. Dr. Stephen H. King, a graduate of Harvard Medical School in 1872, professor in the medical department of Johns Hopkins University, died in London June 7, of pneumonia. Born in Lowell, Mass., about 54 years ago, he returned to Lowell to practise medicine early in the 70's. Later he moved to Providence and from there to Baltimore, to accept his professorship at Johns Hopkins University.

MISCELLANY.

Typhus Fever in Mexico. It is reported that employés in the Cananea Mining Camps in Mexico are dying at the rate of 100 or more per month. When attacked by the disease they die in less than 3 days. The Cananea Mining Camps produce copper, and are situated about 150 miles from the Texas boundary line, about 300 miles from El Paso. The railway connection is to Benson, Arizona, on the Southern Pacific Railway.

Bubonic Plague. No dead rats have been found in Honolulu, H. I., in the locality in which the recent deaths from the plague occurred. An amendment has been recommended by the Senate Committee, providing for the payment of $1,000,000 by the United States Government and authorizing the territory of Hawaii to issue bonds for $500,000, to pay for the destruction of property in Hawaii on account of the prevalence of the plague in 1899 and 1900.—News has reached the State Department of an outbreak of the plague at Mayinga, Madagascar.

Cholera. A German sailor died of cholera at Tientsin, China, June 6. A Japanese soldier died in Pekin, June 7. A decided amelioration of the cholera conditions is reported from Canton, Honam and Fati. The Canton authorities have announced the precautions to be taken against plague and cholera, due to the efforts of the American consul.—The latest reports from the Philippine Islands, April 19, state that the disease, while kept well in control, has not, unfortunately, yet been stamped out. At this time, 16 Chinese, 7 Americans and 5 Europeans have contracted the disease. The provincial towns have suffered more than Manila, in proportion to population. Cases of cholera have developed on 7 boats in quarantine, and no case has appeared on any boat despatched during the past 4 weeks after quarantine. All baggage is disinfected as soon as the boats enter quarantine, where each vessel is kept 5 days.—The marshy ground of the Ganges delta, with its vast masses of vegetation decaying under the tropical sun, is the native home of the cholera. In that pestilential region the cholera and plague are found every year and all the year round.

Obituary. Dr. John Vedder, at Saugerties, N. Y., May 22, aged 86 years.—Dr. Henry van der Berg, at Zeeland, Mich., May 23, aged 45 years.—Dr. Henry Howard Hill, at Everett, Pa., May 22, aged 57 years.—Dr. Alexander Montague, at Sacramento, Cal., May 21.—Dr. Ford S. Dodds, at Anna, Ill., May 21.—Dr. George Long, at Fort Atkinson, Wis., June 2, aged 60 years.—Surgeon Dallas Bache, at San Diego, Cal., June 3.—Dr. J. Augustus Michie, at Albemarle county, Va., June 6, aged 75 years.—Dr. Joseph Eastman, at Indianapolis, Ind., June 5.—Dr. Charles M. Fairbrother, at New York City, June 6, aged 70 years.—Dr. Benjamin A. Church, at Oneonta, N. Y., June 6, aged 47 years.—Dr. A. B. Robinson-Messner, at Philadelphia, Pa., June 5.—Dr. William Ashcraft, at Smyrna, Del., June 7, aged 78 years.—Dr. Otis R. Freeman, at Freehold, N. J., June 9, aged 93 years.

CONTINENTAL EUROPE.

University Notes.—Berlin: Professor Rudolf Virchow, who is regaining power in the leg which was fractured last winter, being already able to walk with support, sometimes using only one crutch, is at present taking the cure at Teplitz-Schönau. His general condition is much improved.—**Bonn:** Dr. Hermann Wendelstadt has been made professor of pharmacology and Dr. Heinrich Pletzer, professor of gynecology.—**Breslau:** Mr. Georg Thür, of Berlin, who prepared the plans for the recently erected clinic and medical institute at the University of Breslau, received the honorary degree of M. D. from the University of Breslau, May 6.—Dr. Poleck, professor of pharmacology and director of the pharmacological institute, who recently celebrated his 80th. birthday, will be retired October 1.—Dr. Neisser, professor of genito-urinary diseases, delivered a course of lectures, May 12, 13 and 14, by special request of the minister of education. His subject was "The Significance and Dangers of Venereal Diseases."—**Brussels:** The International Conference for the Prophylaxis of Syphilis and Venereal Disease will meet in Brussels, September 15-20, 1902. The secretary of the meeting is Dr. Dubois Havenith, Brussels.—**Freiburg:** Dr. Pfister has been put in charge of the psychiatrical clinic during the present session, in the place of professor Emminghaus, who is absent on account of illness.—**Halle:** Dr. Karl Heilbronner has been appointed professor of nervous diseases.—**Munich:** Dr. Rudolf Emmerich has been appointed director of the Hygienic Institute, and Dr. Neumayer has been appointed director of the medical polyclinic.—**Paris:** The title of honorary physician has been conferred upon Drs. Jaccoud, Tenneson and Audhoui; that of honorary surgeon has been conferred upon Dr. Panas.—The University of Paris, in which 9,300 students are enrolled, is the largest university in the world.—**Pavia:** Dr. Bottini will celebrate the 25th. anniversary of his appointment as professor of surgery in October. The students of the University of Pavia have already presented Professor Bottini with an address, composed by Professor Rossi, inscribed on vellum.—**Rome:** The Fourth International Congress of [illegible] will be held in Rome, Septem-

ber 15-20, 1902, Dr. Baccelli being the honorary president. Professor Pasquali, with Professor Pestalozza as general secretary, has the matter in charge.—**Stuttgart:** Dr. von Koch, director of the Medicinalcollegium, has been given the title of professor upon his retirement. Dr. von Rembold has been appointed his successor.—**Vienna:** Following the retirement of Professor von Drasche, Dr. Heinrich Lorenz, formerly chief physician at the Kaiser Franz-Josef's-Hospital, becomes director of the third medical department of the Vienna General Hospital.

Famine in Russia.—The situation of the famine-stricken peasants continues to grow worse. In 241 villages of the Minzelinsk district, 6,815 cases of scurvy are officially recorded, as compared with 2,723 cases reported a month ago. This is only a sample of existing conditions in other famine districts.

Physicians in Siberia.—While physicians are rare in the Russian provinces of Europe they are very rare in Siberia. Because of the snow, ophthalmia is particularly prevalent, and on this account the Government at St. Petersburg sends a number of oculists to Siberia. The Government reports show that 32,000 patients were treated and 11,000 operations performed last year. One of these traveling detachments of oculists, in a 6 months tour through the province of Irkoutsk, treated 3227 patients, performing 243 operations upon the eyes.—*Le Soleil.*

Experiments with Borax.—A pamphlet has recently been published by the Imperial Health Office, Berlin, giving the results of experiments made to determine the effect of borax upon the human system. The tests were made upon 4 men and were continued for 2 years. They have proved that borax in the human system retards the assimilation of albumin and fats and thus interferes with the nutrition of the tissues. Borax remains in a man's body 8 days after ingestion. The continued use of borax even in small quantities causes an excessive loss of liquid and a decrease in weight without increasing the sensation of thirst or hunger in the individual. In some cases these phenomena assume a threatening aspect. At the same time that these results were published Professor von Lipmann claims to have found large quantities of boracic acid in oranges and lemons. Besides, it has been stated that Virchow has been in the habit of taking a dose of borax daily for years, and that this has resulted in great benefit to his health. Since his 80th. birthday he has been taking a double dose of borax daily.

Russian Medical Society.—On February 15, the Russian Medical Society celebrated the 100th. anniversary of the birth of its founder, Dr. Fedor Inosemzeff, who died in 1869. Dr. Inosemzeff was professor of surgery in the University of Moscow until his death.

A Physician Prime Minister.—The Premier of France, who has formed a cabinet to succeed the retiring Waldeck-Rousseau Ministry, is a physician, Dr. J. L. E. Combes, who received his M. D. degree in 1867. He is now in his 68th. year, but only practised medicine for 8 years, having been elected Mayor of the town of Pons in 1875. Since that time he has held many political positions. His most important work was a book on the psychology of St. Thomas Aquinas.

Cancer in Germany.—Prof. von Leyden's commission, which, in October, 1900, began an investigation of the spread of cancer, has just published a report stating that 4,430 men and 7,514 women were under medical care in Germany afflicted with that disease. This shows that the victims of cancer number 215 in each million of the population. Patients over seventy years of age were most numerous. Seventy per cent. of all cases suffered from cancer of the digestive organs.

Obituary.—Dr. Möller, chief medical officer of the Danish Army, died recently.—Dr. Louis Secretan, professor of internal medicine, died recently in Lausanne, aged 49 years. Dr. Franz Scholz, formerly physician-in-chief at the Vienna General Hospital, died recently, aged 82 years.—Dr. Theodor von Kezmarszky, professor of obstetrics and gynecology and director of the gynecological clinic in the University of Budapest, died May 18, aged 61 years.—Dr. Karl F. Skrzeczka, honorary professor in the University of Berlin, died May 20, in his 70th. year. Born in Königsberg, he came to Berlin as professor of medical jurisprudence in 1865.—Dr. Guido von Török, director of the Sophia Hospital and privatdocent in surgery in the University of Vienna, died May 20, from an infected wound, aged 52 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

May 24, 1902. (No. 2160.)

1. Remarks on Myasthenia and Ophthalmoplegia. WILLIAM R. GOWERS.
2. A Clinical Lecture on a Case of Traumatic Epilepsy with Adhesion of Skin to Brain; Treated by Insertion of Gold Foil. RUSHTON PARKER.
3. A Case of Complete and Temporary Paralysis of the Limbs in a Child, Probably a Case of Recovery from the Initial Stage of Acute Anterior Poliomyelitis. JUDSON S. BURY.
4. A Case of Sporadic Cretinism, in which a Relapse Occurred owing to Omission of Thyroid Extract. ARTHUR HALL.
5. Myxedema in Mother and Child. S. W. MacILWAINE.
6. The Diazo-Reaction as a Method of Diagnosis in Clinical Medicine. H. W. SYERS.
7. Three Cases of Cerebrospinal Fever Treated with Antipyrine. E. C. FREEMAN.

1.—**Myasthenia** or myasthenia gravis is met with chiefly in the first half of adult life and is characterized by general feebleness of the muscles, by their quick exhaustion on use and the quick renewal by rest of what power they possess. The course of the disease is seldom definitely progressive nor has great improvement been often seen except as a transient event. Death has been the result of intercurrent disease and has yielded no clear indication of the nature or the seat of the malady. Treatment has seldom had marked effect. The symptoms vary in different cases, and in some there has been considerable loss of power in the eye muscles. Gowers describes 3 cases in which **ophthalmoplegia** was very marked. He calls attention to a peculiar alteration in the smile due to the absensce of the normal action of the zygomatic and risorius muscles. He calls this smile the nasal smile. The furrow of this smile is seen entirely above the upper lip, ceasing just above the angle of the mouth. The ophthalmoplegia seen in the cases reported was the most conspicuous and most enduring symptom. It presented a strong resemblance to the ophthalmoplegia from nuclear degeneration. [J. M. S.]

2.—Parker reports the case of a man, aged 38 years, who had suffered from fits and a drowsy, vacant manner for 18 years. In 1894, he fell from a railway truck, striking a stone and producing a compound depressed fracture of the left frontoparietal region. At the time of the accident he was trephined and the spicula of bone and the trephined disc were removed. He got well and returned to work as a tailor. Three or 4 years later he had some fits accompanied by violent twitching, in one of which he dislocated his jaw; in 1895, his fits returned again; at the seat of the injury there was a translucent cyst over the gap in the bone. This cyst was excised, the covering loosened from the bone and sewed together over the aperture. The patient had no more fits after this operation until December, 1901, when the attacks returned and in one of them he again dislocated his jaw. The scar over the original seat of injury was depressed, pulsated slightly and was soft to the touch. When pressure was applied to it, unconsciousness resulted, the patient's head and eyes turned to the right and his right lower lip and fingers began to twitch. The old scar was dissected up and away from the brain to which it was adherent. The dura was found turned out along the margins in the opening of the bone and **adherent to the bone and to the skin by scar-tissue.** The dura was loosened up and strips of gold foil were placed between it and the exposed brain, on the one hand, and the skull on the other hand. The patient recovered completely from the operation and during his convalescence had but one fit, early the next morning. [J. M. S.]

3. Perry reports the case of a girl aged 9 years who

complained of being shaky and cold. Two days later she was shivering and her skin was very hot. The next day her legs seemed to fail her, and the day after that she was unable to move either her hands or her legs. Diphtheria was excluded as a cause of this **paralysis** which gradually disappeared. The author believes that there was a profound although transitory disturbance of the functions of the parts attacked, although he is not able to indicate the site of the lesion nor its nature. [J. M. S.]

4.—Hall reports the case of a **cretin** who improved very much on **thyroid treatment**, but who had a relapse owing to the cessation of this treatment for 6 months. When the child was put upon thyroid treatment again, the improvement in his condition returned. [J. M. S.]

5.—MacIlwaine reports cases of **myxedema in mother and daughter.** [J. M. S.]

6.—Syers has examined the urine of 125 patients for the **diazo-reaction.** Five of them gave positive results; one patient was suffering from acute tonsillitis, one from lobular pneumonia, 2 from typhoid fever and one from acute tuberculosis. The last patient was thought at first to have typhoid fever and the diazo-reaction failed at the very point when it would have been of the greatest possible use. As a result of his observations the author concludes that, so far as typhoid fever is concerned, the diazo-reaction is of little or no practical use. [J. M. S.]

7.—Freeman reports an outbreak of **infective meningitis** that occurred on the transport *Montrose*, which was carrying a detachment of a British regiment and Boer prisoners of war to the number of 1000. Measles and pneumonia broke out at the commencement of the voyage; the latter being of particularly virulent type, 39 cases with 13 deaths, and influenza also occurred. There were 6 patients suffering from infective meningitis, 3 of whom were treated in the ordinary way and died. The other 3 were **treated with antipyrine,** 2 of whom recovered and one died after an illness of 90 days. Antipyrine was given in doses of 5 grains 3 times a day in 2 of the cases, and in doses of 10 grains 3 times a day in the fatal one. [J. M. S.]

LANCET.

May 24, 1902.

1. A Lecture on Thirty Years' War Against Lunacy. T. CLAYE SHAW.
2. An Address on Acute Pleurisy with Effusion. GEORGE R. MURRAY.
3. A Contribution to the Study of Tropical Abscess of the Liver. RICKMAN J. GODLEE.
4. Is Chloroform More Dangerous Than Ether, etc.? H. CHALLICE CROUCH and ELDRED M. CORNER.
5. The Feeble-Minded and Crime. MARY DENDY.
6. Improvements in the Operation for the Radical Cure of Inguinal Hernia by the Use of Some New Instruments and Gold Wire Sutures. IGINIO TANSANI.
7. A Case of Perforation of the Rectum Into the Peritoneal Cavity, Laparotomy; Suture: Recovery. G. R. TURNER.
8. A Short Note on the Use of Linen Sewing-Machine Thread for Ligatures and Sutures. ARTHUR E. J. BARKER.
9. Meningo-Encephalocele. EDGAR DU CANE.
10. Observations on Diet. HARRY CAMPBELL.

1.—T. Claye Shaw delivered a lecture on **thirty years' war against lunacy,** before the Post-Graduate Medical Association, on February 12, 1902. He points out that, prior to 1870, the administration and regulation of London asylums were very inadequate, and persons of unsound mind were kept in conditions quite unsuitable for them. Systematic treatment for patients was not carried out; laboratories were lacking and teaching of the subject was not recognized in the schools. He contends, however, that, with the progress that has been made in the care and study of insanity during the past 30 years, material progress in the successful curative treatment of insanity has not been made, and that there are no more people discharged cured from asylums at the present time than formerly. He states that in America the percentage of cures to admissions is less than in England, for the reason that the authorities are more particular before allowing any one to leave as cured. He thinks that, in the main, most asylum statistics are unreliable and therefore useless. The remainder of his lecture is devoted to the consideration of the changes and improvements of asylums and the various laws which have been enacted for the control of imbecile patients in England. [F. J. K.]

2.—George R. Murray delivered an address on **acute pleurisy with effusion** before the Middlesborough and District Medical Society, on November 27, 1901. He points out that, from recent evidence, cold must be considered a predisposing factor in the majority of cases, and that evidence points to infection as the exciting cause. During the last few years it has been shown that the great majority of cases of pleurisy are either tuberculous or rheumatic in origin, or are due to the pneumococcus. The most important cause of acute pleurisy is by infection due to the tubercle bacilllus. Demonstration of this bacillus in the tuberculous effusion, he points out, is difficu t by microscopical examination of the fluid, but the results of inoculation are the most positive method of demonstrating the nature of the process. Recently Besançon and Griffin have recommended a new culture medium, consisting of nutrient agar, to which is added glycerine and rabbit's blood, spread on the bottom of an Erlenmeyer's flask. Colonies of tubercle bacilli appear upon these media when incubated at 37° C. after 3 or 4 weeks. This method insures positive results more frequently than other cultural methods. He contends that the previous history is often most instructive in regard to its origin of tuberculous pleurisy, and that persons who had this disease not infrequently develop tuberculosis of the lungs later, and, further, that post mortem evidence points to the latter conclusion. Purulent effusions are most commonly due to infection by pneumococci, although this micro-organism may be associated with serous effusions. He points out, as Dr. J. W. Washbourn has shown, that the symptoms of pneumococcic pleurisy may be identical with those of lobar pneumonia. The typhoid bacillus, the streptococcus pyogenes and the staphylococcus have been found associated with serous effusions, although the streptococcus pyogenes and staphylococcus are more commonly associated with purulent effusions. In empyemata, bacteriological examination of the pus is often a useful aid to prognosis, as the symptoms vary according to the micro-organism present. This has been shown by Mr. Bilton Pollard, who also holds the view that pneumococcic empyema runs a most favorable course. Staphylococic empyema is less acute, while streptococcic empyema run an acute course and is associated with pronounced toxic symptoms. The latter observer contends that, if the effusion is only slightly turbid and contains streptococci, it should be considered an empyema and treated accordingly. Murray states that it is always important to ascertain the cause of a serous effusion. A careful history of the case and physical signs which cannot give the required information, may, nevertheless, indicate that the pleurisy in all probability is tuberculous. By cultures of the fluid withdrawn in a sterilized syringe, the pneumococcus, streptococcus pyogenes and streptococcus may be demonstrated. If no growth occurs at the end of 48 hours, the evidence is in favor of tuberculous origin. He thinks that the agglutination test, which occurs when a culture of tubercle bacilli is mixed with the fluid from the tuberculous effusion, has not been sufficiently simplified for regular use. The same may be said in regard to the tuberculin test. An examination of sediment obtained by centrifugalizing some of the fluid withdrawn by the exploring syringe may give valuable hints in regard to the nature of the effusion. In acute tuberculous pleurisy, the presence of great numbers of lymphocytes with some red blood-cells is suggestive of the character of the effusion, upon which the treatment and prognosis largely depend. In cases of tuberculous pleurisy, it should be borne in mind that tuberculosis of the lungs may occur. Streptococcic pleurisies are acute and severe, while the prognosis in pneumococcic pleurisy is more favorable, its duration is usually between one and 2 weeks. The ordinary hypodermic syringe is unsuitable for exploring purposes, owing to its small capacity and the bore of the needle being too small. He thinks the needle of the exploring syringe

should be about 3 inches in length; it should have an internal diameter of not less than 1/16 of an inch, and the syringe probably should be about 3 times as large as the ordinary hypodermic syringe. He further contends that the ordinary antitoxin syringe should not be employed for exploring purposes, as he has known the needle to snap off short. The method of sterilizing the syringe which he prefers is as follows: Place the needle in a test-tube containing water, heat the tube until the water boils for about one minute. The needle is then immersed into a carbolic acid solution (strength 1 to 40), and the syringe should be washed with the carbolic solution 2 or 3 times. If cultures are to be made from the fluid, both the needle and the syringe should be boiled in a pan. The skin should be washed with soap and water and then with a 1 to 20 carbolic lotion. The physical signs in the case largely determine the site at which the puncture should be made. Murray thinks in the large majority of cases the selected point should be in the eighth or ninth intercostal space, in the line of the angle of the scapula, having the patient in a sitting posture. He prefers freezing the skin with the ethyl-chloride spray before making the puncture. In introducing the needle, care should be taken not to thrust it too deeply at first. When no fluid appears in the barrel of the syringe, the contents in the needle should be examined, for, in some cases of empyema, the pus may be viscid and not flow through the needle, and a microscopical examination of its contents may reveal the nature of the process. Rest in bed is necessary in all cases of acute pleurisy. If pain should occur at the onset of acute pleurisy, he recommends hot applications of linseed or linseed and mustard poultices and belladonna fomentations. Strapping the chest may relieve the pain in many cases. The application of leeches he contends is certainly useful. It may be necessary to employ a hypodermic injection of morphine. He recommends a saline aperient every morning as soon as exudation is present. In early effusion, 20-grain doses of sodium salicylate 3 times a day are often useful. Iodine internally may aid absorption. A dram of oleate of mercury rubbed into the affected side each day may assist absorption. When the effusion is large, as indicated by the physical signs, so that dulness covers the hole of one side posteriorly, or anteriorly reaches up to the clavicle, aspiration should be performed at once. It is advisable to remove some of the exudate when dulness extends above the level of the fourth rib in the nipple line. He points out that physical signs do not always indicate the amount of fluid, and aspiration is always indicated when there is marked dyspnea on slight exertion, cyanosis, palpitation, irregularity of the pulse or signs of edema of the opposite lung. When there are no urgent symptoms and the effusion is moderate, fluid should not be removed during the first 10 days. When no diminution in the size of the effusion occurs during the first week or 10 days, recovery may be hastened by aspiration, but if signs of absorption can be demonstrated, aspiration should not be performed. Potain's aspirator is the most useful instrument for removing fluid from the pleural cavity. He believes it is not advisable to attempt to remove all the fluid at the first aspiration, considering it better to withdraw not more than 2 pints at one sitting. The occurrence of pain and cough during aspiration is an indication to remove the aspirator. The opening in the chest wall should be closed with antiseptic wool and collodion. Incision and drainage of the pleura are indicated in empyema; aspiration may be performed, however, to give temporary relief. Absolute rest in bed is advisable for 2 or 3 days after aspiration. Respiration exercises are indicated as soon as there are signs of absorption or about 3 or 4 days after aspiration. The treatment during convalescence is most important. It should consist of pulmonary exercises, the patient should spend much time in the open air, and, if possible, should be sent to a high altitude. [F. J. K.]

3.—R. J. Godlee presents a study of **tropical abscess of the liver** and details 10 cases which he has treated. Some of the complications of liver abscess are first presented. Perihepatitis is an almost invariable accompaniment. This inflammation results in adhesion of the liver to the parietes and produces the acute pain which is distinguished from the typical liver pain. Before adhesion takes place, friction can be felt and heard over the inflamed area. If this perihepatitis with adhesion has not taken place, the introduction of an exploring trocar or aspirating needle is dangerous. Inflammation of the peritoneum covering the liver often occurs in definite attacks, accompanied by fever and vomiting. It usually affects the convex surface of the liver, and consequently adhesion to the diaphragm most frequently occurs. Perihepatic peritonitis does, however, sometimes occur on the under-surface of the liver, causing the stomach, duodenum and colon to become adherent to the liver and resulting not infrequently in subsequent contraction which may give rise to considerable interference with these organs. If the inflammation occurs in the transverse fissure, compression of the hepatic ducts is produced with resulting jaundice, and Godlee refers to such a case in which he found it impossible to free the common duct from the adhesions, and was obliged to perform a cholecystenterostomy. In this case for a time the whole amount of bile escaped through the liver abscess, an occurrence which is rare in the tropical form of this disease. Stress is laid upon the importance of exploring the liver without delay when in the course of an abscess a marked pleural friction develops. Such friction is ominous of a rupture into the lung. In every case of rupture into the lung an abscess of greater or less extent must be found in the lung tissue. The signs of cavity formation will be met with most frequently below and to the inner side of the right nipple, although not infrequently it may occur behind, and in a few instances a liver abscess has burst into the left lung with the formation of a cavity there. Godlee asserts that lung abscesses of liver origin do not behave as do those from pneumonia, injury or tubercle, but show a peculiar tendency to burrow and destroy large areas of lung tissue. The pus discharged from a secondary lung abscess is chocolate-colored and frequently contains the ameba coli. Such a discharge frequently keeps up after a liver abscess has completely healed, leaving little or no trace in the liver substance. Pulmonary abscess consequent upon hepatic abscess should be opened without delay. Not infrequently the ameba coli, although absent in the immediate discharge of a liver abscess, can be found later. Reference is made to the great latency of tropical abscess of the liver, developing even years after the patient has left the tropics. Latent abscess, however, may suddenly become acutely septic as the result of infection with the colon bacillus or some other septic organism. Some tropical abscesses of the liver also are acute and septic from the beginning. These, it is thought, should be classed by themselves. The method best suited to the thorough evacuation of most liver abscesses is as follows: If 2 lines be drawn vertically downwards, prolonging the anterior and posterior folds of the axilla as far as the margin of the ribs, they will at the lower part inclose the space where the widest interval intervenes between the lowest part of the pleura and the costal margin, an interval generally of 2 inches and often even greater. The incision may conveniently be made transversely—that is, parallel with the lower margin of the pleura— and the portion of one rib and cartilage that crosses the wound obliquely should be removed, great care being taken to separate the structures on the deep surface of it without injuring the pleura in case by chance it should extend lower than usual. Generally the structure thus exposed consists only of the origin of the diaphragm, but if the pleura should be low, it is easily recognized and may, without any difficulty, be dissected up without injuring it and pushed out of the way to the upper part of the wound. If it should accidentally have been opened, the suture of the opening is a simple matter and it is essential to make it perfectly air-tight before proceeding. The rest of the operation consists of incising the diaphragm, either in the direction of the fibers or across them (the author prefers the former method), and then cutting through the diaphragmatic peritoneum. If there be no adhesions, the liver may either be sutured to the diaphragm and the chest walls, or the parts around the opening may be carefully plugged with some antiseptic material. If the latter course is adopted, it must not be forgotten that, if the abscess be large, the liver will at once shift its position, and that this shifting will take place in the upward direction. This method is much to be preferred to the method of opening the abscess behind, since the latter operation must necessarily be a transpleural one. The anterior operation is the only possible one in certain abscesses of the right lobe and in all those of the left. The abscess can be opened after the liver is exposed, by means of hemostatic

forceps. Although the bleeding is usually free at first, it is usually controlled with packing about the tube. Profuse hemorrhage is more likely to occur in the septic cases than in the truly amebic ones. [J. H. G.]

4.—Crouch and Corner discuss the **relative dangers of chloroform and ether.** They present a careful study of 2400 cases in which ether and 600 in which chloroform was employed. Their observations were particularly directed to postoperative pulmonary complications. Of the 2400 ether cases, 10 developed temperature with some respiratory trouble within 24 hours, and all of these 10 had inhaled gas previous to ether; in none of these patients was there any previous history of bronchitis, and all were in good condition at the time of the operation and took the anesthetic well. The operations were all prolonged ones and done upon the trunk. The 600 chloroform cases were all anesthetized under the exact conditions that surrounded those to whom ether was given. None of these 600 patients developed any form of respiratory trouble. Reference is made to 2 patients who had previously taken ether and developed subsequent inflammation of the respiratory tract, and who were anesthetized afterwards with chloroform without any such postopertaive complication. Of the 10 ether cases, one patient, who developed respiratory trouble, died of a bronchopneumonia. The authors recommend chloroform for all prolonged operations on the trunk, and approve the method of continuing ether anesthesia with chloroform. [J. H. G.]

5.—Mary Dendy contributes an article on the **feeble-minded and crime.** As the result of many years' work amongst the poor, of minute attention to the condition of the children in the English public elementary schools and in their homes, and of a certain amount of reading and consideration of expert opinion, the author had arrived at the conclusion that the main cause of most of the evils which keep many people in a degraded condition, is weakness of intellect. She thinks the weakness of intellect is, in the majority of cases, an inherited disease, that the very large proportion of feeble-minded persons have children, and that the only method of stopping the increase of this malady is by caring for the feeble-minded persons during their whole lives. Feeble-mindedness is frequently responsible for the drunkard, the pauper, the criminal and the corner lad. She argues that private charity has often for its object the care of the feeble-minded population for a limited time and that, after this temporary care of training, the patients are turned out again into the world. They are trained to obey and behave decently under the strict supervision of their keepers, but not trained to stand alone, and in many cases are more helpless. Examples of feeble-minded children and what becomes of them are mentioned. She argues that children, who are acknowledged to be feeble-minded and fit subjects for special education, should be under careful medical observation for the last few years of their school life, with the view of ascertaining whether they are suffering from mental incapacity. If they are, they should immediately on leaving the day-school (and in some cases before the time for their doing so has arrived), without any disastrous interval spent in learning the lesson of the streets, be transferred to a boarding school and thence again to an adult school, in which they might remain, working and playing, all their lives, children to the end, but happy, harmless children, instead of dangerous and degraded ones. [F. J. K.]

6.—Iginio Tansani recommends the **use of small gold wire sutures in the radical cure of inguinal hernia and the use of 3 specially devised instruments,** a hook for the cord, a retractor and a spatula, which instruments perform the operation to be accomplished with little handling of the tissues by the assistant. The use of these instruments and the employment of gold wire has resulted in a great improvement in the author's percentage of infections and recurrences. [J. H. G.]

7.—G. R. Turner reports an interesting case of **perforation of the rectum into the peritoneal cavity by a broom-stick.** An abdominal section was done and the peritoneal cavity was found to contain extravasated fecal matter. The tear in the rectovesical fold of the peritoneum was sutured with great care and drainage instituted. After the operation some fecal matter was discharged through the abdominal wound; this subsequently ceased and the patient made a good recovery. The successful result of the operation is attributed to drainage. [J. H. G.]

8.—A. E. J. Barker recommends the employment of **linen sewing-machine thread as a substitute for other suture materials.** It is strong, cheap, easily obtainable and stands frequent sterilization without becoming rotten. The author has used it extensively and has found it in every way satisfactory and much preferable to silk. The cotton thread is not strong enough for surgical ligatures and does not stand boiling well. [J. H. G.]

9.—Edgar Du Cane reports a case of **meningo-encephalocele** in an infant, aged 3½ days. The patient was brought to him for treatment by the midwife, who had delivered the mother. The latter, 35 years of age, had had 5 healthy children at full term, and one still-born. There was no particular difficulty during her last labor. At birth the child's head presented a tumor in the occipital region, globular in shape and connected with the head by a circular peduncle covered with hair. When the child cried, pulsation could be detected over the tumor. He diagnosed the case as one of meningo-encephalocele and decided to operate. After rendering the parts aseptic, 4 ounces of fluid were removed by aspiration, then the skin was dissected back from the membrane, and, finally, by separating each layer, the posterior portions of both occipital lobes were exposed. It was found impossible to return the exposed portion into the cranial cavity. The protruding parts were excised, the bloodvessels were tied or twisted, the membranes removed, the edges of the membranes stitched together and the skin sutured. An antiseptic gauze dressing was applied. The child died 16½ days after the operation. Post mortem examination showed almost complete cicatrization of the cerebral lesion. The ventricles were not greatly distended and pus was not present. He points out that the partial success attending the operative measures in this case would justify him in again attempting removal in a similar case. [F. J. K.]

MUENCHENER MEDICINISCHE WOCHENSCHRIFT.

January 21, 1902. (Vol. 49, No. 3.)

1. Further Communications Upon the Serum Diagnosis of Tuberculosis. E. ROMBERG.
2. Scientific Hydrotherapy and Water Cure. VON VOGL.
3. Contribution to the Treatment of Severe Anemias of Gastro-Intestinal Origin. F. PERUTZ.
4. A Peculiar Condition of the Urine (Emulsion Albumin) in Uremia. H. CRAMER.
5. The Combination of Diabetes, Incipient and Mellitus. KUHN.
6. Blood Poisoning and Amputation. H. BRAUSER.
7. Amputation and Blood Poisoning (second). H. DOERFLER.
8. Report of the Ambulatorium for Internal Diseases of the Medical Clinical Institutes (Geh.-Rath von Ziemssen) in the year 1901. KERSCHENSTEINER.

1.—Romberg contributes an exceedingly valuable article upon the value of **agglutination of the tubercle bacilli by blood serum** in the diagnosis of tuberculosis. His technique is as follows: A dry culture of tubercle bacilli is thoroughly triturated and emulsified, and to one liter of the emulsion 5 gm. of carbolic acid added, this is diluted one part to 3 of distilled water, and serum extracted by wet cups added in proportion of one part to 5, 10, 15, and 20, etc. The reaction is completed in test-tubes, and considered positive when within 44 hours the solution becomes clear. Altogether the reaction has been tested in 256 individuals. The results were as follows: In 33 newborn children, that is in the blood extracted from the placenta, no reaction occurred. In 102 persons, more than 14 years of age, without clinical signs of tuberculosis, the reaction was positive in 64 and negative in 58. Forty-three of the positive cases agglutinated only in proportions of 1 to 5 and stronger, and 18 of the remainder in dilutions of 1 to 10. The remaining 3 reacted in dilutions of 1 to 15, 1 to 20 and 1 to 30 respectively. An interesting fact was that as the age increased the percentage of

cases reacting positively decreased considerably. The result is that the bloodserum of persons free from tuberculosis does not produce agglutination. Nägeli has shown that active latent lesions are more common in young than in old persons, and this may account for the diminution in the agglutinative activity. One hundred and five persons had clinically recognizable tuberculosis of the lungs. The percentages of reaction and failure to react in the first stage of the disease were 80 and 20; in the second stage of the disease 66 and 33, and in the third stage of the disease 57 and 43, that is to say the frequency and also the intensity of the agglutination diminished rapidly as the disease progressed. The reaction was usually negative in severe and rapidly progressive cases, and also in several in which the symptoms had been latent for a considerable period of time. Certain interesting points are noted. The reaction of the emulsion has much to do with the rapidity and intensity of the agglutination. Thus, decreased alkalinity seems to favor, and increased alkalinity to destroy the agglutination. The number of tubercle bacilli in a given quantity of emulsion also has considerable influence. Thus, increased dilution of the emulsion increases greatly the intensity of the agglutination. In regard to the value of the serum diagnosis in tuberculosis Romberg is still undecided. There seems to be considerable reason to suppose that it is quite as accurate as the tuberculin test, although it certainly does not react in the same way, and particularly not in animals of different species. At any rate we must use strong dilutions, and must recognize that the reaction is no aid in the recognition of manifest tuberculosis. [J. S.]

2.—The value of hydrotherapy in scarlet fever is (1) that it diminishes the temperature of the peripheral blood and therefore prevents its injurious action upon the central organs. (2) The regulation of the distribution of the blood is controlled by the cold water. (3) The peripheral nerves are stimulated by the action of cold. (4) The dermatitis and multiple lymph adenitis is more or less controlled. (5) The respiration and the excretion through the skin are both stimulated, relieving the kidneys. (6) The infectiousness of the skin is diminished by the action of the cold water. The application of water is, according to von Vogl, as follows: Every 2 or 3 hours the patient is placed in a cold bath of from 20° to 16° C., that is from 68° to 59° F., whenever the temperature is above 39° C. or 102 2-5° F. Usually on the second day, there is distinct improvement. In regard to pneumonia it must be said that the therapeutic measures at present employed have little influence upon the course or duration of the disease, therefore experiments with hydrotherapy are justified. von Vogl bathes all his patients every 2 or 3 hours for 15 minutes in a bath from 20 to 15° C., whenever the temperature is above 39°: practically therefore the ordinary treatment of typhoid fever. The effects are beneficial but very transient. Usually the patient, upon being placed in the bath, takes a deep inspiration followed by expectoration; the cyanosis is diminished, the pulse is diminished in frequency and the mental condition is improved. It should be used cautiously, if at all, in complicated pneumonia. It is also important that, if the desired effect is not obtained, modification be employed, and therefore the physician should invariably be present at the first bath, and, if necessary, hot tea with cognac should be administered in order to aid in the dilation of the cutaneous capillaries. Properly employed, the cold bath is not dangerous in pneumonia. [J. S.]

3.—Perutz reports the case of a man, 53 years of age, who had suffered from neuralgia of the trifacial nerve, and occasionally from pains in the legs. There were frequent attacks of diarrhea and profound anemia. Examination showed loss of free HCl. The motility of the stomach was apparently normal. Daily washing produced considerable improvement; the hemoglobin increased from 50 to 65% and the patient felt stronger. Later he grew worse, the hemoglobin sank to 20%, but by vigorous treatment and forced feeding he improved; the general anasarca disappeared, the HCl reappeared in the stomach contents, and the blood improved until the hemoglobin was 80% and the red bloodcells, 3,900,000. The case appears to be one of **pernicious anemia**, based upon gastrointestinal disorder, and apparently cured by persistent lavage of the stomach and intestines with careful regulation of the diet. [J. S.]

4.—Cramer observed, in a case of puerperal eclampsia, a very dark colored urine containing a large proportion of albumin. This suddenly changed to a gray turbid urine that could not be cleared by filtration, the addition of acids or by centrifugation. When boiled, a heavy precipitate formed which produced some clearing. In the course of 2 days the urine, upon standing, became clear. Microscopical examination did not confirm the suspicion of chyluria. The second case was one of uremia in a woman of 38, with essentially the same reactions. Further investigations upon this patient showed that the urine did not contain fat; that the emulsion could readily be cleared by digestion with pepsin and HCl. The cloudiness could be precipitated by alcohol; heating with 1% HCl. caused percipitation of allantoin crystals, and therefore there is reason to believe that the urine represented a peculiar **emulsion of albuminous bodies.** No similar case is recorded in the literature. It seems possible that the discovery of this form of emulsion albuminuria can be considered an indication of a fatal termination. [J. S.]

5.—Kuhn reports a remarkable case. A woman of 58 had been operated upon for rightsided empyema following pneumonia. Later she had a tumor of the breast removed, which proved to be a carcinoma. She then stated that she was obliged to drink large quantities of liquor; the urine was of low specific gravity and contained no sugar. She was greatly emaciated; otherwise her condition was normal. Suddenly the daily quantity of urine increased, the specific gravity was greater, and sugar could be detected. The patient became semicomatose, the course was febrile and death finally occurred. No lesions were found in the brain; there was some metastasis to the thoracic lymphglands; the pancreas was atrophied; the right adrenal contained a metastasis; the liver contained metastatic nodules; the uterus was absent. It is possible that the **diabetes** could be explained by the pancreatic change, or by the pressure upon the solar plexus produced by the enlarged glands. It is not known when or for what reason the uterus was extirpated. [J. S.]

6.—Brauser gives a vigorous criticism of Doerfler's article in which the latter urges that amputation in cases of septicemia is useless and should be entirely discarded. Brauser believes that there are many cases in which amputation is indicated and helps to save life. He reports some interesting cases in which, after longstanding septic processes with persistent high fever, amputation served to restore health immediately, which seemed to prove that, in cases of this class, generally severe forms of cellulitis following injury to the extremities, amputation is a valuable and perhaps an indispensable therapeutic measure, and he hopes that the publication of such cases will serve to prove that amputation is sometimes indicated in conditions of this character. [J. S.]

7.—Doerfler, in view of the criticisms which have been made upon his previous article, feels it incumbent upon him to call renewed attention to what are exactly his views. He believes particularly that early amputation in [illegible] inflammation should be discarded. He goes even further, and believes that amputation in fresh septic phlegmonous inflammations, that are the result of slight injuries which have not caused serious harm to the extremity as a whole, and which have not [illegible] gangrene or necrosis of these parts should be invariably avoided. He does not discuss the propriety of

amputation in severe injuries, in extensive laceration of the soft parts, in opening and destruction of joints with severe septic suppuration, or in cases of extensive suppuration of the tissues and joints following injury and infection. In all cases it is necessary to study carefully the exact physical condition of the patient, as this is of the greatest importance in deciding upon the measures to be employed. He reports cases in which, when the condition of the patient appeared to be hopeless, improvement suddenly occurred, and remarks that had amputation been performed just before the improvement had taken place it would have received the entire credit. In some of these cases, as a matter of fact, amputation was seriously discussed just at that particular time. He also reports cases in which amputation through the healthy portion of the limb had no effect either in checking the progress of the infection or in saving life. He is inclined to believe that in phlegmonous infiltration the result is influenced unfavorably, if at all. [J. S.]

8.—Kerschensteiner reports the service at the dispensary of von Ziemssen in Munich. Altogether 3525 patients visited it in the year 1901. There is very little of interest to be noted from the statistics. In valvular heart disease 48 cases were diagnosed as affecting the mitral, and 17 the aortic valves. Leukemia is apparently rare in Munich, only one case being reported. Locomotor ataxia must be fairly common, because 24 cases are recorded, and also 5 of syringomyelia. [J. S.]

January 28, 1902. (Vol. 49. No. 4).

1. Experiences with One Hundred Analgesias by Spinal Tropacocainization. K. SCHWARZ.
2. Auscultation of the Respiratory Tract with Remarks upon the Pathology of Pulmonary Tuberculosis. O. ROSENBACH.
3. The Thymus Gland and Rachitis. F. MENDEL.
4. Addison's Disease. J. BRUNO.
5. Angiomata and their Relation to Carcinoma. GEBELE.
6. Scientific Hydrotherapy and Water Cures. von VOGL.
7. The Insurance Against Disease and the Physician. F. MARTIUS.
8. Sir William MacCormac. BUSCH.

1.—Schwarz **discusses the technique of spinal anesthesia** and calls attention to the method of Behr which consists of placing elastic bandages around the neck for the purpose of producing venous congestion and preventing the ascent of the cerebrospinal fluid. This seems to have given better results than the other methods. Eucaine does not appear to be preferable to cocaine, that is, so far as the elimination of secondary results is concerned. Eucaine-B is, however, slightly less dangerous. Schwarz prefers tropacocaine on account of the mild character of the secondary effects. He found that the lower portion of the rectum, the perineum, the external genitals, and the feet and legs can be rendered completely anesthetic. Other portions of the body are not completely painless. The dose is .05 gr.; ¾ gr. larger doses sometimes have disagreeable after-effects, such as headache, chill, fever, etc. Altogether he has used this method of anesthesia in more than 100 cases. In one case the patient was a morphine and cocaine habitué, nevertheless total anesthesia was obtained. Among the operations performed were various amputations upon the lower limbs, various gynecological operations, and numerous operations upon herniæ, as well as amputation of the breast and extirpation of the lymphglands in the neck. In the majority of cases the secondary effects are slight. Sometimes there is vomiting and headache, and very infrequently chill with elevation of temperature. Injections are usually accomplished by having the patient sit up bent forward, and then thrusting a needle, 9 cm. long, between the fourth and fifth lumbar vertebræ. He believes that this method is always to be preferred to the inhalation method of anesthesia. [J. S.]

2.—Rosenbach contributes a paper on the **auscultation of the respiratory apparatus.** He discusses the generally accepted necessity of examining patients during deep resipration and suggests that this possibly leads to errors partly because some patients—particularly those of sedentary habits, or women accustomed to tight lacing—are incapable of expanding the lungs thoroughly; partly because the patients, when uneducated, respire so slowly that the sounds are not fully developed; partly because there may be, as a result of muscular action, a very disturbing interruption of the sounds, or even apparently pleural frictions which are really due to muscular activity. He therefore believes that patients should be instructed to breathe rapidly as well as deeply. Rapid respiration apparently gives rise to more distinct and satisfactory sounds than slow breathing, and is particularly likely to bring rales into evidence. He also calls atttention to the peculiar odor of the expiratory air in the early stages of pulmonary tuberculosis. It is a rather stale, sweetish, intensely disagreeable odor that has a distinct resemblance to the odor of putrid bronchitis. It is probably produced in the bronchi, and is of so specific a character that Rosenbach has frequently been able to make a diagnosis by it alone. It nearly always occurs in association with defective teeth, and it is therefore possible that there is a general impairment of nutrition which is manifested both in the mouth and lungs. Rosenbach believes that this gives us an indication for treatment, which is, that attention to the whole gastro-intestinal tract is important. [J. S.]

3.—Mendel believes that the thymus is an organ which during the most energetic period of growth of the body serves for the formation of tissues and particularly of the osseous system. The changes produced by its removal are increase of the appetite, and, to a proportionately less degree, the growth; increase in the leukocytes, and diminution of the erythrocytes; increased elimination of nitrogen, and diminished elimination of carbohydrates. Sweating is increased, the secretion of urine diminished. There is, therefore, some reason, upon experimental grounds, to assume **a relation between the thymus gland and rachitis.** In 300 autopsies made by Friedlaben upon children in all cases in which rachitis is mentioned there were gross alterations in the thymus gland; therefore it seems reasonable to employ the thymus in cases of rachitis, and Mendel has employed tablets in 100 cases, administering them in the form of a soup. There were no disagreeable manifestations as a result of the treatment, and in many cases, without any alteration of the diet, distinct improvement was observed. The increased secretion of sweat ceased, the attacks of laryngismus stridulus became fewer and the enlarged splenic tumor decreased in size. At the same time the rachitic changes in the bones began to disappear; dentition improved and the general condition of the patient was better. The dose consisted of 6 to 12 tablets twice weekly, and the duration of the treatment was always several months. This form of treatment is, of course, useless in cases of congenital syphilis, tuberculosis and other conditions simulating rachitis. [J. S.]

4.—Bruno reports 2 cases of **Addison's disease.** The first, a man, 39 years of age, had been sick for about a year, complaining of weakness, fatigue and disinclination to work. He was irritable, nervous, excitable and his appetite was poor. He frequently had fever, cough and pain in the limbs, and, later, he developed chronic diarrhea, vomited frequently, emaciated rapidly, had night-sweats and pruritus. Later he developed constipation, bronzing of the skin, and showed some psychical confusion. When examined he was found to be extremely emaciated; there was bronzing of the skin and the mucous membranes and evidences of consolidation at the apices of the lungs. A diagnosis was made of Addison's disease and chronic tuberculosis of the lungs. The patient rapidly grew worse and died of exhaustion. At

the autopsy tuberculosis was found in the lungs; both adrenal capsules were enlarged and cheesy. The second patient, a man of 25 years, noticed symptoms of the disease at the age of 20. He had pain in the abdomen when walking, and began to emaciate. About a year later there began to develop a gradual pigmentation of the skin, especially in the back and hips. Later there was cough, expectoration and night-sweats. There was occasional hemoptysis. When examined he was found to be emaciated, pigmented, and there was evidence of consolidation at the apices of the lungs. A diagnosis of pulmonary tuberculosis and adrenal tuberculosis was accordingly made. The patient was given tonics, his diet was carefully regulated, he gradually improved in condition, and coincidently for 12 days had a subnormal temperature. A mass was felt in the right hypochondriac region. Venesection was performed in the hospital and 4 to 6 weeks later the scar was deeply pigmented. The patient improved and left the hospital. A series of experiments were made upon frogs from which the adrenals had been removed, and with the blood of this patient and that of normal patients. It did not appear that the blood in this case of Addison's disease had a higher degree of toxicity for frogs than normal bloodserum. [J. S.]

5.—Gebele has examined 21 cases in order to determine whether **angiomata of the skin** are more common **in carcinoma** than in other conditions. He found them present in 11 cases, and absent in 10. In 200 patients suffering from other conditions he found them present in 86 and absent in 114 instances. Angiomata are apparently more common in old persons, and there seems to be no reason for supposing that their presence is of any diagnostic value in carcinoma. He reports one case in which the presence of carcinoma of the stomach was suspected, because 37 angiomata were found on the skin, and the symptoms appeared to accord with this diagnosis. At the autopsy an eroding ulcer of the duodenum was discovered. [J. S.]

6.—von Vogl discusses the contraindications usually alleged for hydrotherapy in typhoid fever. (1) A mild case of typhoid fever does not require such vigorous treatment. He believes that it is impossible to determine from the early course of the disease whether or not the case will be mild, and that even if it commences without active symptoms, nevertheless in order to prevent complications the bath treatment is desirable. (2) Weak persons should not be treated so vigorously; but statistics in private practice and in civil hospitals show that it is particularly this class that require the cardiostimulating effects of the Brand method. (3) The method is not scientific, because it is applied according to the temperature which is only one symptom of the general condition of the patient; but as it is the most important indication of the condition, and as it generally agrees very closely with the others, it is the most reliable. (4) The baths increase the nervousness of the patient. von Vogl, who has had an enormous experience, has not, however, found this to be true. He believes the great advantage of hydrotherapy is in moderating the symptoms and in preventing complications. He also discusses the value of hydrotherapy in tuberculosis. It can, under these circumstances, be given with the best effect in the form of partial cold baths, or particularly in the form of the cross-bandage of Winternitz. This consists of 2 linen bandages, each 2½ meters long, and 4/10 of a meter broad (100x16 inches). One is placed over the shoulders and beneath the axilla across the breast. A second bandage is placed over this. This treatment seems to have a good effect upon hemorrhages from the lung by acting as a tonic upon the bloodvessels. Hydrotherapy can also be employed in cases of cardiac, nervous and other forms of disease. [J. S.]

7.—Martius discusses the recent law **insuring against loss through sickness.** He believes that as at present carried out the system is full of error and only too frequently contradictory opinions are expressed by different physicians. He believes that there should be some method of action determined upon in order that unity should prevail, and that this may be [illegible] [J. S.]

8.—Busch contributes a sympathetic obituary of the eminent Englishman, **Sir William MacCormac.** He calls attention to the remarkable talents of MacCormac's father, and to his knowledge of foreign languages, a knowledge which his son emulated. It is interesting to note that during the Franco-German war MacCormac was second in charge of the Anglo-American ambulance service, of which Marion Sims was head. During this service he and his assistants averaged more than 100 major operations daily. Another interesting fact is that, after passing through a severe phlegmonous inflammation due to infection from a suppurating wound, MacCormac remained for the future free from septic infection, and, as he believed was immune to it. His subsequent brilliant professional career in London need not be touched upon in this abstract. [J. S.]

BERLINER KLINISCHE WOCHENSCHRIFT.

March 10, 1902. 39 Jahrgang, No. 10.

1. The Question of Substituting Bromides for Chlorides. T. HONDO.
2. Myogenous Rigidity of the Vertebræ. R. CASSIRER.
3. The Hydrotherapy of Pneumonia. S. MUNTER.
4. The United Effect of Alexin. HANS SACHS.
5. Alcohol in the Disinfection of the Hands. R. SCHAEFFER.

1.—After describing his method of estimating the amount of bromide in the urine, Hondo gives the histories of 3 patients upon whom experiments were made. He estimated the composition of the food ingested; then added sodium bromide and estimated the amount of sodium chloride and sodium bromide in the urine and the nitrogen excreted in the urine and feces before during and after giving the bromides. He concludes that bromides are quickly eliminated when mixed diet is taken the greater part being excreted in 10 days yet small amounts appeared for months. When however little sodium chloride is taken with the bromides the excretion is slower and in less amount, increasing when salt is added to the diet. This lack of salt has no effect upon assimilation unless it lasts a long time. This will be of use in the treatment of epilepsy for bromides, given with as much as three grams of food containing little salt, **will take the place of the chlorides.** [M. O.]

3.—**Phthisis** is a local affection. Good air and good assimilation are necessary for recovery. For a man does not upon what he eats, but upon what he digests. Heat raises the surface temperature, cold lowers it. When heat is used, some means of reaction must be employed afterwards. Most applications to the chest and also hot inhalation decrease the frequency of the heart beat and increase bloodpressure. Cold water should be used, after warm water, to prevent shock, with strong friction afterward. Thus by wet packs douches baths etc. mixed infection is prevented, and good health obtained. **Hydrotherapy** increases the natural powers of resistance of the organism. Many authorities are quoted. [M. O.]

4.—It is a fact that the globulicidal ability of normal serum depends upon 2 bodies, one resisting heat and one destroyed by heat. This is well shown [illegible] Buchner's negative experiments, carried out [illegible] Sachs. One of the ambeceptors remains with the blood corpuscles, the other being in the fluid. These experiments show the complex composition of normal hemolysins. Complements were found in other animal serums for the ambeceptors of one animal's serum. Sachs concludes that the united effect is produced in all normal serums some perhaps being more complicated, yet some remaining in principle the same. [M. O.]

5.—Mechanical cleaning of the hands does not give

absolute asepsis, nor does the use of antiseptics prevent the occurrence of some bacteria after disinfection. Schaeffer reports a series of experiments with **hot water, followed by alcohol.** Before putting the hands in the alcohol, living bacteria were found. But by changing the alcohol, and using absolute alcohol last, very few bacteria could be discovered. His results were so good as to cause him to recommend this as an almost ideal method of disinfecting the hands. The details of his experiments and of his method are given. [M. O.]

March 17, 1902. (39 Jahrgang, No. 11.)

1. The Serum Diagnosis in Pulmonary Tuberculosis. FRANCESCO DE GRAZIA.
2. A New Observation in Acute Myelogenous Leukemia. HANS HIRSCHFELD and WILLY ALEXANDER.
3. Idiopathic Dilatation of the Esophagus without Stenosis. THEODOR ROSENHEIM.
4. Myogenous Rigidity of the Vertebral Column. R. CASSIRER.

2.—Alexander and Hirschfeld give the history of an extremely **acute case of leukemia** in a man of 21, ending fatally in 2 weeks. Upon admission his blood showed 35% hemoglobin, 2,000,000 red corpuscles, and normal leukocytes. Fever and anemia followed, as the spleen enlarged, while the red corpuscles decreased and the hemoglobin fell rapidly to 10%, with the appearance of nucleated red cells and a leukocytosis which reached 64,000. Many of these leukocytes were myelocytes, hence the **diagnosis of myelogenous leukemia.** Retinitis, multiple periostitis, sternal pain and leukemic tumors of the oral mucous membrane occurred. Beside the typical changes of leukemia, all the lymphglands enlarged, showing a myeloid character microscopically. Even the intestinal follicles showed enormous hyperplasia. Mastcells and eosinophiles were absolutely wanting. An increase of these cells was formerly deemed necessary for forming the diagnosis of myelogenous leukemia, but Alexander and Hirschfeld show that this is unnecessary in very acute cases. [M. O.]

4.—Cassirer reports in full 2 case-histories of patients with **chronic vertebral rigidity,** a peculiar wobbling gait, sometimes pain on motion, increased mechanical irritability, and fibrillary and fascicular tremors. The pain in the neck, shoulders, back and hips resembles chronic rheumatism. There is marked tenderness on pressure. Undoubtedly this is some chronic muscular affection. Marked atrophy may occur, without changes in the electrical reactions. The muscular changes seem to be secondary to articular changes, as a rule, even with great hardness and stiffness. Yet in some cases resembling lumbago, this muscular rigidity seems distinctly primary, without signs of any articular affection; or articular symptoms may result later. In Cassirer's cases the muscular symptoms predominate, as in chronic rheumatism. On salicylates, baths, massage and electricity the condition improves. Cassirer believes that while this is not a disease in itself, myogenous rigidity of the vertebral column should be considered among the cases with rigidity of the spinal column from different causes. [M. O.]

ARCHIV FUER KLINISCHE CHIRURGIE.

1902. (Volume 65, No. 3.)

27. A New Conservative Operation on the Testicle. W. J. RASUMOWSKY.
28. Experimental and Clinical Investigations on the Cause of Death in Strangulation of the Small Intestine. VICTOR ALBECK.
29. Cancer in Man and the Different Domestic Animals. ANTON STICKER.
30. Spina Bifida. PHILIPP BOCKENHEIMER.
31. Small Caliber Wounds in the Boer War, 1899-1900. A. HILDEBRANDT.

27.—**Total resection of the epididymis** was first done by Bardenheuer in 1886. While Scaduto recently performed the operation on dogs, uniting the vas deferens and the rete testis, Iwanowsky has done the same operation upon men. He found that, when only the lower half of the epididymis was tubercular, the upper half could be left in place. He performed 4 such operations, 2 by each method, for tuberculosis of the epididymis. The lower part of the epididymis is first affected by tuberculosis. The details of his technique in both operations follow in full, with explanatory diagrams, and the 4 case-histories are given. [M. O.]

28. The **cause of death in strangulation of the small intestine** has been intoxication from the contents of the intestine, peritonitis or shock. Albeck has examined the contents of 13 incarcerated herniæ, finding bacteria in but 3 cases, all different and not virulent. From a review of the literature it seems that necrosis is necessary for bacteria to pass through the intestinal wall. Of 51 cases of strangulation of the small intestine, 19 came to autopsy without operation, while 32 underwent operation. 7 of these showed purulent peritonitis, while 19 showed no signs of peritonitis. From a series of experiments upon animals Albeck found that death often occurred without peritonitis, due to intoxication from the intestinal contents. Another series of experiments showed the poisonous effect of the contents of strangulated intestine. The poison in the intestinal contents was soluble in water, withstood cooking, and passed through a Chamberland filter; in other words, it was a putrid poison. This is absorbed in the liquid passing through the intestine, very little of it reaching the peritoneum. Albeck concludes that the cause of death in strangulation of the small intestine is **an intestinal intoxication,** the poison beng elaborated in the strangulated intestine. A table of 51 cases, with the bacteria found, follows. [M. O.]

30.—Clinically, Bockenheimer divides **spina bifida** into myelocele, myelocystocele and meningocele. Myelocele, which is the most common form, shows 3 zones, the outer skin, often with hypertrichosis, a zone of fatty tissue, and in the center a thin vascular surface, showing the opening into the medullary canal. This may ulcerate, when the opening will no longer be recognizable. Motor nerves at the position of the myelocele are more degenerated than sensory nerves. Motor paralyses commonly follow. When sensory disturbances occur, they are much less marked. Trophoneurotic symptoms are generally present. There are fluctuation, tenderness on pressure, umbilical hernia and, rarely, hydrocephalus. Myelocele is usually noted in the lumbosacral region. In myelocystocele, the cylindrical epithelium of the medullary canal lines the tumor, continued out through the opening. The entire tumor is covered with skin, hair, telangiectasis and, sometimes, scars. Fluctuation may be noted from the tumor in the open fontanelle. Hydrocephalus is commonly seen with myelocystocele, with symptoms of cerebral compression. Paralysis of the bladder and rectum occurs. Sensory disturbances are more frequent than in myelocele, and paralysis of the muscles of one side of the abdomen may follow. Some scoliosis is usual among these infants. Myelocystocele is found between the dorsal or lumbar vertebræ. In meningocele the pia or pia and arachnoid are continuous over the opening between the vertebræ. These tumors are large, often have hair upon them, and may be pediculated and movable. The condition is rarely complicated, the child being otherwise well developed. Meningocele is usually sacral in position. The diagnosis of the 3 forms of spina bifida is not always easy. While a myelocystocele can be reduced upon pressure, and a menigocele may be slightly reduced, a myelocele cannot be reduced at all. The differentiation between meningocele and myelocystocele is very difficult. Operation is indicated early, is simple, and attended by but slight mortality. It is contraindicated when spina bifida is complicated by high grade deformity, hydrocephalus or severe paralysis of one or both extremities. The technique of the operation for all 3 forms is described and the case-histories of 63 infants with spina bifida follow, 20 of whom were operated upon; seven of these died. [M. O.]

31.—Hildebrandt examined 339 wounded men during the Boer war. All had **small caliber** wounds, since the English only used small caliber rifles. Pieces of the bullets were

found in wounds, yet they rarely caused symptoms. The size of the wound of entrance depended upon the angle of the shot. One bullet often made several wounds. Large wounds of exit were usually seen and several of them suggested bone injury. Wounds of the soft parts were relatively benign, with but slight pain and hemorrhage. Injuries of the large arteries of the extremities were seldom fatal. Aneurysm formation was more frequently observed than formerly. Wounds in the lungs healed rapidly, and intestinal injuries sometimes healed spontaneously. Injuries of the abdominal viscera were also favorable. Most cranial wounds were at once fatal; some men losing consciousness, others going on fighting. The first treatment of the wound generally decided its course, by preventing infection. Laparotomy is only indicated on the field when there is dangerous hemorrhage or intestinal contents are found in the abdomen. The primary aseptic dressing was in every case left on as long as possible. After detailed descriptions of what took place in South Africa, Hildebrandt concludes that a greater percentage of those wounded recovered, and that fewer returned home invalids than in former wars. [M. O.]

ZEITSCHRIFT FUER KLINISCHE MEDICIN.

Bd. XLIV., Hfte. 5 u. 6.

1. Clinical and Experimental Investigations Concerning Cardiac Death from Diphtheria Toxin. KARL v. STEJSKAL.
2. Contributions Concerning the Question of Traumatic Diseases of the Heart. WILHELM ERCKLENTZ.
3. Contributions Concerning the Dietetic Treatment of Diseases of the Kidneys. First Report: On the Use of Various Forms of Meat in Kidney Disease. KAUFMANN and MOHR.
4. A Contribution Concerning Intestinal Putrefaction, Under Physiological Conditions, with Various Forms of Diet. WOLD. BACKMAN.
5. The Saccharin Question. A Reply to the Paper of R. O. Neumann, entitled: "The Action of Saccharin Upon Nitrogen Metabolism in Man." BORNSTEIN.
6. The Diagnosis of Hypernephroid Tumors of the Kidney. Some Remarks in Answer to v. Hansemann's Article on Tumors of the Kidney. O. LUBARSCH.

1.—Stejskal gives an extensive discussion of the question, and reaches the following conclusions: The methods chosen by Romberg and his colleagues to determine the heart power are insufficient to demonstrate a change in the work of that organ or any damage to it. Measuring the arterial pressure alone does not give exact data regarding the work carried on by the heart. More exact methods, however, show that diphtheria toxin poisoning first produces a slight improvement in the action of the heart, which is followed by a brief period of unfavorable action upon that organ. There is then a further stage, which is similar to the earliest effect, and consists in increased power for work, due to irritation; and then there is a still further stage, in which the diphtheria toxin damages the heart capacity. Even in the second stage of increased heart's work, however, it is possible to discover that the normal favorable effect, which is reflexly produced by nerve irritation, is absent; that is, that the organ can no more be brought to its normal rate of labor. At the same time, the vasomotor system is seriously damaged by the diphtheria toxin; but there are stages in which the heart is no longer reflexly irritated, while the vasomotor system still responds to nerve irritation. Hence, there are evidently two parallel and coincident effects exerted by the toxin, that upon the heart and that upon the vasomotors. The end result in both cases is to produce damage—on the one hand, in the heart; on the other, in the vasomotors. The condition is, therefore, not, as claimed by Romberg and his co-workers, a secondary weakness of the heart, due to paralysis of the vasomotor system. This condition is present, but the heart itself is also directly damaged. The vasomotor paralysis does not damage the heart, as claimed by Romberg, in that the organ is provided with too little blood; but because the paralysis of the vasomotor center in the medulla directly causes a cardiac dilatation and overdistension with blood. The heart tone, like that of the whole circulatory apparatus, is dependent upon the action of the centers in the medulla. [D. L. E.]

2.—Ercklentz gives a study of the general question of the occurrence of traumatic affections of the heart, discussing certain of his own cases and numerous instances in the literature. He approaches the question chiefly from the medicolegal standpoint, which has become of much importance in Germany. He first discusses changes in the heart muscle, touching upon the occurrence of cardiac dilatation from trauma, and particularly noting the results of overstrain from exercise, etc. Rupture of the heart may be produced by blows upon the chest. He also quotes from various authors, in order to demonstrate his belief that trauma may produce small lesions in the heart which are followed by a localized myocarditis. This has not been satisfactorily proved by anatomical investigations. The author then discusses damage to the valves, and, in particular, describes two cases from the literature in which he believes that valvular lesions were produced by injury; also a case of his own, in which a young man, who had apparently been previously well, after lifting a heavy weight was suddenly seized with pain in the chest and symptoms of cardiac weakness. When examined, two weeks afterward, he showed aortic and mitral regurgitation with severe loss of compensation. It was believed that he could not have carried on his heavy work if the lesions had been previously present; and that these lesions had been produced by the sudden strain. Cases of injury to the mitral valve are then referred to, the most important being one of Heimann's in which post mortem there were scars on the mitral leaflets and small holes in the valves, where some of the chordæ tendineæ should have been attached. He believes that endocarditis may occur as the result of trauma, and follows the views expressed by Litten upon the question, referring to three personal cases of chronic endocarditis which he believes followed severe trauma of the chest. In all the cases there was absence of cardiac symptoms before the trauma, and the histories showed nothing to lead one to suspect the presence of cardiac disease; but soon after the injury the patients showed notable signs of cardiac disease, and all of them exhibited the physical signs of valvular lesion. Only one case was fatal while under observation, and in this post mortem examination could not be carried out. The author then refers to the rupture of large vessels as the result of trauma, to aneurysm and to pericarditis resulting from trauma. In the latter connection, he reports a personal case, which occurred in a woman of sixty, who had been struck by a wagon about two months previously and who had afterwards had a cough. She exhibited extreme cardiac weakness and soon died. Old tuberculosis of the lung was found, and the pericardium contained about 40 cc. of fluid. There were pericardial adhesions; there was also a fibrinous exudate; and in the epicardium there were numerous tubercles. The tuberculous pericarditis was evidently recent, and it was believed that the trauma had caused its outbreak. [D. L. E.]

3.—The authors report their personal observations on 7 cases, and also mention the cases previously reported by v. Noorden and Ritter. In all of these, they investigated the condition of nitrogen metabolism—particularly nitrogen elimination, the excretion of albumin, of phosphates and usually of uric acid, when using dark meat, light meat and milk. They reach the following conclusions: An accurate judgment cannot be formed upon the results of such a study, because patients with kidney disease usually show marked variations in elimination from time to time, without reference to the diet. It seems proper, however, to decide from the figures that the best elimination and the least albuminuria are present when a milk diet is used; but this was not notably the case and the conditions varied decidedly, the most satisfactory conditions at times being found with milk, at times with dark meat, and at times with light meat. The authors admit that it may be objected to their investigations that they were of too short a duration; but it was impossible to carry them through a prolonged period. From the clinical results which they have obtained during a long series of years, however, they believe that one can allow kidney patients to choose the form of meat which they prefer. They usually choose white meats only, but when allowed their choice, patients eat better and are kept in better

nutrition. The authors believe that the generally accepted rule that dark meats are especially harmful for kidney cases must be considered to be unfounded. In this, they refer only to chronic and subchronic cases, and do not touch upon the question as to whether one should allow patients with acute nephritis to take meat at all. [D. L. E.]

4.—The investigations were carried out by estimating the preformed and conjugate sulphates in the urine, testing for indican, and noting the number and character of the stools, with various forms of diet. As a result, Backman decides that carbohydrates seem to have no notable effect upon albuminous putrefaction in the intestine. Many authors have insisted that carbohydrates decrease putrefaction, but the present writer does not believe that this is definitely true. Fats, on the contrary, seem distinctly to increase the putrefactive process. No difference could be observed in the effect of animal and vegetable albumins. With an absolute diet or one composed almost entirely of milk, somewhat less putrefaction was observed. Casein itself does not cause less putrefaction than a similar amount of other albumins, and the author believes that the effect of milk was due purely to the milk-sugar. The amount of putrefactive processes in the intestine is directly dependent upon the amount of albumin in the diet. The greater the albumin content of the food, the greater the putrefaction. There is, however, no absolute ratio to be established. Admitting the correctness of Backman's conclusions, he believes that if we desire to reduce putrefactive processes in the intestines we should proceed as follows: Use either an absolute milk diet or one containing little beside milk; or, if this cannot be carried out, use a diet with little albumin, relatively little fat and a sufficient amount of carbohydrates to provide the necessary food calories. [D. L. E.]

5.—The article is merely a somewhat spicy reply to an author's abstract of Neumann's paper, which appeared in the *Münchener medicinische Wochenschrift* of June 22, 1901. [D. L. E.]

6.—This article is a reply by Lubarsch to Hansemann's statement that the former had taken advantage of a private demonstration of a preparation from a kidney tumor, to criticize the latter publicly. Lubarsch says that his criticism appeared a year and a half after the appearance of Hansemann's description of his case in print. Lubarsch then gives further reasons for considering that his criteria for the diagnosis of hypernephroid tumors are correct *in toto*.

WIENER KLINISCHE WOCHENSCHRIFT.

February 27, 1902. (XV Jahrgang, No. 9.)

1. Fatal Hemorrhage Following Tonsillotomy. NIKOLAOUS DAMIANOS and ALFRED HERMANN.
2. Typhoid Bacilli in the Sputum of Typhoid Fever Patients. LUDWIG JEHLE.
3. Clinical Experience with Alboferin. KARL FUCHS.
4. Muscular Rigidity in Tetanus Intoxication. HANS MEYER.
5. A Reply to Professor Meyer. L. ZUPINK.

1.—A review of the literature of the past 60 years revealed but 150 cases of severe **hemorrhage after tonsillotomy.** Only 7 of these were fatal. A man of 23, whose right tonsil had been removed with the tonsillotome, had several slight hemorrhages during the next few days. They recurred in spite of gelatine injections. Ten days later a fistula developed under the angle of the jaw, where a gas-containing abscess had formed after the gelatine injections. Three days later a profuse hemorrhage occurred and the right common carotid was at once ligated. He died the same day. The autopsy showed general anemia, with cloudy swelling of the myocardium, liver and kidneys. Cultures from the gas-containing abscess resembled the anaerobic gas-forming bacillus of Hitschmann-Lindenthal, Fränkel, etc. The patient was supposed to have been hemophilic. A detailed account of the bloodsupply of the tonsils follows. In 4 other cases anaerobic bacteria were found. From this case two things are plain: That care should be taken in performing tonsillotomy, since fatal hemorrhage may occur; and that gelatine injections seem to favor the growth of anaerobic bacilli. The table of cases follows. [M. O.]

2.—Jehle examined the **sputum of 23 cases of typhoid fever with bronchitis or bronchopneumonia,** and the contents of the bronchi in 15 cases post mortem. Pure cultures of typhoid bacilli were found in the sputum of a patient in the third week, in 5 separate examinations. In another they were also present, before and after death. Of the other 21 cases typhoid bacilli were found but 4 times. Of the 15 cases examined post mortem typhoid bacilli were present in 8. In one case they were also found in a pleural effusion. Jehle concludes that in patients with pneumonia complicating typhoid fever typhoid bacilli are often found in pure culture or with other bacteria in the sputum and bronchial secretion. This is often hemorrhagic. But typhoid bacilli were also found in cases of bronchitis without intestinal lesions. This shows that the typhoid bacilli may enter the organism by inhalation. They may also be found in the bronchial secretion long after typhoid fever. [M. O.]

3.—**Alboferin** is composed of albumin, 89%; iron, 0.7%; phosphoric acid, 0.3%; and mineral matter, 10%, and is not broken up until it reaches the small intestine. It does not taste badly and is readily soluble in water. Fuchs has used it in several cases of **chlorosis,** with rapid improvement. Subjective symptoms disappear quickly and the hemoglobin increases 30% in 4 weeks, on an average. There are also increase in weight, improved appetite, disappearance of indigestion and return of menstruation. He advises it not only in primary, but also in secondary anemia. Fourteen case-histories follow in detail. [M. O.]

4.—Meyer states that Zupnik is incorrect, for muscular rigidity in tetanus occurs without the muscles or their nerve ends sharing in the intoxication. [M. O.]

5.—From Zupnik's experiments upon dogs, which he reports in full, his former assertions, based upon facts, though contradicted by Professor Meyer, seem correct. [M. O.]

March 6, 1902. (XV Jahrgang, No. 10.)

1. Folliculitis Exulcerans Serpiginosa Nasi. E. FINGER.
2. Retroperitoneal Hematoma Resembling an Ovarian Cyst with Twisted Pedicle. EDMUND WALDSTEIN.
3. The Food in a Vienna Restaurant for Young Men. MAX HAMBURG.

1.—**Ulcerative serpiginous folliculitis of the nose,** according to Kaposi, is a rare affection. After fully reviewing the literature of the subject, Finger describes a case, in a man of 20, whose eruption, already 3 months old, had been treated as syphilitic. The ulceration was upon the right side of the nose, cheek and lip. Upon a 5% boric acid ointment and a 0.2% carbolic acid wash, the condition improved. Some of the ulcer, examined microscopically, showed simple inflammation. The details of the lesions are given. Finger concludes that there are certain peculiar skin conditions, acne-like, which break down and form ulcers, which, after throwing off the upper layers, heal spontaneously. [M. O.]

2.—Waldstein gives the history of a woman of 27, who 4 years before had been ill for 3 weeks, following knocking her left side and abdomen against the corner of a table. Some weeks later she first noticed a tumor deep in the left side of her abdomen, as large as an orange, near the left kidney. Pain followed, becoming worse during menstruation. The diagnosis made was cystic ovarian tumor, probably with a twisted pedicle. Operation, however, showed a retroperitoneal cyst, which was dissected out. She recovered in 6 months. Macroscopical and microscopical examination showed the tumor to be a **hematoma, retroperitoneal** and prerenal in position. This probably followed the accident of 4 years before. The differential diagnosis between this condition and ovarian

and pancreatic cysts follows. The literature is fully quoted. [M. O.]

3.—During 3 months Hamburg analyzed the food of a first class Vienna restaurant for young men, both that for lunch and for dinner, to find its nutritive value. Several tables of analyses follow, showing the albumin, fat and carbohydrates contained in the foods, the calories necessary, lacking, etc., at the separate meals. The article is full of details of Vienna food. As a rule more meat is ingested than is theoretically needed. As a whole, however, this restaurant gives a sufficient quantity of food of good quality to its regular customers. [M. O.]

REVUE DE CHIRURGIE.

February, 1902. (22me. Année, No. 2.)

1. Resection of the Internal Pudic Nerve in Vaginismus and Pruritus of the Vulva. E. TAVEL.
2. Gastrostomy. F. TERRIER and A. GOSSET.
3. Cicatricial Stenosis of the Pylorus. QUENU and JEAN PETIT.
4. Cytology, Cryoscopy and Hematolysis. CHARLES JULLIARD.

1.—Vaginismus and pruritus of the vulva often persist in spite of medical treatment. After a review of the literature and of the anatomical relations of the internal pudic nerve and its branches, Tavel reports 2 cases in detail, in women of 18 and 28 years, with vaginismus and pruritus vulvæ. Both were cured by resection of both internal pudic nerves. The anal branch was left in place undisturbed. His technique is fully given. No drainage is necessary. Diagrams illustrate the article. [M. O.]

2.—Terrier and Gosset, who have performed gastrostomy upon 8 patients with carcinomatous stricture of the esophagus, fully describe their technique, the operation being well shown in diagrams. They divide the operation into the following steps: Incision of the abdominal wall, search for the stomach, fixation of the stomach in the abdominal wall and opening the stomach. It is not difficult, taking about 20 minutes. But one patient died in 24 hours, and he had swallowed no food for a week previous to operation. One died in 17 days, one in 22 days, one in 30 days, and one in 41 days. The other three are still alive, one 9½ months, one 4 months, and the other 3 months since operation. The orifice must be very small, and be placed as high as possible. The canal should be long, with folds of mucous membrane which cover, and a spincter which closes it. A long cone of the stomach is drawn up to the abdominal wall, and 3 layers of sutures are put in. The muscular layer, after retraction, with the right rectus muscle, forms a spincter. [M. O.]

3.—Cicatricial stenosis of the pylorus frequently and rapidly follows the ingestion of caustic liquids. Yet in some cases symptoms appear gradually. Out of 29 cases in which death occurred quickly, 10 showed pyloric ulceration. Of 30 cases in which death occurred a month after the ingestion of the caustic, 18 showed gastric ulceration, 13 of them with pyloric stenosis. Half of the cases die in 24 hours, from perforation, collapse, shock, etc. In other cases improvement follows, but symptoms of esophageal or pyloric stenosis appear, especially the latter, in 3 or 4 weeks. There is gastric dilatation, with hyperchlorhydria, pain, vomiting, cachexia, and death from two to five months after ingesting the caustic. They report the case of a man of 21, who swallowed hydrochloric acid in 1892. He improved, but at times could not swallow. Esophageal stricture followed. In 1894 his esophagus was dilated and he swallowed well. In 1895 gastric symptoms appeared and grew gradually worse. In 1900 operation showed a dilated stomach with pyloric stenosis, for which Quénu did posterior transmesocolic gastro-enterostomy. Then he recovered completely. In 2 other cases quoted, gradual stenosis of the pylorus developed. While pyloric dilatation, pylorectomy and pyloroplasty have been done, posterior gastro-enterostomy with sutures seems the best operation. Next comes pylorectomy. A number of tables complete the article. [M. O.]

4.—Julliard gives a most detailed account of the clinical use of cytology, cryoscopy and hematolysis in surgical effusions into the serous sacs, such as hydrocele, hernia, arthritis etc. He examined the fluid from 14 hydroceles of different kinds, and found that chronic essential and syphilitic hydrocele showed only endothelium; that encysted hydrocele of the cord gave polymorphonuclear leukocytes, probably inflammatory in character; that gonorrheal hydrocele showed marked polymorphonuclear leukocytosis; that tubercular hydrocele showed lymphocytosis; that lymphocytes or polymorphonuclear leukocytes followed traumatism, such as puncture; that the effusion was generally mechanical when no cytes were found; that eosinophiles seem to be present in infectious hydrocele; finally, that the cellular contents of an effusion show a relation rather to the clinical stage of acuteness or chronicity than to the cause of the hydrocele. He examined 4 strangulated inguinal and crural herniæ. The intensity of the morbid process was shown by the increasing presence of endothelium, lymphocytes and polymorphonuclear leukocytes, with colon bacilli in every case the probable cause. He also examined 14 cases of arthritis. Acute gonorrheal or rheumatic arthritis showed polymorphonuclear leukocytes; when subacute, endothelial cells also; when without fever, only lymphocytes were found. Tubercular arthritis showed lymphocytes and endothelium at the beginning. The presence of polymorphonuclear leukocytes does not show septic action, but the acuteness of the morbid process, whether infectious, toxic or traumatic. Thus cytology may become of diagnostic importance. The different infections may cause their own peculiar changes in the effusion. Finally torpid or mechanical effusions show endothelial cells alone; subacute or chronic infections and certain traumatic effusions show lymphocytosis alone; while acute effusions, or chronic effusions with exacerbations, injury, etc., show polymorphonuclear leukocytosis. Cryoscopy seems useless, giving inappreciably varying results. Hematolysis shows lysins in the fluid of the hernial sac and in the articular effusions of the acute infectious diseases. In traumatic hemarthrosis the hematolytic power of the liquid varies inversely as the length of time from the beginning of the disease to the examination of the fluid. [M. O.]

March, 1902. (22me. Année, No. 3.)

1. Strangulated Hernia in Infants. E. ESTOR.
2. Unsuspected Symmetrical Fractures of the Clavicles. C. FERE and E. PAPIN.
3. Congenital Luxation of the Patella. D. G. ZASAS
4. The Intestine Above a Stenosis. M. PATEL.

2.—Féré and Papin report the histories of 5 cases of unsuspected symmetrical fractures of both clavicles in middle-aged individuals. Radiographs illustrate each case. No signs of traumatism were found, and none of the persons were aware of the fractures. As the histories pointed to no accident, Féré and Papin conclude that the fractures were congenital, probably the result of intra-uterine convulsions. [M. O.]

3.—Patel describes minutely the condition of the intestine above a stenosis, with a number of histological diagrams. Thickening of the intestinal wall often occurs, whether the stenosis be extraparietal or parietal, with or without dilatation. He concludes that the position, degree or age of the stenosis bears no relation to this thickening, which coincides with an actual lesion of the mucous membrane. This hypertrophy is due to pathological infiltration of the muscular and cellular layers, a false hypertrophy due to an ulcerative lesion of the intestinal wall. This hypertrophied part should be considered diseased and should not be employed in anastomosis. [M. O.]

JOURNAL DE CHIRURGIE.

[illegible], 1902. (12me. Année, No. 1.)

1. Double Rachitic Coxa Vara. G. GEVAERT
2. The Treatment of Tubercular Glands. C. WILLEMS
3. Chronic Orbital Abscess. DEPAGE
4. Suture of the Carotid Artery. DEPAGE
5. Uterine Fibroma with Parovarian Cysts. A. HANNECART
6. Hydronephrosis. LAUWERS
7. Bilateral Testicular Neuralgia. VERHOEF

1.—Gevaert reports a case of double coxa vara in a boy of 8, the condition probably being of rachitic origin. The

boy was sent to the seashore with a diagnosis of coxalgia. His left leg was 1½ cm. shorter than the right, and abduction on both sides was limited. The lesions of the heads of the femora are well shown in a skiagraph. The literature is briefly reviewed. The prognosis is more favorable when the condition is rachitic in origin. The patient walks without fatigue. Constitutional treatment alone is indicated. [M. O.]

2.—Willems believes that it is the physician's duty to **cure tubercular glands** with the smallest possible scar. Beside constitutional treatment, sea air, etc., Willems paints swollen glands with 10% iodoform collodion. When fluctuation appears, this should be stopped. When caseation occurs, he incises, using dry drainage. Great care is needed to prevent infection when changing dressings. This is also his treatment when suppuration has occurred. When a fistula persists, the glands should be extirpated. [M.O.]

3.—Depage reports the case of a boy of 10, who, following measles 3 years before, noted conjunctivitis in the right eye, nasofrontal pain and exophthalmos. The 2 latter symptoms have persisted. Examination showed increased retrobular tension. A large **chronic abscess of the bottom of the orbit** was found upon operation. The internal bony wall of the orbit had disappeared, and the operator pierced the nasal mucous membrane. The patient recovered rapidly. [M. O.]

4.—Depage recently **sutured the internal carotid artery** during an operation for the removal of a carcinoma of the tongue, in a woman of 52, filling the posterolateral part of the tongue on the right side. While ligating the external carotid, he injured the internal carotid. At once he put in 2 silk sutures and continued the operation. The patient recovered well. [M. O.]

5.—Hannecart presented a specimen of **uterine fibroma with multiple intraligamentary bilateral cysts.** Uterus, tumors and adnexa had all been removed. The patient recovered. Some of the cysts were hyaline, others papillary. [M. O.]

6.—Lauwers discusses **hydronephrosis,** giving 9 case-histories in detail. It always follows obliteration of the ureters, congenital, due to movable kidney, calculi, etc. A right-sided tumor may move the ascending colon, while the relations of a left-sided tumor remain unchanged. He advises nephrectomy as the treatment. The details of the operation follow, with another case-history. The pathology of hydronephrosis is also described. [M. O.]

7.—Verhoef reports a case of **bilateral testicular neuralgia.** In 1899, a young man of 19 awoke with excruciating pain, so severe that he fainted several times. A rudimentary testicle was found at the external inguinal ring, with a congenital hernia. As one testicle seemed normal, it was left alone, and the other was removed when the radical cure for hernia was performed. The pain recurred on the other side 2 years later, and castration was necessary, after a preliminary operation which had been useless. The patient has kept well since. [M. O.]

LA SEMAINE MEDICALE.

[illegible], 1901.

The Evolution of Morbid Phenomena. M. CHARRIN.

In his paper on the evolution of morbid phenomena, Charrin discusses along biological lines the conception of disease itself, in what health consists and how the cessation of vital functions is brought about. He describes the various defences of living organisms, especially of the higher types, by which they are able to adapt themselves, within limits, to changes of environment and still preserve undisturbed function. Beyond this point disease results. The various factors which bring about disease are separately considered, including the effects of heat, cold, the atmospheric elements generally, auto-intoxication and micro-organismal infection. The evolution of morbid phenomena is discussed in all its phases. Etiologically the period of incubation and the course of the disease including the likelihood of subsequent attacks is considered and the nature of possible complications. [T. L. C.]

January 1, 1902.

Latent Tuberculosis of the Tonsils and Adenoid Vegetations. S. JANKELEVITCH.

Jankelevitch presents a lengthy review of the literature of latent **tuberculosis of the tonsil.** He is convinced that most of the cases published as primary have really been secondary to tuberculosis elsewhere in the body. He insists that tuberculosis of the tonsil is benign and, the opinion of Pluder and Fisher to the contrary, that it never goes on to suppuration. He affirms that between latent tuberculosis and ulcerative tuberculosis there is not only a difference in degree but a difference in nature of the affection. He has not found in the literature a single well-authenticated infection of the lungs having its origin in the tonsil. In that form which affects the **pharyngeal tonsil** in particular the existence of a latent tuberculous focus may be regarded as a favorable process which has prevented the physiological involution, but if we recognize in an adult adenoid vegetations of considerable size, it is not necessary to conclude that these vegetations are the seat of a latent tuberculous process, for if this is a cause of the retardation of the involution, it is not the only cause nor the principal one. Surgical treatment is the only measure recommended. [T. L. C.]

January 8, 1902.

Surgical Treatment of Tuberculosis of the Testicles. F. LEGARS.

The surgical treatment of tuberculosis of the testicles must be based upon a clear conception of the development of the process in this organ and especially of the vital resistance of the organ itself as an essential factor to cure. In order that treatment be conservative, active measures must be undertaken early. The article is illustrated with cuts showing the operation of **epididymectomy, exploratory orchidotomy and castration in mass by mediocrotal transfixation.** The subject is discussed in detail. [T. L. C.]

January 15, 1902.

Comparative Studies of the Pathogenic Action on Animals, Especially Those of the Bovine Species of the Bovine and Human Tubercle Bacillus. D. A. de JONG.

In a series of experiments de Jong has been able to inoculate a number of animals with the human tubercle bacillus. He believes that there is a difference in virulence between human and bovine tuberculosis. To illustrate this point he states that he has been able to produce tuberculosis in the bullock, sheep, goat, dog and monkey with the bacilli derived from the human species, but that the disease appears much more grave in these animals when bovine tubercle bacilli are used. He believes that the tubercle bacillus derived from the bovine species is, in general, more virulent than that of man. He does not accept the view that the higher virulence of bovine tubercle bacilli as indicated by his experiments may not also be demonstrated equally in man. It follows, therefore, that man as a factor of infection from the bovine species is of much greater importance than the latter considered as a factor of infection from man. In consequence, bovine tuberculosis from the point of view of hygiene is deserving of more attention than it has heretofore received. The author states that these investigations were made prior to Dr. R. Koch's address before the London Congress. [T. L. C.]

January 22, 1902.

Pleural Effusion Associated with Heart Disease. ERNEST BARRIE.

Barrie states that he has had for some time in his ward 2 women patients suffering from cardiac disease as well as a complication in common, a **pleural effusion.** The first patient presented a **double aortic lesion,** the second, who was also **rheumatic,** suffered from **mitral regurgitation.** He mentions the fact that this association of heart disease with pleural effusion, while not uncommon, differs in its nature, pathology and diagnostic features. The differential diagnosis between hydrothorax and pleurisy can be made by remembering that a true pleural effusion is unilateral, and selects by preference the right side and that in distinction, and that it is more frequent that hydrothorax and even, although small in amount, is apt to give rise to dyspnea. Hydrothorax is generally bilateral, and accompanied by signs of severe organic disease. In hydrothorax the pleura is practically unaltered while in pleurisy it is inflamed or [illegible] to the adjacent hemorrhagic infarct. Chemical examination of the fluid from the two conditions is im-

portant: that of hydrothorax is simply serous; while that of pleurisy is inflammatory in nature and contains fibrin. This distinction is important, but especially so is the cytological examination of the fluid which from hydrothorax is found to contain desquamated endothelial cells from the pleura, while the fluid from a cardiac pleurisy approaches the formula of **pneumococcic pleurisy,** there being found especially polynuclear cells, with epithelial elements. The presence of the polynuclear cells is of great importance, for it permits us to diagnose an unsuspected hemorrhagic infarct. When the examination has determined that the condition is pleurisy and not hydrothorax, the diagnosis is not determined, for the effusion may follow an intercurrent attack of **acute polyarticular rheumatism.** He has recently had such a case under his care in a patient suffering from a double mitral lesion which followed two severe attacks of articular rheumatism. The patient recovered under treatment by salicylate of soda and complete rest in bed. The pleurisy which complicates rheumatism is, as a rule, sudden in its onset and soon becomes bilateral. Its cause is usually the toxic influence which may also exert its influence on the endocardium. The prognosis of the pleurisy is by no means as serious as that of hydrothorax. As far as the treatment of the latter is concerned, it is necessary to remember that it must be directed toward the underlying asystola. [T. L. C.]

January 29, 1902.

Traumatic Scarlet Fever. R. de BOVIS.

Traumatic scarlatina constitutes an **eruptive, contagious and often epidemic disease** which seems to be of the same nature as ordinary scarlatina. The infection, however, occurs in a wound. The disease has been called **surgical scarlatina.** In 147 cases selected from the literature 117 occurred in children under 15 years of age and two-thirds of these were in boys who had suffered from traumatism. In a number of these cases the appearance of the scarlatina and the association of the wound have been purely coincident. In a certain number, however, the scarlatina has developed in the wound. Traumatic scarlatina is less severe in its course than the ordinary scarlet fever. The eruption makes its appearance at the wound and spreads from that point over the body. The sore throat is very much less severe and the constitutional symptoms slighter. The period of incubation is shorter and desquamation sets in earlier. It is also pointed out that traumatic scarlatina occurs in older children than the common affection. [T. M. C.]

February 5, 1902.

Smallpox in England During the Last Fifty Years and the Lessons Which Can be Drawn From the Point of View of the Influence of Vaccine on the Contagion and the Severity of the Disease. A. GUBB.

Gubb's paper, dealing with the **epidemiology of smallpox,** contains tables showing the relative proportion of infants of less than 5 years, the patients from 5 to 20 years, and adults, who have suffered from smallpox in London since 1842. He shows that the infants under 5 years of age contributed from the years 1842 to 1850, 69% of the total mortality from variola. Under the favorable influence of vaccination this enormous proportion was gradually lowered until 1890, and for the decade, 1881 to 1890, it was not more than 25%, but at this time the **antivaccination movement** began to gain ground and, aided by the epidemic which prevailed from 1892 to 1895, the infant mortality increased to 31% for the period 1891 to 1900. It is not possible to explain the remarkable progress accomplished from 1842 to 1890 other than by the protection that vaccination afforded. From the years 1881 to 1890, in every 100 individuals attacked the mortality among the vaccinated was 4.3% of infants of less than 5 years and among the nonvaccinated the rate for the same period of life was 40.5%. Tables are presented showing the great decrease of the number of vaccinated persons to every 100 of the population from 1872 to 1898 and further instructive tables show the mortality among the **vaccinated** and **nonvaccinated** during the epidemic of 1901 in London. [T.L.C.]

February 12, 1902.

Phlebitis in the Course of Secondary Manifestations of Syphilis. OETTINGER.

Affections of the veins in general are comparatively rare manifestations of syphilis, while the arterial changes are common. Oettinger reports a case which presented with secondary syphilitic manifestations a **double phlebitis of the external saphenous veins** which developed without marked pain, without appreciable edema and without redness. This phlebitis was symmetrical and localized exclusively at the trunk of the two external saphenous veins and did not affect the deeper vessels. Under active mercurial treatment and rest the symptoms disappeared in about 15 days. [T. L. C.]

February 19, 1902.

Milk Diet in Adult Life. R. LEPINE.

Lépine discusses the **chemical composition of milk,** the **various effects of modification,** such as **boiling, pasteurization,** etc. He mentions the fact that milk is not a suitable diet for an adult in health, that it gives rise to various gastro-intestinal disturbances and is only occasionally well-borne. In disease, however, Lépine considers that it is of the greatest use and he mentions a number of conditions in which it is especially indicated. In nervous affection he does not limit himself to the use of milk alone, but permits a considerable freedom of diet. He mentions the treatment of **diabetes** by milk, in which it is recommended that 5 to 6 liters per day be taken. In Lépine's opinion the amount taken does not contain a sufficient number of calories to nourish the obese diabetic. While in certain cases this insufficient alimentation may prove favorable in a grave case, Lépine believes the milk treatment absurd. [T. L. C.]

February 26, 1902.

Topography of the Lumbar Region With a Special Reference to Lumbar Puncture. E. JUVARA.

Juvara, in a remarkably well illustrated article, discusses the anatomy of the lumbar region with a special reference to the procedure of lumbar puncture. [T. L. C.]

March 5, 1902.

The Persistence of Negative Work in Paralyzed Muscles and its Importance From the Point of View of Prognosis and Treatment. P. REGNIER.

Regnier mentions the great interest to the physician of the recent work of physiologists in the study of **muscular contraction.** He briefly reviews the work of Chauveau and Laulanie on this subject and deals especially with **Chauveau's** law as to force and [illegible] by the contraction of the muscles. The effort upon the muscle required to raise the arms is termed **"positive"** and the force required to keep it at a certain position is called **"negative."** Regnier has utilized these principles and regards them as helpful in the prognosis and treatment of paralyzed muscles. The profession recognizes the precision introduced by the study of the reactions **of degeneration,** partial or total, in the differential diagnosis of muscular atrophies and of motor paralyses. The presence of these reactions of degeneration permit us to discard a certain number of affections which have never existed, such as **primitive myopathies,** and to recognize others. The [illegible] facts of physiology have furnished us additional means of refined diagnosis. A problem is presented of exacting the smallest amount of work from the muscle and [illegible] cells in the cord and in this way overcoming the [illegible] of the degenerated nerve to the nerve wave. To obtain the maximum energy of the motor cell the following method is used. The [illegible] of the limb is caused to [illegible] resistant to the position previously determined upon and the patient is then told to oppose the return of the [illegible] position of equilibrium. The patient must at the [illegible] the breaking of the apparatus [illegible] If the effort is good at this time a reaction [illegible] noticed due to the reflex contraction which is designed to maintain the rigidity of the lever formed by the arm. The recurring reflex actions thus formed substitute **the nerve wave from the brain,** which it is not [illegible] by pressure owing to the long [illegible] of the cells of the peripheral sensory [illegible] Regnier has been able to obtain this contraction in over [illegible] of the cases in cases of spinal paralysis or neuritis even when the reactions of degeneration are present. This point is especially valuable in prognosis, for, if the nerve wave is

not present, no treatment will prove of any service, but if it is present, daily exercises in gradually increasing the resistance applied to the part will prove the best possible treatment. One of the many interesting observations which Regnier makes is that the application of this physiological law affords a rational explanation of the effects of **Swedish movements.** [T. L. C.]

March 12, 1902.

Is There a Renal Diabetes? FRANCIS MUNCH.

Munch believes that there is much to be said in favor of the existence of a renal diabetes. In making such a diagnosis, however, it would be necessary to exclude a class in which the albuminuria did not with certainty precede the glycosuria or in which it is possible to account for the presence of the glycosuria from such a cause as gout. Experimental pathology has thrown a certain amount of light upon the question; after intoxication by cantharidin or after the administration of theobromin there is present an increased renal permeability, but in certain other conditions it is held that we may attribute to the kidney the production of sugar in such cases of **phloridzin glycosuria.** The evidence as far as human beings are concerned is not positive from the literature of the reported cases and the question may be regarded as *sub judice.*

[T. L. C.]

March 19, 1902.

The Report of a Case of Pott's Disease of the Cervical Spine. RAYMOND.

Professor Raymond reports a case of a young woman of 26 years with an unimportant family history. She was married at 23 years, became pregnant and in the course of her pregnancy she was seized with violent pains in the left arm, which came on about 3 A. M., and continued violently for about 7 hours. This increased in severity toward the end of her pregnancy. After this event, the pain finally became less severe in the arm and localized itself at the level of the last cervical vertebra and movements of the head or arms were excruciatingly painful. Three months later her right arm became anesthetic, power was gradually lost and the patient was unable to feed herself. Her condition grew rapidly worse, the entire left half of the body from just below the mamma became totally anesthetic, as was the right hand which also showed diminished sensibility radiating to the shoulder. The left hand and arm also presented great loss of sensibility. Her condition was diagnosed as a spinal affection which was limited to the cervical portion. This affection in the beginning simply presented the phenomena of affection of the cervical and brachial roots. Later there was evidence of the extension of the process. [T. L. C.]

March 24, 1902.

Suppuration in the Subphrenic Zone. F. LEJARS.

Lejars presents a case of **subphrenic abscess** in an otherwise healthy man of 35 years. The diagnosis in such a condition lies between: (1) **Nongaseous abscess;** (2) **gaseous abscess,** including the **pyopneumothorax subphrenicus of von Leyden,** and (3) **retroperitoneal abscess.** The surgical anatomy of the region is described as well as the means of differential diagnosis. Having determined the exact nature of the abscess, it is necessary to open it at the lowest possible point and to drain it thoroughly. Such aids in the diagnosis as **exploratory puncture** and **radioscopic examination** are considered. After a commendable description of the points outlined, Lejars mentions the importance of early diagnosis and the favorable outlook when the proper surgical treatment is instituted. [T. L. C.]

April 2, 1902.

Uremic Stomatitis and Its Diagnosis. EDGAR HIRTZ.

Hirtz reports a case of a patient of 51 years, who came to the hospital suffering from headaches and failure of vision and violent dyspnea. He presented a slight edema of the leg and of the lumbar region. Subcrepitant rales were present at the bases of the lungs most marked on the right. He suffered from tachycardia, gallop rhythm, and the clinical picture lead to the diagnosis of respiratory uremia. Two days after his admission the urine showed 12.43 cgm. of albumin per liter. The man's breath was very foul. Examination of the mouth revealed that the teeth were covered with a thick and viscid deposit and they showed long neglect. The buccal membrane was covered with grayish patches which were well brought out by the deeply red color of the intervening spaces. These patches bled on removal and were extremely tenacious. The membrane was deeply ulcerated in places. No ulcerations of the tonsils or pillars were found. Hirtz describes the various conditions of stomatitis including the ulceromembranous, diphtheritic, aphthous and thrush, and demonstrates that, the condition found taken into consideration, the patient's general condition is that of **uremic stomatitis.** Without going deeply into the etiology of the condition he mentions the fact that the cause probably resides in the effort of the mucous membrane to eliminate the toxins or chemical irritants, and in particular **urea.** The prognosis is rather unfavorable on account of the deep ulcerations which heal with difficulty. Treatment should be constitutional and directed to improve the patient's general state and local antiseptics should be employed. [T. L. C.]

April 9, 1902.

The Thirty-first Congress of the German Society of Surgery, held at Berlin, April 2-5, 1902.

This number contains a report of the recent Berlin meeting. [T. L. C.]

April 16, 1902.

The Estimation of the Leukocytes as Diagnostic means of Determining the Presence of Pus and in Particular of Pelvic Suppuration.

The question of the value of the leukocyte count as a means of determining the presence of pus is considered and the views of Hayem, Grawitz, Cabot, Rieder, Curschmann and other authorities are briefly stated. [T. L. C.]

JOURNAL OF NERVOUS AND MENTAL DISEASES.

March, 1902. (Vol. XXIX, No. 3.)

1. Hereditary Cerebellar Ataxia, with Report of a Case. HUGH T. PATRICK.
2. Association of Hysteria with Insanity. F. SAVARY PEARCE.

1.—H. T. Patrick gives the obstacles in the way of establishing **hereditary cerebellar ataxia** as a distinct disease: (1) A fundamental barrier, diversity of symptoms in the original basic sixteen cases; (2) absence of uniformity of subsequent cases reported as examples of this disease; (3) lack of careful post mortem examinations in cases which are, clinically, sufficiently typical; (4) variations in post mortem findings; (5) several autopsies which strongly lead to controvert Marie's thesis. [T. M. T.]

2.—F. S. Pearce says that hysteria as a clinical entity may develop, beyond the essential stigmata of this psychosis, three aspects: (1) The emotional element more particularly; (2) the physical state such as paralysis, sensory or motor; (3) the clinical side may be specially shown in disturbance of organs such as the heart, stomach, etc. In the author's experience this first division is the type that can be complicated more frequently by insanity of one form or another, and this is usually a form of mania. Forms of delusional insanity of slow onset in the hysterical subject are more likely to occur, however, when the mind is given suggestion by some physical defect, as in cases of hysteria with anesthesia, or a motor palsy in the symptom simplex. The autosuggestion through the paralysis or anesthesia on the hysterically enfeebled mind may produce, therefore, a true delusional insanity which may be quite irrecoverable after recovery of all the evidence of hysteria *per se.* This is also true of the hysterical cases of the third group. When the heredity is good and the hysteria can be cured by suggestion and general building up of the system, the author feels that the patient will recover from the mild delusional alienation. [T. M. T.]

Society Reports.

AMERICAN GYNECOLOGICAL SOCIETY.

The [illegible] annual meeting of the American Gynecological Society was held at Atlantic City, on May 28, 29, 1902. Dr. Philander A. Harris, of Patterson, N. J., gave an address of welcome which was responded to by the president, Dr. Seth C. Gordon of Portland, Me. The society immediately entered upon the business session, Dr. Thomas A. Ashby, of Baltimore, reporting his **case of wandering spleen packed in the pelvis and complicated by typhoid fever.** A splenectomy was performed, the patient making a good recovery. An animated discussion followed, participated in by Drs. Howard, Dudley, Sutton, Stone, Smith of Montreal, Bovée and others. Bovée remarked that removal of a spleen, the function of which is abolished, gives no more symptoms than the removal of a fibroid tumor, but the nearer the normal it is, the more severe the symptoms. He emphasized the importance of examination of the blood before performing such an operation. Splenopexia, he states, is of doubtful importance. Before excising the spleen he would clamp the vessels, both the veins and the arteries, and ultimately ligate them individually.

Dr. Edward W. Jenks, of Detroit, presented a paper on **the medical side of gynecology** which was intended to refute the statement which has been made that there is no such thing as medical gynecology. Incidently he remarked that the mortality of all operations in the pelvis as shown by the statistics of large hospitals, is 3.8% in the hands of gynecologists and 6% in the hands of the general surgeon. Some of the symptoms of gynecological diseases are simulated by general diseases, such as chronic malarial infection, myalgia and coccyodynia. A wide knowledge of constitutional disorders is important for a good gynecologist. He objects to the men who call themselves gynecologists, but who plough only in one furrow, while the subject of gynecology itself is only one branch of the greater field of surgery.

Dr. Walter L. Burrage, of Boston, read a paper on the **lacerations of the cervix uteri and pelvic floor—a plea for their more careful study, their diagnosis and treatment.** He remarked that all the lines of improved surgery and surgical treatment tend to simplicity. In his work he has encountered 276 cervical lacerations, and has operated 276 times. He has endeavored to restore in every instance the original condition and has not amputated a cervix or restored the floor irrespective of its usefulness. The diagnosis of laceration of the cervix immediately after labor is difficult. In the severer cases he still prefers the operation of trachelorrhaphy, as the cervix, he believes, is important in preserving the normal relations of the parts. It is especially important to repair the cervix in cases complicated by displacement, and, in doing this, he emphasizes the necessity of removing a wedged-shaped piece in order to bring the parts well together. Nonabsorbable sutures give the best results in most cases. A curetting should be performed before the operation of trachelorrhaphy in order to relieve the symptoms. Laceration of the pelvic floor results in loss of support to the pelvic tissues which may not manifest itself for several years. It is advisable to restore the parts immediately after labor; atrophy of the muscles from disuse would otherwise follow. He prefers nonabsorbable sutures for this operation also, especially if many be required. Dr. Dickinson of New York remarked that it is difficult to find the retracted ends of the muscles in the old cases and in the immediate operation the perfect restoration of the floor is impossible because of distortion of the parts; hence the week after delivery is the best time for operating. This is also true of laceration of the cervix. Any sphincterial tear should be repaired on the fourth to fourteenth day. Boldt, of New York, prefers to amputate the cervix of stellate laceration with [illegible] In infection are less in the primary operation than when the operation is performed in the intermediate stage. Studies of Montgomery [illegible] that the vast majority of cases of adenocarcinoma [illegible] rather does it begin at some joint near the surface. He [illegible] makes an immediate repair of the cervix. Dudley, of [illegible] prefers to perform the operation in the primary stage and emphatically differs from others who think to the contrary.

AFTERNOON SESSION, May 27.

The afternoon session was devoted to a **symposium on retrodisplacement of the uterus.** Dr. Matthew D. Mann of Buffalo, presented the first paper on **the etiology, pathology and symptoms.** He states that the [illegible] [illegible] the cervix, [illegible] the attachment of the vagina and cervix [illegible] and [illegible] [illegible] [illegible] [illegible] must be at fault. The round ligaments are the most important structures. They are muscular organs which contract during [illegible] draw the fundus forward. The uterosacral ligaments [illegible] form an important part by holding the cervix back. [illegible] ture of the perineum with falling of the vaginal walls brings the uterus down and tips it backward. As a result of displacement, the pelvic circulation is interfered with and chronic metritis and noninfectious endometritis occur together with menstrual disturbances. Cervical lacerations [illegible] organ backward. Coughing and the straining of constipation [illegible] ache, but it is possible for a displacement to exist without [illegible] [illegible] especially gastric symptoms. Eye-troubles are closely associated with backward displacement.

Dr. Francis H. Davenport, of Boston, presented **the non-operative treatment of retrodisplacement.** He stated that the pessaries are the most important of the non-operative methods of treatment. Supports for prolapsus were known before the Christian era. As retrodisplacements were recognized, [illegible] modern pessary was evolved. Massage has been [illegible] [illegible] [illegible] [illegible]

suspension. He stated that the operation is indicated in fixed uteri and in displacements accompanied by marked symptoms; also when the operation is done secondarily to abdominal section for other conditions. The operation may not give relief; the uterus may pull away and displacement occur; very rarely hernia may occur; general sepsis may follow in faulty technique; there is the possibility of interference with subsequent pregnancy, but this is usually due to a fixation of the uterus and not to a suspension. These are some of the objections advanced to the operation. Robb thinks that ventral suspension is the best method we have for treating retrodisplacement of the uterus.

Dr. J. Riddle Goffe, of New York, read a paper on **intra-abdominal shortening of the round ligaments per vaginam.** He does not recognize the uterus has any support whatever from below. In retrodisplacement the ligaments are at fault. After the uterosacral ligaments the round ligaments are the best structures to act upon in restoring a retrodisplaced wound. The Wylie-Mann method of shortening these ligaments is most excellent. The same method done through the vagina gives excellent results. In performing this operation, the vagina is opened transversely and the bladder dissected loose. The anterior vaginal wall is then split down to the sphincter vaginæ and the flaps dissected back. These flaps contain the ureters. Goffe has operated upon 130 cases of this kind during the past 6 years with only 3 failures which were due to modifications of the technique. After exposing the uterus, the finger is hooked over the top of the organ, anteverting it into the vagina. The appendages are then drawn down and inspected, after which the round ligaments are doubled upon themselves and sutured with silk. The uterus is then replaced, the bladder restored and the vaginal incision closed. Ten of Goffe's cases became pregnant, and 8 went to term. Suppurative disease of the appendages is the most common cause of the retrodisplacement; hence the Alexander operation is of service in but a small number of cases. In the congenital form of retrodisplacement due to imperfect invagination of the uterovesical ligaments, these structures may be detached and re-implanted further up on the anterior uterine wall.

Dr. J. Wesley Bovée, of Washington, read a paper on **shortening of the uterosacral ligaments.** He states that this operation, which has been infrequently done, has been of service in restoring retrodisplaced uteri. Herrick reports 26, Sänger 52 successful cases performed by the vaginal route. In all, Bovée has gathered 83 cases of this operation with one known failure, and that due to catgut sutures.

In the **discussion** upon this series of papers, Mann remarked that shortening of the broad ligaments, as suggested by Cleveland, will throw the uterus posterior, and not anterior. He believes in the Alexander operation. He has performed it several hundred times, and uses it in adherent cases without appreciable masses in the appendages by first opening the vagina and breaking up the adhesions. He never does this when there is marked disease of the ovaries. The operation is very useful in cases of prolapse.' Cushing, of Boston, does not believe in the Alexander operation. The perfectly mobile cases are few and do not require this operation. Again, the operation requires 2 incisions. The operation is best done above and not by the vagina. A transverse incision just above the pubic hair does away with the abdominal scar, which is one of the main objections to the ventral operation. Cragin, of New York, has had no bad results after Alexander's operation, and only one failure after ventrofixation, in which case the wound suppurated, and the fundus became attached to the anterior wall. Wylie believes that imperfect development is a prolific cause of retrodisplacement. He also believes that ventral suspension is abnormal and will eventually become obsolete.

MORNING SESSION—MAY 28.

Dr. Hiram N. Vineberg, of New York, read a paper entitled **a further contribution to the study and practical significance of lactation atrophy** which he considers a physiological process with or without amenorrhea and only temporary in nature. Very rarely it may remain permanently but he has encountered only one permanent case in 60 cases of lactation atrophy seen in his recent experience. He meets with from 50 to 60 cases annually. In some cases the condition can be determined only by bimanual examination. In connection with lactation atrophy the sound shows a measurement of from 4 to 6 cm. The cervix at times shares in the process, but the ovaries do not undergo a corresponding change. The atrophy is most marked during the fourth and fifth months when lactation is the heaviest. The reestablishment of the menstrual function can be looked upon as a sign of the full restoration of the uterus to its normal size. The degree of atrophy shows no relation whatever to the degree of anemia shown by the patient. The question remains, does this physiological hyperinvolution take place independently of lactation? There is a certain amount shown in cases in which lactation is not going on, but the condition is most marked in nursing women. He would, as a result of these studies, advise a stoppage of the nursing at the end of the seventh month. Smith, of Montreal, would not limit the period of lactation to 7 months, but would continue the process through the usual period. Grandin, of New York, objects to the term atrophy. He believes that this condition is not pathological, but that it is a natural process. Vineberg, in reply, claimed that the process of involution, whether normal or excessive, consists in a distinct atrophy of the muscular tissue and therefore he prefers to continue the term.

Dr. E. E. Montgomery, of Philadelphia, read a paper on **the relative advantages of the complete and partial hysterectomy** in which he described the various operations of Schroeder, Goffe and Baer and gave a history of the evolution of the two forms of hyseterctomy. He endorsed the method practised by Doyen, of Paris, which he described in detail. Among the numerous advantages claimed for this method are an increased immunity from sepsis and the complete removal of an organ that may ultimately become degenerative. Noble, of Philadelphia, believes that the elder Emmet, of New York, was the first man to do the operation of the hysterectomy with amputation of the cervix and covering of the stump with peritoneum. He thinks that amputation is safer than removal of the cervix. He understands that Doyen's mortality has been excessive; for instance, in a series of 10 cases it is reported that 8 bled to death, one died of tetanus and one recovered. A simple tumor can be readily removed by this method. Cushing, of Boston, said that Bardenheuer performed the operation 7 times and should therefore be given the right of priority. Mann, of Buffalo, has seen 3 cases of cancerous degeneration of the cervix after supravaginal hysterectomy. If there is real danger of such an occurrence, he does not think that the cervix should be left. He does not believe that removal of the cervix adds to the danger of the operation. The removal of this structure affords drainage and prevents elevation of temperature from retention of blood which oozes out. He has been compelled to dilate the cervix 2 or 3 times in order to remove such accumulation of the blood. He now removes the cervix in all his hysterectomies, especially if the woman has borne children. Noble, of Philadelphia, always uses cumol catgut in his operations, and in 13 cases he has never had a bad result follow. Baldy, of Philadelphia, has never seen suppuration occur under the peritoneum covering the cervix. A running stitch will effectually prevent any leakage into this subperitoneal space. He never uses catgut in the peritoneal cavity when tension exists. Complete removal takes longer than amputation, and he leaves the cervix

which, he finds, always atrophies after the operation. Cragin, of New York, prefers to leave the cervix.

The president, Dr. Seth C. Gordon, of Portland, Me., read his address on **the passing of gynecology** in which he stated that modern gynecology is the legitimate child of ancient obstetrics. There will remain a large field for gynecology until modern obstetrics becomes more perfect. He gave a short résumé of the fathers of gynecology, including the famous New York operators, Emmet and Sims. The latter's treatment of vesicovaginal fistula of itself made him the father of gynecology. To Emmet belongs much credit for his plain and practical presentation of the subject. While formerly neglect of the forceps was the cause of much injury in the parturient tract, the too early use of forceps is now one of the great faults of obstetricians. Cases of accidents occurring in labor are not properly treated at the time. Thorough asepsis and the judicious use of anesthetics are very important. Dr. Gordon closed his address with a brief review of the modern progress in gynecology.

Dr. Robert A. Murray, of New York, read a paper entitled, **the treatment of placenta previa—Cesarean section not justifiable.** He mentioned the recent suggestion of Tait and others that Cesarean section be performed in placenta previa in order to decrease the maternal mortality of that condition, and gave a review of the reports of cases of that operation up to date. In the brief discussion that followed, Grandin, of New York, remarked that he regards placenta previa as a malignant disease of the uterus, as much so as sarcoma or carcinoma, and he at once empties the uterus. That is, he resorts to an elective accouchment. He objects to the term forcé. He does not tear the muscle, but causes the uterus to dilate. He would never resort to Cesarean section in this disease, for, after the grave hemorrhage has occurred, the child is dead and the Cesarean section is useless as far as the fetus is concerned. Murray, in closing, admitted that in a very small minority of cases is it possible to treat placenta previa by Cesarean section.

AFTERNOON SESSION—MAY 28.

Dr. E. P. Davis, of Philadelphia, read a paper on **two conditions simulating ectopic gestation.** He remarked that pelvic hematocele is not invariably a result of ectopic pregnancy as is shown by the report of 2 cases. The first patient gave the symptoms of internal hemorrhage, and examination showed a spongy mass in the pelvis. He opened the posterior cul-de-sac and removed a number of clots; the patient became septic and died. No autopsy was allowed. It was learned that her husband was an anatomist and had made some intra-uterine treatment. An examination showed that the material removed consisted purely of blood-clots. Davis remarks that hematoma of the abdominal wall during pregnancy may simulate an extra-uterine pregnancy. His second patient presented the signs of internal hemorrhage, was very anemic, and examination showed that the pelvis was filled with a soft boggy mass. Her breasts showed the signs of early pregnancy; the pulse was rapid. Operation was performed and an intra-uterine pregnancy was discovered with normal tubes and ovaries. At 6 months the patient aborted spontaneously and the uterus at that time was found lined with an old blood-clot one-half inch in thickness. Pregnancy in a rudimentary horn may also simulate extra-uterine pregnancy. In doubtful cases Davis thinks it is better to perform abdominal section. Grandin, of New York, remarked that the diagnosis of extra-uterine pregnancy is not a simple matter. A symptom exists, however, which is peculiar to this condition and exists in no other disease. It was first noted by Jan-

doubt, he makes a posterior vaginal section to confirm his [illegible]. If no blood escapes through the vaginal incision, the finger may explore the appendages to ascertain their condition. Pryor, of New York, stated that acute hemorrhage of the ovary will simulate all the symptoms of an extra-uterine pregnancy [illegible] because is entirely unknown. The bleeding occurs a little before menstruation and takes place in the ovarian [illegible]. The [illegible] remarked that extra-uterine pregnancy is found but is not [illegible] diagnosed, the abdomen must be opened.

Dr. Charles P. Noble, of Philadelphia, presented a **clinical report on ureteral surgery** [illegible]. The most [illegible] implantation of stone in the ureter. A [illegible] pubic cystotomy was performed, the ureter incised, the stone removed and suprapubic and urethral drainage established. The patient recovered. *Second case*: Ruptured tubal pregnancy with a subperitoneal hematocele. Hysterectomy was performed and the lower part of the ureter excised. The ureter was implanted into the abdominal wall. The patient recovered. Subsequently nephrectomy was performed with resulting cure. Noble recommends this course when the ureter is too short for other operations, such as uretero-ureteral anastomosis or insertion into the bowel. *Third case*: A large [illegible] double ovariotomy; injury to the right ureter; death. The [illegible] between 2 pieces of the tumor and was softened and readily cut. *Fourth case*: Left papillary ovarian cyst; [illegible] of the ureter at the bladder; division of the ureter and implantation into the abdominal wall; escape of urine; the patient died. *Fifth case*: Cervical epithelioma; hysterectomy by the thermocautery with resulting urethral fistula and with cure of the cancerous disease. The ureter was subsequently implanted into the bladder by a [illegible]. *Sixth case*: Recurrent uterine sarcoma; hysterectomy by the combined method; injury of the left ureter; ureterovesical anastomosis [illegible] Cervical epithelioma, vaginal hysterectomy; ligation of the left ureter; death on the fourth day. *Seventh case*: Perforation of the ureter by a supposed ureteral calculus [illegible] Xray examination [illegible] which was not found at time of operation. *Eighth case*: Ureteral calculus, operation, recovery. Pryor, of New York, recorded a case of a ureter purposely cut in a carcinoma operation and the ureter introduced into a transversed incision in the side of the bladder; the vesical mucosa was drawn out, sutured to the ureter, and, retracting, drew the [illegible] which the right ureter was cut and implanted into the bladder. The operation was done at midnight. Uretero-ureteral anastomosis failing, the ureter was obliquely implanted into the bladder. The patient recovered. Reynolds, of Boston, said that in short ureters he would free the bladder from the tissues so to make it approach the ureter. He would then pass a forceps through the ureter into the bladder and one blade on through the bladder-wall. The [illegible] the bladder and implanted. This holds the ureter firmly into the bladder. The bladder-wall closes and the forceps are [illegible] Smith, of Montreal, in a case of sacula, opened the abdominal wall, cut the ureter at its lower end, made an oblique opening into the bladder, used Van [illegible] method of anastomosis [illegible] and sutured the [illegible]

urotropine for one week before the operation in order to render the urine aseptic.

Dr. Edward Reynolds, of Boston, read a paper **on the principles underlying the repair of cystocele and an operation founded thereon.** He stated that 2 anatomical points underlie success in the treatment of cystocele, namely, the studying out and utilizing of the natural support to the vaginal wall and the avoidance of using the stretched-out parts which should be excised and done away with. If they be used a weak scar results. A cystocele should be treated as any other hernia, namely by reduction, excision of the sac and stitching of the edges together. He described a crescentic operation modeled somewhat after the operation of Sims which resulted in the object desired.

THURSDAY MORNING.

The Nominating Committee reported the following officers for the ensuing year: President, J. E. Janvrin, of New York; vice-presidents, Edward W. Jenks, of Detroit, and A. P. Dudley, of New York; secretary, J. Riddle Goffe, of New York; treasurer, J. M. Baldy, of Philadelphia; members of the council, William R. Pryor, of New York, Mathew D. Mann, of Buffalo, Ely Van de Warker, of Syracuse, and Seth C. Gordon, of Portland, Me.; delegate and alternate to the Congress of American Physicians' and Surgeons, to to be held in Washington next year, J. Wesley Bovée and J. S. Stone, of Washington. The date and place of the next convention was May, 1903, in Washington. Papers were read by Fernand Henrotin, of Chicago, on **when and how to make the vaginal incision.** Isaac S. Stone, of Washington, on **anterior and posterior kolporrhaphy by a new method.** Reuben Peterson, of Ann Arbor, on **fibroid tumors of the ovary,** and Philander A. Harris, of Paterson, N. J., on the **closure of suppurating abdominal wounds following laparotomies.** Dr. Matthew B. Mann., of Buffalo, read a memorial paper on Paul F. Mundé, M. D., LL. D., a former member of the association. The meeting then adjourned.

AMERICAN ORTHOPEDIC ASSOCIATION.

Sixteenth Annual Meeting, Philadelphia, June 5-7, 1902.

THURSDAY MORNING, JUNE 5.

The president, Dr. H. Augustus Wilson, delivered an address on the **advance of orthopedic surgery.** He spoke of the prosperity of the association and of its great influence. Many of the serious deformities of the past are now unknown, while conditions previously considered incurable are now arrested before destructive changes have occurred. While in 1887 but 5 medical colleges included orthopedic surgery in their curriculum, such courses are now given in practically all of the medical colleges in the United States. State medical examining boards are including questions upon orthopedic surgery in the examination on surgery, and many hospitals have been established devoted entirely to orthopedic patients. About 2000 articles have been written during the past 15 years by the fellows of this association, a great contrast to the complete list of orthopedic literature published between 1825 and 1860, numbering only 173. Seven text-books upon orthopedic surgery have also been published within the past 15 years, while 2 journals appear on this subject. Nor does this include the great number of papers on orthopedic surgery written by physicians who are not fellows of the association. In closing, he spoke of the death of Dr. Florian Beely, of Berlin, who died April 30, in his 57th. year, a corresponding fellow of the association.

Dr. H. P. H. Galloway, Toronto, read a paper on the **general management and constitutional treatment of tuberculosis of the bones and joints,** with special reference to life in the open air and in tents. While tonics, such as iron and arsenic in small doses, are sometimes of service in the general treatment of bone and joint tuberculosis, most cases will do as well without them if proper hygienic conditions be secured. He advises cod-liver oil, milk, cream and butter, with a simple nutritious diet. Life in tents, enabling patients to live in the open air all the time, is his plan of treatment. The ventilation of the tent may be perfect, since canvas is pervious to air. During the summer the sides of the tent may be opened. Much more rapid strides towards recovery follow than would be possible under ordinary conditions. Nurses accompanying tubercular children are also greatly benefited. Efforts to perfect local and mechanical treatment should not be relaxed. He claims that some such patients may be saved through the agency of fresh air and sunshine after all other means have failed. He advises this open air treatment not as a substitute for surgical and mechanical means, but as complementary to them. **The malignancy of bone tuberculosis** was the title of a paper by Drs. J. E. Goldthwait and C. F. Painter, Boston, who reported 47 cases. Sixteen of these were cases of Pott's disease, 17 hip disease, 10 tumor albus, 33 with abscess and 14 without. The average age of the patients at the time of exacerbation was 28 years, the average quiescent age of the disease being 12½ years. Prolonged care and observation are necessary in such cases. Dr. J. K. Young, Philadelphia, referred to the absence of the most recent methods of treatment in textbooks and monographs on the subject. Dr. B. E. McKenzie, Toronto, believed that out-door life at home was successful without the necessity of taking patients far away. Especially is this the case if a tent may be erected at the patient's home. Dr. Schaffer, New York, referred to a case successfully treated in a tent in the back-yard. Dr. R. M. Lovett, Boston, believed that bone tuberculosis stunted the growth of children, both in weight and height. He advises rest in the recumbent position for all such children, especially if they have fever. Dr. H. M. Sherman, San Francisco, noted an increase in weight in children whom he had sent to the country. The earliest possible removal of the focus of the disease offers the best possible chance of recovery so far as local conditions are concerned. Dr. G. G. Davis, Philadelphia, said that tuberculosis may be a local disease, and in such cases recovery may follow removal of the local trouble. If there is recurrence, the condition is probably constitutional.

Dr. A. J. Steele, St. Louis, read a paper on **elevated scapula,** reporting the cases of a girl of 14 and a boy of 11. Dr. Freiberg, St. Louis, said that there was much deformity noted with elevation of the scapula. Dr. H. L. Taylor said that these cases of a bony plate connecting the scapula with the spine are very interesting. He has reported such a case. Dr. Wilson referred to a number of such cases reported. Dr. Sherman then reported a case of **congenital deficiency of the clavicle,** an uncommon condition. There was no interference with the movement of the arm. He showed photographs and radiographs. Dr. Davis believed that there was some loss of function. Dr. Davis then explained an apparatus for paralysis of the hands and fingers which he had constructed.

THURSDAY AFTERNOON, JUNE 5.

Dr. John Dane, Boston, delivered **some remarks on arthrodesis of the ankle for infantile paralysis.** He referred to the deformity of the foot and ankle following anterior poliomyelitis. A year after onset it is possible to tell what muscles are permanently injured. He alluded to the disadvantages of mechanical support, and spoke of the good results of apparently paralyzed muscles after immobilization of the ankle joint by arthrodesis. Dr. Davis objected to this treatment because of the undeveloped tissues in childhood and the difficulty of securing bone union.

Dr. McKenzie read a further report on the **treatment of neurotic patients in orthopedic practice.** He reported a case in which the suggestion of a morbid condition overcame self-control. Exercise did the patient a great deal of good, though paralysis of the sphincter and bladder persisted. In another case of neurosis exercise again effected a cure. He believed that too much sympathy was the cause of many of these cases in neurotic patients. The physical condition and environment of the patient should receive attention.

Dr. Painter, Boston, reported an epidemic of 38 cases of **infantile paralysis.** He noted the tendency of the disease to become epidemic. Twenty-one of his cases were 3 years old or younger. Not one of the patients recovered entirely, some paralysis remaining in every case. Drs. Galloway and H. L. Taylor also believed in gymnasium exercises for neurasthenia. Dr. Taylor had noted an epidemic of infantile paralysis in New York 5 years ago. Dr.

Sherman had noted a similar epidemic around San Francisco.

Dr. R. T. Taylor, Baltimore, reported a case of **double Pott's disease,** illustrated by photographs. Dr. Freiberg reported a case of **spondylitis following typhoid fever.** Dr. H. L. Taylor, New York, read a paper on the **final results of the mechanical treatment of Pott's disease,** exhibiting a number of diagrams. He discussed 39 cases, 30 of which were treated by the Taylor method. This method of treatment was then described in detail. Dr. L. A. Weigel, Rochester, believed that these cases showed bone disease. Dr. Schaffer believes that the diagnosis in cervical disease should be made early. Drs. Galloway and Sherman spoke of the differentiation between typhoid spine and Pott's disease. Dr. Frank Peckham read a paper on the **mechanical treatment of internal arrangement of the knee joint,** following sprains, knocks, etc., advising Dr. Schaffer's apparatus. Dr. R. T. Taylor presented an **osteoma of the knee** discovered by the Röntgen rays. Drs. Ridlon and Schaffer reported similar cases .

THURSDAY EVENING, JUNE 5.

An evening session was arranged for the **demonstration of the use of plaster-of-Paris bandages and jackets.** Dr. R. H. Sayre, New York, demonstrated upright suspension in the application of spinal jackets, and exhibited a rotary plaster saw; Dr. R. T. Taylor, Baltimore, demonstrated upright and small recumbent kyphotomes; Dr. John Ridlon, Chicago, exhibited knives for cutting plaster; Dr. Sherman exhibited a saw, separator and plaster-of-Paris splints for club-feet; Dr. R. M. Lovett, Boston, exhibited a frame for the application of plaster jackets and a bandage roller invented by Dr. S. Robinson; Dr. Weigel showed a removable plaster jacket; Dr. Galloway exhibited a simple machine for making plaster bandages; Dr. Steele explained the advantages of wire gauze in plaster bandages, and exhibited a saw and skin protector; Dr. Young demonstrated a method of applying plaster jackets in recumbency; and Dr. Wilson exhibited a portable door-extension apparatus for applying plaster jackets, an apparatus for making plaster bandages and a circular saw.

(To be Continued.)

AMERICAN SURGICAL ASSOCIATION.

Albany, N. Y., June 3-5, 1902.

TUESDAY MORNING, JUNE 3.

After an address by the president, Dr DeForest Willard, Philadelphia, Dr. Roswell Park, Buffalo, related a **successful treatment of a case of gunshot wound of the stomach and liver with posterior drainage.** The patient was a woman of 26 who had been shot in the upper abdomen, sustaining fracture of the ensiform cartilage, perforation of the stomach near the lesser curvature and a wound of the left lobe of the liver. There were pain and hematemesis, but the general condition was good. One and one half hours after the injury the abdomen was opened, the wounds in the stomach closed, 2 quarts of blood removed, and the laceration of the liver packed with gauze, the gauze emerging from the incision in the anterior abdominal wall. An opening was made in the left costovertebral angle for the passage of a rubber drain. The bullet could not be located. Recovery was uneventful. Dr. L. M. Tiffany, Baltimore, reported a case of a **bullet wound** of the stomach and liver, and another in which 9 perforations were found in the bowel. The bullet was not found in either case and both recovered. He does not flush the peritoneal cavity, but wipes it dry with sterile sponges and **drains with gauze.** A large amount of salt solution under the skin soon finds its way to the peritoneal cavity and the gauze begins to drain even though all fluid has been most carefully removed.

Dr. C. B. Nancrede, Ann Arbor, read a paper on the **results of wounds of large joints by modern military projectiles.** Drs. R. H. Harte and F. T. Stewart, Philadelphia, reported a case of **myelorrhaphy for gunshot wound of the spinal cord** which appeared in the Philadelphia Medical Journal, Vol. 9, No. 23, page 1016. Dr. W. L. Rodman, Philadelphia, favors drainage in bullet wounds of the abdomen and recognizes the importance of posterior drainage when the lesser peritoneal cavity is implicated. Dr. Carson, St. Louis, favors posterior drainage and opposes flushing of the peritoneal cavity. Dr. Nancrede pointed out the comparative benignity of modern bullet wounds of the extremities, providing the fingers and the probe were kept out of the wound. Dr. Bell, Montreal, attempted to suture the spinal cord but failed; in dogs he has never secured union. Dr. Bonticou, Troy, narrated a case of paralysis of the limbs which followed a bullet wound of the spine and in which recovery took place. Dr. MacDonald, Albany, gave the history of a case of bullet wound of the stomach, gallbladder and colon, with recovery after operation. He would drain through the loin if the lesser peritoneal cavity were soiled. Dr. Estes, South Bethlehem, gave the history of a case of fracture of the 9th. and 10th. dorsal vertebræ following hyperflexion, in which the cord was severed. After squaring off the ends, the distance between the segments measured about ¾ of an inch. The cord was sutured by catgut and the patient recovered some motion and a little sensation. Death occurred at the end of 18 months from sepsis. Dr. Estes also mentioned a case of partial section of the cord which was followed by enough return of function to allow the patient to walk. Dr. McGraw, Detroit, called attention to inaccuracies which are apt to arise from military statistics. Dr. Weeks, Portland, Me., does not believe that all cases of gunshot wounds of the viscera should be drained; when drainage is indicated he used wet gauze unless the discharge is purulent when a tube is employed. Dr. VanderVeer, Albany, reported a case in which a minie ball perforated the intestinal tract and was later passed per rectum; no operation was performed and the patient recovered. He prefers tubes to gauze for drainage. Dr. Abbe, New York, said that it had been proposed to resect a portion of the spine in order to allow widely separated segments of a severed cord to unite. He called attention to the fact that even in the peripheral nerves careful approximation is not always followed by a return of function. He would suture the cord. Dr. Elliott, New York, thought that a gauze drain in order to be efficient should be changed frequently. Dr. Tiffany would [illegible] the cord if necessary to secure union of a divided cord. In 2 cases he has failed to suture a severed cord.

TUESDAY AFTERNOON, JUNE 3.

Dr M. L. Harris, Chicago, reported a case of **carcinoma of the prostate and bladder in which the bladder and prostate were removed through a suprapubic opening.** After making a median incision just above the pubis the peritoneal fold was crowded upward and the bladder exposed and opened. The growth involved the prostate and the trigone and extended above the ureters. The bladder was freed by blunt dissection as far as its base, the urethra divided close to the triangular ligament and the prostate and bladder separated from the rectum, a working upward and two ways. An assistant introduced 2 fingers into the rectum and pushed the parts well forward, thus facilitating the operation. By keeping the bladder well forward the bleeding was easily controlled. A portion of the vertex of the bladder about 6 to 7 cm in diameter was normal and was allowed to remain. The ureters were divided well beyond the mass and implanted into the vertex of the bladder, which was stitched to the edges of the suprapubic wound. The cavity in the pelvis was packed with gauze and a large drain tube inserted to the bottom of the cavity. The patient made a good recovery from the operation but died 2 months later of croupous pneumonia. At the autopsy metastases were found near the bifurcation of the aorta. An interesting point was the formation of a tongue shaped process lined with epithelium, continuous with the lower end of the bladder, extending almost to the posterior end of the urethra, a distance of 5 to 6 cm, a fact which shows the regenerative power of the bladder as pointed out by Schwartz. Dr. C. A. Powers, Denver, read the history of a man of 52, who had suffered **from vesical tuberculosis** for some time. **The bladder was** very small and urination almost constant. Local treatment made him worse. A permanent suprapubic fistula gave

him comfort and relief, and under this the tubercular ulcer healed. Up to 4½ years after operation he made progressive gain in health, weight and strength. At the end of this time the introduction of a badly fitting tube lead to discomfort and leakage, and to a relapse. He believes that the patient will regain the ground lost after the bladder is again suitably drained.

Dr. J. E. Moore, Minneapolis, read a paper on **anatomical and technical reasons why the perineal is preferable to the suprapubic route in prostatic surgery.** Up to the present patients suffering from enlarged prostates have not received relief. The catheter is but a makeshift, and with present methods it is an open question whether, by preventing early operation, it does not do more harm than good. A prostatic's real danger begins with the use of the catheter. Operation should be popularized and the technique perfected so that prostatectomy may be conscientiously recommended before grave bladder and renal changes occur. Age is no contraindication to prostatic surgery as long as the kidneys are not too far gone. Experience with prostatic massage converted Moore to the advantage of perineal prostatectomy. In many instances in which the prostate can scarcely be reached through the rectum, a short curved sound with the point turned toward the rectum will enable the organ to be pulled down, so that every part of it and the base of the bladder can be reached. From an anatomical standpoint every fact is in favor of the perineal and against the suprapubic route. By the suprapubic method often as many as 3 holes are made in the bladder and when the viscus is filled with septic contents each must have an independent mortality-rate. By the perineal method the bladder should not be injured. Although some of the muscular fibers of the bladder are continuous with the prostate, a good thick bladder wall is left after the prostate is removed. Even when the third lobe projects into the bladder, it pushes the wall ahead of it. The prostate is twice as far from the skin of the abdomen as it is from the skin of the perineum. The approach through the perineum is through comparatively unimportant structures. The transverse and curved incisions divide arteries, sever nerves, and cut across muscle fibers. The median incision, from the scrotum to the anus, is not open to any of these objections. Prostatectomy by any method destroys the generative function, as the ejaculatory ducts are torn across. When total prostatectomy is performed, the prostatic urethra must be seriously injured and is often destroyed. The removal of that portion of the prostate between the urethra and bladder is entirely unnecessary. The third lobe is a projection from the lateral lobes. By the perineal route the lateral and third lobes can be removed and only a small portion of the urethra need be sacrificed. Through this opening the bladder may be entered, preserving the anatomical integrity of that organ. Hemorrhage is more easily controlled through the perineum. In a patient with healthy kidneys the most imminent danger is sepsis, and the facilities for drainage are infinitely superior after the perineal operation than after the upper method. Urine may be drained through a suprapubic opening but detritus cannot. The perineal is safer and better than the suprapubic route in all cases except when the third or lateral lobes are very soft and vascular and project far into the bladder. A complete prostatectomy is seldom the operation of choice, the isthmus and the greater portion of the prostatic urethra being preserved as a rule. At the beginning of the operation a short-beaked sound will bring the gland down within easy reach and after the capsule is dissected well back it is often an advantage to remove the sound and depend on instruments with which one can take hold of the prostate and drag it down.

Dr. J. Ransohoff, Cincinnati, read a paper on **curvilinear prerectal operation for abscess of the prostate,** reporting 3 cases treated by this method, in which an incision is made from one ischial tuberosity to the other, passing about one inch in front of the anus; the transverse muscles of the perineum are not divided but are retracted and the rectum pushed back. The urethra is not opened and the prostate is pulled down by a stone searcher in the bladder. The parts are freely exposed and bleeding is easily controlled. Dr. Dandridge, Cincinnati, believes the catheter should be employed in prostatics intelligent enough to take care of themselves antiseptically. When prostatectomy is indicated, he favors the perineal route. A. Watson, Boston, says that 2/3 of the cases of prostatic hypertrophy can be dealt with through the perineum. Clinically the operation is much safer than the suprapubic route. When he operates from above he makes a perineal incision and pushes the gland up from below. A perineal incision obviates the necessity for a pre-operative cystoscopic examination. When removing the gland from below, Watson inserts a finger in the rectum and thus drags the prostate down. Dr. Elliott, after doing 6 suprapubic prostatectomies, concluded that the operation was difficult and ineffectual, because, after the middle lobe had been removed, the lateral lobes would crowd in and cause a return of the obstruction. He has recently performed 4 perineal prostatectomies without a death and finds that the entire gland may be removed, but that the bleeding is greater and more difficult to control. In one of the suprapubic cases he accidentally tore into the peritoneum, and in one of the perineal cases the rectum was inadvertently injured, causing a transient fecal fistula. Dr. Wier, New York, spoke of 3 cases of tuberculosis of the bladder treated by opening the bladder and packing with gauze. Dr. Ochsner, Chicago, thinks the suprapubic operation for hypertrophied prostate unsatisfactory and the perineal operation extremely easy. He utilizes cat-paw retractors to pull down the gland, working inside the capsule in order to avoid bleeding from the submucous plexus. Dr. Finney, Baltimore, believes the Bottini operation to be the best treatment. Dr. Abbe stated that some of the cases in which the radical procedure could not be done were best treated by the formation of a permanent suprapubic fistula, under cocaine anesthesia. If the bladder wall is inverted around the catheter by means of a purse-string suture, a permanent fistula will not result; it is the eversion of the mucous membrane which precludes the obliteration of a fistula. Abbe also described a rubber bladder accurately fitting the tube which drained the bladder, preventing soiling with urine.

An article on the **removal of bladder growths by the suprapubic method** by Dr. A. T. Cabot, Boston, and a paper on the **excision of the lumbar lymphatic nodes in malignant disease of the testicles** by Dr. J. B. Roberts, Philadelphia, were read by title. Dr. J. B. Deaver, Philadelphia, in an article on **abdominal hysterectomy,** spoke of the advantages of this method over the vaginal route: increased space, better control of bleeding, the possibility of using the Trendelenburg posture, so keeping the intestines out of the way, less liability to infection, more tissue can be taken away, the lymphatic glands may be excised, little danger of injuring the ureters, and if they are injured better facilities for repair, greater ease in dealing with adhesions and other complications. The Doyen operation is not recommended. The only indications for total hysterectomy are septic infection, malignant disease and low fibroids. In all others a high supravaginal operation is indicated. In order to prevent the formation of adhesions, absorbable animal membrane may be sutured over the raw surfaces which cannot be covered with peritoneal flaps.

Dr. G. E. Brewer, New York, reported a case of **fatal acetonemia following operation for appendicitis.** The patient was a 12-year-old boy, operated upon 48 hours after the onset of pain, when a perforated appendix was excised. He did well until the fourth day, when he was suddenly seized with screaming, followed by somnolence. Later the screaming and terror recurred at intervals, and an odor of sweat was noted on the breath. Acetone and diacetic acid were found in the urine and blood. A solution of pure carbonate of soda was injected into the blood, and diuretics, diaphoretics, purges and other eliminatives administered. Coma deepened, however, the lad dying on the fifth day, 32 hours after the onset of symptoms. In 32 cases in which the urine was carefully examined before and after operation acetone was found in 7 cases subsequent to anesthetization. Dr. Deaver considered this case one of sepsis, although Brewer pointed out that the ordinary symptoms of sepsis were absent.

(To be Continued.)

Special Articles.

FOOD PRESERVATIVES.

By HENRY LEFFMANN, M. D.,

of Philadelphia.

Very recently another incident has served to make the question of food preservatives of some newspaper value. The rise in the price of meat, alleged by many to be due to the arbitrary actions of a syndicate, has attracted national attention, and part of the attack, at least locally, has been the accusation of improper use of preservatives. Now, what are the facts? Methods of food preservation have been in use for ages. Scientific data lead us to the view that the only perfect food is fresh food, but practically mankind cannot realize this ideal. Even cooking injures the digestive qualities of many substances, but it is necessary as a protection against parasites. Raw meat is more digestible than well-cooked meat, but a constant use of the former is almost sure to give rise to dangerous infection. Experience among those who make long journeys, away from the comforts of civilization, and have to rely on food preserved in any way, shows amply that there is some special nutritive quality in fresh materials that is not long retained. From this point of view, all methods of preservation, cold, cooking, drying, salting, pickling, smoking or by the addition of special antiseptics must be found more or less objectionable, that is, diminishing the food value, and the exclusive use of such food for a considerable time will lead to scurvy. This fact is amply exemplified in the history of navigation, and, more recently, in the experience of Alaskan pioneers.

From this point of view it seems inaccurate to make distinctions between the different kinds of preservatives except as to those which can be shown to have specific harmful qualities. The action of some authorities, in placing such substances as saltpeter, vingear, salt and wood-smoke in the list as permissible antiseptics and designating boric acid, formaldehyde, salicylic acid, benzoic acid and beta-naphthol as poisons, is wholly arbitrary. It is true that the ingredients in the latter list are capable in large doses of producing marked disturbances of function, but the same criticism applies to the substances in the former list. The whole question is one of dose. Large amounts of salt, vinegar and saltpeter are highly irritating. The acetic acid, upon which the value of vinegar depends, is one of the most corrosive poisons known; creosote and its analogues, to which wood-smoke owes it preservative functions, are also highly corrosive. In fact, the question as to what is a poison cannot be answered unless the question of dose and manner of administration are taken into account. Many articles of food will come into the category of poisons if we interpret the word broadly. Vanillin, the odorous principle of the vanilla bean; caffeine, the active principle of coffee and tea; citric acid, to which the agreeable taste of the lemon is largely due; cream of tartar, which gives the tartness to grape juice, are all capable of producing in large doses marked functional disturbances, yet they are not ranked as poisons, nor are the substances containing them forbidden by dairy and food commissioners. On the contrary, these officials insist that extract of vanilla, coffee, tea, lemon juice and grape-juice shall contain notable amounts of the respective active ingredients.

It is in the light of the above principle that we must examine the question of the preservation of meat and butter by boric acid, concerning which so much has been written of late. It is well to note that the use of boric acid is not of recent origin. It has been widely used for many years. Its antiseptic qualities are considerable, but experiment has shown that still better effects may be obtained by a mixture of borax and boric acid, and such a mixture is sold under various trade names. It finds special application in the preservation of butter. This important food article is, as is well known, very liable to decompositions by which it acquires a disagreeable flavor, hence the desire of dealers to "hold up" the original state until the article can go into consumption. Salt has been largely used, and is objectionable to many persons. The borax-boric mixture in the proportion of 8 ounces to 100 pounds of butter, *i. e.*, one-half of one per cent. secures perfectly the keeping qualities without further addition. No evidence is at hand to show that that amount of boric acid or borax is harmful. An average consumption of half a pound of butter per week may safely be assumed for each adult, which would mean the ingestion of seventeen and one-half grains of the preservative. This is well within the ordinary medicinal dose. The observations of several physiologists, Liebrich, in Germany, Tunnicliffe and Rosenheim, in England, Chittenden and Vaughan, in this country, have failed to show any unfavorable effect. If it be said that large doses have caused trouble, it may also be said that salt, saltpeter and other preservations will do the same.

The use of the boric mixture in meats is the special storm-center at this moment. It is used partly by injection into the substance of the meat, partly as a washing solution and largely dusting the outside of the mass. In the last use it has the specific value that it prevents the growth of putrefactive microbes. The same principle applies to its use in meat as in the case of butter; there is no evidence to show that the quantity employed is sufficient to do harm.

DR. WYETH'S PRESIDENTIAL ADDRESS

AT THE FIFTY-THIRD ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT SARATOGA SPRINGS, JUNE 10-13, 1902.

In opening his address Dr. Wyeth paid a tribute to the memory of Professor Edward Mott Moore, a former President of the Association, who died in Rochester, New York, March 3, 1902. He also called the attention of the members to the meeting of the Fourteenth International Congress of Medicine which is to be held at Madrid, from April 23 to 30, 1903. As president of the Association Dr. Wyeth has received an appointment from the Secretary

of State as a delegate to represent the Association at the Congress and he was requested by the Secretary of State to name five additional delegates which are announced as follows: Dr. Nicholas Senn, of Illinois; Dr. Maurice H. Richardson, of Massachusetts; Dr. George Crile, of Ohio; Dr. Richard Douglas, of Tennessee, and Dr. Edward B. Dench, of New York. Dr. Wyeth called attention to the new régime which this meeting inaugurated in the government of the Association proper and in the changed relationship of the State Association to the national body, as well as the relationship of the county to the State organizations. Under the old organization business was transacted by delegates from State, district and local affiliated societies in the proportion of one delegate for each ten members, while now only affiliated State organizations have the right to send delegates and these are only entitled to one delegate for each five hundred active members or fraction of this number. These form the House of Delegates which is further re-enforced by two members from each of the scientific sections of the Association and one each from the Army, the Navy and the Marine-Hospital Service. Under the old régime the State Association bore the same relationship to the national body as did the city, county and district organizations; now only the State Associations are represented and they create the legislative body of the American Medical Association In other words, the House of Delegates is a federation of all the State Associations. Scarcely second in importance to a uniform scheme of reorganization is that of a uniform standard of requirements for the practice of medicine in the various States. It is of vital interest to the welfare of the profession that the question of reciprocity or interstate comity should be settled, so that without any sacrifice of the very highest requirements a physician in practice in one State, having gone before a competent board, upon change of residence might be permitted to practise without being subjected to a second State examination in the place of his adoption. The House of Delegates will, without doubt, act upon this matter at this session. Referring to the subdivisions of the scientific work of the Association, Dr. Wyeth said that it may be imperative in the future, with increasing membership and consequently larger attendance, to create new sections as is authorized by the Constitution. This should only be done, however, after careful consideration, and not until it is demonstrated that the material of high scientific value offered to the twelve sections now existing is more than can be utilized in the time allotted for the meetings. The President stated that the by-laws require every member to register in one of the sections and suggested that it would be well to limit each reader to a single paper before the section chosen. The Association should insist that the officers of sections exercise a most rigid scrutiny of the papers referred to them. If we are to achieve our highest purposes we must present through our sections papers which demonstrate not only the high scientific attainment of the author, but the undoubted value of the material presented. Dr. Wyeth expressed the hope that the various tri-State societies and the sectional organizations, such as the Southern Surgical and Gynecological Association and the equally successful Mississippi Valley Association, and others of like character, attracted by the high and unselfish aims of this organization, may appreciate the vital necessity of a united profession and vote themselves into district branches of the American Medical Association. Truly, in such a union there would be strength so potent and influence so far-reaching that we could safeguard without doubt the material interest of the profession, elevate still higher the standard of medical education, secure the enactment and enforcement of just and rigid medical laws, enlighten and direct public opinion in regard to the broad problems of State medicine and demonstrate to the world the practical accomplishments of our science. Dr. Wyeth referred to the propriety of selecting in each of the geographical subdivisions of the United States, in which the sessions are successfully held, some suitable location that has been found to be well adapted to the work of the organization and to which we could return when the meeting was again to be held in that section of the country. The smaller cities with ample hotel accommodations have always yielded a larger attendance in the sections than the cities of larger size with their multitude of distractions. In his message to Congress, December, 1901, the President recommended the establishment of a Department of Commerce and Industries. In its passage through the Senate the name was changed to that of Commerce and Labor. Before the National Legislature at the same time was a bill known as the Perkins-Hepburn Bill to increase the efficiency and to change the name of the U. S. Marine-Hospital Service to that of the U. S. Health Service, transferring this from the Treasury to the new department. The American Medical Association has on several occasions expressed its desire for the establishment of a Department of Public Health, either as a separate department of the government, or as one of the important bureaus of a department. In view of its failure to obtain this important recognition for the medical profession it would seem advantageous to the scheme of establishing ultimately a Department of Public Health that the Perkins Bill should become a law, because the U. S. Marine-Hospital Service could then with more propriety be removed from the new department of Commerce and Labor into a separate and independent department. This department should be in charge of a medical officer to direct our foreign and insular quarantine, interstate quarantine, the medical supervision of epidemics and, in fact, all matters pertaining to the general health of any group of States or of the entire country. The work of this officer and bureau can only be carried out with success by the earnest co-operation of the Health Officers of the various localities and States, and of the advisory board for the hygienic laboratory provided for in the Perkins-Hepburn Bill; for the national and local authorities acting in harmony would be better able to control epidemics and enforce practicable quarantine regulations. Dr. Wyeth believes that, as the representative organization of the medical profession of the

United States, it is the duty of the Association to co-operate with the medical corps of the Army in the effort to procure legislation which will not only uphold the rights and dignity of the medical officers in the public service, but will give better protection to the health and lives of our troops. The establishment of a course of instruction on military hygiene as recommended by the Surgeon-General would impress upon commanding officers the importance of military hygiene and the greater necessity for co-operation with the medical corps of the army. The President dwelt at some length upon the critical analysis of the status of the medical profession and set forth two principal causes of the evident weakness of wielding by organization and discipline the powerful influence of a united profession aiming at a high and honorable purpose. These causes are: (1) The insufficient methods of medical education which have prevailed for the greater part of the first century of our national existence. (2) The lack of organization. In closing Dr. Wyeth pointed out certain modifications in the Code of Ethics of the Association which must be a part of the liberal plan of reorganization that has been undertaken. In his opinion the time has come when we cannot absolve ourselves from the responsibility of doing away with the inconsistencies for which we may now be properly criticized. He mentions the section which forbids a member of the regular profession to act upon a board of examiners which has to pass upon the qualification of persons not graduates of regular medical colleges, while in thirty-eight of the States with representations present the civil statutes require these boards, which are composed in great part of members of the Association, to conduct such examinations. In conclusion he asks that the Association stand for more than the healing art. To labor for the alleviation of suffering and for the restoration of health is a noble avocation, but to teach our fellows how to avoid disaster is a prouder privilege and a higher duty.

On the Significance of Bacterial Symbiosis in Infection of the Conjunctival Sac. Rimovitch (*Russki Archiv Patologii*, etc., ol. XII. No. 2) found that the **Koch-Weeks bacillus grows much more luxuriantly in conjunction with the diphtheria and pseudodiphtheria bacilli and the staphilococci isolated from the conjunctival sac.** The staphylococcus pyogenes albus also favors the growth of the Koch-Weeks bacillus, but to a lesser degree. The supposition is advanced that some bacteria contain within their bodies a substance, probably globulin, which favors the growth of the Koch-Weeks bacillus. The author believes that this effect of symbiosis is not accidental, but plays an important role in the infection of the conjunctiva. [A. R.]

On the Pathogenesis of Duodenal Ulcer in Retention of Bile in the Organism. Zimnitski (*Bolnitchnaia Gazeta Botkina*, Vol. XII, No. 45) determined by a series of experiments on animals that **an etiologic relation exists between retention of bile and duodenal ulcer.** The following conditions are considered essential to the formation of duodenal or peptic ulcer: (1) An increased activity of the peptic glands (hypersecretion); (2) the existence of local circulatory disturbance in the duodenum, owing to diseased bloodvessels; (3) stasis dependent on the changes in the liver, and (4) anemia, hydremia and a decrease in the alkalinity of the blood. All these conditions exist in jaundice of long standing. [A. R.]

Original Articles.

SUGGESTIONS FOR CERTAIN CHEAP AND CONVENIENT FORMS OF APPARATUS FOR CLASS WORK IN THE BACTERIOLOGICAL LABORATORY.

By ALLEN J. SMITH, M. D.,

of Galveston, Texas.

(From the Pathological Laboratory of the University of Texas, 1901, No. 1.)

The particular needs of the class in bacteriology in the Medical Department of the University of Texas during the past few years have suggested the appended special forms of apparatus, which, so far as it known to the writer, are undescribed in the various text-books upon the subject, but which in use have shown such practical advantages as to seem to merit announcement to others who may be in the same position as regards space and financial cramping as is the writer.

1.—Where solutions are to be filtered hot, as nutrient gelatine or more particularly agar, the writer formerly used no special measures, or made use of the old-fashioned Plantamour hot-water funnel, or placed the flask and funnel with the hot liquid to be filtered into the ordinary steam sterilizer. The laboratory possessed but one hot-water funnel and but two rather small steam sterilizers, and the class sections usually comprised about twelve or fourteen students, all of whom in their work in the preparation of media desired to use these pieces of apparatus at the same time to aid in filtration. In order in a measure to overcome this difficulty, one of the students in the section of the class working in the early part of last session, Mr. J. W. Matlock, suggested that a cheap substitute for the steam bath might be made in the following manner (Fig. 1), this

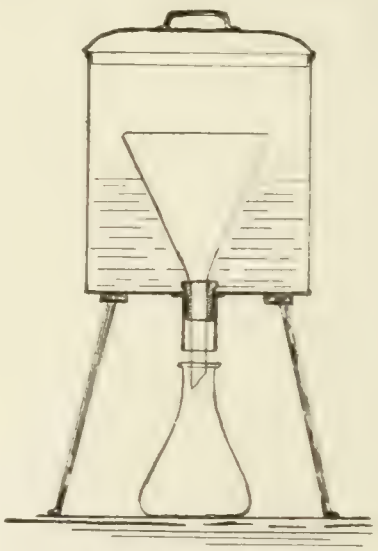


Fig. 1.—Matlock Bucket.

substitute obviating the disadvantage of the hot-water funnel in that it does not permit the evaporation and thickening of the more slowly filtering liquids, and at the same time protects the surface

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*Presented to the Section of Pathology of the Third Pan-American Medical Congress, at Havana.

of the material from air-contamination. A cheap tin bucket, with cover, such as may be purchased in any shop for twenty or twenty-five cents, is procured; a suitable round hole cut in the center of the bottom, and a metal tube of proper diameter and length soldered in position as shown in the diagram. An ordinary funnel is introduced into the bucket and tightly fitted by means of a proper-sized perforated rubber stopper, at a height permitting closure of the lid of the bucket, into the tube soldered into the bottom. A convenient amount of water is introduced into the bucket around the funnel, an ordinary tripod used as a stand, and a Bunsen flame adjusted to the bottom at a safe distance from the rubber stopper in the center; and when a proper temperature is reached, the filter-paper and solution to be filtered arranged in the funnel and the lid of the bucket adjusted. Thus the funnel and its contents are enclosed, top and sides, in a steam bath much more convenient in shape and size than the steam sterilizer and with all the usual advantages of the latter. This bucket, spoken of in the laboratory as the "Matlock bucket", has in use proved exceedingly efficient, and the trifling cost has been to us a decided feature of advantage. Were it made of copper, while the cost of manufacture would be materially increased, its length of service would be much extended, the ordinary tinned iron quickly rusting through unless great care is had.

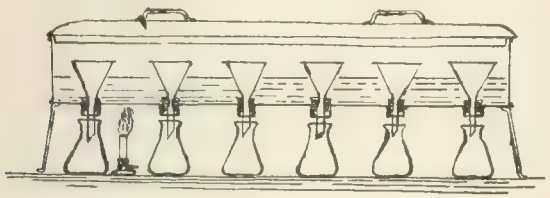


FIG. 2.—Filtration Bath.

With a view of economizing table-space the writer would suggest that for class use a larger container, a covered rectangular trough, with bottom perforated for a dozen or more funnels, after the plan in the accompanying diagram (Fig. 2), be used; the whole to be made of galvanized iron or copper sheeting as preferred.

2.—For several years we have been accustomed, largely through the requirements of financial necessity, to extemporize thermostats as needed in laboratory use; which, while in no way new in principle, seem of some special value in that they are efficient, and cheap and easy of manufacture. From the fact that they are home-made and from a fancied detection of the letters in the shapes of the tubes used, these are spoken of among us as the "U. T. thermostats". The basis of the apparatus is a convenient-sized test-tube into which a perforated rubber stopper is fitted; and into this is applied a curved glass tube as shown in the diagram (Fig. 3). At the upper end of this double curved U tube a second

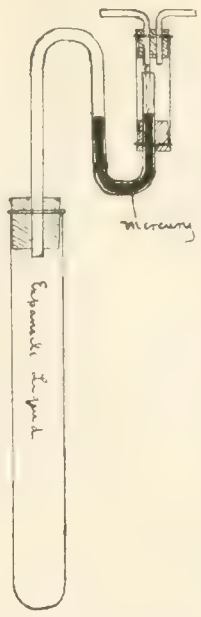


FIG. 3.—U. T. Thermostat.

perforated rubber stopper is fitted, the glass tube passing through the stopper, not in the center, but to one side, and projecting an inch or more above the upper surface of the stopper. This stopper is fitted into the lower end of a short and rather wide glass tube, the upper end of which is closed by a double-perforated rubber stopper bearing the usual feed and exhaust gas tubes as shown in the diagram. This last part forms the T of the name applied locally to the arrangement. The feed pipe is finely perforated as in any similar thermo-regulator and ground on a bevel at its lower, fine end. It is adjusted so that this end passes some distance into the upper end of the U tube entering the encasing from below. The test-tube and the first portion of the U tube are filled with alcohol, ether or other fluid sensitive to heat, or with air as in case of Bohr's thermostat; while the U is filled with mercury, and the lower, bevelled end of the feed pipe adjusted over the surface of the latter. The large volume of sensitive liquid in the test-tube is placed in position in the waterbath of the incubator or wherever else desired and the usual attachments made. The whole apparatus may be constructed in a short time from material always on hand in the laboratory, and in addition to its efficiency it possesses the advantage of trifling cost.

3.—Considerable inconvenience also resulted in class work from the lack of incubators, the laboratory possessing but two medium-sized Muencke incubators; the cultures belonging to the individual students being crowded and often confused in the small space afforded. Further, so many persons having frequent recourse to these small chambers, temperature disturbance during the working hours of each day caused considerable bother. To obviate these difficulties the following rather rough but fairly efficient substitute was devised by the writer. A large box of wood (45 in. x 32 in. x 32 in.) is arranged

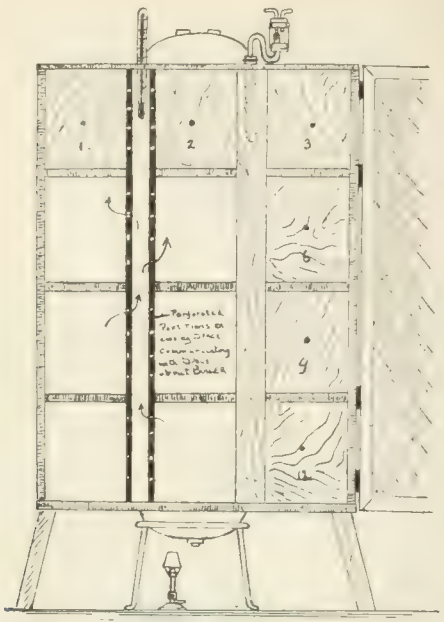


FIG. 4.—Sectional view of an arrangement for an incubator having five tiers of drawers for students' use, showing interior arrangement.

as shown in the accompanying diagrams (Figs. 4* and 5) with perforated wooden shelves and double partitions into a dozen pigeon-holes (each measuring 10 in. x 8 in. x 18 in.), these opening at the front of the box and into the large space at the back of the box. Into each of these pigeon-holes a cage-drawer is fitted

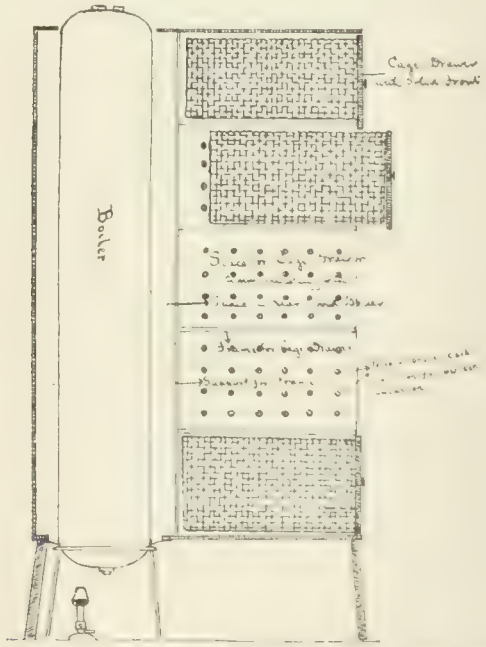


FIG. 5.—Front of incubator with door open, showing drawers in position, [illegible] with thermometer stands without it [illegible] with its sides perforated for full distribution of air. This space and the corresponding one occupied by thermostat freely communicate with space above boiler.

loosely and arranged with a wooden front, so that when all the cages are in position the front of the box is closed. This box is then covered with asbestos felt and a single large door fitted to the front to cover the front of the cage-drawers. Into the unoccupied space in the back part of the box a large reservoir of water, as an old boiler from a condemned kitchen-range, is placed, its top slightly protruding above the top of the box with suitable opening for filling and overflow. It protrudes slightly also at the bottom, where the flame is applied for heating, and the box is here protected from danger of fire by having the wood well sawed away from the boiler, and sheet metal applied to close the resulting space. A small opening through the top of the case permits the introduction of the thermostat between the double perforated partitions between the tiers of drawers, and another permits the insertion of the thermometer. A cage-drawer is assigned to each student in the section working in the laboratory, and ample space afforded for his private tubes; moreover, the opening of the comparatively small space of one of the drawers disturbs but little the interior air-body and its temperature. The incubator could be made more serviceable by doubling the wooden wall and by providing for a small amount of light to enter the interior. So, too, it might be convenient to have the waste space about the water chamber in the back of the box utilized; and this might readily be done by cutting one or more doors into the back of the enclosure. The whole of the apparatus may be made in a day or two by any one at all skilled in wood work and in making the cages from wire netting. There are used, roughly, a little over one hundred square feet of common dressed lumber, costing between two and three dollars. The wire netting for cages will cost about the same amount. The water reservoir need not cost above five or six dollars; the felt between two and three dollars; and the other expenses, aside from labor, are trifling. In this institution the work is done by one of the janitors; and the total cost is thus kept well within fifteen or twenty dollars. While this incubator is not as neat and sightly as the costly metal ones, and while it is not as evenly heated in all parts of the interior as is an incubator enclosed in a water bath, it is far cheaper, and is competent for all ordinary work of the class, the difference in the temperature of the front and back of the enclosure being so slight as to cause no serious inconvenience.*

In mentioning this incubator the writer is reminded strongly of a work upon bacteriological technique by C. J. Salomonsen, to which he wishes to ascribe many suggestions of a helpful nature toward working out efficient and cheap substitutes for costly apparatus. The work was published in English translation in the 1886 series of Wood's Monographs. It is in no way pretentious, but well worth attention from the lively desire of the author to popularize his subject by creditable devices for the provision of working apparatus for private individuals unable from lack of funds to procure the costly equipment of a well-supplied modern laboratory. That such a work should receive acknowledgement

*Fig. 4 is drawn to scale for a height of 74 inches, accommodating fifteen cage drawers.

*This the writer believes can be largely [illegible] [illegible] [illegible]

for its peculiar excellences is well urged by the many and curious shifts made from time to time by men anxious but often unable from want of means to employ approved bacteriological methods in private practices. Thus, for example, the writer well remembers a certain physician who, for lack of an incubator, carried several inoculated tubes of serum, encased in a flat metal mailing case to prevent breakage, in an inner pocket by day, taking the package to bed at night, that his own body might serve to give the even temperature of the lacking incubator.

4.—The rooms of the bacteriological laboratory in the Texas school are unfortunately situated upon the south side of the building, and in summer the rays of the sun play directly upon the walls and windows. In consequence the temperature of the closed rooms often in the middle of the day mounts to 100° F. or more, and gelatine is constantly kept liquid. To prevent this latter, the writer has made of one of the incubators at this time of the year a "cool incubator" by passing through its water chamber a slow stream of tap-water, usually having a temperature of 75° F. or 78° F. It has suggested itself that, under similar circumstances, when the summer temperature interferes with the temperature of the warm incubators, with this same arrangement with an added small regulated flame the usual heat might well be maintained in the incubators even if the surrounding temperature be above this point.

5.—Speaking of Dr. Salomonsen's book reminds the writer of another device which is often and profitably employed in our laboratory practices. Salomonsen's method of separation of contaminated material by means of a capillary tube culture, although not very popular in this country for some unknown reason, has always proved highly satisfactory in class work and private investigations at the hands of the writer; and its value may be warmly attested. One objection, however, has been recognized in the liability of failure properly to sterilize the outside of the tube by ordinary cleansing after the enclosed medium shows growth and it is desired to transfer bits of the tube containing colonies to fresh media. In such case, of course, the fresh medium becomes contaminated by the bacteria adhering to the outside of the capillary tube, and the object of the procedure is lost. In practice this may be obviated readily by keeping such capillary tubes, as soon as made and filled with the inoculated material, in a large glass tube, sterilized and having its ends plugged with sterile cotton. A number of capillary tubes are kept in one such sterile container, each marked at a certain position by a dab of sealing-wax to distinguish it from its fellows. The container and contained capillary tubes are fastened by a few wire or thread stitches to a slip of cardboard and notes made from day to day thereon as to each capillary and its colonies as they appear and are seen through the glass walls of the container. When transfer of colonies to fresh media is desired, the capillary tube is carefully withdrawn and broken off near the position of the colony in question. A sterile forceps grasps the bit containing the colony, which is then broken from the rest of the capillary and placed in contact with the fresh medium. This method is, after several years usage, a very satisfactory one in the hands of the writer.

5.—**Addendum to original paper: October 15, 1901.** For the same reasons of financial cramping above mentioned the use of the more complicated anaerobic apparatus by the individual members of the class has been precluded; and the writer has recently arranged the simple and less costly device shown in the accompanying diagram (Fig. 6). An ordinary specimen jar, with wide mouth suitable for

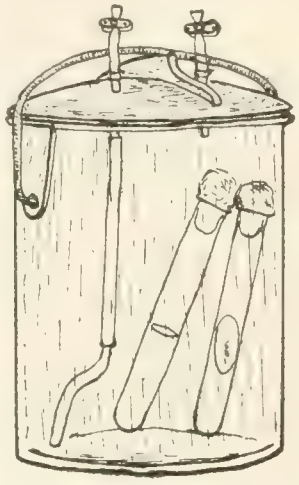


Fig. 6.—Anaerobic Jar.

easy introduction and withdrawal of culture tubes, fitted with proper rubber ringpad between the jar and the lid, and with a simple clamp for closure, has had two small holes ground into the lid. Two glass tubes have been ground into these holes and are sealed into position by application of liquid glass. To the outer end of each a bit of stout rubber tubing is fitted and bound tight by a ligature of copper wire. A Hofmann's screw clamp serves to close each of these rubber tubes above the lid. On the interior a rubber tube is applied over the tip of the tube selected for entrance of the gas, and carries at its lower end a bit of bent glass tube to insure the distribution of the gas to the lowest portions of the jar. The cultures are placed in the jar, the top sealed by pressure (and in a well made jar with a good rubber ring imposed between the lid and the edge of the jar the sealing is safe even for hydrogen). The gas is then introduced, and when the jar is filled the screw clamps tightened.

The jar now furnished for the purpose by Messrs. Eimer and Amend, of New York, can, the writer feels, be improved upon by substituting a square form for the round shape, as it would give added space in the interior and lends itself better for adjustment in the wire cages in the incubator; but it would be more difficult to obtain well-fitting lids in the square form, as the grinding is more difficult, and thus cost would necessarily be added. The jar at present furnished to the Galveston laboratory has an inside depth of four and one-quarter inches and an inside diameter of three and one-half inches, and is quite convenient both for introduction into an incubator and for the containing of culture tubes. By the dozen the makers quote a price of $20.00. Both because of the original cheapness of the ap-

paratus and because there is little to get out of order which cannot be mended on the spot, the arrangement has recommended itself for use. Practically, too, it well serves the purpose for which it is intended.

SOME GASTRIC CONDITIONS AS FOUND IN FORTY HEALTHY PERSONS.

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of Boston, Mass.

Instructor in Clinical Medicine, Tuft's College Medical School; Physician to Boston Dispensary, etc.

To decide in my own mind some questions relating to the stomach, I have recently investigated certain gastric conditions as found in forty students of Tufts College Medical School. The subjects examined, with but three exceptions, considered themselves free from acute or chronic gastric diseases, consequently, until the contrary is proven, we will assume that their stomachs are normal. The time spent in this work occupied the mornings of about one month, only one or two cases being examined daily. As accurate information was sought, time and thoroughness in the work were not spared. All tests in each case were made by me personally. The results obtained are of interest, as they pertain to a feature of gastro-enterology with which too few of us are familiar, the healthy stomach.

The tests made in these examinations are much the same as I use at the first examination of a patient, and, while they do not afford all the information desired, they do give about as much as can be obtained from one examination. The technique of the tests is as follows:

The subject was instructed to fast from his evening meal until the time of his examination on the following morning, and, with but two exceptions, each individual fasted ten or more hours. On the morning of the examination an Ewald test-meal (bread 35 grams, and water 300 cc. measured) was given in the room where all tests were made. At the end of one hour the stomach contents were removed with a suction bulb, the bulb was employed to insure rapid and complete evacuation of the stomach. Water was then poured into the stomach until the subject felt he could stand no more, when the amount was recorded. On its withdrawal, an approximate idea of any residual contents from the test-meal was obtained, but rarely did it seem of an appreciable amount. By means of a two ounce or 60 cc. inflation bulb the stomach was moderately distended with air, the number of bulbs required being noted. The area of stomach resonance was then determined by gentle to moderate percussion; when doubt existed, auscultatory percussion was employed. The relation of the greater curvature to the center of the navel in the median line was ascertained, then the highest zone of stomach resonance in the same line, the distance between these two points being recorded as xipho-umbilical resonance. The greatest distance of stomach resonance to the right of the median line is recorded as pyloric resonance. The costal cartilage under which the greater curvature passed was noted, also the rib corresponding to the greatest height of stomach-lung resonance, and the axillary line to which this resonance extended to the left. The iodoform test for motility was made in nearly all cases, but, for the reason that a discussion of this subject will be given in a forthcoming paper, little mention of it will be made here.

As stated, forty individuals were examined, but for various reasons all tests were not completed in each case. The three cases with subjective symptoms are excluded in all instances in which the results of their tests would materially influence the mean, maximum or minimum results. But little attention was devoted to the chemical side of the secretions, merely the quantities of free HCl and total acidity were determined, and the presence or absence of lactic acid.

Amount of contents.—From the considerable fast in each case (usually ten to fourteen hours) it may be assumed that the stomachs were empty or nearly so at the time the test-meals were given. In several of the cases, in which over 100 cc. were obtained, no fasting contents could be found at future examinations, or at least only the 5 to 20 cc. which may be considered normal. In 39 cases (excluding case 8) the average amount of stomach contents was found to be 105 cc. or 3½ ounces. The maximum amount in any case was 190 cc., the minimum amount 30 cc. In eighteen cases the amount exceeded 100 cc. These figures compare very closely with Hewes'* results. He found that the mean amount in fifty students was 110 cc., the maximum amount in any case was 200 cc., and the minimum amount was 35 cc. In twenty-five of his cases the amount exceeded 100 cc. These two observations establish beyond a doubt the average amount of stomach contents to be obtained from the class of individuals here dealt with, young men from 18 to 30 years of age. It seems probable that figures, if obtained from men and women of all ages, would not materially differ from the results here given. Hewes' figures have been criticized, the amounts obtained by him being considered too high as compared with the German standard, but the confirmation of his results here made will perhaps lead Americans to the adoption of a standard of their own.

Relation of the lower border of the stomach to the navel.—Of 39 cases, in 23 the lower border of the stomach was found above the umbilicus, in 16 it was at or below. The average relation of the lower border to the umbilicus in the median line in 39 cases was ½ of an inch above. Of the 23 cases in which the lower border was above the umbilicus the average distance was one inch.

Ewald* quoting Pacanowski says: In a careful

*Hewes. Boston Med. and Surg. Journal, 1897.

*Ewald's Diseases of the Stomach.

study of 81 persons, in which, unfortunately, those having gastric disorders have not been separately classified, the distance of the lower border of the stomach above the umbilicus, in the left parasternal line, was 3 to 5 cm. or 1 1-5 to 2 inches, while in his own (Ewald's) experience he has found it somewhat less, 2.5 to 4 cm. or 1 to 1 3-5 inches. Bouveret* gives this distance as 5 to 6 cm. or 2 to 2 2-5 inches. Ewald further states that it may be accepted as a rule that pathological conditions exist when the greater curvature lies at or below the umbilicus.

In the position of the greater curvature as in the amount of stomach contents, my results differ from those of the Germans, but in the latter instance accuracy can hardly be doubted. Moreover, my results in these two respects, are not inconsistent, for we know that, as a rule, in diseased stomachs the lower the greater curvature, the larger is the amount of contents, at least in men, the position of the curvature being due to dilatation, the large amount of contents resulting from stasis which is a usual accompaniment.

We have assumed that the stomachs examined were normal, yet that atony, or dilatation with stasis may be present in a degree without causing subjective symptoms, (the same as in cases of compensated valvular lesions, there may be no subjective symptoms) I believe no one will dispute.

To show that these conditions existed, I shall cite one case, and rely on the history and the results of the various tests employed to prove my point. Case 6, a young man of 19, a large eater and drinker, not only accustomed to eating large meals regularly and irregularly, but has frequently done drinking stunts, his record being 13 successive glasses of water. By the accompanying table we see that his capacity to air and fluid was abnormally large, it is also seen that the greater curvature of the stomach was ¾ of an inch below the navel. The xipho-umbilical measurement was 6 inches, and the stomach-lung resonance extended to the posterior axillary line; the amount of contents was 140 cc. and the reaction to the iodoform test was delayed nearly one hour. This case is the most marked example of the series, yet, by a careful study of the table, several similar cases may be detected, their histories would also show plausible causes for the conditions found. As some of these cases will be under observation for at least two years, it will be of interest to learn their condition at the end of this period.

If the Germans have excluded in their statistics such cases as these, then our difference in results can be attributed to the presence of such cases in my series. If they have not, then atony, or dilatation with stasis but without subjective symptoms, would seem to be a fairly common condition of the American stomach. At least in this series of cases and in practice I have frequently found larger amounts of contents and lower positions of the greater curvature without marked pathological conditions, than the Germans consider normal.

In regard to the position of the lower border of the stomach there is one point on which I thoroughly agree with Obrastzow,* who, as the result of a series of very careful investigations, concludes that the situation of the lower border is dependent upon the build and general nutrition of the individual. The better these are, the higher will the greature curvature lie, while the poorer these are, the lower will it be found. In my cases there were but three fleshy individuals, the rest being of slight to medium build. Eleven of the sixteen cases in which the lower border was at or below the navel, were thin individuals. Judging from the xipho-umbilical measurements in these cases the positions were due to dilatation rather than to ptosis.

It has several times been asked of me what the difference is in the position of the lower border between the inflated and the uninflated stomach. From some observations, and in several cases the "shotted tube" and fluoroscope were employed, I should say the difference is usually about one inch, though in cases of dilatation and gastroptosis it may be considerably more.

Xipho-umbilical resonance.—In these cases this is the resonance as determined by gentle percussion between the lower border of the stomach and the inferior edge of the liver. More forcible percussion would have elicited stomach resonance beneath the liver, consequently such percussion would have given greater measurements.

In 39 cases the average measurement was 4½ inches, the maximum in any case being 6⅛ inches, the minimum 2¼ inches, but in this case the liver was abnormally low. Pacanowski gives this measurement as 4 2-5 to 5 3-5 inches.

This resonance is particularly desirable to be obtained, because by its measurement in cases of low positions of the curvature one can usually distinguish between dilatation and ptosis.

Relation of the greater curvature to costal cartilages.—In 28 of 39 cases the greater curvature was found to pass under the ninth costal cartilage, in seven cases it was the eighth and in the remaining four cases it passed under the tenth cartilage. In three of the four cases in which the curvature passed under the tenth cartilage it was also found below the navel.

Stomach-lung resonance.—The stomach-lung resonance in 30 cases was found to extend, up to the sixth rib in nineteen, to the seventh rib in fifteen,

*Bouveret. Maladies de l'estomac.

*Obrastzow. Zur physikalischen Untersuchung des Magens und Darms. Deutsch. Arch. f. Klin. Med. Bd. XLII.

to the fifth rib in four, and to the eighth rib in one case.

In eighteen cases this resonance extended to the left, to the anterior axillary line, in seventeen cases to the midaxillary line, and in four cases to the posterior axillary line.

Pyloric resonance.—The stomach resonance to the right of the median line is recorded as pyloric resonance, the average distance in 39 cases was 2¼ inches, the greatest distance was 3½ inches, the least distance 1½ inches. Bouveret gives the average as 2 inches.

Liquid capactiy test.—The average amount of fluid contained by 39 cases was 1290 cc. or 2 3-5 pints. The largest amount contained by any case was 2600 cc. or 5 1-5 pints. The smallest amount was 400 cc. or 4-5 pint. Ewald states that we can speak positively of a large stomach only when its capacity exceeds 1600 to 1700 cc., while Legendre estimates the average capacity as 1300 cc. Bouveret accuses the Germans of eating and drinking more than the French, and from this concludes that the capacity of the German stomach is greater than that of the French. Since the result of this test probably depends more on the tolerance of the stomach, than upon its capacity, it is of but little importance. I wish particularly to emphasize this point, because physicians unfamiliar with modern methods of examinations, as a rule, place more reliance on this test in judging the size of the stomach than on inflation and percussion. This is certainly a mistake.

The average number of bulbs (capacity 2 ounces or 60 cc.) used was 17, the largest number in any case was 50, the smallest number 5. Here, as in the liquid capacity test, but little reliance can be placed on the results, except, as I have found in practice, that any stomach receiving 25 or more bulbs may be considered a large one. Not infrequently cases of marked dilatation will take 35 to 50 bulbs, and in one recent case it required 70 bulbs to distend the stomach. Inflation serves its best purpose in preparing for percussion.

Acidities.—The records of 31 cases in which free HCl was present show that the mean amount was 1.7 per m., as determined by titration with dimethylamidoazobenzol, as an indicator; the largest amount in any case was 3.6 per m., the smallest amount .8 per m. In four cases no free HCl was detected.

The mean total acidity in 35 cases was 64 per c. as tested with phenolphthalein as an indicator, the largest amount found in any case was 115 per c., the smallest amount was 12 per c. Lactic acid was not detected in any case by the ferric chloride test.

Case 30, from a chemical standpoint, is worthy of special mention. In this case, on two occasions, two weeks intervening, no free HCl, no combined HCl, no rennet or pepsin could be detected by the ordinary tests. Bile in considerable quantity was present on both occasions. At the latter its presence could not be attributed to retching. The iodoform test showed good motility, the reaction occurring in 40 minutes. The considerable amount of contents, 130 cc., can in part be accounted for by the presence of bile. The subject has never suffered any gastric disturbance whatever. The condition in this case may be properly termed achylia gastrica, and, according to Einhorn,* is probably of nervous origin. Of the three other cases in which there was no free HCl, its absence was most likely due to chronic gastritis. In one case, (case 27) I am certain this was the cause.

While one is enabled by the accompanying table to judge of the condition of each case, in so far as the results of the tests made allow, and to draw his own conclusions, there are several points to which I wish to call attention, or refer again.

The amounts of contents found in these cases are larger than has been considered normal, however, placing the limits at 30 to 120 cc. for normal cases, I believe, would be more accurate than the figures handed down to us by the Germans, which are 25 to 60 cc. It must be remembered that of 90 cases (Hewes' and my own) in 43 the amount exceeded 100 cc.

As to the relation of the lower border of the stomach to the navel, according to Ewald, pathological conditions must have been present in nearly one half of these cases, as in 16 of the 39 its position was at or below the navel. I cannot deny that such conditions may have been present, in fact, I believe they were in some of them, but an important fact to be borne in mind is that these conditions caused no gastric disturbance in any case.

In these two tests, in fact in all tests of the stomach, we must ever bear in mind the wide limits in results which may be met in normal cases.

If subjective symptoms had been present, in some of these cases it is more than likely they would have been attributed, by many of us, to the conditions found on examination. The value of this lesson, at least to the writer, is considerable.

Future results confirming or disproving the accuracy of those here given will be awaited with interest.

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*Einhorn. N. Y. Med. Record, July 6, 1901.

Notwithstanding that the practicability of the use of the [illegible] with it in these cases may not be out of place. The tube, of course, was introduced into the stomachs of all the [illegible] with it in these cases may not be out of place. The tube, of course, was introduced into the stomachs of all the [illegible] reasons for [illegible] to the examinations. In some [illegible] the examinations for various tests was [illegible] of the [illegible] symptoms and of the rest several expressed a willingness to undergo the examination a second time if anything were to be gained thereby.

In one case (Case 5) markedly hypertrophied tonsils were the cause of considerable [illegible] and the tube was withdrawn [illegible] was completed. In [illegible] the tube was passed more easily than in those of [illegible]

It was noticed that in thin individuals, almost without exception, the tube was passed more easily than in those of [illegible]

No.	Fast.	Amts. Contents.	Bulks.	Liquid Capacity.	Inf. border to navel	Cost cartilage	Rib of highest resonance	As line of stomach lung resonance	Pyloric resonance	X. U. resonance	Iodoform reaction	Free H Cl per mille	Total acidity
	Hrs.	cc	No.	cc.	inch		Rib		in.	in.	minutes	Per M.	Per c
1	10	160	21	1300	¼	8	6	Ant.	2½	1½	68	1.4	60
2	14	80	19	850	1	9	7	,,	2	1¼	47	1.3	78
3	15½	65	14	1300	¼	8	6	,,	2½	1¼	37	3.6	115
4	13½	95	20	1950	— ¼	10	7	Mid.	2½	5	55	1.4	63
5	14	60	—	—	—	—	—	—	—		150	0	20
6	11½	110	50	2600	— ¼	8	6	Post.	2¼	6	100	1.7	64
7	12	95	20	1800	-o-nav.	9	8	Ant.	2½	4	45	1.2	52
*8	16	265	13	1000	1	9	6	Post.	2½	3¼	165	1.6	58
9	10	135	22	1750	2	9	6	Ant.	2½	3¼	40	.9	56
10	15	35	19	500	1	9	7	,,	1¼	1¾	52		
11	14	100	25	1500	1¼	9	6	Mid.	3	5	100	1.4	57
12	9½	70	15	1020	¼	8	6	Ant.	2	4	51	1.3	54
13	15	120	15	2000	2	8	7	Mid.	1½	1¾	72	2.2	88
14	11½	40	11	1100	¼	9	7	,,	3	3¼	47		
15	14½	155	24	1300	— ¼	9	6	,	2	5	78	2.3	77
16	12½	100	17	1580	— ¼	10	5	Post.	2	1¾	52	2.2	76
17	10	50	12	1070	—1	9	8	Mid.	2	4¼	16	1.7	68
18	12	150	20	1670	—1 ¼	9	6	,	2½	6¼	35	1.6	64
19	13½	180	15	1100	¼	9	7	Ant	1¼	4¼	50	1.8	71
20	15	30	17	1150	¼	8	7	,	2¼	4¼	55	2.3	82
21	14	150	13	1500	¼	10	6	Mid.	2¼	5	58	1.8	76
22	11	135	15	1450	— ½	9	7		2¼	5½		1.7	72
23	15	65	20	1365	¼	9	6	,,	2	5	67	1.6	66
24	10	150	20	1580	— ¼	9	6	Post.	2	4½	93	2.3	84
25	11	90	11	500	-1	10	6	Ant.	3	1¾	39	1.5	72
26	15	70	12	1370	o	9	6	,,	3	4¼	°105	.8	50
*27	15	95	14	1670	o nav.	9	7	,,	2¼	4¼	72	0	24
28	15	135	5	400	— ¼	9	7	Mid.	2¼	5	31	2.2	73
29	14	105	12	1250	—1½	9	5		2¼	5⅝	18	0	13
30	15	130	15	500	1¼	9	6		1¼	3¾	40	0	12
31	12	190	12	900	1	9	7	Ant	2	2¼	165	2.1	92
*32	14	85	15	1350	2¼	8	6	,,	2½	3¼	87	1.4	70
33	15	85			¼	9	7	,	2	4¼	—	1.2	44
34	10	70		-	1¼	9	6	Mid.	2	4¼	—	1.8	72
35	14	165	21	1220	¼	9	6	,,	1¼	1¾	85	2.2	77
36	14	75	20	850	1¼	9	7	Ant.	2	4¼	—	1.7	78
37	6½	35	25	1150	¼	9	6	,,	2½	4¼	—	—	-
38	15	105	20	750	¼	9	7	Mid	2¼	4¼	42	1.6	72
39	13	95		1300	-o-nav.	9	5	,	2½	5	—	—	—
40	13	90		900	1	9	7	Ant.	2	4	—	—	—

o in the 6th column left means that the lower border was at center of navel.

* Cases in which there were subjective symptoms.
X. U.-resonance means xipho-umbilical resonance.

Tetany with Malaria.—Albert describes an attack of tetany in a soldier suffering from severe quotidian fever for the second time. Tetany, of the upper extremities only, appeared on the fourteenth day, and lasted only 5 days. The condition improved with large quinine injections. His attitude was typical of tetany. The cause of tetany was most probably the malarial infection. (*Archives de Medecine et de Pharmacie Militaires*, April, 1892.) [M. O.]

THE PLACE OF DRUGS IN THE TREATMENT OF STOMACH TROUBLES.*

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The majority of medicines administered empirically in cases of so-called dyspepsia probably do more harm than good. Even after an accurate determination of the actual existing pathological condition by a thorough external examination of the abdomen, an urine analysis and a chemical and microscopical examination of the stomach contents, it is often found that medicines are less useful than hygienic or mechanical measures, such as a carefully selected diet, a freer use of pure drinking water, exercise, massage, electricity, etc. Indigestion may result directly or indirectly from imprudent eating and imperfect mastication, but a large proportion of complaints of pain or discomfort in the stomach are either reflex phenomena or functional disturbances, the indirect consequences of unhygienic habits of work or play. Inordinate mental or nervous strain results in persons who have long overworked or overdissipated with the help of stimulants, including not only the alcoholic beverages, but also strong coffee and tea. The injury to the nervous system from these and other excesses reacts very injuriously upon the digestive function, and a considerable proportion of so-called dyspeptic troubles is traceable to such excesses. In all these cases especially, drugs should play a subordinate role, particularly when stimulants and nerve tonics have been already abused, as is so often the case. The indication here is to get rid of the cause; then rest and time for recuperation. Much help can also be obtained from a life in the open air, plenty of natural sleep, nourishing food, change of climate sometimes, and often the mechanical methods of treatment. The overambitious exhausted professional or business man must take a trip away, or, in the worst cases, a rest cure. Many cases characterized by headache, insomnia, nausea, vomiting and severe gastric pain, will yield readily to such hygienic measures, especially when no organic basis for the symptoms can be found in the digestive tract. When one or both of an engaged couple suffer from gastric symptoms of nervous origin, they should be separated until the wedding day; and similar symptoms in married couple are often the result of injurious methods of attempting to avoid offspring. But while gastric neurasthenia is much more amenable to treatment by the hygienic and mechanical measures above mentioned than by drugs, a very careful use of certain well-selected remedies can often do good, after examinations of the secretions and excretions. Small doses of the bromides, the hypophosphites, the glycerophosphates, dilute phosphoric acid and the preparations of iron, zinc, arsenic, silver and gold are among the remedies which can often be so used with advantage, except in cases in which some such remedies have already been long administered before, for the reprehensible purpose of enabling the patient to go on overdoing.

*Read in the Annual Lecture of the Medical Society of Pennsylvania, at Bryn Mawr, Pa., April 15, 1902.

or to persevere in violating Nature's laws in other ways. When these or other drugs are administered in such cases, the only safe rule is to begin with minute doses and gradually increase, if necessary, always being content with the smallest that will produce the desired effect.

In diseases that really involve the stomach, there is frequently a place for drugs, and in certain of them a very important one, when one has learned exactly in what way the organ is affected. Guessing at the diagnosis is objectionable. Even in cases in which it may seem impracticable to use any intragastric instrument, very much important information can be obtained by an expert external examination of the abdomen, particularly with regard to the size, position and motor power of the stomach, as well as the fixity of the kidneys, the position, sensitiveness and size of the colon, etc. When the gastric secretion is excessive, as in simple hyperchlorhydria, in Reichmann's disease and in gastroxynsis, the administration of alkalies is generally necessary, often in very large doses combined with small or moderate doses of some preparation of belladonna. In acid gastric catarrh or in round ulcer of the stomach, with such a hypersecretion, the same treatment is necessary, plus lavage in the former and rest in bed in the case of ulcer, besides rectal feeding for a week or two, with later milk diet.

In the opposite condition of a deficient secretion of the gastric juice, especially of the HCl—such as obtains generally in old cases of chronic gastric catarrh of the atonic type, and even also in some cases of chronic nerve exhaustion of long standing—an entirely opposite line of treatment is necessary. In many of these cases nothing effects such prompt beneficial results as the administration of the official dilute HCl in doses of from 5 to 30 drops, combined usually with pepsin. Experience demonstrates also that very large doses, and even in fact moderate doses, sometimes markedly disagree with stomachs which careful tests show to be greatly in need of the remedy. A burning pain is often produced by it in such oversensitive stomachs, and it is necessary, therefore, in these cases, to administer it a little at a time. The appropriate dose should be added to a half tumblerful of water and taken in sips every few minutes during the hour following each meal. In these cases the bitter tonics also, especially nux vomica, quassia, columbo, condurango, etc., may do good.

Massage of the abdomen and also exercises for the trunk muscles, such as body bendings, twistings, etc., are nonmedicinal measures which help to restore the secretion of the gastric juices when the peptic glands have been impaired but not destroyed. When the HCl and pepsin, as well as the rennet ferment, are entirely wanting, as in gastric atrophy, it is generally best to abandon all efforts to promote peptic digestion and administer full doses of a good preparation of pancreas with an alkali.

In atrophy, too, strychnine may be useful to assist in overcoming any coincident deficient motor or propulsive power, though gymnastics, massage, hydrotherapy, electricity and especially intragastric faradism will, any one of them as a rule, accomplish more in such atonic conditions, as also in dilatation of the stomach from atonic causes.

Dilatation may also result from pyloric cramp, usually dependent upon the combination of a hyperesthetic mucous membrane with a very excessive secretion of HCl. In this condition, and also in gastralgia from excessive HCl or from an unknown cause, it is proper to administer soda, potash or magnesia, in full doses, and, if necessary, at short intervals until relief, so as to neutralize beyond question all the free acid of any kind in the stomach; also belladonna for both its depressing effect upon the secretion of HCl and for its antispasmodic action. A course of arsenic may further be given for its specific nervine and antineuralgic action, though sometimes phosphorus or some other tonic will do as well, or better. This line of medication will generally be found more effective than opiates, which increase secondarily the secretion of the peptic glands besides stopping the bowels. For the graver forms of dilatation due to tumors in or near the pylorus surgical intervention alone can be effective, though lavage with antiseptics may palliate for a while.

As to gastritis, in the acute form after putting the patient to bed, stopping all food and allowing water in small frequent sips only, no medicines are really required, as a rule, except when necessary to open the bowels. Then 1-10 to 1-3-grains doses of calomel every half hour or hour, till effect, will do more at first than anything else to hasten the subsidence of the nausea and vomiting, except a warm, wet compress over the stomach externally and small pieces of ice internally. When such an attack persists after the calomel has acted, a mixture of bismuth, 5 to 10 grains, with ¼ to ½-drop doses of carbolic acid flavored with peppermint frequently repeated, is very effective.

In chronic atonic gastric catarrh the bismuth and carbolic mixture will accomplish generally as much as any remedy administered per os, but lavage every day or two with a combination of soda and common salt in the first wash water, (a teaspoonful of each to the quart) followed with a weak solution of alum (½ dram to the quart,) silver nitrate (10 to 15 grains to the quart) or other antiseptic astringent, can do still more in skilled hands; and the diet is all important. These solutions for lavage should be followed by washing out with a pint at least of plain warm water, and, in the case of the silver salt, with a solution of table salt.

Tumors of the stomach are always cases for the surgeon, except when malignant growths have progressed too far before discovered. In the time to come this will less frequently happen, because physicians will in suspicious stomach cases obtain expert counsel at a stage of the growth when the subsequent calling in of the surgeon will not be in vain. In inoperable cases of cancer or sarcoma the main reliance will be on opium. Lavage with antiseptics will prolong life and lessen the misery when the pylorus is involved with resulting dilatation.

In displacements of the stomach, unless the organ has been pulled down by a morbid growth, there is usually no need of surgery. Strychnine and diet will

do something; abdominal supports, gymnastics, massage, electricity and hydrotherapy can do very much.

FOCAL FACIAL EPILEPSY, FOLLOWED BY TEMPORARY UNILATERAL PARALYSIS OF THE FACE AND TONGUE.*

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The subject of focal epilepsy is of so much importance in diagnosis that contributions to this subject must, in the present state of knowledge of cerebral localization, be of considerable value. The case we here report has not only a localizing value, but is especially of interest in connection with the "explosion" theory of epileptic convulsions, and the exhaustion paralysis of Hughlings Jackson.

The patient, C. C., colored, aged 68, widow, complained of spasm of the face. She has had all the diseases of childhood, but, outside of slight colds and rather frequent attacks of indigestion, has enjoyed good health up to the present illness. There is a history of one miscarriage, following a fall; three other children are living and in good health. Menopause occurred 14 years ago without any serious nervous phenomena.

One year ago (Fall of 1900), in attempting to put on her hat, she accidentally pushed the hat pin into the scalp. This caused considerable pain and was immediately followed by convulsive movements of the arms and legs. There was a sensation of cold in the limbs at the time but she did not lose consciousness. Several weeks after the above attack, she began to have the local manifestations in the face which have continued up to the present time. The attack comes on suddenly and follows a peculiar indescribable sensation in the top of the head and eyes. It begins as a series of clonic movements affecting the entire face, both upper and lower areas, and lasting from a half to one minute. The eyelids on the affected side (right) are very nearly closed and take part in the convulsive movement. The pupil could not be examined on account of the short time of the "spasms" and the excitement of the patient. When the convulsive movements ceased, it was apparent that there was a complete paralysis of the right lower face, with some weakness in the upper facial distribution, and also a complete paralysis of the tongue, on the right side. This paralytic condition lasts from 3 to 5 minutes and gradually disappears. Consciousness is not lost in the attack, but at times she feels dizzy. These attacks occur usually 2 or 3 times a day. They also occur at night and wake her from a sound sleep.

Examination of the patient reveals a well-nourished, black negress. Her general condition is good, without visceral disease. Motor power over the entire body is good. The reflexes are normal, the knee-jerks being somewhat more active than is usually met with. The eye reflexes are normal and no changes could be discerned by Dr. Shumway, to whom the patient was referred for examination. Sensitive to touch and pain, she appears normal to objective examination, but she states that she feels cold and heat decidedly better on the left than on the right side. On cold days she experiences the normal sensation on the left side, while the right side remains unaffected. She is able, also, to pick up much "hotter" articles about the kitchen with the right than with the left hand.

There is no vomiting, nor vertigo *other than that during the attack*, and no psychic symptoms suggestive of organic disease of the brain.

We have here a case of focal epilepsy occurring in an old woman, affecting the right side of the face and tongue, and followed by paralysis of the right face and tongue lasting from three to five minutes.

The case is one of great interest, not only on account of the diagnosis, but also on account of the interest attached to the paralysis following a localized convulsion. The differential diagnosis of an organic brain lesion from hysteria has to be considered. From the history of the case it was at first thought that it was a case of hysteria. The first attack of convulsive movements, resulting from an accidental scalp wound by the hat-pin, may have been hysterical. The conditions point to hysteria. This need not necessarily be so, as reflex epilepsy can well be caused by intense pain. It is hardly necessary to call attention here to the fact that in guinea-pigs convulsive states may be induced, and in some cases be transmitted to the offspring, by irritation of the sciatic nerve.

The following case is interesting in this connection: J. M., age, 46, was under treatment for an old indurated leg ulcer. He had had some convulsions as a child, but had been free from them up to the time of his coming under treatment for the ulcer. In curetting the ulcer, the pain became very intense, and suddenly the patient developed a typical general epileptic convulsion. Whenever the wound was dressed without thoroughly anesthetizing it, a general convulsion occurred. There were no convulsions except when pain was produced. This is as near to a pure reflex epilepsy as is usually met with in human beings. It is possible that the first attack in the case (number one) here reported was of this nature.

Hemiplegic paralysis and monoplegic parlysis are occasionally seen following general and partial epileptic attacks, but the distribution of the paralysis in our case is unique. In a digest of these cases, with the report of a case by McConnell, facial or lingual palsy is not recorded. The face is supplied by the seventh nerve (facial) coming from the pons, while the motor supply to the tongue is from the twelfth nerve (hypoglossal), which comes from the medulla. It is quite unlikely, therefore, that a pontine, or basal lesion would produce such symptoms and not disturb the sixth, eighth, ninth, tenth and eleventh cranial nerves. Clonic convulsive movements have long been considered localizing for cortical areas, and a manifestation of irritation of still intact motor areas. In a case reported to the Pathological Society of Philadelphia by Drs. Mills and Spiller, of similar convulsive movements, there was found at autopsy both a cortical and peripheral neuronic lesion. It is doubtful if a lesion affecting the peripheral motor nerves could cause such convulsive, clonic movements. In spinal cord lesions, intermittent clonic movements are occasionally seen; but here there is usually, if not always, a lesion of not only the peripheral neuron, but also of the descending central tracts from the brain. Such conditions are associated with spasticity and marked increase of the reflexes, both of which were absent in our case.

We are, therefore, justified in drawing the conclusion that there is a small lesion of gradual development localized in the left motor area in or near

*Read at the January Meeting of the Philadelphia Neurological Society.

the face center, that it is at present not sufficiently developed to cause serious disturbance of function of the motor cells for the face and tongue, such as permanent paralysis, but by irritation to lead to paroxysmal convulsions followed by paralysis.

This "exhaustion paralysis" has been carefully studied by Hughlings Jackson.[1] He states his conclusions as follows: "General body (or muscular) prostration is, of course, not meant; but exhaustion of nervous elements in a particular part of the central kinetic route. There are, I suppose, degrees of exhaustion, and no doubt of different numbers of nervous elements of the kinetic route in different cases. But illustrating by the extremest degree, the supposition is that nervous elements of the route, after their excessive "exercise" in the fit, are left "fatigued" to the degree of utter impotence.. The nervous elements exhausted in the post epileptiform paralysis are, I suppose, in the same state as are the motor-nerve fibers of the sciatic nerve going to the cut-off leg of a frog after strong faradization of that nerve trunk. The leg is convulsed by the faradization (close analogue to epileptiform seizure) and is next paralyzed (close analogue to post epileptiform paralysis) because its motor fibers are exhausted by the involuntary high functioning they have been artificially compelled into." This theory would seem to receive the support of the experimental work of Pitres and Franck.[2] The idea that the paralysis is in direct proportion to the intensity of the convulsions, does not receive any support from our case. The clonic convulsive movements were of short duration and the paralysis which followed was at first complete but rapidly wore off, so that the patient was usually able to talk within five minutes after the attack.

Discussion. Dr. Charles K. Mills remarked that the history would indicate that the case was one of small cortical lesion in the facial area, as shown by the recurrence of the facial spasm, and the clonic type of the spasm, followed by paralyses (Hughlings Jackson, exhaustion paralysis). This form of paralysis is usually due to a lesion which does not entirely destroy the cortex, but by irritation causes a severe discharge from certain cortical areas. The hypesthesia might be due to a similar discharge through the sensory cortical neurons, which send their processes to the motor cortex, or it might be a hysterical epiphenomenon. He did not lay any stress on the absence of optic neuritis in cases of small tumors of the cortex.

Dr. William G. Spiller thought that the diagnosis of a small cortical lesion was probably correct. It was noteworthy that there was no disturbance of speech. If in this case there was a basal lesion, it was strange that only the seventh and twelfth nerves were affected. While this was possible in meningitis, he considered it more likely that the lesion was cortical.

Dr. F. S. Pearce referred to a case which had been under his care, in which there were epileptic seizures involving the left side, particularly the arm; and these were followed by paralysis. The man probably had tuberculosis of the lung, although no bacilli were found. There was no optic neuritis. Operation over the right motor cortex was advised, but the patient went home and died. No autopsy was made, but the speaker thought that there probably was a tuberculous abscess.

1. British Med. Journal, 1890, V. 1.
2. Quoted by Jackson.

SUPERIOR TABES.*

By M. H. BOCHROCH, M. D.,
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Howard F., white, 48 years of age, native American, cigarmaker by occupation.

Family history is negative. Both parents dead. Father died at the age of 90 years, mother at 80, of apoplexy. Has but one brother who is living and well.

Personal History.—In childhood had measles and scarlatina. He has never had an injury of consequence to his head or back.

Used alcohol excessively from his 18th. to his 35th. year. Denies syphilis.

Eighteen months ago he had constricting or cramp-like pains in the region of the bladder, without, however, difficulty in starting or passing his urine. Shortly after this he noticed a numbness in his hands. He was unable to handle objects properly. He states that a piece of iron felt to him like a piece of gum. He was unable to "roll cigars" and was compelled to give up his work. This sensation of numbness gradually passed up his arms to his back and chest. Here he subsequently experienced a "drawing" or constricting which still persists. The numbness also began to be felt in the lower abdominal and inguinal regions, in the buttocks and perineum, the left foot especially over the instep, and in the soles of both feet.

About a year ago, sharp shooting, knife-like pains commenced in the arms, accompanied by twitching. The pains were so severe that he would cry out. Intense pains made their appearance over the cardiac region and in the chest. It was constricting in character. About this time he began to stumble when he walked and suffered from "gnawing pains" in his legs. Difficulty in expelling his urine was now also noticed; at times he did not know he was passing urine and would soil his clothing.

Within the last 2 months has been greatly troubled with somnolence, falling asleep at his work or during an ordinary conversation. He does not remember having seen Jacob. There has been a progressive loss of sexual desire and power. Never had a vomiting or epileptoid attack. He is obstinately constipated.

Status Presens.—Patient is 5 feet 6 inches tall, slight of build. Muscular development very poor. Claims to have lost 30 pounds during the last 6 months. Heart and lungs normal.

Patient has a dull, sleepy appearance and also a partial double ptosis, more particularly marked on the right side. The pupils are small and contracted, and respond neither to light nor accommodation.

There is a slight [illegible] in the fauces. There is no paralysis of the muscles supplied by the fifth or seventh pairs of nerves. The grasp of both hands is equal, but not strong. His mentation is slow. His memory is impaired, especially so for recent events.

Romberg's symptom is absent. He cannot however stand on either leg with eyes closed. Walking backward or forward with eyes closed reveals unmistakably some incoordination, though ataxia is not marked in the legs.

The movements of the arms are however very ataxic. Touching nose or ears with index finger of either hand is almost impossible. He can neither button nor unbutton his clothing nor perform other habitual movements.

The reflexes in the upper extremities are as follows: Both wrist jerks are preserved. Tapping over musculo-spiral nerve of the arms. The biceps jerks are preserved. The triceps jerk, however is lost.

In the lower extremities we find that the knee-jerks with ordinary methods cannot be obtained [illegible] with

* Read before the [illegible] Neurological Society.

Jendrassik's method, the right one responds. Ankle clonus and Babinski's sign are absent.

The disturbances of sensation are as follows: Over face, chest and back, the patient cannot distinguish whether he is being touched by one or two points of the esthesiometer, no matter how widely the points of the latter are separated. Neither can he tell whether he is being touched with the sharp or blunt point of the instrument. When touched he merely complains of a burning sensation. There is marked retardation of the conduction of sensation. A similar condition exists in the arms and in the hands. Biernacki's symptom is also present.

In the lower extremities there is decided retardation of conduction of sensation, especially below the knees, and he is quite unable to decide whether he is being pricked by, one or two points of the esthesiometer. The condition is similar to that found in the upper extremities.

It is important to add that nowhere was I able to determine any loss of the thermal sense. The patient's answers as to heat and cold were always correct, no matter what portion of the body or limbs were tested. Pain sense is also quite well preserved.

I am indebted to Professor de Schweinitz for the following eye report: Typical spinal myosis with reflex iridoplegia. No palsy of external ocular muscles, except slight droop—probably beginning ptosis right lid.

Beginning gray degeneration each disc, most marked on right side, with concentric contraction of form and color fields.

The case before us is evidently not one of ordinary locomotor ataxia. The fact that ataxia is so slightly marked in the legs, and is, on the other hand, so pronounced in the arms, suggests that this case is one of superior tabes. Syringomyelia can be excluded.

There is one view, however, which I think deserves consideration, and that is, that the case before us may not be one of tabes, but of paresis. Certainly the patient's mental slowness, his loss of memory, his somnolence and general facial expression strongly suggest paresis. In fact, I strongly incline to the view that this case is one of paresis, with beginning tabes of the cord.

A STUDY OF HEREDITY.*

By HIRAM A. WRIGHT, M. D.,
of Detroit, Michigan.

I have no apology to offer for having chosen what may seem to many, living in this seriously practical and mercenary age, to be a too entirely theoretical subject to merit a place on the program of a gathering of busy medical men.

Are we not too much inclined sometimes to disparage the study of the purely theoretical side of many questions, in our anxious desire to be considered practical? I fear this is true, and in the solution of many problems therefore the course pursued proves impracticable, for no other reason than that we neglected first thoroughly to familiarize ourselves with the true theory underlying the action we so attempt to put into practice. In fact, it is a truism, that in all things we must first study the science, before we can intelligently practise the art. We, as physicians, apply this thought in the very fact of insisting upon a thorough course of college study on the part of every one, before being admitted or considered competent to practise the healing art. We must first know why, when and what to do, then do it, and one's ability to do, or practise well, is quite proportionate with or dependent upon the knowledge he has acquired concerning the subject matter under consideration. This is true in every walk of life, not being in any sense confined to the work of our chosen profession. This by way of introduction to the treatment of my subject proper.

No one, I venture, will deny the importance of a thorough understanding, both on the part of physicians and the laity, of hereditary transmission of traits or tendencies from progenitor to offspring, since that is claimed by many to be a contributory etiological factor in a large and varied series of phenomena. Note, for instance, its unquestioned significance in predisposing the physical organism of the child to certain diseases or defective functional activities, when it is known that the immediate ancestry has been tainted by or suffered from organic disease of the nervous, circulatory, glandular, digestive or other systems of the bodily organism. So, with those, whose ancestry is known to have been comparatively free from such transmissible defects. The physically healthy, robust, long-lived parent or ancestors beget strong, robust offspring. The medical departments of our large life insurance companies bear testimony to the value of family history in estimating the "expectancy of life" of an individual. Those having robust, long-lived ancestry, other things being equal, i. e., occupation, climate, hygienic surroundings, freedom from vice in its many phases, are in the very nature of things more liable to live to an advanced age, than are those born of physically defective, or disease-tainted ancestry. As children, we are, physically considered, a composite reproduction as to stature, color or skin, organic functional activity, of our ancestry, modified of course, slightly, by the environment into which we severally are placed.

This is but another way of giving expression of our recognition of the operation of the "Laws of Conformity to Type," as enunciated by the great Darwin, and accepted by thousands of his followers, who believe in the doctrine of Evolution, in preference to the doctrine of Special Creation. With the foregoing statements I anticipate you concur in your opinion, and shall therefore not dwell longer upon this, the purely physical aspect of the subject.

Let us now examine the foundation, or underlying principles of many other phenomena which it is claimed by nearly all teachers and writers are influenced by hereditary transmission. For instance, it is claimed by such that certain mental traits, tendencies and dispositions, in addition to physical peculiarities, if not actually transmitted, are in some mysterious way hereditarily influenced by the fact of relationship between progenitor and offspring. In order to be more specific, permit me to quote but a few statements from Ferri, the noted European writer on criminal sociology. He says in one connection, "These are organic conditions, it must be at once affirmed, which account as nothing else can for the undeniable fact of the hereditary transmission of tendencies to crime, as well as predisposition to insanity, to suicide, and to other forms of degeneration." Or again, he says, "The scientific proofs of these hereditary tendencies to crime, even apart from the clinical forms of mental alienations, are now so numerous that it is useless to insist upon them further." Or again, he says, "Moral diseases are like physical diseases, they are contagious, epi-

*Read before the Northern Tri-State Medical Society at Angola, Ind., July 30, 1901.

demic or hereditary. Vice is transmitted in some families, in the same way as scrofula, or consumption," and he (Ferri) endorses the statement of Plutarch to the effect that: "The sons of vicious and corrupt men reproduce the very nature of their parents." It may be claimed that these are very severe statements, as such they are, yet all who teach and believe that mind is dependent upon matter, must, if consistent, endorse them. If these statements were true, their converse must likewise be true, that parents who are morally and mentally sound, beget children who are likewise morally and mentally untainted by disease. Now, as a matter of fact, I do not believe these statements of Ferri, nor their converse, neither do you, because they are not supported by the fact of every day observation. They are true or consistent with his materialistic theory, but in conflict with facts.

The central and important thought in connection with the whole subject is, that we are studying man. What is Man? Who will answer? Except we can agree on formulating a reply to this inquiry, we cannot in the very nature of things agree upon certain conclusions to be deduced from the premises offered by a reply to the question. "What am I, whence produced, and to what end, whence drew I being, and to what period tend?" The careless and thoughtless physician and layman regards man to be that only which he seems to be; a physical body, a complex of several organs, each performing a certain function, and chief among which is the brain, presiding in some inexplicable, mysterious manner over the phenomenon of consciousness and its several states of being. Those who regard man thus, seemingly imagine that the study of anatomy and physiology covers the whole field of what is implied in the suggestion of Socrates, "Man know thyself." They regard the study of psychology of decidedly minor or no importance, and what little is being taught of psychology nowadays, is so confounded with physiology that it is quite impossible to comprehend their distinction. It is not sufficient in the study of psychology merely to acquaint ourselves with the phenomena or manifestations of mind and disregard what the mind itself is. For in truth every rational man is possessed of and makes manifest that which we call mind. Then, is it not of tremendous importance, to know what the mind is, and what relationship it bears to the brain in the economy of man? Suppose for the sake of argument, we regard the various mental faculties as bearing a certain functional relationship to the cells of the cerebral cortex, (a truly absurd proposition indeed) we must yet account for the fact of our having such moral attributes, as love, goodness, wisdom and knowledge and mercy and justice—virtue; and their respective antitheses, hatred and evil and folly and ignorance and revenge and injustice—vice—as well as the several emotional states, fear, anxiety, anger, joy, grief, etc. What relationship exists between these several qualities or principles and the brain cells, if the statement of Ferri be true, that "we must study the organ before the function, and the physical before the moral?" As bearing upon this phase of the question let me quote from Prof. Sully's "Outlines of Psychology," wherein, on page 507, he says: "Coming now to the exact nature of the concomitance, we find that the conscious series are parallel only with an intermediate central portion of the neural circuit. In the process of peripheral stimulation and the propagation of its effect to the center, and in the transmission of a motor impulse from the brain to the muscles, we have a physiological process without any conscious concomitant. How are we to conceive of the partial parallelism? Does it point to any true causal relation between the physical and the neural factor, or does it rather suggest a parallelism of two disconnected processes, as of two rivers flowing side by side? These questions have not been satisfactorily answered by scientific methods. According to a common view, more especially among physiologists, we have to think of the chain of nervous events as complete and self-sufficient throughout. It follows from this supposition that there can be no causal action of consciousness upon the series of neural events, just because, in accordance with the principles of modern physical science, more particularly the law of conservation of energy, every phase of a series of movements is fully accounted for by a knowledge of the preceding phases. This view looks upon the appearance of consciousness at a certain point in the physical succession as something collateral and apparently accidental. This doctrine is known as that of Human Automatism, the doctrine that we are essentially nervous machines, with a useless appendage of consciousness somehow added. The doctrine obviously fails to explain why consciousness should appear on the scene at all."

No matter what theory or hypothesis may be advanced to explain the phenomenal relationship existent between the several attributes of the soul and the several faculties of the mind, with the cells of the brain, the incontrovertable fact obtains that these several abstract principles and processes are as essential to the economy of a rational sentient being, and much more so, than is an appendix, or gall-bladder, concerning which our medical literature has been so plentifully supplied during the past few years. These principles and processes, being so essentially a part of our being, are yet entirely neglected in the usual course of professional study, even in connection with insanity in its various types, as students are being taught psychiatry to-day. I am free to assert that he, who may have neglected the study of psychology, and may have studied anatomy, physiology, neurology and pathology for many years, because of such study, no more competent to offer an intelligent opinion upon the evidences of development of the mental faculties and the possibility of their transmission by heredity from progenitor to offspring, than is one, who has studied psychology alone, capable of giving proper advice to a patient suffering from Bright's disease, or to determine upon the advisability or not of operating upon a given case of appendicitis, let alone to perform the operation.

If there is any one thing our alienists and physiologists have not yet conclusively shown, it is the relation existent between the mind and the soul and the brain of man. Until convinced to the contrary I must regard man as being a

soul, a seat or realm of consciousness, with a *mind*, being a series of faculties or processes incident thereto and emanating therefrom, with which to utilize an instrument or mechanism called a *body* for the purposes of manifestation. Soul and mind pertain to the metaphysical realm, the body to the physical. Soul and mind are essentially abstract—that is, only conceived of, not perceived, hence are subjective, not objective entities. The body only is concrete, an objective entity.

Until those who are inclined to the materialistic view concerning the philosophy of life (and they constitute the vast majority of medical men, I believe) can affirmatively show that all mental operations or activities are dependent upon or accompanied by a material process in the cortical cells of the brain, it is positively absurd for them to assert or imply that mental or moral traits, tendencies or peculiarities are latent in such remote cells as those of the testicle or ovary, and, after a union between the spermatozoon and ovum and certain developmental changes have taken place, that these latent tendencies therein now become active in some cases, not all, in the cells of the brain cortex of the offspring. This proposition is precisely what is implied, when it is asserted that such qualities or characteristics are subject to hereditary influence or transmission.

Any ordinary observer knows full well that it is the exception, not the rule, for children to present mental and moral tendencies similar to the parent. But because similarity to one or the other parent has been observed, in some instances the conclusion has been drawn therefrom that the child inherited these traits or tendencies, good or bad, vicious or criminal, diseased or defective, from the parent. Let me ask, what force or circumstance prevented the other children of the same family who manifest dissimilar traits to the parents, from inheriting the same qualities as the others did, from the parents or ancestors? Some children in a family are like one parent, others like the other, and some dissimilar to both, in fact, the unlikeness is the rule, not the exception, and yet advocates of hereditary transmission of such qualities have dignified this jumbled mass of likeness and unlikeness in offspring compared with parent, by the term Laws of Heredity,—and then to make this reign of *law* more chaotic still, when unable to account for the individuality of some of the children, because so unlike both parents, they have introduced into the dilemma the dogma of "atavism."

To illustrate the peculiar application of the term *law*, let me quote from Dr. Frederick Peterson's text-book his summary of the Laws of Heredity as they relate to insanity.

I. The child tends to inherit every attribute of both parents.

II. Contradictory attributes cannot be inherited from both parents.

III. The child may inherit the attributes of either parent solely.

IV. It may inherit the qualities of one parent in some respects, and of the other in other respects.

V. It may inherit the father's attributes for one period of existence and the mother's for another.

VI. Some attributes have the quality of prepotency, or the tendency to push aside or overrule the other attributes.

VII. Attributes which are similar in both parents, tend to become prepotent, giving rise to convergent or cumulative heredity.

VIII. Attributes may be transmitted in latent form, from one generation to another, to appear in a third or fourth or still more remote generation, a phenomenon termed "reversion."

IX. Attributes tend to appear in the progeny about the same time of life, at which they become manifest in the parents.

X. Attributes of the father tend to be inherited by the sons, and of the mother by the daughters."

There can be no doubt but what these phenomena referred to in the above enumeration, both as to the fact of similarity and as to the time of life at which the similartiy becomes manifest, are frequently observed, but to regard them as due to hereditary transmission and not environmental training is, in my opinion, decidedly improper.

The great error into which many writers on the subject have fallen, I believe, is failure properly to distinguish, between *sequence* and *coincidence*. In considering certain phenomena as controlled by a *law*, *i. e.*, rule of action, we regard a combination as a sequence, when one bears a causal relation to the other, or one is cause, the other a result, while, in coincidence, there is a similarity, yet one is not dependent upon, or caused by, the other.

Our every-day observation clearly demonstrates that it is the exception, not the rule, for children to resemble parents, with respect to mental and moral traits and tendencies, which fact entirely excludes the possibility of the operation of a uniform natural law of hereditary transmission. If all children of particular parents were alike and each like their parents, then we could say it was evidence of law—but since this similarity does not obtain, there is no sequence, hence no law. Therefore similarity of child to parent (other than physical) can only be considered as a coincidence, not a sequence. Then how may we account for the coincidence? By the influence of environment. The child may become like the parent, but not necessarily so, due largely to the fact that, in our social relations, the child is more in contact with the parents, than with friends or neighbors, hence, the greater influence wielded by parent results in growing similarity of personality—as between child and parent.

If, on the other hand, as is usually taught, the instances of similarity between child and parent are due to heredity, then the only way to explain the instances of dissimilarity, is to say that they were like the parents in early childhood, but that environment, training, etc., have made them unlike. Who ever heard of a child becoming unlike a parent by training? Yet, this is the only explanation you may offer to account for the fact of dissimilarity between parent and child. To sum up the argument, we would assert briefly, that heredity is a powerful factor in determining the qualities of the physical

body, and that environment is of minor importance; while, as to the mental and moral traits manifested, environment is the powerful factor, and heredity is entirely inoperative.

Some one may say that this is a mere dogmatic statement, insusceptible of proof. Not so, yet I admit it cannot be demonstrated objectively, but may be proven subjectively quite as conclusively as many other hypotheses pertaining to other realms of thought may be, and which are accepted as true without question, yet an equally clear explanation of a psychological proposition is unaccepted, and brushed aside as mere "speculative philosophy," not by the earnest student, but by those who have never interested themselves in the subject, sufficient to comprehend the simplest fundamental thought in respect to it. The limits of this essay will not permit of extended argument to support the statement just made, but I will encroach upon your time, sufficient to direct attention to one, otherwise inexplicable, phenomenon, quite frequently observed. I refer to precocious children, and to so-called mathematical and musical prodigies, occassionally born into families. I omit specifying instances, you know they occur. An ultra believer in heredity will advance the argument of accumulative atavistic influence, or some such fine-spun theory, but this would imply, in such instances, the transmission from parent to offspring, per spermatozoon or ovum, of actual definite knowledge of music or numbers—a positive absurdity, indeed. Furthermore, these recorded instances of prodigies give evidence of being in possession of knowledge, which none of their ancestry had been acquainted with. The only rational explanation of this phenomenal fact is based upon the following reasoning:

Our best writers and thinkers agree that all knowledge we possess is acquired by experience, rather than that we have it *a priori*. Granted. Then what in man, body, mind or soul, may we consider as being the seat of consciousness, and which by experience acquires or retains more knowledge from year to year. We answer the soul, (or what Hudson confusingly designates the subjective mind). This soul we regard as immortal, not subject to destruction by the change we call death, and is capable of independent existence, after the death of the body. If after, why not before? If immortal, then eternal. Eternity, includes all of time, not only present and future, but past as well. In the past, that is, prior to the birth of this present body, some have been placed in such an environment, that, by experience, they have acquired a knowledge of music or numbers, and stored it up in the ego (soul) and now, when incarnate in this present body, there becomes manifest, that which, by experience, was learned in a previous incarnation. But someone says this implies re-incarnation. True, but not transmigration. In the remote past education (development of the mental faculties, not merely acquisition of knowledge) was enjoyed by but a very small percentage of the population as compared with recent times, and proficiency was attained almost exclusively in mathematics and music, hence, prodigies are few in numbers as yet. Others were educated to a degree in previous incarnations, and in other branches of learning, and now in childhood, when they come in contact with similar or familiar ideas, or lines of thought, we say of them, their intuitive power is acute; they learn easily and quickly; we say they are precocious children. Others again are dull, and slow of comprehension, they learn slowly, because, in this incarnation, they are brought in contact with such ideas for the first time in the life-history of that soul. Hence, (from these observations, others impossible to include here) we conclude that, mentally and morally, we are the architects of our own destiny, that we are now just what we have made ourselves, that we are not blessed by heredity with any virtues we have not earned, and are not cursed by heredity with any vice we do not deserve, and that we progress *pari passu*, as we take advantage of the opportunities which our environment provides. All of us are alike, in so far as we are all subject to the same law of progress. The physical body is but a mechanism, over which, by means of the cerebrospinal system of nerves, the soul has voluntary control, (all involuntary functional activity being presided over by the sympathetic system). The cells of the brain cortex are not automatic, self-sufficient in themselves to explain the phenomenon of consciousness and voluntary control. Introspective psychology, if not experimental, forces me to an acceptance of the above hypothesis, as being by far the most feasible of any with which I have yet come in contact.

A number of writers lately in discussing the phenomena of social progress seem to deplore the fact that more attention is being devoted to the careful and selective breeding of live stock than is being given to the procreation of children. This idea is associated with a supposed social wrong in permitting certain criminals, and mental defectives, to marry and procreate their kind. One of the most recent examples of this class of literature I was privileged to hear in the section devoted to deaf, blind and feeble-minded children, of the National Educational Association meeting in Detroit last week. The essay was prepared and delivered by Prof. Brandt, of the Central High School of Philadelphia. I will quote from his essay the following:

"The physically diseased can only beget the physically diseased; the idiotic and the imbecile can only give rise to the idiotic and the imbecile; from criminals only criminals can come. The state needs to combine with its policy of protecting benevolence a policy of progressive elimination and annihilation. In the sterilization of the sexes it has a remedy, as simple as vaccination, easy, harmless, sure and benevolent."

It seems to me that the fears of such writers are not well founded, neither as to the principles underlying the practice pursued by live stock breeders, nor as to the remedy offered. Let us see. In order to cultivate or accentuate certain physical qualities of the horse, for instance, viz., running, trotting, pacing, or drawing heavy loads, our progressive farmers take pains in the breeding of just such stock known to be specially adapted for these various activities, not because of their capacity for intellectual or moral growth. In these days, when bicycles, automobiles, electric or steam cars, and good horses

are utilized by man for the purposes of transportation, we no longer find it necessary to beget fast running children, as savage or barbarian races deemed proper. Now we hope to beget physically healthy children and then train them to utilize these other means to perform certain work in shorter time and with much less expenditure of energy on their own part. We take special care in the breeding of other domestic animals, because we know that some species are better adapted than others to furnish flesh, milk, eggs, wool, etc.

We are not procreating children to be driven, nor to be used as food, in these enlightened days. We should distinguish between mere physical qualities, on the one hand, and moral and intellectual attainments on the other, before we hasten to declare that, because more care is given to the breeding of live stock, than to the procreation of children, the whole human race is going to the bow-wows. In our reasoning as between children and animals in this respect we should compare like qualities in each, else it were consistent and proper for one to ask such a question as this. Who can better solve a mathematical problem, a 200 lb. man, or a 150 lb. man, regardless of their intellectual attainments? Furthermore as to criminals begetting their kind by procreation, we must remember that intellectual faculties and moral attributes pertain to the psychological realm of man, with which heredity has nothing whatever to do. Heredity is only of consideration in connection with the physical body of man, and the physiological uses of the organs thereof.

The remedy advocated by those referred to is either some restriction of, or state control over who shall be permitted to marry, and asexualization, with a view to prevent procreation of similar mental or moral defectives, or those having hereditary tendencies to become so. The real difficulty lies in the fact that such defectives are incapable of properly training the children they beget, and in the unwholesome environment into which such children are born, they are liable, yet, not necessarily so, to become criminal or vicious because of lack of moral training.

Not that I advocate permitting such individuals unlimited opportunities to beget, and then have parental control of their offspring, which necessarily implies improper care and training, but I do claim that asexualization is not the remedy which the circumstances demand.

By such a procedure we should attempt an impracticable course of conduct, because of insufficient study of the principles underlying the phenomena we hope to combat. When parents are morally or intellectually unfit properly to train children, I am very certain to practise asexualization upon them will not add to their capacity in that direction. They no doubt, through no fault of their own, in early years were deprived of the opportunity of good training so essential to our intellectual and moral uplift, and it is now proposed to punish them by asexualization. God forbid! We are never too old to learn. But some say that the attempt to train such criminal adults is a hopeless task. I answer, that no concerted effort has yet been put forth on the part of society or the state to accomplish the task set before it, that of properly caring for and dealing with those, over whom the state by means of courts and penal institutions has assumed paternity. Imprisonment at hard labor, without pay, for a period of months or years, I am sure, is not very conducive to good morals, and tell me if you will, what other provision has yet been made to deal with the criminal classes of our country. If the state may assume the authority to asexualize him, why not assume the authority to do for him just what he requires, i. e., train him to be a man. Example is the best teacher. By training I do not mean to teach him to live by wits, rather than by work, nor that the strong should be protected by law, and the weak taken advantage of, by legislative enactment. The whole subject will yet admit of much study on our part as physicians, in whose hands such matters to a large extent repose, and if, in the presentation of this essay, I have awakened thought upon this tremendously important subject, I shall feel satisfied that great good shall accrue to society because of more united effort.

ARCHIV FUER VERDAUUNGSKRANKHEITEN.

Bd. VII., Hft. 6.

1. On the Question of the Pathogenic Importance of the Balantidium Coli. S. E. HENSCHEN.
2. Megastoma Intestinale and other Parasites in a Case of Gastric Carcinoma. ERICH ZABEL.
3. On the Nature and the Anatomical Seat of Gastralgia. MAX BUCH.
4. Investigations of Honthin as an Antidiarrheal Drug. W. TISCHER and A. BEDDIES.

1.—Henschen states that he has been incorrectly quoted as believing that the palantidium coli is of no importance in the production of intestinal symptoms. This was due to an early report with Waldenström, in which the opinion was expressed that these parasites did not produce the symptoms. This opinion was Waldenström's, and not his own. He himself has always believed that they are active in the production of symptoms. He now **reports 2 new cases,** the only ones which he has seen since 1874. In both there occurred **diarrhea without known cause,** which was protracted, and which very seriously reduced the general health. In both cases the symptoms ran a course very closely corresponding with the numbers of the parasites in the stools; and as the parasites disappeared, the patients entirely recovered. In both, **large enemata, containing tannic acid and vinegar,** were used, and seemed to be extremely satisfactory, the symptoms in both cases improving rapidly after the use of these enemata; the parasites in one case soon vanished, and in the other gradually disappeared. All told, Henschen **has seen eight cases.** In five of these, rapid recovery occurred with the disappearance of the parasites; in one, improvement occurred, but the patient disappeared from observation; in another, recovery occurred a month after the disappearance of the parasites; and in the remaining case the diarrhea continued, although the parasites had been entirely removed. In this case, however, there had been a chronic colitis for about 2½ years before treatment with tannic acid and vinegar was begun, and the continuance of the symptoms was probably due to the chronic colitis. [D. L. E.]

2.—The case was interesting in that the general condition and the examination of the stomach contents indicated the presence of carcinoma; and the stomach tube, when

introduced, apparently lodged against a large tumor, but no tumor could be felt. The megastoma was found in large numbers in the stomach contents, and it was suspected that it might be a case of parasitic infection of the stomach. The patient greatly improved after the use of the stomach tube, but he soon grew worse, and it was determined to operate. Portions of the tumor had come away through the stomach tube, but it was impossible to make a definite diagnosis of carcinoma from the examination of these fragments. Operation was carried out, **a large cauliflower carcinoma** was found, and the **stomach was removed in toto.** Zabel then gives an extensive descussion of the megastoma. He believes that they were of no pathological importance in this case, but that their presence in either the stomach contents or in the feces indicates disturbance of the stomach or of the intestine; hence, that **the megastoma is of diagnostic importance,** and by studying it some determination may be reached as to the seat of the trouble. If the individual from whom they are obtained seems to have normal intestines, **its presence indicates** that he has disease of the stomach or upper intestine, and, not improbably, that he has had **achylia or hypochylia gastrica.** A very large proportion of those who have megastoma in the stools suffer from achylia, the reason being that normal amounts of HCl will kill these parasites. This is one of the main causes of their frequent presence in cases of phthisis. The infection in this case is believed to have come through the drinking water, which may have been infected through rats, as these animals commonly produce infection. There was in this case infection of the stomach with large numbers of other parasites. There were **numerous cocci and other bacteria,** spirilli, leptothrix, amebæ monads, cercomonads, trichomonads and peculiar objects of unknown nature. Yeasts and sarcinæ were not present. The curious bodies of unknown nature were probably infusoria. There is an extensive bibliography with the paper. [D. L. E.]

3.—Buch discusses gastralgia with very numerous references to the literature and the reports of some personal cases. He decides that the sympathetic is not, under normal circumstances, sensitive to pressure, but becomes so under pathological circumstances. This hyperesthesia of the sympathetic may remain for a long time before the patient notices it as actual pain; but when such hyperesthesia exists, any decided increase in the irritation is likely to bring forth pain, which is recognized as gastralgia. The anatomcal seat of gastralgia is considered to be not in the stomach itself, but in the epigastric part of the sympathetic. The author **believes, therefore, that it should be called epigastralgia, instead of gastralgia.** [D. L. E.]

4.—The authors report a few cases of varied kind, in which gastro-intestinal disturbance associated with diarrhea was quickly overcome by the use of honthin.

[D. L. E.]

Relapsing Fever in Algeria. Billet has recently reported a case of relapsing fever in a native soldier, aged 30, in Constantine. The patient entered the hospital with sudden chills, rachialgia, myalgia, hyperesthesia, high fever and dyspnea. Bilious vomiting, diarrhea and delirium followed. All symptoms became worse and a few rales were observed. The Widal reaction was negative. Examination of the blood, however, revealed the **spirilli of Obermeier** in large quantities. The spleen was enlarged and slight jaundice was noted. A blood count showed oligocythemia, oligochromemia and polynuclear leukocytosis. On the fifth day, with profuse perspiration, his temperature fell to normal. Constipation followed and no more spirilli were noted for 12 days. Then he had another attack, less severe, but with the same symptoms, lasting but 3 days. Spirilli were again observed. This case was remarkable on account of the short duration of the attacks. The diagnosis must be made from malaria, typhoid and the different forms of malaria. (*Archives de Médecine et de Pharmacie Militaires.* March 1902.) [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service during the week ending June 7, 1902:

			Cases.	Deaths.
SMALLPOX—United States.				
COLORADO:	Denver	May 17-24	7	
FLORIDA:	Jacksonville	May 24-31	1	
ILLINOIS:	Chicago	May 24-31	12	
	Freeport	May 17-24	4	
INDIANA:	Indianapolis	May 17-24	14	
	Terre Haute	May 17-24	1	
KANSAS:	Wichita	May 17-24	5	
KENTUCKY:	Covington	May 24-31	8	
LOUISIANA:	New Orleans	May 24-31, 2 cases traced to outside infection.		
MAINE:	Biddeford	Jan. 1-May 29	2	
MASSACHUSETTS	Boston	May 24-31	23	3
	Brockton	May 17-24	1	
	Cambridge	May 10-31	12	
	Everett	May 24-31	1	
	Lawrence	May 17-24	2	
	Malden	May 24-31	3	
	Melrose	May 24-31	2	
	Newbern	May 24-31	2	
MISSOURI:	St. Louis	May 18-25	25	
MONTANA:	Butte	May 18-25	4	
NEBRASKA:	Omaha	May 17-31	47	
NEW HAMPSHIRE	Nashua	May 24-31	2	
NEW JERSEY.	Hudson County (including Jersey City)	May 18-25	36	1
NEW YORK:	Elmira	May 17-31	1	1
	New York	May 24-31	63	2
OHIO:	Cincinnati	May 23-30	11	
	Cleveland	May 17-31	68	9
	Hamilton	May 24-31	2	
	Toledo	May 17-24	6	
PENNSYLVANIA	Erie	May 17-24	2	
	Johnstown	May 24-31	2	
	Philadelphia	May 24-31	4	1
TENNESSEE:	Memphis	May 24-31	12	
UTAH	Salt Lake City	May 17-24	6	
VERMONT:	Rutland	Apr. 26-May 31	13	1
WASHINGTON	Tacoma	May 18-25	1	
WISCONSIN.	Green Bay	May 18-June 1	1	
	Janesville	May 17-24	2	
	Milwaukee	May 17-31	12	
SMALLPOX—Foreign.				
AUSTRIA	Prague	May 3-17	8	
BELGIUM:	Antwerp	May 3-17	14	4
	Brussels	May 10-17		1
CANADA	Halifax	May 17-31	2	1
	Quebec	May 24-31	34	
	Winnipeg	May 17-24	2	
FRANCE	Paris	May 10-17		2
GREAT BRITAIN	Birmingham	May 3-17	4	1
	Glasgow	May 10-17	4	
	Liverpool	May 10-17	1	
	London	May 3-17	265	27
INDIA	Bombay	Apr. 22-29		7
ITALY	Naples	May 3-17	5	
MEXICO	City of Mexico	May 11-18		1
	Vera Cruz	May 18-24	1	
RUSSIA	Moscow	May 3-17	16	3
	Odessa	May 3-17	17	5
YELLOW FEVER.				
COLOMBIA	Panama	May 3	8	6
MEXICO	City of Mexico	May 11-18		1
	Vera Cruz	May 18-24	26	16
PLAGUE				
PHILIPPINES	Manila	Mar 29-Apr 18	278	208
	Batnan Province	Mar 30-Apr 18	241	168
	Bulacan Province	Mar 30-Apr 18	122	89
	Camarines Province	Mar 30-Apr 18	248	173
	Cavite Province	Mar. 30-Apr. 18	5	5
	Ilocos Norte Province	Mar 30-Apr 18	1	1
	Laguna Province	Mar 30-Apr 18	1	1
	Pampanga Province	Mar 30-Apr 18	29	30
	Rizal Province	Mar 30-Apr 18	47	34
CHOLERA—Foreign.				
INDIA:	Bombay	Apr 22-29		2
PLAGUE—Insular.				
INDIA:	Bombay	Apr. 22-29		320
	Karachi	Apr 26-May 4	127	105

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See Advertising Page 8.

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The Meeting of the American Medical Association.—The meeting at Saratoga this year may be considered a success. We have discussed several important aspects of it under separate headings. The registration was not so large as was expected, only reaching about 1400. This was doubtless due to the place of meeting, which, with all its charms and advantages, was nevertheless rather out of the way. This fact demonstrates the truth of what we have often contended for, that the best places for holding large medical conventions are the large medical centers. In these centers of active medical work the most representative men are to be found; the atmosphere is conducive to medical thought and activity, and the opportunities both for work and for enjoyment are great.

We are therefore convinced that the final decision to hold the next meeting at New Orleans instead of Hot Springs was a wise one. New Orleans is the southern metropolis, and if the meeting is held early in May, the climatic conditions will probably be most favorable.

The selection of Dr. Frank Billings, of Chicago, for President meets with general approval. Dr. Billings is a representative medical man of the great Central West. He is, moreover, a physician, and as the Association has honored surgeons now for several years with its highest office, it was appropriate that it should turn this year to a representative of the other field of practice.

The importance of the American Medical Association as a representative national body increases every year. This is as it should be. There are still some things, however, to be desired. We believe that the character of the scientific work can and should be still further improved. This is true of some of the sections more than of others. The work in these is hardly up to the standard of some of the special associations. It should be made to equal the work of these bodies in every particular. This responsibility rests especially on the officers of the several sections.

Dr. Billings' Oration on Medicine.—The eloquent oration of Dr. Frank Billings at Saratoga was in fact a plea to the legislative and commercial elements of the community for the recognition of preventive medicine as a desirable form of investment; not in the sense of creating capital, but in the sense of diminishing expense. It is unnecessary to dwell upon the importance of this feature. The principle of insurance is adequately realized at the present day—the chief point is that men die, buildings burn, and ships founder, but the epidemic that is prevented never comes, and the world can only be made to recognize the amount that is saved by comparison with the costliness of epidemics that do occur. Now, unfortunately, the so-called extinct volcanoes give rise to no feeling of insecurity, and we are just as likely to consider a disease extinct that has not visited Europe for 100 years. Witness the bubonic plague. For the diseases that do come the governing and commercial bodies labor under the delusion that quarantine is a fairly efficient protection, and then object to quarantine because it disturbs commerce. Dr. Billings has performed a noble service in his address in urging the purely profitable side of sanitary science. The larger part of his paper consists of the enumeration of the advances that have been made in the various realms of medicine, particularly parasitology and the prevention and cure of infectious conditions. This summary is admirably done, concise, clear and thorough. Incidentally he mentions the expense attendant upon certain infectious diseases, as, for example, malaria in Italy, yellow fever in Cuba, and the great benefit that has accrued to different places by the stamping out of infectious diseases, notably the city of Havana, where the hygienic measures introduced by the army medical service of the United States have borne such remarkable fruit. Then in the concluding part, which is really the gist of the paper, he makes a plea that "medical science should receive the moral and financial support of States and municipalities in the employment of the measures which science has proved to be efficacious in modifying, restricting and abolishing infectious diseases." Probably no abler request for support, no clearer statement of the needs of sanitary science, has ever

been made. The financial return in the shape of diminished expenditures that would follow the elimination of cholera and plague in the Orient, of yellow fever in the tropics and of malaria wherever it exists in severe endemic form, would be almost incalculable, and that the weapons are now in our hands and would prove effective if we could only wield them, seems to be true, or almost true, for some forms. There are evidences here and there in the United States that wealthy men are awakening to the desirability of work in this direction, and with such an object lesson as Havana we believe that it will not be long before the Government realizes its full obligations in this matter.

Dr. Billings deserves to be congratulated and sincerely thanked, not only by his medical colleagues, but by the commercial bodies of the world, for so clearly stating the problem as it now stands.

The Proposed National Board of Examiners.—Dr. Rodman's proposed plan for a voluntary national board of examiners has so much in it that is reasonable and fair that those who favor it are just as well pleased that nothing precipitate was done in the matter at Saratoga. There is no occasion for desperate partisanship in this matter; no just motive for making a fighting issue out of it. The scheme is intended for the good of all concerned, and those who favor it acted wisely in not pushing it too furiously this year.

In the first place, the opposition engendered to the plan in the convention of State Boards was hasty and rather ill advised. We are well assured that had some of these gentlemen taken time to consider the measure more carefully, they would not have so unqualifiedly and so hastily condemned it. Many, and some of the most influential, members of these Boards have since expressed themselves as favorable to the plan. Due allowance must be made for some sensitiveness—perhaps jealousy—on the part of some members of State Boards, but a mere narrow-mindedness in this matter will not eventually prevail.

In the second place, this was not an auspicious year for launching novel and important legislation. The House of Delegates was still new to its work, and not prepared to dispatch even the necessary routine business with as much vigor as was desirable. These defects, inseperable from a new body, will be remedied in another year. Dr. Wyeth referred favorably to Dr. Rodman's plan. Dr. Welch, of Baltimore, also spoke favorably of it, and moved that it be referred to a special committee because of its importance. This Committee was constituted of W. L. Rodman, of Philadelphia, Chairman; Henry Beates, of Philadelphia, William H. Welch, of Baltimore, J. M. Matthews, of Louisville, and T. J. Murray, of Butte, Montana. Everything is in the hands of this committee. So impartially was it constituted that by Dr. Rodman's own insistence the State Boards were represented on it by the appointment of Dr. Beates and Dr. Matthews. The intention frankly was to conciliate the State Boards, and it is believed by responsible observers that the members of these Boards will view the matter in its true and favorable light as soon as they have cleared their eyes of the dust which some irresponsible parties have been kicking up in opposition to it.

The measure could probably have been pushed through the House of Delegates this year, but it has been deemed wiser to take time and win over all parties by an appeal to reason and a sense of justice. We should like to caution all persons not to allow themselves to be misguided in the matter. Something absolutely must be done to relieve the medical profession from the intolerable conditions imposed by the present system of state licensing. If anybody has a better plan than Dr. Rodman's, let him bring it forward. As yet we have seen no better plan. Unreasoning opposition is not constructive statesmanship.

The House of Delegates.—This new legislative body of the American Medical Association gave ample evidence that it can dispatch work much more efficiently than was possible in the general session heretofore. It contained many representative men, who showed a willingness to devote themselves to its business at no little sacrifice to themselves. It had to struggle against some disadvantages, due to the newness of the work and to the fact that an untimely fire at Saratoga drove it from its original quarters. The urbanity of President Wyeth and his rather low articulation were, perhaps, not conducive to a quick dispatch of business, but after the first day the progress made was more expeditious.

This first experience has proved several things. The sessions should, if possible, be held at times when the sections for scientific work are not in session. Many men were kept from reading papers because they were conscientiously attending the House of Delegates. Others remained away from the House, because the sections were more interesting. If this is allowed to continue, the House will soon be attended by few others than the political wire pullers who have at times dominated the affairs of the Association to its disadvantage.

The House would do better to meet early in the

morning or in the evening during the time devoted to entertainments than during the time assigned for section work. It is probable that one of the Vice-Presidents or a Chairman elected by itself should be selected to occupy the chair in most cases, so that the President might be free for social and scientific duties. The President of the Association is usually elected for scientific services rendered to the profession and the public, and is not necessarily a good parliamentarian. The House of Delegates should be empowered to select a man with a strong voice, a strong backbone and a knowledge of parliamentary law combined with absolute impartiality to preside over its deliberations. This would insure sessions beginning at the exact minute agreed upon and would dispatch business in a quick, just and efficient way. On the whole the House of Delegates was, and promises to continue to be, a success.

A Word About Journalistic Enterprise.—The **Philadelphia Medical Journal** was fully represented at the recent meeting of the American Medical Association, and special pains were taken to secure good reports. Almost the entire editorial staff was in attendance, and individual members were delegated to secure or supervise the securing of complete details. We believe we are, therefore, able to present as satisfactory a report as it was possible to make of the proceedings of the various sections.

There were two ways to secure such reports. One way was to have a real, genuine, live representative present in every section, who knew how to report medical proceedings, and could be relied upon to do it. The other way was to "hack" the reports out of the official programs, which in many cases published synopses of the papers read. The **Journal** chose the former way, but it realized at the start that this method required time and conscientious work. The latter method did not require so much time, and, as the reports by this method could even be prepared before the meetings were actually held, it would thus have been possible to publish on Saturday, the 14th. of June, proceedings which occurred only two and three days before. This seemed to us to be a sort of "fake" journalistic enterprise, and we accordingly did not enter into it.

The report which we present to-day has been prepared by conscientious work, and has been allowed the time which it really required.

The Annual Orations.—The President's address and the three annual orations delivered before the American Medical Association afford each year an admirable opportunity for the presentation of living topics to the professional public. We are convinced that these orations this year were up to the usual standard, and we have to express our obligation to the editor of the *Journal of the American Medical Association* for the advance sheets. Instead of publishing them in our columns, however, we have subjected them to appreciative editorial comment. We judge that this will be quite as satisfactory to the authors, and perhaps more so to our readers, who can find these orations not only in the official organ of the Association, but also in the pages of most of our contemporaries.

Saratoga.—Probably few of the members of the American Medical Association who visited Saratoga for the first time last week will soon forget the impression made upon them by that famous and beautiful resort. It was soon apparent to all the visitors that the selection of this historic spot for the meeting of the Association was in some respects a most happy one. Saratoga was clothed in all the beauty of the early summer foliage. The air was cool and invigorating. The splendid trees, the fine streets, the celebrated and interesting mineral springs, all combined to make the visit one of great interest and pleasure.

It was a good thing for so many physicians to make the acquaintance of this great health resort. Its capabilities are yet far from being developed to their full extent. The place might be the Mecca of the American invalid. Everything contributes to make it an ideal spot; its climate, its location, its historic associations, its beautiful drives and well-kept town, its springs of living and wholesome waters; all these make of Saratoga a health resort which fashion cannot spoil and which the physician can scarcely overpraise.

Bringing Pathology Down From the Clouds.—It has been said of some of the inductive philosophers, such as Aristotle in the ancient and Bacon in the modern world, that they aimed to bring philosophy down from the clouds. It were much to be wished that some inductive reformer would occasionally do the same service for pathology. At the recent meeting of the American Medical Association there was a tendency in some of the sections to indulge in speculative pathology. This was especially so in the section on Nervous and Mental Diseases. When men travel hundreds of miles to discuss the "pathogenesis of epilepsy," the chances are that they are simply throwing away their opportunities. Nothing definite is known about this and kindred subjects; and until a man has some definite knowledge based on actual observation, it is best for him not to indulge in mere speculation on such recondite themes. We should like to suggest to

some of our much criticised—and often unjustly criticised—asylum men that they have a wealth of clinical and pathological material right at their hands in their own hospitals, and that it is far better to study this material in the old-fashioned, commonplace way than to indulge in ambitious dissertations in the manner which they think they have learned from Hughlings-Jackson and Herbert Spencer. Let them bring their neuropathology down from the clouds, and into the wards and laboratories. And this caution does not apply to the neuropathologists only.

The Etiology of Nephritis.—The morning session of the second day of the American Medical Association was devoted to a symposium on nephritis. Papers were read by Drs. Elliott, of Chicago; Burns, of Memphis; Herrick, of Chicago; Kelly, of Philadelphia; Bishop, of New York, and Riesman, of Philadelphia. In the discussion of these papers, Vaughan, of Ann Arbor, suggested the application of Ehrlich's side chain theory to the explanation of the etiology of nephritis. He premises, first, that nephritis is always due to a toxin, which he calls a nephrolysin. He defines a nephrolysin as a substance that will split off one or more of the side chains from the kidney cell, thus impairing its functions. Chemically, potassium chlorate is such a substance. This suggestion is entirely theoretical. It is based upon a theory that cannot be proved and, in its turn, it is not supsceptible of demonstration. The theory of Vaughan is ingenious and, since Ehrlich's side chain theory in relation to immunity is now generally accepted, it is at least reasonable and is evidence of an original mind.

Uremic Aphasia.—An interesting paper on this subject was read by Dr. David Riesman at the recent meeting of the American Medical Association at Saratoga. Dr. Riesman called attention to a fact which is too little recognized by general clinicians, although it has long been familiar to the neurologists. This fact is, that uremia may simulate organic diseases of the brain. Among these diseases are especially aphasia, hemiplegia, monoplegia and monospasm, and even gross lesions, such as cerebral softening, focal hemorrhage and brain tumor.

Dr. Riesman's paper was devoted more particularly to aphasia, and was based upon the comparatively few cases that are recorded, as well as upon some cases which he had observed himself. The type of speech defect may vary; it may be a motor aphasia, a paraphasia, or, as in a very few instances, a sensory aphasia, such as word-deafness or word-blindness. There may also be agraphia. The speech defect may or may not be associated with a hemiplegia, especially of the right side. The picture presented by these cases is, therefore, as Dr. Riesman pointed out, strongly suggestive of an organic lesion.

It is curious how closely uremic encephalopathy may simulate a gross organic lesion. Thus within very recent years a case was studied in the Philadelphia Hospital in which the symptoms were so suggestive of brain-tumor that an operation was seriously considered. All the symptoms yielded, however, to treatment directed to the relief of the renal condition. In another case, in which the patient was not so fortunate, an operation was actually performed, with fatal result.

The pathogenesis of uremic aphasia is obscure. The theory which regards a temporary vascular change as the cause of the focal lesion is the most satisfactory. Dr. Riesman is apparently inclined to accept this theory. In Bright's disease, as is well known, of course, changes occur in the walls of the bloodvessels. It is, therefore, quite conceivable that vessels in certain limited regions may be more affected than in others and that under the influence of a toxic state of the blood these local vessels might, by reason of a spasmodic action of these walls or of altered consistency of the blood, become temporarily obstructed. It seems certain that, whatever the cause may be, it is capable of acting only temporarily. For these patients often recover from the aphasia, whereas the general renal condition is only too apt to persist.

The Fixation of Nitrogen.—Lord Kelvin is reported to have said that the most interesting thing that he saw in this country was the process at Niagara Falls for obtaining and utilizing the nitrogen of the atmosphere. The alarmists, it will be recalled, have been predicting a dearth of nitrogen, or of its nitrates. Sir William Crookes in 1898 pointed out the possibility of the failure of the world's wheat supply. Nitrogen is being used up. There is nothing to supply its place. The supply of nitrates from Chile is being exhausted. According to Sir William it is simply a question of time—a matter for mathematical demonstration—when the nitrates of the world will be used up.

But the alarmists seem to have overlooked the atmosphere. They did not stop to reflect that the air is composed of four parts of nitrogen to one of oxygen. Therefore there is plenty of nitrogen all around us; the only question has been how to obtain it. This problem, according to *Harper's Weekly*, has been solved by Messrs. Bradley and

Lovejoy by means of electricity at Niagara Falls, and at a reasonably cheap rate. Nitrous oxide is formed by the aid of a current, and nitric acid and the various nitrates are made from this. Thence it will be but a step to make fertilizers and gunpowder —or, in other words, the means both to sustain life and to destroy it. In Lord Kelvin's judgment this is a most important contribution to the world's resources.

The *Practitioner* quotes with approval this maxim: "The function of the physician primarily is to cure people. Don't go into politics." Such an astute journal as the *Practitioner* should be able to see the fallacy in this catchy phrase. To prevent disease is even better than "to cure people," and preventive medicine and hygiene often need the aid of the doctor in politics.

Current Comment.

INSANITY IN TWINS.

Insanity in twins is a rare interesting condition and one which serves to throw light on the difficult and obscure problem of the constitutional predisposition to mental disease. Instances of insanity in twins are uncommon in the records of medical literature, the few cases known to have occurred in the United Kingdom having been reported by Clouston, Wigglesworth, Mickle and Turnbull in the *Journal of Mental Science* during the past 25 years. In the *Archives de Neurologie* for May Dr. P. Keraval, the medical superintendent of the asylum at Armentières, and Dr. G. Raviart, assistant medical officer, have reported a case of insanity occurring in twin brothers who had for many years lived quite apart from one another. One of the patients was a man, aged 39 years, when admitted to the asylum in September, 1888. He was married and was the father of two children. The patient's mother was living and well. He was a man of temperate habits and free from syphilis. On admission to the asylum he was suffering from symptoms of general paralysis of the depressed type with delusions that he was dead and had no bodily organs (*délire des négations*). He refused to take food and the disease progressed rapidly and proved fatal in 4 months from the time of his admission. The twin brother was admitted to the same asylum in November, 1896. He was a temperate man, free from syphilis, married, and the father of 5 children. There were symptoms of incipient general paralysis on admission, together with failure of memory, great depression, weeping, and delusions that he was ruined and dead—the same type of delusions as his brother had. He suffered from congestive or apoplectiform seizures and gradually grew worse and died in May, 1899. It was a curious fact that his wife, who predeceased him in January, 1899, was a general paralytic. Dr. Keraval and Dr. Raviart state that the especial interest of these 2 cases lay first, in their twinship; secondly, in the absence of hereditary antecedents of insanity; thirdly, in their freedom from syphilis and alcoholism; fourthly, in the fact that both were married and developed the same form of insanity in adult life; and, lastly, in the fact that where the general paralysis appeared earlier, as in one of the brothers, it ran a more rapid course and resulted in death more speedily.

—*The Lancet.*

REMEDY WORSE THAN DISEASE.

New Zealand has a better cure for rheumatism than carrying a last year's chestnut in your hip pocket. It is simply this: Get in a dead whale. After the whale has been killed and towed ashored and there is still a little warmth in the body, cut a hole into its side, and get in, feet first, up to your neck. Then have a friend close up the aperture, so that as few as possible of the ammoniacal gases from the carcass shall rise up around your face and stifle you. It is those cases, which are of an overpowering and atrocious odor, which affect the cure, the whalers say. Patients do not usually stand a whale bath for over an hour, and at the end of that time they are lifted out by their friends in a fainting condition. When the patients recover, the bath is repeated. Twenty-five or thirty hours will, it is said, cure the severest case of rheumatism. The deader the whale the more ammonical gas and the more thorough the cure. Davidson brothers, Ben Boyd Point, Twofold Bay, N. S. W., and Messrs. Christian, Norfolk Island, are prominent whalemen of the southern hemisphere, who know from experience the merits of the cure. They will gladly answer any inquiries on the subject. But from the esthetic point of view rheumatism is to be preferred to the whale cure.

—*Chicago Tribune.*

BEWARE!

Most of the announcements of the purveyors of country board dwell on the fact that an abundance of milk will be supplied visitors. Those who thus wander away from the protection of the Board of Health would better be cautious, for on no less an eminent medical authority than the London *Lancet* it is stated that milk is now colored with "methyl orange, or, in chemical nomenclature, the sodium salt of dimethylaniline-azobenzene-sulphonic acid."

—*New York Herald.*

Reviews.

Diseases of the Nose, Pharynx and Ear. By Henry Gradle, M. D., Professor of Ophthalmology and Otology, Northwestern University Medical School, Chicago. Handsome octavo of 547 pages, profusely illustrated, including two full-page plates in colors. Philadelphia and London: W. B. Saunders & Co., 1902.

In this book Professor Gradle describes diseases of the nose, pharynx and ear (the larynx is not included) as he has seen them during an experience of nearly twenty-five years. He has endeavored to present all the facts bearing on the subject and to detail only those procedures which he himself has found to be useful.

Upon the whole the teaching is sound; the author has incorporated material not often found in elementary textbooks, but on the other hand he has omitted some details which might have proved of use to a beginner. Especially commendable are the paragraphs on embryology and upon the development of the organs described, also the notes on history and literature placed at the end of some of the chapters.

The volume is divided into Book I, dealing with the nose and pharynx, and Book II, dealing with the ear. The anatomy, pathology and treatment of sinus involvements are dwelt upon at some length. In glancing through the work the following are noted: "Tonsillitis is due mostly to streptococci;" only sprays in the nose and throat are of little use; orthoform may be used after tonsillotomy and other operations to annul pain; tampons brushed with 10% antipyrin solution and dusted with powdered tannin will check hemorrhage in the nose and pharynx; in acute coryza the patient is advised to stay in a warm room and to avoid exercise; antipyrin internally is recommended for sinus pains and for earache; the alkaline douche with cotton or gauze tampons constitutes the treatment for

atrophic rhinitis (nothing is said here or elsewhere about the use of iodoglycerine solutions). For marked septal deflections preference is given to Asch's operation and to Krieg's resection of the septal cartilage; under quinsy nothing is said about uric acid as an etiological factor, nor are laxatives and antirheumatic remedies mentioned in the treatment. The author condemns the use of general anesthesia in the removal of adenoids because of "18 deaths collected from American and English sources alone from 1892 to 1898." In detailing the indications for mastoid operation the important symptoms, abundant discharge and sagging of the upper posterior wall of the meatus are omitted.

The description of the internal ear is excellent.

[W. G. B. H.]

Genito-Urinary Diseases and Syphilis. For Students and Practitioners. By Henry H. Morton, M. D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital; Genito-Urinary Surgeon to the Long Island College and Kings County Hospitals and the Polhemus Memorial Clinic, etc. Illustrated with half tones and full page color plates. Pages XII, 372. Size 9½x7 inches. Price, extra cloth, $3.00 net, delivered. Philadelphia, F. A. Davis Company, Publishers, 1914-16 Cherry Street.

The present volume contains a great deal that will be found most useful, but certain chapters in the book are undoubtedly deficient. The portion devoted to Syphilis is probably the most commendable part of the book. The author's methods of arrangement and his style of description are both good. The illustrations are good but might be more numerous. The chapters on gonorrhea, the prostate, the seminal vesicles, and the urethra present the subjects discussed in a very comprehensive manner.

The chapter of the book which we think calls for criticism is that devoted to the kidney. Less space is given to this subject than is found in the ordinary single volume work on general surgery. Tuberculosis of the kidney is not mentioned, but probably the most notable omission is that of the diseases and injuries of the ureter. Although both segregation of the urine and catherization of the ureters is referred to, the manner of accomplishing them is not described. Harris's instrument is spoken of as Harrison's segregator. Another omission from the work, although mentioned in a foot-note, is Doyen's operation for the cure of hydrocele; the method is certainly old enough and has been sufficiently tried to warrant its description in the text.

With the exception of the criticisms made the work is a good one. [J. H. G.]

Reference Hand Book of Medical Sciences, Vols. I, II, III and IV. Embracing the Entire Range of Practical Medicine and Allied Science, by Various Writers. A new edition completely revised and rewritten. Edited by Albert H. Buck, M.D., of New York City. Illustrated by Chromolithographs, Half-tones and Wood Engravings. New York, William Wood & Company.

This Reference Hand Book might more appropriately be called an Encyclopedia of the Medical and Allied Sciences. This is a new edition completely revised and rewritten, and conducted by Dr. Albert H. Buck. It is very profusely illustrated, and is on a much more comprehensive scale than Quain's well known Dictionary, which we have noticed above. It is obviously impossible in such a journal as this to subject this voluminous work to a detailed review. From our experience with it, however, we can heartily recommend it as a vade mecum for the physician's library. There is at present a great abundance of reference books and encyclopedia adapted to the use of the physician, but we know of nothing which is more comprehensively an encyclopedia than this Reference Hand Book. It has been promoted to a place of honor in the editorial sanctum of this Journal. We do not know of a better way than this to show our appreciation of this work. [J. H. L.]

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Wills' Eye Hospital.—At the last meeting of the Board of City Trusts, June 11, the resignation of Dr. William Thomson as attending surgeon of the Wills' Eye Hospital was accepted. Dr. Thomson was appointed consulting surgeon. Dr. William Campbell Posey was then elected attending surgeon in Dr. Thomson's place.

University of Pennsylvania.—It has been announced that a gift of $100,000 was recently made to be added to the building fund for erecting the new medical laboratories. The gift was anonymous and the particulars will only be made public after they have been submitted to the trustees. It is, however, known that the gift is a memorial and is to be devoted to the pathological department of the new laboratories.

Jefferson Medical College Hospital.—At a recent meeting of the hospital committee of the board of directors, Dr. Solomon Solis Cohen was elected attending physician, taking the place of the late Dr. Wirgman.

Medical Club of Philadelphia.—A reception and banquet were given at the Art Club, June 14, in honor of Dr. P. M. Rixey, Surgeon-General, U. S. N., who was in Philadelphia to inspect the Naval Hospital. Dr. Rixey made a few remarks during the evening. A great number of physicians were present.

Pittsburg Municipal Hospital.—Two ordinances were passed by Pittsburg's Select Council, June 13, to combat smallpox. One authorized the appropriation of $7,500 for disinfection, the other appropriated $10,000 for the erection of an addition to the Municipal Hospital.

Throat Troubles Due to Soft Coal.—Throat and nose specialists believe that breathing a smoke-laden atmosphere is very injurious to weak throats, causing catarrh and other diseases. These complaints are most prevalent in Pittsburg. Coal dust is also blamed for conjunctivitis.

NEW YORK AND NEW JERSEY.

Columbia University Medical School. At the commencement exercises, June 11, almost 150 degrees of M. D. were conferred. Among these graduates of the College of Physicians and Surgeons, the Medical Department of Columbia University, was Dr. E. H. Spitzka, who not only received the anatomy fellowship, but also took the third Harsen prize for clinical reports.

American Academy of Medicine. At the recent meeting of the American Academy of Medicine, at Saratoga, the following officers were elected for the ensuing year: President, Dr. Charles McIntire, Easton, Pa.; vice-presidents, Drs. William R. White, Providence, R. I., George Dock, Ann Arbor; Rosa Englemann, Chicago, and D. C. Hawley, Burlington, Vt.; secretary, Dr. A. R. Craig, Columbia, Pa., and treasurer, Dr. Edgar M. Green, Easton, Pa.

Oxygen at Niagara Falls. Since the organization of a company to manufacture products from the nitrogen of the air, the residents of Niagara Falls are wondering whether they will in the future breathe pure oxygen. For the proposed factory expects to withdraw a large percentage of the nitrogen from the air to make food stuffs and fertilizers.

New York Infant Asylum. The large establishment of the New York Infant Asylum at Mt. Vernon, N. Y. will close July 1, owing to lack of financial support. Before that time it is expected that the 120 babies now in the institution will be distributed among other institutions in New York City. Some of the infants will be sent to their parents, and some will be placed in families by the Children's Aid Society.

Baltimore and Ohio Railway Surgeons. The convention of this association will be held at Atlantic City, June 25 to 27. The opening address will be delivered by Dr. Stanley and the Mayor will make an address of welcome. Besides the important papers to be read, a ball, reception and numerous excursions have been planned. Over 200 members are expected to be present with their families.

Diseased Immigrants. The Immigration Commissioner of New York city has recently discovered a number of cases of lawes among immigrants. It is plain that not only ship surgeons but also health authorities in the towns whence the immigrant comes, either deliberately swear to

what they know to be false, or fail to discover the disease.

Ophthalmia in Public Schools. The New York Board of Health has decided to place ophthalmia upon the list of contagious diseases to be reported. Investigations show that at least 18% of the children in public schools have this disease.

Brooklyn's High Death-Rate. The fact that the mortality from diphtheria in Brooklyn is 19.8%, as compared with 11.4% in Manhattan and Bronx, is giving some concern to the health officials in Brooklyn. In order to reduce the mortality, if possible, it has been decided to keep the Health Office open nights, as well as day, for the supply of antitoxin, which will be furnished free for charity patients.

To Fight Malaria. The Board of Health of the city of New York will sprinkle crude petroleum on ponds and other breeding places of the mosquito this summer. Swamps will be drained and scientific investigations made, wherever possible. The health commissioner has asked for an extra appropriation of $10,000 to carry out this work.

New York City Sued. Two people, recently detained at the Reception Hospital, North Brother's Island, and at a pest-house in Flatbush, on account of alleged smallpox, have sued the city of New York for damages. Both patients, women, are said not to have had smallpox by competent physicians, yet both at different times were taken to smallpox hospitals in ambulances with persons suffering from smallpox.

NEW ENGLAND.

Massachusetts Medical Society.—The annual meeting was held in Boston, June 10 and 11. On the first day smallpox and its treatment was the subject of discussion. Professor Theobald Smith described the preparation of vaccine, favoring the glycerine preparation. Dr. E. A. Darling believed that the State should assume the burden of producing the standard vaccine. Dr. J. H. Mulholland enumerated the diseases which have been attributed to vaccination, in none of which was there proof that vaccination was the primary cause. His investigations covered over 2 million and a half vaccinations. Dr. J. T. Bullard, New Bedford, discussed the diagnosis of smallpox; Dr. S. W. Abbott spoke of compulsory vaccination, and Dr. Michael Kelley, Fall River, gave the medical treatment of smallpox. A number of surgical papers were read, and in the evening Dr. Frank Billings, of Chicago, delivered the Shattuck lecture, on the changes in the spinal cord and medulla in pernicious anemia. The next day many interesting papers were read. Dr. J. C. Warren demonstrated a model of the thoracic and abdominal viscera; .Dr. F. J. Cotton discussed empyema in children: Dr. F. G. Benedict, of Wesleyan University, spoke of the nutritive value of alcohol: Dr. S. J. Meltzer, New York, discussed the influence of alcohol upon the infectious diseases, defending its use: Dr. A. R. Cushney, Ann Arbor, spoke of the basis of the use of alcohol in therapeutics, believing it to be not a stimulant, but a cerebral depressant, and Dr. Graham Lusk, New York, read a paper on the common use of alcohol as a beverage, reporting the results of his experiments upon animals. He recommended alcohol when there was loss of appetite, though its use should not be prolonged. Before the annual banquet, Dr. W. S. Everett, Hyde Park, delivered the annual address upon the personal quality in the physician's work.

Boston City Hospital Relief Station. Upon the flat top of this building a roof garden for the treatment of heat prostration cases has just been erected. The roof looks like a camp, consisting of 4 or 5 tents, each tent being supplied with 2 cots, tables, chairs, etc., adorned with rows of plants. Portable bath-tubs are also supplied. As Haymarket Square is a busy thoroughfare, it is probable that this roof hospital will soon be in demand.

Massachusetts Physicians. The number of registered physicians in Massachusetts is about 4500, an average of one to every 625 inhabitants.

Rhode Island Medical Society. At the annual meeting, held June 5, in Providence, the following officers were elected for the ensuing year: President, Dr. G. F. Keene, Howard; vice-presidents, Drs. W. R. White, Providence, and C. F. Barker, Newport; treasurer, Dr. S. A. Welch, Providence. The address of the president, Dr. G. F. Keene, was upon heredity and its lessons. Several interesting papers were read.

Massachusetts State Vaccine. The State Board of Health of Massachusetts has reported to the House of Representatives the results of its investigations upon the feasibility of manufacturing pure vaccine lymph. The Board recommends the manufacture and distribution of free vaccine in the manner in which diphtheria antitoxin has been prepared and distributed since 1895. They have made a detailed report upon the subject.

Death of Dr. Whittier.—Dr. Edward N. Whittier, a graduate of the Harvard Medical School in 1869, died in Boston, June 14, aged 61 years. He became a member of the Massachusetts General Hospital's staff in 1873, which position he held for 20 years. In 1877 he became instructor of clinical medicine in the Harvard Medical School; in 1881, instructor in theory and practice of medicine; in 1884, assistant professor in clinical medicine, which position he held until 1888. His practice consisted largely of consultation work. He was graduated from Brown University in 1862, and served during the Civil War, having received a medal for gallantry at Gettysburg.

WESTERN STATES.

City Hospital, Milwaukee.—Dr. Simon Flexner, professor of pathology in the University of Pennsylvania, delivered an address at the City Hospital, Milwaukee, June 7, on the clinical aspects of certain obscure affections of the chylopoietic viscera, on the occasion of the meeting of the Wisconsin State Medical Society.

Infection From Handling Money.—A man almost died recently in Chicago from erysipelas, contracted by handling money on which were the micro-organisms. He had a slight abrasion upon one finger, which had evidently touched the infected bank-note. Though seriously ill, it is expected that he will recover.

CANADA.

(From our Special Correspondent.)

Ontario Medical Association.—The twenty-second annual meeting was held at Toronto, June 4 and 5, Dr. N. A. Powell, Toronto, the president, in the chair. Among the papers read on the opening day were: **Deformities consequent upon the injury to the epiphyseal cartilages of long bones,** by Dr. B. E. Mackenzie, Toronto; **Some points in life insurance,** by Dr. J. L. Davison, Toronto, who gave interesting figures, showing how much medical men received from insurance companies for examinations made. The consensus of opinion appeared to be that the insurance companies did not pay enough for the examinations made, otherwise there would be more accuracy and care in filling out the forms. Dr. G. A. Peters, Toronto, read a paper on **transplantation of the omentum into the abdominal wall** for the relief of ascites due to the cirrhosis of the liver, presenting his patient, about 50 years old, now apparently in sound health. Other papers read by title were on the **cure of Bright's disease by operation,** by Dr. A. Primrose, Toronto; the **operative treatment of tonsillar hypertrophy,** by Dr. P. G. Goldsmith, Belleville, and **some comparative results of the treatment of appendicitis,** by Dr.J.P.Armour, St. Catherine's. In the afternoon, the president, Dr. Powell, delivered the annual address, referring to the different legislative acts before the Ontario and Dominion Parliaments during the past winter. Regarding the measure for a Dominion Medical Council, so successfully carried through the Canadian Parliament by Dr. Roddick, he considered that the bill was now of very little use either for good or evil. Other papers read were upon the **value and results of ventrofixation,** by Dr. J. A. Temple, Trinity Medical College, who is totally opposed to ventrofixation: **placenta previa,** by Dr. H. D. Livingston, Rockwood; **obstetric emergencies,** by Dr. C. J. C. O. Hastings, Toronto; **five cases of ectopic gestation,** by Dr. R. E. Webster, Ottawa; the **treatment of septic abortion,** by Dr. K. McIbwraith, Toronto, in the obstetrical section. In the medical section papers were read on **pneumonia** by Drs. D. Hoig, Oshawa, and J. C. Mitchell, Enniskillen; **epidemic of cerebrospinal meningitis,** by Dr. A. McPhedran, Toronto; **primary tracheal diphtheria,** by Dr. R. D. Rudolph, Toronto; the **treatment of consumptives,** by Dr. J. H. Elliott, Gravenhurst; and **pleurisy with effusion,** by Dr. D. G. Gordon, Toronto. At the evening session, Judge Macdougall, Toronto, read a paper on **medical testimony in the courts of law,** deprecating the present system. An expert should be adviser of the court, being paid for his services by the State. Dr. H. A. McCallum,

London, gave an interesting lantern demonstration on certain functional and organic diseases of the nervous system, followed by a demonstration on the anomalous forms of smallpox, by Dr. C. A. Hodgetts, Toronto. A paper was then read on dry labor, by Dr. A. H. Wright, of Toronto University. The morning session of the second day was largely taken up by the presentation of clinical cases. Papers were read in the surgical section by Dr. C. R. Dickson, Toronto, on the use of the X-ray other than in diagnosis, by J. E. Hett, Berlin, on the X-ray in cancer, lupus and Hodgkin's disease; by Dr. J. McMaster, Toronto, on results obtained by the X-ray; by Dr. B. Welford, Woodstock, on stricture of the esophagus; by Dr. D. J. Gibb-Wishart, Toronto, on hydrobromic ether; and by Dr. J. P. Brown, Toronto, on India-rubber splints in the treatment of deflected nasal septa. In the medical section the following papers were discussed: Climate and health resorts in the Southwestern States, by Dr. C. D. Parfitt, Gravenhurst; cases of syphilis in the lungs and brain, by Dr. G. Chambers; ophthalmology for the general practitioner, by Dr. J. T. Duncan; tabes dorsalis, by Dr. H. B. Anderson; a case of brain tumor, by Dr. W. B. Thistle, and a case of acute arthritis, by Dr. J. Hunter, Toronto. Dr. Roswell Park, of Buffalo, contributed a short paper at the afternoon meeting on surgery of the gall-bladder. This paper was discussed by Dr. I. Olmsted, Hamilton, who has extirpated the gall-bladder 3 times successfully by Finney's method. Other papers read by title were: Fractures of the shaft of the femur, by Dr. H. Williams, London; removal of the Gasserian ganglion for trigeminal neuralgia, by Dr. H. A. Bruce, Toronto; cancer of the breast, by Dr. D. K. Holmes, Chatham; technique of the removal of tuberculous cervical glands, by Dr. L. W. Cockburn, Hamilton; abdominal neuroses, by Dr. D. C. Meyers, Toronto, and remarks upon some eye cases, by Dr. G. H. Burnham, Toronto. The following officers were then elected for the ensuing year: President, Dr. J. C. Mitchell, Enniskillen; vice-president, Dr. G. A. Bingham, Toronto; treasurer, Dr. A. R. Gordon, Toronto, and secretary, Dr. H. C. Parsons, Toronto.

MISCELLANY.

Cholera in the Philippines.—The outbreak of cholera in the Philippines has been attributed hitherto to vegetables from China, but the latest report received by Surgeon-General Forwood announces that in some quarters, at least, the appearance of the disease in Manila last March, is attributed to drinking the Pasig River water. Colonel Heizmann, of the Medical Department of the Philippines, expresses the fear that the number of different points attacked by the epidemic and the consequent infection of many streams used for drinking and bathing, into which all garbage finds its way, will cause a large number of deaths before the annual rains occur. The army is much better protected than the natives or civilian Americans on the Islands, because of the care exercised in supplying the soldiers with good food and water. In the provinces 22 different places have been attacked up to April 15. Smallpox is also more prevalent than at any time since American occupation. Vigorous measures have been instituted to prevent the spread of cholera. Manila has been quarantined, distilled water provided, house to house inspection made, chloride of lime freely used, a cholera hospital established, the Farola district burned, and 28 Army Medical officers detailed to duty with the Manila Board of Health. Medical officers of the Army have been given practical charge of health matters in or near towns where troops are stationed. The report on the health of the Army in general shows a slight decrease in the percentage of patients.

Obituary.—Dr. Joseph Scholl, at Washington, D. C., June 7, aged 80 years.—Dr. Newton P. Holden, at Detroit, Mich., June 9.—Dr. Harry Kohpelberger, at Eau Claire, Wis., June 8.—Dr. George W. Woods, at San Francisco, Cal., June 10, aged 64 years.—Dr. Thomas W. Reynolds, at Baltimore, Md., June 9, aged 44 years.—Dr. Robert Patterson Greenleaf, at Greenhill, Del., June 11, aged 72 years.—Dr. Edward N. Whittier, at Boston, Mass., June 12, aged 61 years.—Dr. Charles A. Carlton, at Salem, Mass., June 12, aged 61 years.—Dr. Frederick Horner, at Marshall, Va., June 14.—Dr. Griffin W. Goldsborough, at Caroline county, Md., June 14, aged 81 years.—Dr. Milton Bottman, at Paris, May 30, aged 56 years.—Dr. Edwin V. Soencer, at Mt. Vernon, Ind., May 28, aged 77 years.—Dr. T. J. Shreeve, at Baltimore, Md., June 14.—Dr. Hallock R. Maine, at Brooklyn, N. Y., June 13, aged 37 years.

GREAT BRITAIN, ETC.

The King's Hospital Fund. At a meeting of citizens, in London, June 9, a resolution was adopted providing that the national coronation gift to the King shall be added to the King's Hospital Fund. The Lord Mayor announced that $275,000 had already been subscribed. The corporation of London, the Rothschilds, the Morgans and Sir Ernest Cassel have each donated $25,000.

The King's Sanatorium. So great was the number of competitors for the prizes offered for the erection of a sanatorium for tuberculosis in England that the task of examining the essays and plans has not yet been finished, although all essays were in the hands of the committee by April 15 last. It is expected that the winners will be announced in August.

Coronation Regulations. All volunteers going to England from British India for the Coronation, are to undergo a strict medical examination, and only those declared to be thoroughly fit will be allowed to proceed to Bombay.—Ambulance arrangements, similar to those at the Diamond Jubilee, have been published in London, from which it is plain that there will be no lack of medical attendants. The regulations governing the medical corps during the celebrations attending the coronation are complete in every detail.

The Dangers of Confetti and Rice. Dr. Collingridge, medical officer of health for the city of London, has recently called attention to the use of powdered mica for confetti during festivities. While paper confetti are absolutely harmless, powdered mica produces abrasion of the cornea, and easily leads to corneal ulceration. He cites the case of a bridegroom who lost his sight after having been struck in the eye with a grain of rice which had been thrown by the bridal party. The *British Medical Journal* believes that the indiscriminate throwing about of powdered mica should be absolutely prohibited.

The Pineapple in Digestion. A slice of pineapple after a meal is excellent, physiologically, since fresh pineapple juice contains an active digestive principle, bromelin, similar to pepsin. It will digest as much as 1000 times its weight within a few hours, according to the kind of proteid present. The bromelin is obtained from pineapple juice by adding salt, which causes its precipitation. It acts in an acid, neutral or alkaline medium, unlike pepsin. Pineapple also contains much indigestible matter, but the decidedly digestive properties of the juice compensate for this fact. *Lancet.*

Obituary. Dr. G. F. Bodington, a graduate of Durham and Giessen Universities, member of the London College of Physicians, and fellow of the College of Surgeons of England, died recently, in Paris, in his 73d. year.

CONTINENTAL EUROPE.

A New Treatment for Tuberculous Peritonitis.—At a recent meeting of the French Academy of Medicine, Dr. Baylac described a new treatment for tuberculous peritonitis, which consists in puncturing the ascites and then washing out the abdominal cavity with sterilized water.

A Queen's Unsanitary Residence.—Following the recent illness of Queen Wilhelmina of Holland, over a half dozen cases of typhoid fever have appeared among the Queen's personal attendants at Castle Loo. The cause of the disease is supposed to be the unhealthy condition of the Castle, which is now being thoroughly overhauled, sanitary plumbing and a different water supply being put in. The Prince Consort has selected cows, so that, in the future, no milk need be procured outside the royal premises.

Obituary. Professor Karl Böhm von Böhmershein, formerly director of the Vienna General Hospital, died recently in Vienna, aged 74 years.—Dr. A. V. Pigeolet, professor emeritus in the University of Brussels, died recently, aged 87 years.—Dr. Folaillon, surgeon to the Hôtel-Dieu, professor in the Paris faculty of medicine, and member of the French Academy of Medicine, died recently in Paris, aged 66 years.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

May 31, 1902.

1. Remarks on the Removal of Prostatic Adenomata. WILLIAM THOMSON.
2. Chronic Hypertrophy of the Prostate; Freyer's Operation; Recovery. JOHN SMYTH.
3. Further Remarks on Myasthenia. WILLIAM R. GOWERS.
4. Further Remarks on Finsen's Light and X-Ray Treatment in Lupus and Rodent Ulcer. MALCOLM MORRIS and S. ERNEST DORE.
5. The Therapeutic Employment of X-Rays. G. H. LANCASHIRE.
6. The Curative Effect of the X-Rays on Callous Sinuses of the Abdominal Wall. D. BERRY HART.
7. A Case of Sarcoma of the Face. REGINALD J. GLADSTONE.
8. A Plea for the Adoption of a more Accurate and Scientific Method in the Investigation and Treatment of Lateral Curvature of the Spine, etc. ARCHIBALD YOUNG.

1.—Thomson reports a case of **hypertrophy of the prostate** which he treated by suprapubic enucleation. Thomson believes that the entire prostate may be removed from above as pointed out by Freyer. A great deal of confusion has been caused in the understanding of prostatectomy by the different meanings given to the term "capsule." There is the "proper capsule" of the gland (Thomson), a layer of thinned prostate which remains in certain cases when a large adenoma is enucleated, and a third capsule formed by the normal reflection of the rectovesical fascia. [F. T. S.]

2.—Smyth reports a case of **hypertrophy of the prostate** which he enucleated through a suprapubic opening in the bladder (Freyer's operation). There was a secondary hemorrhage from the incision in the thickened bladder wall. [F. T. S.]

3.—Gowers reports a fourth case of **ophthalmoplegic myasthenia,** in which the peculiar nasal smile, which he described in his other cases, was absent. [J. M. S.]

4.—The experiences of Morris and Dore, with the use of **Finsen's light in the treatment of lupus and rodent ulcer** now extend over 2 years. Although the results obtained justify the employment of the treatment, the authors do not regard it as the only measure to be used in all cases, nor do they advocate it indiscriminately, to the exclusion of other methods. In regard to cosmetic effects, it certainly stands first, while in reliability it yields to none. The results have not been as permanent as the authors had expected them to be, and relapses have been common when the disease has not been entirely eradicated in the first instance. These relapses are due, in great measure, to the fact that it is difficult to determine when the disease is eradicated. The chief disadvantages are the length of time required, the small area that can be treated at one time, the expensive apparatus and the large staff of attendants. Although the authors have found the X-rays very useful as an adjunct to the light-rays, they do not regard them as an adequate substitute. The reaction of the X-rays is, as a rule, more severe than that caused by the ultraviolet rays; it is deeper, more painful and usually suppurative. Its onset is delayed, but the action is cumulative, and its effect lasts longer than that of the ultraviolet rays, and the action goes on after the cessation of the treatment. Ten case-histories are given. [J M. S.]

5.—Lancashire employs the **X-rays** in the treatment of hypertrichosis, coccygenic sycosis, lupus vulgaris and rodent ulcer. Cases of lupus vulgaris, in which the disease affects prominent parts, such as the face and in which it is too extensive for the employment of Finsen's method, those that are ulcerated, those that are associated with unsightly scars and some of those involving the mucous membranes, are suitable for treatment with X-rays. The author has seen only one case of rodent ulcer that showed no response to treatment with the X-rays. That was one of long standing and of great extent. [J. M. S.]

6.—Hart uses the **X-rays in the treatment of callous sinuses of the abdominal wall,** in which no foreign body is present. He has had good results from the treatment in 2 cases. [J. M. S.]

8.—Young describes a **scoliosometer** which consists of a small central frame supporting sliding transverse and vertical limbs, which are graduted in both directions from zero at the center. The highest palpable cervical spine and the third or fourth sacral spine are marked on the skin, and the vertical limb of the apparatus laid along a line joining these two points; the amplitude of the curves is measured by the horizontal limb and a drawing made on paper as a record. The article is illustrated. [F. T. S.]

LANCET.

May 31, 1902.

1. An Address on the Powers of Natural Resistance or the Personal Factor in Disease of Microbic Origin. STEPHEN MACKENZIE.
2. A Clinical Lecture on a Case of Supposed Intestinal Obstruction, due to a Vascular Lesion, etc. HERBERT W. PAGE.
3. The Congenital Factor in Hernia. R. HAMILTON RUSSELL.
4. Complete Relaxation of the Abdominal Wall under Anesthetics. J. BLUMFELD.
5. Urethral Hemorrhage in Gonorrhea. J. F. DOBSON.
6. Remarks on Certain Methods of Physical Diagnosis in Diseases of the Chest. A. G. AULD.
7. Notes on a Case of Arthritis Accompanying Ophthalmia Neonatorum. C. O. HAWTHORNE.
8. The Advisability of Preliminary Tracheotomy and Ligature of the External Carotid in Severe Operations about the Face. CHARLES R. KEYSER.
9. Note on Two Cases of "Ulcerated Sore Throat." EDWARD C. BOUSFIELD.
10. Radical Cure of Inguinal Hernia. JOHN O'CONOR.
11. A Case of Appendicitis with General Peritonitis; Recovery after Removal of Appendix, followed by Secondary Incision into the Cecum for extreme Paralytic Distension. FRANK COLE MADDEN.
12. Observations on Diet. HARRY CAMPBELL.

1.—Mackenzie delivered the annual oration of the Medical Society of London, **on the powers of natural resistance or the personal factor in disease of microbic origin.** He points out that influenza is a striking example of pandemic disease occurring at irregular and long intervals which attacks all classes and ages and is not generally a serious malady unless occurring in the aged, in those suffering from pulmonary and cardiac disease and in those devitalized from any cause. He thinks that the powers of natural resistance play a most important part in tuberculosis and contends that too little consideration has been given to the human host in which the specific germs find lodgement. He argues that the powers of personal resistance are well demonstrated by the fact that only a limited number of those exposed to tuberculous infection fall prey to it. He further claims that tubercle bacilli may not only invade the respiratory and digestive organs, but may find their way by the blood into practically all parts of the body where, only under suitable conditions, they set up the tuberculous process. The personal factor of resistance is strongly emphasized by post mortem experience which has shown that tuberculous lesions are found in the lungs and other parts of the body of individuals dying from diseases other than tuberculosis. It has been estimated by writers that such nonactive tuberculous lesions are found in from 30 to 90% of all dead individuals. The differences in the powers of natural resistance are also shown by the frequency with which many inherit and some acquire a tendency towards tuberculosis. The intemperate, or those who have opportunities for drinking, show a higher mortality from tuberculosis than do others. Measles and whooping cough are often complicated with bronchopneumonia. They reduce the vital resistance powers and open the door to tuberculosis. A point upon which he

lays considerable stress is that during the last 50 years, not only in England, but in other countries, the mortality from consumption has greatly diminished and he thinks that this striking decrease in mortality from consumption, which has gone on before measures were taken to disinfect sputum and separate the sick from the healthy, can be traced to improved sanitation, to better draining of the land, to the improved disposal of the sewage, to the better housing, clothing and feeding of the general population. He refers to rheumatic fever and points out that, while the bacterial origin of this disease is not absolutely admitted at the present time, it appears to be within almost immediate realization. He mentions the various theories which have been advanced to explain the cause, and he discusses at some length the organism described by Poynton and Paine. He emphasizes that if the bacterial nature of rheumatic fever were fully established, we would still have to take account of the soil no less than of the seed as in tuberculosis, and that the personal factor will remain as important in the future as it has been in the past. Lastly he refers to appendicitis or perityphlitis as an excellent illustration of the importance of natural powers of resistance in the occurrence of disease. He states, we must never forget that the soil is of as great importance to study as is the seed in the proper understanding and treatment of diseases of microbic origin. [F. J. K.]

2.—Page reports an interesting **case of gangrene of the stomach and duodenum**, the result, probably, of an embolus of the superior mesenteric artery. The patient was a man, 50 years of age, who 3½ years previous to the present trouble suffered from typhoid fever which was complicated by a thrombosis of the right leg; afterwards the left leg was twice thrombosed with a year between the attacks. The present trouble came on suddenly while the patient was walking, and was characterized by severe pain above the umbilicus which was soon followed by diarrhea. Diarrhea ceased and vomiting came on; morphine gave only temporary relief. The temperature was normal, and pulse about 100. Abdominal examination was absolutely negative, there being no distension and but slight tenderness; rectal examination revealed nothing and an enema was without effect. Twenty-four hours after the onset of symptoms tenderness developed midway between the umbilicus and the left costal margin, and the pulse rose to 120. At this time the patient was in a serious condition. The vomit was coffee-colored. The abdomen was absolutely flaccid, moved on respiration and there was but the one point of tenderness. The cause of the condition could not be understood, but operation was determined upon. When the abdomen was opened, the stomach and duodenum were found greatly distended and their peritoneal coats quite purple. An examination of the remaining portion of the intestine showed it to be collapsed. The distension of the duodenum was gradual, as was the change in its color. The question of opening the stomach to relieve the distension arose, but, because of the nature of its wall it was thought unlikely that the opening would heal. The patient died 3 hours after operation. A rather unsatisfactory necropsy was made which confirmed the findings at the time of operation. No definite clot was found in the mesenteric vessels but there was every evidence that the portal vein was free from clot.

[J. H. G.]

3.—Russell discusses the **congenital factor in hernia**. The author is convinced that all inguinal herniæ are the result of a congenital sac and that the muscular wasting and weakness which accompanies hernia is the result and not the cause of the condition. The laxity of the peritoneum plays an important part in the incidence of hernia and to it is attributed the occurrence of direct inguinal hernia in young people. Reference is made to the frequency with which the bladder is drawn into the hernial sac. Its presence in this position is considered also secondary. It complicates the application of a ligature to the neck of the sac, but this can be overcome by carefully separating the two after the sac has been opened and the finger introduced. Hernia of the sigmoid flexure is more difficult to treat than hernia of the bladder, since its attachment to the peritoneum is much more intimate. It is a condition seldom met with in children, but frequently seen in adults. Russell has seen it once in 115 operations upon children, while in a small number of operations upon adults it has occurred three times. Femoral hernia is generally considered an acquired hernia. To put it tersely, in femoral hernia it is the hernia that forms the sac; in inguinal hernia it is the presence of a sac that causes the hernia. This statement the author made 3 years ago, but now has changed his opinion as to the etiology of femoral hernia and he believes it also to be the presence of a congenital sac in the crural canal. [J. H. G.]

4.—Blumfeld discusses **complete relaxation of the abdominal wall under anesthetics**. He maintains that such a state is obtainable if the proper anesthetic (generally chloroform) is employed to a proper degree (as a rule a profound anesthesia), and upon 3 main factors depends the desired condition of the abdomen: (1) Absence of excessive respiratory vigor; (2) absence of contraction of the recti abdominales muscles and (3) normal character of the respiratory movements. In the concluding paragraph of this article he states, taking a general survey of the conditions of the abdominal wall which interfere with an operator's convenience, that it may be seen that there are some unusual cases in which the anesthetist can not remove the difficulty, but that in the great majority of instances he can obtain a perfectly satisfactory condition by maintaining unimpeded breathing, complete absence of cyanosis and sufficiently deep anesthesia. These desiderata he obtains by properly selecting his anesthetic, by giving it freely with a liberal supply of air, by keeping the air passages free and by holding the lower jaw well forward. When this is not enough, the mouth must be slightly opened and the tongue drawn out. One other point may be mentioned, viz. The element of time. It often happens that only towards the close of an operation is the patient's abdomen in a perfectly satisfactory condition from the surgeon's point of view. It is a good plan, therefore, in abdominal cases, to let the anesthetic get to work at the earliest possible moment—as soon, for instance, as the surgeon begins to get his instruments ready, by such a step at the close of the operation only the surgeon and anesthetist witnessing the condition which they had all along been desiring. [F. J. K.]

5.—Dobson reports 3 cases of urethral hemorrhage in gonorrhea. The first case was that of a man, aged 26 years, [illegible] servation, which was on September 2, 1899. For the first 2 weeks the discharge was purulent and profuse, during the last it lessened considerably. He employed an injec[illegible] santal oil. On the evening of September 2, after coitus, he had a profuse urethral hemorrhage, loosing a large quantity of blood; the hemorrhage was arrested but with some difficulty. The treatment for the arrest of the hemorrhage consisted of weak injections of tincture of ham[illegible] externally. Two days afterwards the bleeding recurred. [illegible] had a profuse urethral hemorrhage 6 weeks after he con[illegible]

of a 10 per cent. solution of protargol to the diseased portion of the urethra through the urethroscope. The third case occurred in a man, 34 years of age, who had had acute gonorrhea 3 months previous to May 30, 1901. On several occasions he had had some bleeding from the urethra. At the time he came under observation (May 30, 1901) he had a mucopurulent discharge which contained gonococci. The urethroscope showed a patch in the penile urethra which bled readily on touching. With the urethroscope a 20% solution of protargol was applied on 3 occasions and the patient used a 1½% injection of protargol night and morning. [F. J. K.]

6.—Certain methods of physical diagnosis in diseases of the chest with notes of cases are presented by Auld. Regarding the technique of physical examination he thinks it best first to determine the condition of the organs immediately underlying the diaphragm to ascertain hepatic dulness and the condition of the colon and stomach as to distention. Investigation should also be directed to determine any general cause of pressure upwards as by fluid or tumor. The recumbent posture should be assumed by the patient during this examination. During the observation of the chest which should follow the examination of the abdomen, the patient should be in erect posture. He thinks that interference with the free play of the diaphragm occurs when the patient is lying or sitting up in bed and that the patient's bedding impairs the percussion note in respect to its timbre and massive tone. The remainder of the article includes a discussion of the topography of the chest; the technique of physical examination of the chest and a report of 3 cases. [F. J. K.]

7.—Hawthorne presents a note on **a case of arthritis accompanying ophthalmia neonatorum.** The affection of the eyes began 2 days after birth and for 3 weeks an abundant purulent discharge was present. When the child was 2 weeks old, the right shoulder and the right wrist became swollen, but unattended by pain. At the age of 6 weeks there was a slight conjunctival mucopurulent discharge and the right cornea was slightly abraided. The joints first involved had completely regained their normal state. The right elbow joint was enlarged and on palpation deep fluctuation was elicited. The skin over the swelling was not reddened and the joint was apparently free from pain. Local treatment for the ophthalmia was continued and the joint placed at rest. In 3 weeks the elbow regained its normal characters. [F. J. K.]

8.—Keyser urges the **advisability of preliminary tracheotomy and ligature** of the external carotid artery in extensive operations about the face. The avoidance of hemorrhage, the ease of anesthetization and of operating, and the avoidance of any infection of the respiratory tract through blood is obtained by the performance of these two preliminary operations. Eight cases are reported in which Mr. Allingham has operated by this method with the most satisfactory results. [J. H. G.]

9.—Bousfield reports 2 cases of **ulcerated sore throat.** The first case was considered a slight attack of ulcerated sore throat and not one of diphtheria, but the patient developed paralysis of nearly all of the chief motor centers. In the second patient on the second day of the illness a slough appeared upon one tonsil and then upon the other. Later a patch appeared on the uvula and then extended to the larynx and trachea. Bacteriological examination was not made in either case. The author states that his object in drawing attention to these 2 instances is to emphasize the fact that ulceration of the throat in the presence of a slough upon the tonsils or pharynx can be due to only one of 2 causes—syphilis and diphtheria.

[F. J. K.]

MEDICAL RECORD.

June 7, 1902.

1. The Role of Inhibition in the Normal and in Some of the Pathological Phenomena of Life. S. J. MELTZER.
2. The Merits of the Various Incisions for Appendicitis. JOHN A. WYETH.
3. Report of a Case of Cesarean Section Followed by Hysterectomy for Impacted Cervical Fibroid and Prolapse of Gangrenous Umbilical Cord in a Septic Woman; Recovery. ABRAM BROTHERS.
4. External Speech-Physiology, or So-Called Lip-Reading. CORA D. GORTON.
5. A New Method of Operating for Obstinate Cases of Rectovaginal Fistulæ. HIRAM N. VINEBERG.

1.—Meltzer discusses **the role of inhibition in the normal and in some of the pathological phenomena of life.** Inhibition is present and essential to each and every mechanism of animal life and is also an important factor in many forms of disease. The entire life of the organism is a delicately adjusted equilibrium between excitation and inhibition. Meltzer taks up the question as to the possibility of the disturbance of this equilibrium, especially discussing the relation of inhibition to abnormal states. Can there be any doubt that his equilibrium is liable to be disturbed in many ways? There might be, in the first place, a congenital or acquired stationary or temporary deviation from the normal, resulting in favor of one force or the other through the entire animal organism. All functions might show a greater or less tendency toward inhibition or toward excitation. The deviation might be due to an increase or a decrease of the value of one of the forces or even to a simultaneous increase of one and decrease of the other force; or the value of each force separately might be unaffected but their mutual relations might be shifted in favor of one or the other force. Further, there might be a deviation only within a part of the functions of the body; or one part might deviate in one direction and the other in the opposite direction; the same applies to deviation within a single organ or function. The equilibrium might be disturbed within one part of the organ or the disturbance might have reference to the crossed innervation, the equilibrium between its antagonistic parts, finally the disturbance might be confined to one of the minor differences between the 2 forces, for instance, the latent period, the after-effect, the resistance to fatigue, the minimum stimulus, etc. The possibilities are very numerous. In discussing the relations of inhibition to abnormal states he limits himself to a consideration of **cardiospasm, disturbances in the biliary passages, family periodic paralysis, myasthenia gravis, myotonia, myxedema and Graves's disease.** [T. L. C.]

2.—Wyeth employs but 2 incisions for appendicitis; the **gridiron or McBurney incision,** and the **clean cut** through all the tissues from the skin into the peritoneal cavity. The former should be selected when the conditions justify it; that is, in all clean cases, in those operated upon in the period of quiescence and in others when the inflammatory and septic processes are limited either within the lumen of the appendix or immediately about its walls and when there is no more than a limited local peritonitis. An incision shorter than 3 inches except in cases of well-marked abscess is not advisable. In this condition it is best simply to incise and puncture and drain the abscess. When a condition of sepsis prevails, such as to require a careful operation to prevent widespread infection and peritonitis. Wyeth prefers the clean incision through everything from the skin and including the peritoneum. The technique of both methods is given briefly. When the "gridiron" incision is used, it may not be necessary to keep the patient in bed as long as when "through-and-through" incision is employed. After the latter operation Wyeth requires his patients to remain in bed 6 weeks.

[T. L. C.]

3.—Brothers presents the report of a case of **Cesarean section followed by hysterectomy for impacted cervical fibroid and prolapse of gangrenous umbilical cord in a septic woman.** The patient recovered. The interesting features in the case were the following: (1) The fact that the woman had spontaneously given birth to 3 living children although the tumor must have been of some years growth. (2) The recovery of the mother after cord and uterine contents had undergone decomposition with resulting maternal sepsis. (3) The mental derangement which showed itself about the ninth day and was evidently the direct result of the operation. (4) The escape of the intestines for several hours after the spontaneous reopening of the wound, without fatally influencing the progress of the case. (5) The desirability in sepsis preceding delivery (in cases requiring Cesarean section) of immediately combined abdominal hysterectomy with Cesarean section. The risk of additional shock is fully met by the advantage of removing the infected uterus from the woman's system. [T. L. C.]

5.—Vineberg describes a new method of operating for obstinate cases of rectovaginal fistulæ. The chief feature of the operation is in excising the rectal mucosa to a point beyond the fistula drawing down mucosa and suturing it to the skin as in a Whitehead operation. In his opinion an important feature of the success of his method lies in the free dissection of the rectal mucous membrane beyond the excised portion so as to be able to attach it to the cutaneous margin of the anus without tension. Paul Ségond and A. P. Dudley as well as the writer devised the operation independently of each other. [T. L. C.]

June 14, 1902.

1. The President's Address. JOHN A. WYETH.
2. State Medicine, Past Present and Future. J. M. EMMERT.
3. Suture of Heart Wounds. HARRY M. SHERMAN.
4. The Relation of Medical Science to Commerce. FRANK BILLINGS.

1.—See Special Article, **Philadelphia Medical Journal**, June 14, 1902.

2.—See **Philadelphia Medical Journal**, June 14, 1902. Editorial.

3.—See **Philadelphia Medical Journal**, June 14, 1902. Page 1030.

4.—See **Philadelphia Medical Journal**, June 14, 1902. Page 1029.

MEDICAL NEWS.

June 7, 1902. (Vol. 80, No. 23.)

1. The Advantages of Early Surgical Intervention in Borderland Cases. ROSWELL PARK.
2. A Review of the Progress of Therapeutics for the Last Twelve Months. REYNOLD WEBB WILCOX.
3. The Renal Complications of the Acute Diarrheas of Infancy. JOHN LOVETT MORSE.
4. The Use and Abuse of Digestive Ferments. JOHN C. HEMMETER.
5. A New Method of Treating the Morphine and Alcohol Habits. H. A. HARE.
6. The Comparative Physiology of Faith Cures. PEARCE BAILEY.

2.—Wilcox, in his review of the **progress of therapeutics** in the last year, mentions various important facts concerning new drugs placed upon the market during the year, with additional information about those already known. He gives some facts from Jones as follows: (1) With the exception of hydrogen dioxide, water is the strongest ionizer. Next to this comes formic acid. Of the more common solvents, methyl alcohol dissociates to a much greater degree than ethyl alcohol. Indeed it is true in general that in an homologous series of solvents the lesser members have the greater dissociating power. (2) The dissociating power of a solvent appears to be a function of all the physical or chemical properties of a substance and not of any one. (3) The results of a great many experiments tend to show the chemical inertness of molecules. Most, if not all, chemical reactions are reactions between ions, and molecules as such do not enter into the reactions at all. As the reactions proceed and the ions already present are used up, the molecules are gradually used up and furnish new ions, which then enter into the reaction. The chemistry of atoms and molecules has thus given place to the chemistry of ions. [T. M. T.]

3.—Morse concludes his article with the following facts: Acute and degenerative changes may occur in the kidneys in the acute enteric diseases of infancy, as in other acute infectious and febrile diseases. There is nothing characteristic about these changes. In rare instances proliferative and intestinal changes may develop. The etiology of these conditions is a complex one, including not only microorganisms and their toxic products, but also the products and intestinal fermentation and alimentary poisons. The urine shows the changes usually found with such pathological conditions in the kidneys. It is doubtful if these complications cause any symptoms distinguishable from those due to toxemia. Restlessness, persistent vomiting, unexplainable dyspnea, edema and myosis have, however, been attributed to them and considered characteristic. It is probably that *per se*, except in rare instances, they are of little or no prognostic importance. They are to be regarded rather merely as an index of the degree of toxemia. Recovery from these lesions is usually complete. It is possible, however, in rare instances that they may lead to chronic nephritis in later years. Pyelitis, pyelonephritis and cystitis may also develop as complications. They are usually of a mild type. Their symptoms are generally masked by those of the primary disease. They affect the prognosis but little. The treatment of these renal complications is that of such conditions in general. [T. M. T.]

4.—Hemmeter describes **pankreon**, the latest addition to ferments, as a gray, odorless powder, the taste of which is not unpleasant. At a temperature of 40° C., it is capable of digesting 83 per cent. of 100 grams of egg-albumen in 15 minutes. One gram or 15 grains of **pankreon** is capable of doing this amount of proteolysis. The advantage that this preparation possesses consists in its resistance to HCl of the gastric juice, by which ordinary pancreatin preparations are destroyed in about one and a half hours. This preparation is of advantage in cases of achylia gastrica and chronic atrophic gastritis and intestinal atrophy. If examination of the stools shows a considerable portion of ingesta passed through undigested, a trial of **pankreon** is rational, especially if examination of the stools thereafter gives evidence of a better digestion. [T. M. T.]

5.—Hare reports on Dr. Lott's treatment of the **alcoholic and morphine habits with hyoscine**, which he has tried in 6 cases: (1) The patients can take massive doses for days at a time, as much as one-fourth grain each day hypodermically, with no evil effects on any vital function. (2) They suffer very slightly, if at all, from the immediate withdrawal of the morphine. (3) The desire for the drug is largely, if not entirely, dissipated after a few days. [T. M. T.]

June 14, 1902. (Vol. 80, No. 24.)

1. President's Address at the Fifty-third Annual Session of the American Medical Association. JOHN ALLAN WYETH.
2. Suture of Heart Wounds. HARRY M. SHERMAN.
3. The Relation of Medical Science to Commerce. FRANK BILLINGS.
4. Intestinal Anastomosis: Further Remarks Thereon. FREDERICK HOLME WIGGIN
5. Hysteria, Its Etiology and Management. JOSEPH M. AIKIN

6. Stone in the Female Bladder. H. H. STONER.

1.—See **Philadelphia Medical Journal**, June 14, 1902, page 1058.

4.—Wiggin says that surgeons should remember when they wish to unite severed portions of the intestinal tract that only normal and clean peritoneal surfaces should be united; that hydrozone diluted 50 per cent. with saline solution can be safely used to disinfect the peritoneum; that when employing the Lembert suture the needle must be made to include some fibers of submucosa; that special care must be exercised in approximating the mesenteric borders of the intestine to include a portion of the mesentery; that there is no danger of cicatricial contraction following end-to-end union of divided intestinal cords; that there is no objection to the placing of secondary sutures in intestinal tissue when for any reason it seems necessary to do so; that the formation of intestinal adhesions can be prevented by leaving behind in the peritoneal cavity a quantity of saline solution when closing the abdominal wound, that ordinarily there is less danger to the patient in closing the abdominal wound after suturing the gut than in leaving the wound open and surrounding the injured parts with gauze packing; that union of the parts under favorable conditions is effected in about sixty hours; that a simple procedure by means of which an intestinal anastomosis can be easily effected and which is adaptable to all parts of the intestinal tract, requiring in its performance only a few round sewing-needles and suture material of either horse-hair or silk, is decidedly preferable to methods necessitating the use of specially constructed instruments. [T. M. T.]

5.—Aikin says that the course of hysteria is always chronic. Many patients get instant relief under certain mental and moral influences. Diagnosis is not difficult if it is remembered that the distinguishing marks from neurasthenic emotional disturbance and wilfulness on the part of the patient. The management may be directed mainly to a control of the mental nature of the patient. A careful systematic effort in repairing the nervous system is necessary, that stability may be secured and maintained. Treatment must be general for the disease and special as applied to each individual, according to his or her characteristics. We must analyze and know the potential of physical, mental and spiritual power in the individual; then confidently apply the material, psychical or spiritual therapeutics indicated. [T. M. T.]

6.—Stoner states the reason of the **infrequency of stone in the female bladder** is to be found in the shortness and large caliber of the female urethra. In cases of this kind in the female bladder the cause has been assignable to foreign substances, such as hair-pins, pencils, catheters, crochet hooks, chewing gum, etc. They constitute the nucleus around which the salts of the urine are deposited and the formation of a stone becomes possible. The symptoms are the same as in the male. In a case reported by the author the principal cause which contributed to the formation of the calculus was undoubtedly the strictured condition of the urethra. It must have occurred in consequence of the terrible injury the patient sustained many years ago during childbirth. The cicatrix incident to the sloughing process, which included the urethra, so narrowed this canal that a calculus sufficiently small to traverse the ureter could not pass out through the urethra. The methods advised for removal of these calculi are: (1) Litholapaxy; (2) suprapubic cystotomy; (3) cystovaginal incision. [T. M. T.]

THE NEW YORK MEDICAL JOURNAL.

June 7, 1902. (Vol. LXXV, No. 23.)

1. Cerebral Localization and Brain Function. L. HARRISON METTLER.
2. The Complications of Phimosis, with Treatment. FREDERICK GRIFFITH.
3. Some Considerations on the Hygienic and Prophylactic Treatment of Myopia. ALEXANDER DUANE.
4. Gunshot Wounds, with Report of a Case. PAUL F. EVE.
5. A Case of Transverse Fracture of the Sternum. WALTER J. ROBBINS.

1.—Mettler gives 3 views now in vogue among the investigators of **cerebral localization**: In a general way, it may be said that the English-speaking physiologists regard the sensory and motor areas of the brain as more or less separate and distinct, and as centers for the direct reception and emission of sensory and motor impulses. The Germans incline to the view that these areas are the centers for direct reception and emission of nervous impulses, but they hold that they coincide or more or less intermingle. The French and Italian investigators study the question more from the psychological side, and place less stress upon the separation or commingling of the sensorimotor areas than they do upon the doctrine that the cortex is a general center for the representation of motor and sensory images. Psychosis, according to the latter, is a sensorimotor phenomenon, and mentalization is the product of the combined activities of the sensory and motor areas. They hold that the direct sensorimotor elements are lower down than the cortex; that impulses of cerebral origin are as much peripheral as are those starting from the skin; and that voluntary action is as much of a reflex as is an ordinary involuntary spinal reflex. [T. M. T.]

2.—Griffith divides the complications arising from this condition into (1) those which follow as a direct result of the local condition; (2) those occasioned through sympathetic nervous connection. Under the first division may be named balanitis and posthitis, extravasation, cellulitis, gangrene, arrested development, herpes, eczema, paraphimosis, preputial calculi, urethritis, cystitis, dilatation of the bladder, ureters and pelves of the kidneys, difficult urination, impotence, prostatitis, fissures, hemorrhoids, perineal abscess, prolapse of the rectum, hernia, hydrocele, cancer, anemia. Many statements that phimosis is a predisposing cause of epithelioma of the penis have been made; Gross, however, held opposite views. Enuresis, hair-trigger orgasmal condition, with heightened or lessened erotic tendencies, the "reflex paralyses" of Sayre. incoordination, petit mal, melancholia, convulsions, bladder tenesmus, symptoms resembling calculi, gastro-intestinal catarrh, nasal and eye disorders, false diabetes. [T. M. T.]

3.—Duane's **prophylactic treatment** consists of the following: (1) Making the patient employ the **full correction** of his myopia all the time and for both far and near. This is of prime importance in all varieties of myopia, low, medium and high, and, if applied early, may check the progress of the myopia altogether. (2) Proper attention to **illumination**, the size and legibility of the **print**, the quality of the **paper** used in the books read, the relative height and disposition of the **seat and desk**, and the many other factors that have been brought out by the zealous investigators into the subject of school hygiene. These are important but subsidiary matters. (3) In low and medium myopia, **moderate restriction of near work**, or rather its better distribution, so that it is done mainly by daylight and not for too long at any one time. Furthermore, momentary **rest of the eyes** at frequent intervals during the work. These rules to be the more strictly enforced, the higher the myopia and the younger the patient. (4) In high myopia with evidences of progress, much **more stringent restriction of near work**. Open-air work to be encouraged and the adoption of confining and eye-taxing occupations being forbidden. (5) In medium, and especially in high myopia, plenty of sleep and out-of-door **exercise**. (6) Re-examination of the patient at frequent intervals (which in the case of high myopia should be very frequent), to determine how much the myopia has increased. If it has increased, the glasses should be increased also up to the full strength,

and the hygienic regulations above detailed modified accordingly. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

June 5, 1902.

1. Cystoscopic Appearances in Nontuberculous Cystitis and Pyelonephritis in Women. EDGAR GARCEAU.
2. Some Problems Concerning Venereal Diseases MARSHALL H. BAILEY.

1.—Will be abstracted when concluded.

2.—Bailey discusses some problems concerning venereal diseases, and propounds the following questions: What are the causes of the conditions resulting from gonorrhea, such as ophthalmia neonatorum, stricture, epididymitis, endocarditis, etc? Is it right that they should continue? If not right, then what can be done about it? In the answer to the first question, there is embraced the presupposition that the male is led to the indulgence of his passions by 3 factors: (1) By the strength of the sexual appetite common to every man; (2) by the selfishness due to ignoring the moral and physical welfare of the girl who gratifies him; (3) ignorance—never having learned true manhood. The second question has only one answer. To the third question, history has shown that the effort of the human race has been directed, (1) to the suppression of prostitution, (2) to the regulation of prostitution, and (3) to the treatment of diseases, each of which are considered by the author in detail, as well as some of the social problems involved in bringing up children in such a way as to impress them with facts and not traditional evasions regarding social evils. [M. R. D.]

June 12, 1902.

1. The President's Address; Delivered at the Meeting of the American Medical Association. J. A. WYETH.
2. On Tuberculosis: In Relation to the Livestock Industry. J. G. ADAMI.
3. The Struggle Against Consumption. E. O. OTIS.
4. Cystoscopic Appearance is Nontubercular Cystitis and Pyelonephritis in Women. EDGAR GARCEAU.

1.—See Philadelphia Medical Journal, June 14, 1902, page 1058.

2.—Adami discusses **the prevention and cure of tuberculosis in the domestic animals.** Under ordinary conditions this does not develop by reason of infection from human beings suffering from the disease; the infection is from animal to animal. While experimentally infection in an animal may be caused by material taken from a man, this method of infection may, for practical purposes, be neglected. Tuberculosis inflicts grave losses upon the animal industry and may spread from animals to man. It is less frequent among cattle in the West than in the East, where cattle are more indoors. When introduced into a herd, tuberculosis spreads rapidly. As the cattle industry has thrived, bovine tuberculosis has grown in importance. It affects the greatest American industry, in a commercial and monetary way. Advanced stages render milk unfit for human consumption. Thus far but 1% of the diseased animals have been killed, on account of the expense. Slightly infected animals should be isolated; all advanced cases killed. When meat is not eaten raw, there is no danger from the ingestion of tuberculous meat. Milk containing bovine tubercle bacilli may cause tuberculosis in children and young, susceptible individuals. But this is uncommon. Milk containing bovine tubercle bacilli should not be used as food, nor should any milk containing micro-organisms be sold. [M. O.]

3.—Recent evidence shows that **consumption is curable,** as is proved by statistics from the principal sanatoria of Europe and America. The treatment is purely hygienic, life in the open air, good food and avoidance of fatigue. While the majority of patients need rest, some should be allowed moderate exercise, and this is better carried out in sanatoria. Tuberculosis is easily and rapidly curable in the early or incipient stages. When the diagnosis is made, the patient should be told the nature of his disease, and the importance of immediate recourse to the **open-air treatment.** Medicine is of very secondary importance. In the prophylaxis, Otis discusses the control of tuberculous sputum and the amelioration of the health of the people by better sanitation, improved housing, better prepared food and more fresh air. The sputum and the patient's rooms should be disinfected. The sanatorium affords the best means of cure, isolates the consumptive and sends forth, in its cured patents, teachers of hygienic living. A review of the numerous antituberculosis associations and the good work performed by them follows. Pulmonary tuberculosis is contagious, not inherited, avoidable and curable, and the main source of infection is the sputum of affected subjects. [M. O.]

4.—Brown found the **colon bacillus** in 13 out of 25 cases of **acute cystitis,** while staphylococci were noted in 5; out of 25 cases of **chronic cystitis,** colon bacilli were observed in 15 and staphylococci in 9; out of 11 cases of **chronic pyelitis and pyelonephritis,** colon bacilli were present in 6. When colon bacilli were present, the urine was always acid, as was the case when there were tubercle bacilli in the urine. Uric acid and urates often occur in association with colon bacilli in the urine. **Through the cystoscope it will be noticed whether the bladder alone is inflamed,** showing ulcers, patches or diffused general inflammation or whether the upper urinary passages are also inflamed. A full description of the lesions noted in such cases follows, with quotations from the literature. The case-histories of 20 patients are given in whom the bladder alone was inflamed, and of 18 patients whose upper urinary passages were also affected. Eight of them were reported previously by Brown. **The most important diagnostic point** observed is the fact that **ulceration** of the bladder walls is most marked **about the ureteral orifice** corresponding to the diseased kidney; or that some alteration is noticeable about the orifice of the ureter when a lesion exists in the upper urinary passages on that side. [M. O.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

June 7, 1902.

1. Notes on Aneurysm. WILLIAM OSLER.
2. A Brief Summary of the Clinical, Pathological and Bacteriological Features of Cutaneous Blastomycosis (Blastomycetic Dermatitis of Gilchrist). From Observations of Dr James Nevins Hyde and the Writer, with Illustrations from Thirteen Cases, Three of them hitherto unpublished. FRANK HUGH MONTGOMERY.
3. A Case of Systemic Infection by a Paracolon Bacillus, Probably Secondary to Typhoid Fever, with the Clinical Picture of Acute Cholecystitis. A. A. BERG and E. LIBMAN.
4. Clinical Manifestations of the Early Stages of Cirrhosis of the Liver. FRANK BILLINGS.
5. Hemostasis of the Broad Ligament. HENRY P. NEWMAN.

1.—Osler contributes notes on **aneurysm,** which are discussed under the following 4 headings: (1) Arteriovenous aneurysm of the subclavian vessels; (2) the humming top murmur in thoracic aneurysm; (3) on the value of the fluoroscope in the diagnosis of obscure cases of thoracic aneurysm; (4) on the importance of careful inspection of the chest in thoracic aneurysm. Osler details the history of Edward S., aged 29 years, of Kentucky, who came under his observation on April 19, 1900. The patient was shot four times on January 5, 1900. One of the bullets entered the left shoulder and still remains imbedded in the upper portion of the scapula, but gives no trouble. The second penetrated the middle of the back of the left arm and passed inward and upward to the inner side of the condyle of the humerus, then its course deflected across the bend of the elbow and down the forearm, making its exit about the upper third. The third bullet apparently did not penetrate the anterior wall of the chest and entered the tissues of the left side posterior to the midaxillary line

entered the middle of the fold of the left trapezius, passed inward and upward in front of the spine and made its exit just under the right clavicle. On examinaion, a pulsating swelling was found just about the right clavicle. A marked thrill was felt over the pulsating mass. On ascultation, a humming-top murmur, with marked systolic intensification, was audible over the pulsating mass, with less loudness over the heart. The patient is conscious of pulsation in the left ear, but not in the right. Over the neck and over the axillary and brachial arteries a systolic murmur can be heard, while the diastole over these points is occupied by a whizzing murmur. The right radial pulse is feebler than the left. The pulsations in the temporal arteries present no differences. Osler concludes that the subclavian artery and vein were wounded by the bullet causing an arteriovenous aneurysm. Osler thinks that the humming-top murmur is almost pathognomonic of abnormal communication between the chambers of the heart and the greater vessels at the root of the neck, or of an aneurysm of the aorta with the vena cava or a pulmonary artery. He has recognized it in congenital heart disease, with persistence of ductus arteriosus cases of imperfection of the ventricular septum, and in 2 cases, in one of which there was an aneurysm of the arch of the aorta communicating with the right pulmonary artery, and in the other, a continuous humming murmur was audible over the manubrium and aortic regions. Osler thinks the fluoroscope is of value in the diagnosis of obscure cases of thoracic aneurysm, particularly in cases with symptoms and no physical signs. He lays great stress on the importance of careful inspection of the chest in the diagnosis of thoracic aneurysm, routine examination, a bare chest, a good light and good eyes are the essentials. [F. J. K.]

2.—Montgomery gives a brief summary of the **clinical, pathological and bacteriological features of cutaneous blastomycosis.** Accounts of 13 cases are included in his article. He summarizes as follows: Under the term "cutaneous blastomycosis" (or "blastomycetic dermatitis") have been collected a series of cases presenting a clinical picture differing from that of all other recognized dermatoses. The disorder has also a characteristic histopathology. The organisms in the tissues have been in every case of the budding variety. In cultures they have appeared as budding or as mycelium-forming fungi, of which there are probably several varieties. While the disorder occurs independently of all other diseases, it has been followed in at least one instance by tuberculosis. Secondary pus infection of the lesions is common, and there is no reason apparent why secondary infection, with tubercle bacilli or other bacteria, should not occur. It is possible also that the fungous disease is capable of implantation upon the lesions of other disorders. Practically all cases of the disease, in which potassium iodide has been employed in large doses, have improved decidedly under its administration, but only a small percentage of patients recovered entirely under that treatment alone. Cutaneous blastomycosis and protozoic dermatitis are undoubtedly closely related disorders, if not varieties of the same process. It is possible, however, that the blastomycetes and other fungi are capable of producing in man a series of disorders of different clinical types. [F. J. K.]

3.—Berg and Libman report **a case of systemic infection by a paracolon bacillus, probably secondary to typhoid fever,** which occurred in a man, 33 years of age, a clerk by occupation. He was first seen by Dr. Berg on August 29, 1901. Ten days previous to this date the patient was suddenly taken ill with nausea, vomiting and marked weakness, and there was also some epigastric pain. His temperature was 100° F., and he had considerable abdominal distention. After a free evacuation of the bowels, by a cathartic, the patient improved, the temperature declined to 99° F., and he remained in this improved condition until the seventh day, when he was again seized with intense epigastric pain of a colicky nature, which radiated to the back. His temperature rose to 103° F., and he became slightly jaundiced. The probable diagnosis of an abscess in the right lobe of the liver or an empyema of the gall-bladder was made. The Widal reaction with a dilution of 1.20 gave a negative result. Ehrlich's diazo-reaction was also negative and the leukocytes numbered 15,000 per cmm. On September 1, under chloroform anesthesia, the liver was explored by making punctures in various directions, which gave negative results. The biliary ducts were slightly thickened and obstructed, but did not contain calculi; the gall-bladder was distended with dark thick bile which was removed by aspiration. The patient, while he rallied well from the operation, gradually continued to grow worse, and died on September 9, 1901. During the days of his illness following the operation, epigastric pain continued, the temperature remained high, the pulse was rapid and jaundice deepened. On September 8, the Widal reaction was positive in a dilution of 1/200. The leukocyte count remained high until death. The fluid, which was removed from the gall-bladder by aspiration, contained what was believed to be the paracolon bacillus. On September 4, an organism was isolated from the blood identical with that obtained from the gall-bladder. Ten hours after death, a blood culture was made and the paracolon bacillus, the staphylococcus albus and the streptococcus were isolated. The urine contained the paracolon bacillus. Blood aspirated from one of the heart chambers also contained the paracolon bacillus. Post mortem examination revealed perihepatitis, congestion and parenchymatous degeneration of the liver, also a perisplenitis and a moderate enlargement of the spleen. Further microscopical examination revealed areas of necrosis of the splenic pulp and the presence of clumps of bacilli, which decolored by Gram's method. The kidneys revealed parenchymatous degeneration. There were a number of complete and partially healed ulcers in the ileum, and also a fibrinous exudate on the serous surface. The mesenteric glands were enlarged and all of the tissues were bile-stained.

[F. J. K.]

4.—See **Philadelphia Medical Journal,** May 17, 1902, page 876.

5.—See **Philadelphia Medical Journal,** June 21, 1902. Report of American Medical Association. Obstetrical Section.

June 14, 1902.

1. The President's Address. JOHN A. WYETH.
2. The Relation of Medical Science to Commerce. FRANK BILLINGS.
3. Suture of Heart Wounds. HARRY M. SHERMAN.
4. State Medicine, Past, Present and Future. J. M. EMMERT.
5. A Simple and Accurate Method of Outlining the Stomach. WILHELM BECKER.

1.—See **Philadelphia Medical Journal,** June 14, 1902, Special Article.

2.—See **Philadelphia Medical Journal,** June 21, 1902, Editorial.

3.—See **Philadelphia Medical Journal,** June 14, 1902, page 1030.

4.—See **Philadelphia Medical Journal,** June 14, 1902, page 1029.

5.—Becker has devised a simple method of outlining the stomach, which is accomplished by first washing out the organ and leaving about 200 cc. of water in it; then Turck's double tube is introduced into the stomach. An atomizer bulb is attached to the inlet tube and air is forced into the stomach, while the outlet tube is compressed firmly between the fingers. Auscultation is performed over the stomach while the air enters. A gurgling sound will be produced as the air passes through the water, which is distinctly audible by immediate auscultation. If the stethoscope is moved downward beyond the border of the stomach, the sound will become muffled and indistinct, and in this way the outline is fixed. The process of passing air into the stomach may be repeated until the entire outline of the organ is ascertained. [F. J. K.]

AMERICAN MEDICINE.

June 7, 1902.

1. On Heredity in Bilateral Cystic Kidney. WILLIAM OSLER.
2. Prognosis of Pleurisy with Serous Effusion. RICHARD C. CABOT.
3. A Preliminary Report on Sterilization of Rubber-Gloves, etc., by Formaldehyde Gas, and on the Use of Mild Antiseptics Inside the Gloves. A. GOLDSPOHN.
4. A Case of Meningomyelitis Occurring During Convalescence from Typhoid Fever. THEODORE DILLER.

5. Notes on the Test for Gastric Acidity; the Tungstate Method for Combined Chlorids. A. L. BENEDICT.
6. Dermatitis Medicamentosa; Report of a Case. J. B. SHELMIRE.

1.—Since reporting 2 cases in *American Medicine*, March 22, 1902, Osler has met with a third case of **bilateral cystic kidney.** The diagnosis was made clear by the **bilateral tumors, the cardiovascular changes,** and the **recurring hematuria,** as well as the condition of the **urine.** The patient was 39 years of age. The unusual feature is the fact that his mother died of the same disease. So far as he knew, no other members of his family had been attacked [T. L. C.]

2.—Cabot discusses the **prognosis of pleurisy with serous effusion.** He has made a statistical study of 152 cases of pleural effusion. His figures tend to prove that, whether pleurisy means tuberculosis or not, the outlook is bright provided no family-history of tuberculosis clouds it. If pleurisy means tuberculosis, it is a very mild form of the disease and one from which recovery is usually complete under proper treatment. Even if the lungs are attacked later, the type of the disease is unusually mild. [T. L. C.]

3.—Goldspohn presents a preliminary report on the **sterilization of rubber-gloves by formaldehyde gas and on the use of mild antiseptics inside the gloves.** He describes the sterilizer which he recommends and the method of placing the gloves so that they may be fully permeated by the **formaldehyde gas.** He dusts in each glove a dram of **fomalinized powdered boric acid** which the user shakes over his hands before drawing on the gloves. After the gloves are on, they are held open so that about one-half ounce of diluted alcohol (4 parts sterile water to 5 parts of alcohol) can be poured into the palm of the hand and from there forced into each finger. [T. L. C.]

4.—Diller reports a case of **meningomyelitis occurring during convalescence from typhoid fever.** The patient was a girl of 16½ years. She was seized with typhoid fever about May 29, and 3 months later the symptoms of paralysis of both legs, the bladder and bowels appeared. Ten months later her condition had greatly improved. The symptoms developed very rapidly and in the course of 3 days the picture was complete. There was paraplegia, paralysis of the bladder and bowels, contractures of the leg, bedsore, intense hyperesthesia, strictly limited to the portion of the body below the waist girdle, and exaggerated knee jerks. The source of the infecton is not clear. [T. L. C.]

5.—Benedict presents a further report on the **tests for gastric acidity by the tungstate method for combined chlorides.** This article is an amplification of one by the same writer which appeared in *American Medicine*, May 17, 1902. [T. L. C.]

6.—Shelmire reports a case of **dermatitis medicamentosa** in the form of an unusually extensive and **severe** erythema produced by the ingestion of **mercury** in the form of **calomel.** [T. L. C.]

June 14, 1902.

1. The President's Address. JOHN A. WYETH.
2. The Relation of Medical Science to Commerce. FRANK BILLINGS.
3. Suture of Heart Wounds. HARRY M. SHERMAN.
4. State Medicine, Past, Present and Future. J. M. EMMERT.

1.—See Special Article, **Philadelphia Medical Journal,** June 14, 1902.

2.—See **Philadelphia Medical Journal,** June 14, 1902. Page 1029.

3.—See **Philadelphia Medical Journal,** June 14, 1902. Page 1030.

4.—See **Philadelphia Medical Journal,** June 14, 1902 Editorial.

LA PRESSE MEDICALE.

February 2, 1902. (No. 11.)

1. A Case of Bulbospinal Asthenia. F. RAYMOND.
2. Adrenalin.

1. Raymond reports an interesting case in a man of 44, who first noted diplopia and failing vision in August, 1901. The diagnosis of tabes was made, and mercurial inunction ordered. A week later weakness of the arms and legs became marked. Yet there was no paralysis. This grew worse, but has remained stationary since November. The dorsolumbar, the extensor and flexor muscles of the head, the masticators and the pharyngeal muscles were not at all affected. He is intelligent, showing no physical disturbances. External ophthalmoplegia is more marked on the right side; while the weakness is purely functional. There is absolutely no history of syphilis; nor are these phenomena the result of an attack of smallpox; nor is the tabes, even incipient tabes. Therefore Raymond concludes that this is a case of **bulbospinal asthenia,** first described by Erb. Goldflam states that it is characterized by the absence of grave lesions, shown either by recovery or by the results of histological examination, when the phenomena of bulbar paralysis and paralysis of the limbs and body are found associated. His condition has only improved upon suprarenal extract, which he has had but a short time. Another case history is quoted in full. The prognosis is unfavorable. [M. O.]

2.—**Adrenalin** is 625 times more active than fresh suprarenal glands. It is given as a chloride. Upon the mucous membranes it rapidly produces ischemia. Internally, it causes marked increase in blood pressure. It has been used in conjunctivitis, glaucoma, coryza, laryngitis, otitis media, epistaxis, hemoptysis and metrorrhagia. By applying adrenalin before operation on mucous membranes, the operation is bloodless. Dentists also use it on this account. Floersheim employs it internally in mitral disease, myocarditis, syncope due to choloroform, Addison's disease, exophthalmic goiter, scurvy and morphine poisoning. It is given in doses of from 5 to 30 drops, internally. Externally a 1 to 1000 or 1 to 10,000 solution is used. [M. O.]

March 1, 1902. (No. 18.)

1. Radioscopy in Interlobar Pleurisy. A. BECLERE.
2. Methylene Blue. CHARLES MANTOUX.

1. Béclère who is an enthusiast in radioscopy, describes the different positions at which the radioscope should be placed for diagnosing interlobar pleurisy or sclerosis. Diagrams of 6 different views and 3 radiograms to illustrate them follow. In 4 of these 6 positions a dark band is found when interlobar sclerosis or pleurisy exists. Béclère believes that a physician alone can take comprehensible radiographs; and that radioscopy of the thorax is only correctly performed when several different positions are employed. [M. O.]

2.—Methylene blue has for some time been used by gynecologists and dermatologists. Sendet has now employed it in Vincent's angina with good results. It seems to act almost as a specific, in powder form, chemically pure, applied to the pharynx on cotton, after which a boric acid gargle is used. This is continued once daily until the conditions cured. It causes no pain but colors mouth and lips blue, and sometimes the urine also. It seems to be of use also in treating stomatitis. [M. O.]

Dermoid of the Bladder.—Bazarevski (*Wratschebnaya Gazeta*, Vol. ..., No. 1) reports the case of a woman 41 years old who suffered for 8 years from incontinence of the bladder. She had been treated for catarrh of the bladder without success. A diagnosis of calculus was established and a supra-pubic operation decided upon. The woman was anæsthetized, the uterus found and a digital examination of the bladder made. The examining finger detected a pyriform tumor suspended on a thin pedicle. This was removed by an incision and was found to be a dermoid cyst, and contained hair, fat and teeth. [A. R.]

FIFTY-THIRD ANNUAL MEETING

OF THE

American Medical Association

AT

SARATOGA, NEW YORK

June 10th, 11th, 12th and 13th, 1902

GENERAL SESSION.

The 53rd. annual session of the American Medical Association was called to order by President John A. Wyeth, of New York City, a few minutes after 10 o'clock, on June 10th., at Saratoga Springs, in the large Convention Hall of that place. He asked the former presidents of the Association, and the vice-presidents of the present session, to come upon the platform. The opening prayer was offered by the Rev. T. F. Chambers. The report of the committee of arrangements followed, which was made by George F. Comstock, chairman. The work of this committee had been considerably upset by the destruction of the post-office and theatre buildings by fire the day previous, although with considerable effort, on their part, the accommodations were admirable.

The Association was welcomed to the State of New York by the Hon. S. F. Nixon, Speaker of the New York Assembly, and to Saratoga Springs by Senator Edgar T. Brackett.

President Wyeth then asked ex-president Dr. Davis to occupy the chair, and considerable applause was accorded the venerable gentleman. In the annual address of the president, he alluded to the reorganization of the society, and the beneficial effect that it has had upon the county and state associations, as well as the general body, and that in time they would all become branch associations, and the sections of the country could be brought into more intimate contact than before. Individual states would not need to have separate examinations if the Federal Government would adopt a standard. Several grades could be had to fit the requirements and conditions of the different sections, but it would save the physician and the patient considerable trouble when his services would be needed in a neighboring state. The 14th. International Congress would hold its meeting in Madrid, Spain, in 1903, and, he thought, the delegates selected to represent the association should be those that would do it honor. It was suggested that the expenses of the local authorities for entertainment should be borne by the association, and closed by pointing out the good that physicians could do by manifesting interest in their surroundings as well as their own profession. The session then adjourned. In the evening, Harry M. Sherman, of San Francisco, delivered the oration in surgery, in which he considered the present status of wounds of the heart. On the following evening, Frank Billings, of Chicago, delivered the oration in medicine, his subject being the Progress of Medicine. At the end of this address, the committee for the collection of portraits of ex-presidents was made, and three were presented. The first, Paul F. Eve, was presented by McMurtrie, of Kentucky; the second, of Henry Marsey, by Evans, of Chicago. Dr. Marsey, being in the audience, was accorded a hearty greeting. The third was J. H. P. Hibberd, by Reed, of Cincinnati. A motion was then passed to thank the committee.

On Thursday evening, J. M. Emmert, Atlantic, Iowa, delivered the oration in State medicine, and Friday the meeting was adjourned, shortly after 12 o'clock, by President Frank Billings.

SECTION ON PRACTICE OF MEDICINE.

FIRST DAY—AFTERNOON.

The chairman's address was delivered by Frank A. Jones, of Memphis, Tenn. He referred to the proper preliminary education of the medical student, concerning which he is of the opinion that no hard and fast rules can be laid down. The 4 most important considerations concerning a man's fitness to enter upon the study of medicine are his proficiency in English, his common sense, his capacity for work and his enthusiasm for his profession. A degree in itself amounts to little if the individual possessing it has no gray matter in his head. Other things being equal, however, the B. S. degree is preferable to the A. B. degree for the prospective student of medicine. If, however, more importance was given to the English requirements, the style of the text-books in use in our medical schools would be much improved. In the curriculum of the medical school there seems to be a tendency to increase the number of branches taught, as well as to lengthen the time of study. The reader thinks, however, that if a first class English education is insisted upon as a preliminary attainment, 4 years of 8 months each will be sufficient to fit the men for their work. He is opposed to the establishment of a National Board of Medical examiners as at present proposed; but he favors encouraging the adoption of a standard of State Board Questions and reciprocity between the different State Boards. He believes in the encouragement of County and State societies as the natural feeders of the American Medical Association.

George Dock, of Ann Arbor, read a paper entitled **amebic dysentery in Michigan.** The patient was a farmer, aged 30 years, who had not been outside his own county in 9 years. He drank well-water from a well situated more than 100 feet from his barn and stated that he had drunk no other water. This latter statement, however, cannot be proved. In August, 1901, he had an attack of dysentery in which he passed from 6 to 20 stools daily, which contained usually, but not always, blood and mucus. Rectal examination with a speculum showed the presence in the large intestine of a reddish mucus that, microscopically, contained Charcot-Leyden crystals, red bloodcorpuscles, leukocytes and amebæ. The amebæ measured from 20 to 25 mikrons in diameter; they were usually very active and contained red bloodcorpuscles. The stools at no time contained the bacillus dysenteriæ and the blood serum of the patient did not agglutinate that organism. The patient improved on treatment. There can be little doubt that the case originated in Michigan. In some cases epithelioid cells with protoplasmic oscillation are mistaken for amebæ. But if genuine ameboid motion and contained red bloodcorpuscles are looked for, mistakes may be avoided. The author thinks that the ameba coli is a parasite that has a world-wide dis-

tribution. He is of the opinion that the association of the ameba with diarrhea is not accidental. Although amebæ have been found in the stools of healthy men by other authorities, Dock was never able to find them, and thinks that they do not exist in ½ of the cases in all parts of the world, as has been claimed. The nomenclature concerning amebæ is laborious and, in many cases, unwarranted. McCrae, of Baltimore, referred to many cases of amebic dysentery seen in Baltimore in patients who had not been outside of the state of Maryland at any time. The ameba has been found in the stools of many children who drink gutter water. He thought the cases of amebic dysentery were extending northward. J. J. Walsh, of New York, referred to 2 cases of the disease that he had seen in New York last winter. The patients had not been away from New York recently. Lipman, of New York, said that during the past 3 years he had seen 10 cases of amebic abscess of the liver in Mt. Sinai Hospital. Dock said that in the case reported he had been able to exclude the possibility of infection of his patient by soldiers returning from the tropics. He thought that the stools of all patients suffering from diarrheal and dysenteric diseases should be examined with great care microscopically.

C. F. Hoover, of Cleveland, read a paper entitled **the origin of the vesicular respiratory sound.** He reported the case of a man, aged 82 years, who was suffering from pneumonia of the base of his right lung, which was complicated by severe laryngeal cough. During the attacks of laryngeal cough the glottis was tightly closed. Over that portion of the lung not involved in the pneumonic process a distinct vesicular murmur could be heard. He believes that the vesicular murmur has a different origin from the sound heard in bronchial or tracheal breathing, and that it produced by the disturbance of equilibrium either of the lung tissue or the air contained in the lung or both. Quimby, of New York, said that he thought that the expiratory sound in pneumonia was low pitched. Hoover said that the pitch of the expiratory sound over a consolidated lung was, in his opinion, higher than that over an inflated lung.

Robert N. Willson, of Philadelphia, read a paper entitled **the causal relation of blood poverty to gastric ulcer, with report of an illustrative case with atypical findings.** The author advanced the theory that the lowered resistance of the wall of the stomach to the action of the gastric juice is due in many cases to poverty of the blood. He reported the case of a woman, aged 25 years, who one year ago presented the following blood condition: Hemoglobin, 55%; erythrocytes, 4,000,000; no leukocytosis. She had, sometime afterwards, a sudden attack of gastric pain with the other symptoms indicating gastric ulcer. She recovered with hemoglobin, 87%; erythrocytes over 5,000 000. To the usual treatment of ulcer was added blood from beef in order to improve the blood condition. Fenton B. Turck, of Chicago, said that recent investigations have shown that lack of motility of the stomach with disturbance of blood-supply in the splanchnic area is the cause of ulcer formation. J. J. Walsh, of New York, said that there is nearly always a traumatic element in the production of a gastric ulcer. In the case of a cook the traumatism is furnished by hot food; in the case of a seamstress by the shock of the machine against her abdomen; in the case of a stenographer by the jar of the typewriter. He thought that all anemic people should be warned against making habitual pressure over the stomach. H. B. Favill, of Chicago, said that some recent writer had claimed that lack of hemoglobin is the essential factor without which ulcer will not occur; trauma, impaired circulation and other causes were but secondary in their action. If the lack of hemoglobin is the essential element in the causation of the condition, the return of hemoglobin to normal will be followed by the cure of the disease. Therefore, rest in bed with rectal feeding is not the proper way in which to manage the condition. Willson said that ulcers do occur in patients in whom the hemoglobin is normal. He did not mean to say that blood poverty is the only cause of ulcer of the stomach; but that, when blood poverty is present, ulcer is liable to occur.

Heinrich Stern, of New York, read a paper entitled **the association of Graves's disease and glycosuria.** Glycosuria in Graves's disease may be transitory, alimentary or diabetic. In 10 cases of Graves's disease in the author's experience, he had seen spontaneous, transitory glycosuria in one instance. The patient was a woman, aged 38 years, who had suffered from exophthalmic goiter for a year. She also had tuberculosis of the lungs. She died of heart paralysis. Diabetes and Graves's disease are found associated a little more frequently. He saw one such case in the person of a woman, aged 54 years, who had exophthalmic goiter which improved and was followed by diabetes. In the treatment of the diabetes the best results were obtained when the patient was on a mixed diet. The sugar-excretion, the author believes, is probably due neither to hyper- nor hypothyroidism; but to some ferment secreted exceptionally by the thyroid or the parathyroids. E. F. Wells, of Chicago, said that the causes of Graves's disease and diabetes are universally believed to be similar, although the belief has not been substantiated. As contributory evidence of similarity he referred to the good results that he had obtained in the treatment of both diseases by the use of codeine. Jones, of Buffalo, referred to the case of an obese man to whom he gave thyroid extract in 10-grain doses daily. After the administration of the thyroid extract sugar appeared in the patient's urine, although it had not been found there before. The glycosuria persisted except when the patient was on an absolute diet. He did not offer this as a proof that the diabetes in exophthalmic goiter is due to the enlargement of the thyroid gland.

SECOND DAY—MORNING.

A. R. Elliott, of Chicago, read a paper entitled **etiology of chronic nephritis.** All true nephritis is toxic in origin, the toxins being of chemical or micro-organismal nature. These toxins circulate in the blood and reach the kidney through that fluid. The absorption of toxins from the intestine by the blood is a frequent method by which deleterious products enter the blood. The author believes that all forms of nephritis are related in etiology but that in the chronic cases the etiological factors act more slowly than they do in the acute cases.

W. Britt Burns, of Memphis, Tenn., read a paper entitled **malarial nephritis with report of a case.** Nephritis in malaria occurs in about 4% of cases. The urine contains albumin, hyaline, malarial pigmented casts and red blood corpuscles. In the severest cases of nephritis of malarial origin hemoglobinuria is seen. The author reported the case of a man, aged 35 years, who had had malaria every year for 18 years, during which time he had lived in the Mississippi river bottom. He contracted speticemia from the bite of a tick from which he died. The man was temperate, had not been infected with syphilis, and, 2 years before, there was no evidence of nephritis. During his illness his temperature rose to 104° and staphylococci were found in the necrotic material at the point of inoculation by the tick bite. At autopsy, beginning hypertrophic cirrhosis of the liver, fatty heart and splenitis were demonstrated in addition to a large white kidney on one side and a small white kidney on the opposite side of the body. Microscopical examination showed pigmentation of the cells in the liver and the spleen as well as vessels blocked by pigment in both these organs.

James B. Herrick, of Chicago, read a paper entitled **classification of chronic nephritis.** He gave an epitome of the main facts in the classification of chronic nephritis and said that he thought that the best classification is into (1) chronic parenchymatous nephritis or chronic diffuse nephritis without contraction, and (2) chronic interstitial

nephritis or chronic diffuse nephritis wtith contraction. Great variations of both these types are met with so that subgroups, tending to confusion, have been made by many authors. It is not well to try to classify cases too closely; but as subclasses of chronic interstitial nephritis may be mentioned the primary cases, the secondary cases and the arteriosclerotic cases.

A. O. J. Kelly, of Philadelphia, read a paper entitled **the diagnosis of chronic nephritis.** In the diagnosis of chronic nephritis important factors are the occurrence of albuminuria and cardiovascular changes. Albuminuria may be extrarenal, functional or cyclic and organic. Organic albuminuria may occur in cases of kidney disease with or without serious alteration in the kidney substance. The cardiovascular changes are due to obstruction to the circulation by the toxic substances circulating in the blood. The pulse early in the course of chronic nephritis is small, hard and difficult to obliterate. Later there may be arteriosclerosis and atheroma. The examination of the eye grounds and the search for cutaneous lesions are of importance.

L. F. Bishop, of New York, read a paper entitled **the early circulatory disturbances of chronic Bright's disease.** The author does not regard chronic Bright's disease as a disease of the kidneys primarily, but as a disease of the circulation involving the kidneys and the brain. One of the early manifestations of chronic nephritis is the dyspeptic symptoms that are due to disturbance of the circulation in the stomach. These symptoms are not to be confounded with gastric disturbances of uremia. The early signs of arterial disease are the early signs of nephritis and of these one of the most important is the irregularity of arterial tension. The first symptoms of this irregularity are often seen in the brain.

David Riesman of Philadelphia, read a paper entitled **uremic aphasia.** Uremia is an auto-intoxication in which the kidney plays an important, but not the only, role. The brain shows the results of this auto-intoxication very early and often exhibits focal symptoms and such as hemiplegia, monoplegia, monospasm and aphasia, without gross lesions. Aphasia is rare as the sole expression of uremia. The author reported a case in which aphasia was transitory. It must be diagnosed from embolism and hemorrhage. The onset of the aphasia is usually sudden and sometimes the symptoms of uremia precede the attack. The condition is seen in children as well as in adults. The majority of the aphasias are motor in character without disturbance of the cortical centers. Word deafness and word blindness are rare. The attack may be very short, although the average duration is from 24 to 48 hours. Recovery is usually complete if the patient lives long enough. The kidney symptoms may disappear with the aphasia or they may persist after it. In many cases, at autopsy, no lesions can be demonstrated; but at some time in the future cellular changes will be discovered. The diagnosis of uremic aphasia is made by the transitory nature of the aphasia, by the associated uremic symptoms and by the signs of renal disease.

Discussion on Nephritis. Frank Billings, of Chicago said that, in the treatment of chronic interstitial nephritis it is of great importance to maintain the cardiovascular integrity. The excretions of the body, other than those of the kidneys must be kept under close watch, especially those of the gastro-intestinal tract. In cases of chronic parenchymatous nephritis the same care of the excretions should be maintained and, in addition, much attention should be paid to the nutrition. Drugs are useful but may be abused. Digitalis should be used for heart failure; iron is indicated for blood poverty; diuretics should be exhibited for suppression of urine. If these conditions do not exist, the remedies mentioned should not be given. Diet should not be prescribed as a routine measure; but should be an individual matter. Some patients should be starved and others should be overfed. Diluent drinks for washing out the retained products of excretion are of importance. T. B. Futcher, of Baltimore, said that at Johns Hopkins Hospital 4.2% of all medical cases were cases of nephritis. Of these the majority were chronic cases. The mortuary records show that 31.4% of all autopsies revealed nephritis. Of 314 autopsy cases 24 were cases of arteriosclerotic kidney, or 12% of all cases of chronic nephritis. The arteriosclerotic kidney is large, red, firm and with an irregular surface. The specific gravity of the urine is nearly normal except on some rare occasions. The prognosis depends upon the condition of the heart and the general vascular changes. He has seen 3 cases of temporary aphasia. Uremic coma is benefited by the intravenous injection of normal saline solution of which from 1,000 to 1,200 cc. should be injected after free bleeding. He has seen 3 cases recover from convulsions after this treatment. Halsted has split the capsule of the kidney and decapsulated it, as suggested by Edebohls, twice in Johns Hopkins. Both patients were suffering from chronic parenchymatous nephritis. The operations have been done too recently to permit of the deduction of conclusions. V. C. Vaughan, of Ann Arbor, has seen cases of transitory aphasia in which there were no evidences of kidney lesion. He thinks that in such cases there is spasm of the arterioles in the brain due to toxic causes. Nephritis is always due to toxins, which he calls nephrolysins. A nephrolysin is any substance that will split off one of the side chains from a kidney cell. The side chains of a kidney cell are the components that permit of the proper function of the organ. Potassium chlorate or potassium chromate will produce these nephrolysins. He believes that aninephrolysins can be produced. A nephrolysin may be heteronephrolysin if introduced from without, or idionephrolysin if generated within, the body. The idionephrolysins may be of bacterial origin, bacterionephrolysins, or of digestive origin, autonephrolysins. N. S. Davis, Jr., of Chicago, said that the possibility of diagnosis between parenchymatous and interstitial nephrits depends upon the possibility of keeping the patient under observation. For treatment, the functional power of the kidney is the important thing to determine. In cases in which albumin is found in the urine during life insurance examination, he believes that there are a number of glomeruli affected, but not enough to produce ill health. Ultimately the symptoms of chronic nephritis will develop if the patient is allowed to go without treatment. He advises the physician to pay close attention to the gastro-intestinal tract in cases of nephritis. Fermentation of the contents of this tract results in the production of substances that are injurious to the kidneys Keeping the gastro-intestinal tract clean is the secret of dietetic treatment in these cases. Milk is the ideal diet, because it does not ferment and produce these toxic substances. The diet should be governed by the digestive capacity of the individual patient. J. A. McKenna, of Philadelphia, said that he has seen 2 cases of acute nephritis caused by the oxyuris vermicularis. E. F. Wells, of Chicago, said that the danger in chronic nephritis lies in the residual poisons without the bloodvessels. A patient suffering from chronic interstitial nephritis is always in danger of uremia. In these cases the urea in the blood is always high, in some cases 0.4%. Muscular exercises increases the amount of urea excreted, as was exampled by a case in which convulsions increased the urea output. He has seen a number of cases of transient and recurrent aphasia which he believes were due to uremic conditions. West, of Galveston, Texas, said that he has seen well-defined cases of chronic nephritis in young people recover. He believes that this power to recover is due to the processes of growth that are so active in the young. S. Solis-Cohen, of Philadelphia, said that from the point of view of treatment it is important to decide whether the kidney lesion is primary or secondary to some general condition, such as arteriosclerosis or to some general poisoning. He also

holism. Headache and asthmatic symptoms are important signs of early vasomotor disturbance of toxic origin which may cause or which may be due to nephritis. Arenalin is a good remedy for the treatment of albuminuria without structural lesion, because it constricts the vessels of the kidney and prevents the leakage of the abnormal substance. Webb, of St Augustine, Fla., referred to the importance of the climate of the South in the treatment of chronic nephritis. James Tyson, of Philadelphia, said that in chronic nephritis the parenchyma of the kidney is more frequently attacked primarily and the interstitial tissue less frequently attacked primarily than is supposed. As the tubules disappear, they are replaced by connective tissue. Cerebral symptoms due to uremia do occur, although it is probable that the frequency of these attacks is exaggerated. In the albuminuria of adolescence if the glomeruli leak albumin it is possible to have the useless glomeruli replaced by normal glomeruli. R. F. Weir, of New York, said that he had operated on 2 cases of chronic nephritis with marked improvement in one instance and no improvement in the other. Gordon, of Maine, said that he had operated on a patient who was suffering from movable kidney with evidences of nephritis. The patient was improved in health after the operation. Dudley, of New York, said that if the kidneys are to be operated on, anesthesia by the subarachnoid injection of cocaine would be a safer proceding than general anesthesia.

SECOND DAY—AFTERNOON.

Riesman said that the case reported by him was undoubtly one of uremic aphasia although he admitted that other causes are operative in other cases. The vascular system naturally takes part in producing the condition.

E. F. Wells, of Chicago, read a paper entitled **endocarditis as a complication of pneumonia.** The patient was a man, aged 68 years, who suffered from an attack of pneumonia involving almost the entire right lung. He had a pseudocrisis on the eighth day which was followed by a further extension. On the fourteenth day lysis began and lasted 4 days. Jaundice appeared on the ninth day and lasted 4 days. The urine excretion was deficient and that fluid contained albumin, hemoglobin, hyaline and granular casts. On the twenty-ninth day, while sitting up for the first time, the patient felt a sudden weakness followed by pain in the shoulders. There was a disorder of hearing, tenderness over the spleen, purpura and an aortic diastolic murmur. Cultures made from the blood were sterile. The patient recovered after treatment with nuclein, antipneumococcic serum, adrenalin and hypodermics of camphor. The author concludes (1) that endocarditis is frequent in pneumonia; (2) that it may occur early in the attack and that the ulceration may begin at any time; (3) that the symptoms and the physical signs previous to the occurrence of ulceration are not characteristic; (4) that ulceration usually occurs on the aortic valves, although any valve may be affected; (5) that the diagnosis of simple endocarditis is difficult; but that the embolic showers make the diagnosis of the ulcerative variety certain; (6) that absolute rest in bed in the recumbent posture is the only proper treatment, and (7) that the prognosis is fairly good. James B. Herrick, of Chicago, said that ulcerative endocarditis need not of necessity be fatal any more than septicemia patients must necessarily die. He has been able to find 50 cases of reported recovery from this disease. Post mortem examination of bodies dying from other disease than heart disease, showed that this lesion may heal Cases due to the streptococcus or the pneumococcus are less virulent than those due to the staphylococcus. Since recovery is possible, the unfavorable prognosis may in many cases be modified. A careful bacteriological examination of the blood should be made to determine the cause of the condition. Wells said that the endocarditis of rheumatism attacks the tissues of the valve leaflet so that contraction of the valve follows; on the other hand, the endocarditis of pneumonia gives but little tendency to contraction. If the patient recovers from the initial lesion there is a fair chance of a complete recovery from the entire condition.

H. B. Favill, of Chicago, read a paper entitled **venesection.** He referred to a case of intense pulmonary engorgement with dilated right heart with otherwise sound organs. In such a case blood-letting is indicated and is followed by distinct benefit. A case in which the patient had a dilating heart with profound degeneration of the muscle, venesection was followed by death. In any case of great pulmonary embarrassment due to vascular engorgement, venesection is suggested. It is indicated when the symptoms are mechanical and is contraindicated when they are toxic and progressive and when the heart muscle is known to be bad. C. G. Stockton, of Buffalo, said that he has seen great benefit for a short time produced by repeated withdrawal of small quantities of blood. There is a particular time in pneumonia when small bleedings will benefit both the symptoms and the lung condition. If the operation is done in the stage of congestion and before consolidation is established, there is likely to be a delay in the beginning of the latter process. He thinks that small bleedings are followed by as good results as large bleedings. Greenlee, of Kentucky, advocated bleeding in cases of pneumonia.

Hobart A. Hare, of Philadelphia, read a paper entitled **the employment of digitalis and aconite in the treatment of cardiac diseases.** It is the duty of the physician to study the heart muscle rather than to determine just which valve is affected in a case of cardiac disease. Digitalis is often given in too large doses and for too long a period of time. If the coronary arteries are closed or so nearly so that they cannot give passage to the increased amount of blood that the use of digitalis will cause to go to them, the drug would better not be given. Aconite gives the same result in steadying the heart beat, by its action on the vagi, that digitalis does. In many cases the combined use of digitalis and aconite gives the best results in the treatment of cardiac disease. Jones, of Buffalo, said that in cases of myocarditis with involvement of the coronaries digitalis could undoubtedly do harm. He referred to an illustrative case. J. M. Anders, of Philadelphia, said that, when guarded by nitroglycerine, digitalis does good work even when the vessels are hard. Hare agreed with the remarks of Anders. Digitalis also benefits the nutrition of the heart by increasing the circulation through the vessels of Thebesius.

James M. Anders, of Philadelphia, read a paper entitled **tuberculous myocarditis.** He reported the case of a woman, aged 22 years, in whom there was a family history of tuberculosis. She had an attack of pleurisy, which was at first dry and later serofibrinous. On the seventh day of the disease she had an attack of dyspnea followed by sudden death. At autopsy, 2 liters of serofibrinous fluid were found in the left pleura. There was also tuberculous pericarditis and tuberculous myocarditis, as demonstrated by microscopical examination. Tuberculous myocarditis is usually secondary to a tuberculous lesion in some other location. The tubercles in the heart wall may be large or miliary or the lesion may be diffuse. Infection usually takes place through the lymphatics from the mediastinal lymphnodes. In some cases the infection is through the blood, in others by contiguity.

Victor C. Vaughan, of Ann Arbor, read a paper entitled **the autogenous diseases.** An autogenous disease is one in which the *materies morbi* is a product of some cell in the body and not of some cell outside of the body. Much that has been written on auto-intoxication is without scientific basis. Auto-infection is applied to those cases in which the virus of the disease is elaborated in one part of the body and is thence distributed to other parts of the body. We have not sufficient scientific data from which to classify the autogenous diseases. The author referred to the influence of the digestive products in producing diseases, to the failure of

certain substances to be eliminated by the excretory organs and the failure of certain other organs to prevent the absorption of certain poisons; to the failure of certain groups of cells to accommodate themselves to changed circumstances, to the formation of poisonous substances by cells; and to the failure of some cells to utilize the food products brought to them.

James Tyson, of Philadelphia, read a paper entitled **appendicitis from the physician's standpoint.** There are a certain number of cases in which the diagnosis of appendicitis is so evident that no one questions the propriety of operation. There are other cases in which the symptoms remain permanently, subjecting the patient to frequent exacerbations. There is a third class in which the symptoms abate never to return, on the one hand, or to return at intervals, on the other hand, until relieved or until death occurs. In any case of appendicitis in which the diagnosis is undoubted and the services of a competent surgeon can be secured, operation should be done. Charles G. Stockton, of Buffalo, said that he is of the opinion that cases of appendicitis should be operated upon immediately. Wintersteen, of Minnesota, said that the symptoms of catarrhal and of suppurative appendicitis are alike and that there is no way to distinguish between them. Therefore, they should all be operated upon. J. M. Anders, of Philadelphia, said that the classification indicated by Tyson is a good working basis for the general practitioner. He agrees that operation should be done as soon as possible after the diagnosis is made. The physician should consult with a competent surgeon and thus divide the responsibility. There is a mild leukocytosis at the start of appendicitis and a blood count should be made at frequent intervals as the case progresses. As pus forms the leukocyte count will rise rapidly, unless perforation and peritonitis occur. In the latter instance the general symptoms will point to operation. He approves of operation between the attacks in relapsing appendicitis. If all cases in which the diagnosis is clear are operated on at once, the mortality will be diminished.

James Ely Talley, of Philadelphia, read a paper entitled **a case of scurvy with unusual poverty of the blood.** The patient was a man, aged 32 years, who had been under unhygienic conditions in Cuba. The patient was breathless, his skin was dry, he had anorexia, blood oozed from his gums and he had one or 2 attacks of epistaxis. Blood examination showed erythrocytes, 370,000; leukocytes, 4,600; hemoglobin 17%. He died suddenly. The post mortem showed petechial hemorrhages in the mesenteric fat; excess of bloody fluid in the pericardium, with hemorrhages beneath the visceral layer, in some places extending into the muscle; degeneration of the heart muscle; and fatty degeneration of the liver. A diagnosis of scurvy was made. The most important causative factor in the production of scurvy is a diet deficient in fresh vegetables. A Jacobi, of New York, said that in infants even when the teeth are not erupted there is often bleeding from the gums and that in children with teeth there is often absence of spongy gums in scurvy. Therefore, the gums do not furnish conclusive evidence of scurvy. Corse, of Pennsylvania, described an epidemic of scurvy among the coalminers of Pennsylvania.

THIRD DAY—MORNING.

T. B. Futcher, of Batimore, read a paper entitled **the occurrence of gout in the United States, with an analysis of 36 cases.** Gout is more frequent in the United States than is generally believed. Inaccuracies of diagnosis must be taken into account in estimating the incidence of the disease. At the Johns Hopkins Hospital in the past 13 years, 36 cases of gout have been treated, 0.24% of all medical cases. In London, gout constitutes 0.37% of medical cases in St. Bartholomew's Hospital. In America, heredity does not seem to be active in the etiology of the condition. On the other hand, alcohol is an active factor, particularly the fermented liquors. Lead poisoning is also an important condition in the etiology. Twenty-seven of the 36 patients reported were native Americans. All the patients were males, the majority of which were in the lower walks of life. Before the acute symptoms of the attack begin the excretion of uric acid is below normal; on the second or third day the excretion rises to normal; and late in the attack and in the intervals of the attack the output of uric acid is very low. The excretion of phosphoric acid is parallel to that of uric acid. Tophi were usually present, most frequently in the ears. There were definite evidences of arteriosclerosis in 23 cases; in 14 cases the specific gravity of the urine was low; albumin was present in 27 cases and in 23 cases casts were found. These facts indicate that in a large proportion of the cases chronic interstitial nephritis was present. The occurrence of a uric acid sediment in the urine does not indicate a gouty tendency, as is so commonly supposed. There was no such sediment in any of the 36 cases treated. Tophi are important in the diagnosis of gout; they should contain crystals of sodium urate. Richard C. Cabot, of Boston, said that he has seen 4 cases of gout in the Massachusetts General Hospital among 20,000 patients in the medical wards. He thinks that the disease is rare. J. J. Walsh, of New York, said that in his opinion the cases of rheumatism that resist treatment with the salicylates are cases of gout. He referred to the Heberden's nodes and said that in his experience they were not indications of gout; but rather were found in persons who had a tendency to longievity. George Dock, of Ann Arbor, said that in his experience gout is rare. Heberden's nodes are often of diagnostic importance in excluding gout. Jones, of Buffalo, said that he has seen 2 cases of gout. He does not regard Heberden's nodes as gouty manifestations. He thinks that gout is an indication of a chronic intoxication. Witherspoon, of Nashville, Tenn., reported one case of atypical gout in a negro man who was, however, not genuinely black. He had nodules on his fingers and tophi in his ears. He reported a case in a white man in whom the acute attacks always began with tonsillitis. Mahoney, of Jamestown, said that he believes that gout is quite common. A. C. Croftan, of Philadelphia, said that the estimation of the amount of uric acid in the urine before, during and after an attack of gout is of no value unless the amount of that substance taken in with the food is estimated. The power to destroy uric acid ingested as food is lowered in gouty subjects. If a gouty subject is given a weighed quantity of uric acid and then excretes more uric acid than he should from the amount taken in, the result may be of diagnostic importance. Futcher thinks that the diminished uric acid output may be of diagnostic value when the patient can be watched in a hospital. Uremia may be a factor in visceral gout, as suggested by Cabot. Heberden's nodes indicate arthritis deformans rather than gout. The blood in patients suffering from gout shows no marked anemia and only a moderate leukocytosis. He has been unable to obtain uric acid crystals from the blood of gouty subjects.

A. C. Croftan, of Philadelphia, read a paper entitled **a summary of recent investigations by the author into the causes and treatment of diabetes.** The blood contains a substance than can destroy sugar. This sugar-destroying power is resident in the leukocytes. In the first 30 minutes after drawing blood almost no sugar is destroyed. After ½ hour and up to the expiration of 1½ hours sugar destruction is active and then ceases. This period of sugar destruction is coincident with the disintegration of the leukocytes, which liberate a ferment-like body that destroys the sugar. Removal of the pancreas reduces the power of the blood to destroy sugar. Extracts of pancreas with the addition of a small quantity of hemoglobin possess the power of destroying sugar, although extract of pancreas alone does not possess that power. Trypsin, hemoglobin and sugar are universally distributed in the body in the

necessary combination to destroy sugar. After ligating the pancreatic duct the acini of the pancreas atrophy but the islands of Langerhans increase in size. Injections of the extract of such a pancreas increase the glycolytic action of the blood. Suprarenal extract injected into the blood of an animal increases the excretion of sugar and produces glycosuria.

Charles G. Stockton, of Buffalo, read a paper entitled syphilis of the liver. He referred to the following varieties of syphilitic affection of the liver: Perihepatitis, syphilitic disease of the capsule of Glisson and the portal canals, diffuse syphilitic hepatitis, gummata of the liver. He reported illustrative cases in all the classes mentioned. He concludes that hepatic complications of syphilis are more common than is ordinarily supposed. William Osler, of Baltimore, said that visceral syphilis is much more common than is ordinarily supposed. No credit is due to the general practitioner that this is so. The frequency of its occurrence is explained by the fact that syphilis is a disease for the family doctor and not for the specialist and that the family doctor does not treat it systematically nor for a long enough period of time. He makes the following classification of liver disease due to syphilis: (1) Congenital which may not develop until late; (2) syphilitic cirrhosis; (3) cirrhosis with tumor, and (4) solitary or multiple syphilitic tumor. These cases are usually benefited by the use of iodides and mercury. The diagnoses are often wrong and the causative influence of syphilis is not recognized. The cirrhotic cases are thought to be alcoholic and the cases with tumor to be carcinomatous. It is important that the clinician should study visceral syphilis carefully. Witherspoon, of Nashville, Tenn., referred to the similarity between nodular enlargement of the liver and malignant growths. The use of iodides and mercury, however, benefits the syphilitic cases and fails to bring relief to the cases due to carcinoma. When the liver reaches any size we are apt to have ascites. Tumors of the liver of syphilitic origin may simulate enlargement of the gall-bladder. Some cases may resemble obstruction of the bowel due to the dropping of a loop of intestine through an adhesive band. By the use of the iodides alone no results are obtained in the treatment. When contraction of the organ has taken place the disease will yield to no treatment. Syphilis sometimes produces a very large liver which may be attended by no other symptoms than those of malnutrition. Such cases recover under the use of mercurial inunctions. Treatment with inunctions and iodides may be carried too far and produce anemia and cachexia. Marked constitutional symptoms usually accompany visceral syphilis. He recommends the use of specific treatment in obscure cases of visceral disease. Richard C. Cabot of Boston said that in some cases it is impossible to produce benefit by antisyphilitic treatment until the general condition of the patient is improved by general tonic treatment. Uremic hemiplegia may be mistaken for cerebral syphilis. The Justus test is available in the diagnosis of syphilis. H. P. Pavill of Chicago said that many cases of visceral syphilis can only be diagnosed by the therapeutic test. We should be alert to the possibility of syphilis and courageous in instituting specific treatment. M. Howard Fussell of Philadelphia referred to the unreliability of a negative history of syphilis. He has seen cases of unquestioned visceral syphilis in which he could get no history of primary or secondary lesions. Patients are careless in observing skin manifestations. In the cases of 2 infants in which he had used mercurial inunctions and potassium iodide he produced an enterocolitis from which one of the infants died. C. F. Hoover, of Cleveland, referred to 2 cases of syphilis of the liver that resembled cases of acute phthisis in symptomatology and in physical signs. Tubercle bacilli and other micro-organisms were absent from the sputum. Potassium iodide relieved the condition. Thomas McCrae, of Baltimore, said that in the treatment of salvarsan syphilitic lesions of the liver he combined mercurial inunction with 20 grains of potassium iodide 3 times a day. J. J. Walsh, of New York, advocated the use of mixed treatment in obscure cases of visceral disease. T. B. Futcher, of Baltimore, said that visceral syphilis is often the cause of various types of disease of obscure origin. The symptoms are sometimes intermittent and at other times continuous. Guthrie, of Little Rock, Arkansas, advised the use of antisyphilitic treatment in obscure cases of visceral disease. He said that we should not give potassium iodide and mercurial inunctions to children at the same time, because a soluble mercury biniodide will be formed in the system. This accounts for the cases of enterocolitis described by Fussell. Stockton said that there are cases of syphilitic enlargement of the liver without ascites and jaundice and other cases in which both are present. He has never seen a case of visceral syphilis that would improve on tonic treatment unless specific treatment was added.

THIRD DAY—AFTERNOON.

Richard C. Cabot, of Boston read a paper entitled some instructive errors in cardiac diagnosis and treatment. The largest percentage of mistakes in cardiac diagnosis, as proved by autopsy, is made in tricusped regurgitation, the next in mitral disease, next in aortic stenosis and the least in aortic regurgitation. In 4 cases recently, the author has made the diagnosis of aortic regurgitation in which, at autopsy, that lesion was not discovered. In 3 out of the 4 cases there was profound anemia, 2 cases of which were pernicious, and in the fourth case normal blood findings. Out of the 4 cases, 2 showed, post mortem, marked chronic nephritis. In all the cases the usual diastolic murmur was heard and in 2 of them the [illegible] murmurs was present in addition; in one case the pulse was of [illegible] with no appreciableness. The heart was enlarged and there were signs of [illegible]. At autopsy the aortic valve was found to be normal. In one of these cases there was probably actual regurgitation during life on account of stretching of the aortic orifice due to the [illegible] anemia. In the fourth case the autopsy was [illegible]. The following mistakes were made in treatment: In a case of mitral disease in which there was both stenosis and regurgitation with failing heart treatment was persisted in for a year by rest in bed and digitalis, then the case came to a [illegible]. After having told the patient that under no circumstances could she go to work as a cotton operative she resumed that work and did it with great improvement to her health. The author thinks that the [illegible] the good. The patient died 2 years later from [illegible] but in the interval she was quite well. The existence of mitral disease was established at autopsy. In the second case the patient was an old man who had auto-intoxication, myocarditis and [illegible] compensation. He was told to give up his work as a lawyer and in time [illegible] but at the end of a year he returned to work, saying that he felt better than he was employed. A third patient was the wife of a [illegible] minister, she suffered from aortic regurgitation, hypertrophied heart and arteriosclerosis. She was 75 years of age and wanted to go to a convention meeting necessitating much waiting along and many [illegible] hours. She was told by [illegible] which she did and [illegible] her general condition was much improved. He believes that mistakes are often made by prescribing rigid rest when rest and stimulating have done as much good as they can. In all these cases the mental element in the heart [illegible] considered. Charles Quentin, of New York, said that [illegible] that had occurred in the pulmonary tissues may be present without a mitral reflex when the heart muscle is [illegible]. In such cases digitalis [illegible]. When a patient presents a small [illegible] irregular heart, weak pulse and evidences of myocardial [illegible] rest exercise will be good. When the pulse is of low [illegible] rest is [illegible]. George Dock, of Ann Arbor,

said that the cases reported really had regurgitation and the mistake occurred in the conception of the anatomical condition of the valves. Cabot said that in 2 of his cases in which exercises did so much good, the pulse was of low tension. In answer to a question by Dock, he said that in 2 of his anemic cases the aortic regurgitant murmur might have been due to sudden strain.

E. Fletcher Ingals, of Chicago, read a paper entitled, **the treatment of croupous pneumonia.** He advises the following treatment in croupous pneumonia as used by him in the Cook County Hospital, Chicago: Cold sponging to relieve fever; calomel and magnesium sulphate to relieve constipation; strychnine and digitalis for heart failure; opium to relieve pain; alcohol for its stimulant effect and oxygen for dyspnea. He has not used serumtherapy systematically. Three-fourths of the patients were dressed in a cotton night-shirt and no effort was made to protect the chest. The patients were placed on a liquid diet. He believes that the chest should be protected, because he thinks that by that means extension of the disease may be prevented and that the pneumonic process may be modified. Dry cups should be used frequently. In robust patients, heart sedatives may be used early in the disease. He recommends the use of ammonium bromide for cough and insomnia. Barnett, of Wisconsin, said that in 3 cases of delayed resolution he had punctured the lung with good results. He uses ammonium salicylate during the height of the disease and he thinks that drug has an influence on the process. West, of Galveston, Texas, said that he had used the coal-tar antipyretics in pneumonia and that his mortality had been severe. He cautioned against the use of these substances in any case in which there is danger of death from cardiac failure. William Osler, of Baltimore, said that the profession ought to be doing something systematic and energetic to reduce the mortality from pneumonia. Hospital physicians should give more attention to the systematic study of their cases. Bailey said that much may be done for the benefit of the patient suffering from pneumonia. Before consolidation occurs, in the first day or 2 of the disease, he reduces the temperature with phenacetine, quinine and caffeine. In the early stages also the cough can be much relieved by the use of opium in the form of Dover's power, codeine or heroin. James J. Walsh, of New York, said that he thinks that the sputum of a patient suffering from pneumonia should be disinfected. Ryan, of Des Moines, Iowa, advocates the use of colonic fluishing by means of a high tube. He uses a solution of sodium, potassium, calcium and magnesium chlorides. He believes that this stimulates the heart and benefits the circulation. Cunningham, of Alabama, believes in the use of hypodermoclysis and strychinine and morphine hypodermically.

J. Dutton Steele and Albert P. Francine of Philadelphia, read a paper entitled **an analysis of 65 cases of gastroptosis.** Gastroptosis and entereptosis are common, particularly in women complaining of dyspeptic symptoms. There is some dilation of the pyloric end of the stomach in every case, and general dilation of the stomach does not exist long without descent of the organ. Pyloric dilation is usually secondary to gastroptosis while general dilation is usually primary. In the majority of cases reported, the transverse colon showed displacement and assumed the M-form. The general symptoms are those of gastric motor insufficiency due to the same causes as neurasthenia. Floating torch rib was found in 2 cases only. The splashing sound is of no value in the diagnosis. There was separation of the recti muscles in 70%. The treatment should be by mechanical support of the parts by an abdominal belt which should fit properly and should be laid down by perineal bands. The operation, advised by Byrn of shortening the gastrohepatic omentum gives good results. The union of the recti muscles also gives good results. Systematic gastric lavage is not ordinarily indicated. H. D. Byrn, of Philadelphia, discussed the operation for shortening the gastrohepatic omentum and the gastrophrenic ligament for the relief of gastroptosis. Improvement in health has been marked in every case operated upon. One patient who was operated on one year and 7 months ago still presents good health. Jones, of Buffalo, thinks that a large number of cases of gastroptosis arise in infancy. Charles G. Stockton, of Buffalo, said that in his opinion splanchnoptosis is behind much of the neurasthenia seen in the lymphatic type of woman with fragile tissues. Fenton B. Turck, of Chicago, said that he thinks that the toxic condition of the gastric contents accounts for many of the symptoms. The operation does good but to the good done by the surgeon must be added that obtained by rest in bed and proper diet. The latter methods should be employed before surgical interference is adopted. Frank Billings, of Chicago, said that many cases are congenital, but at the same time, until neurasthenic symptoms have developed, there is no disturbance of the general health, so that in such a case the neurasthenia is primary. There are cases in which the neurasthenic symptoms are due to the malposition of the stomach. Steele said that he has never been able to convince himself that gastric motor insufficiency from gastroptosis is different from motor insufficiency from other causes.

George W. Webster, of Chicago, read a paper entitled **the etiology of acute articular rheumatism.** Rheumatism is always an infectious disease and is usually due to a diplococcus. It is a part of a general infection. All organisms causing arthritis give rise to other lesions as well. He reviewed the work done by numerous investigators on the bacteriology of this disease. J. M. Anders, of Philadelphia, said that there is no reason why the micro-organism causing acute articular rheumatism may not be multiple. Cases in which purpura occurs are evidence of the toxic nature of the disease. The term rheumatic diathesis is obsolete.

Joseph R. Patton, of Chicago, read a paper entitled **etiology and proyhylaxis of the cardiac manifestations of articular rheumatism.** He referred to instances of pericarditis, endocarditis and myocarditis in rheumatism.

Thomas McCrae, of Baltimore, read a paper entitled **review of the cases of acute articular rheumatism treated in Dr. Osler's clinic.** He reported 270 cases of acute articular rheumatism which represented 2% of the medical admissions to the Johns Hopkins Hospital. The majority of the cases occurred in the months of February to May inclusive. There was a family history of rheumatism in 25% and a history of alcoholism in 40%. The fever averaged 12 days in duration. There were no cases of hyperpyrexia. Endocarditis and definite organic lesions occurred in 32%. Murmurs frequently disappeared. There was pericarditis in 6% of the cases accompanied invariably by leukocytosis. Bacteriological examination of the fluid from the joint, the blood and the cerebrospinal fluid was always negative. In monarticular cases the diagnosis is often wrongly made tuberculous arthritis.

James J. Walsh, of New York, read a paper entitled the salicylates in acute rheumatism. The most satisfactory treatment for this condition is with the salicylates. They should be administered in large doses, from 90 to 100 grains daily. Idiosyncrasies sometimes occur. Nervous symptoms, digestive symptoms and nephritis are contra-indications to their use. Sodium salicylate is the most frequent preparation used. Salicin, oil of wintergreen and salicylic acid are also much employed. The synthetic products are not well borne, because they irritate the stomach and the kidneys. Alkalies should be given in connection with the salicylates. The coal-tar products of which antipyrine is the best, have been suggested as substitutes for the salicylates.

Al Howard Powell of Philadelphia, read a paper entitled **obstetrics and the general practitioner.** He believes it is too much the habit of men who see much of midwifery in general practice to believe that the strict rules that are

now observed in hospitals are unnecessary in general practice away from closely populated centers. He believes that all should follow the rules that have been proved absolutely necessary for safe practice. Among the duties of the physician before labor are: (1) Repeated urine examination; (2) the regulation of the daily life of the patient; (3) attention to the breasts; (4) abdominal examination; (5) pelvimetery in primiparæ, and (6) instructions to the woman as to the preparation for the lying-in period. He described the necessary methods of asepsis to be employed by the general practitioner. As few vaginal examinations as possible should be made. He gives directions for the management for the puerperium.

The following officers were elected for the coming year: Chairman, William S. Thayer, of Baltimore; secretary, J. B. McElroy, of Mississippi; delegates, James M. Anders, of Philadelphia, and Charles G. Stockton, of Buffalo.

[J. M. S.]

SECTION ON SURGERY AND ANATOMY.

TUESDAY AFTERNOON, JUNE 10, 1902.

The Chairman, DeForest Willard, of Philadelphia, read an address on **the surgery of tubercular cavities of the lungs.** The procedures which have been proposed for tubercular cavities are, compression either by strapping the chest, injecting air into the pleural cavity, or by resecting a portion of the chest wall; counter-irritation by means of the actual cautery; injections directly into the lung; pneumotomy; and pneumectomy. Of these pneumotomy seems to be the most rational. When the middle and lower lobes are involved, the operation is uniformly successful and even in the presence of mixed infection there is at least a transient improvement in the cough and the general condition of the patient. Chloroform is the best general anesthetic; the operation may be done with a local anesthetic. Two inches of rib are excised, over the diseased area, care being taken not to open the pleural cavity. If there are no pleural adhesions, the second stage of operation should be postponed for 24 hours. Willard proposes to pass sutures through the unopened chest wall down through both layers of the pleura in the form of a parallelogram 24 hours before operation in order to secure adhesions. After the lung has been exposed, the abscess is located with an aspirator and the cavity opened with a knife or cautery; the tract is then dilated with the finger or with forceps and the contents removed with sponges; irrigation is not employed.

F. M. McRae, of Atlanta, Ga., read a paper on the **surgical treatment of pulmonary abscess following lobar pneumonia.** He has been able to collect 75 cases which have been operated upon. He reported 2 of his own cases in which operation was followed by complete recovery in one and in almost complete recovery in the second which is a recent case. The pneumococcus is the organism usually found. Large moist rales, and alternating dulness and tympany over the same area with a metallic sound on auscultation are the most important signs in making a diagnosis. The mortality in the collected cases has been 25%. Too often these cases are regarded as tubercular and are allowed to wait until operation becomes exceedingly perilous.

Horace J. Whitacre, of Cincinnati, read a paper entitled **a contribution to the surgery of the lung as based upon original observations.** He studied 978 cases of tuberculosis of the lung coming to autopsy. No case was free from adhesions. In 28% excision of the tubercular process would have been impossible because of its extensive nature. Pneumotomy is irrational and frequently impossible. It cannot affect the surrounding diseased tissue and the contents of the cavity are innocuous. Of the 978 autopsies in not one was the infection mixed. Caseous material is a poor soil for pyogenic organisms; a patient with cavity formation does not have high fever. The Murphy method of lung compression with nitrogen gas is promising but in only 4% is this method applicable.

Smith, of Hartford, related 3 recoveries after operation for pulmonary abscesses. Mayo, of Rochester, resects at least a portion of 2 ribs and secures adhesions by suturing wet gauze to the pleura at the margins of the opening in the chest wall. If this precaution is taken, the abscess may be opened immediately if necessary. One should be cautious about breaking down bands which stretch across the abscess cavity, as these bands are often naked bloodvessels which bleed vigorously if opened. Gibbons, of Scranton, stated that in the traumatic cases pneumothorax was not as frequent as is generally supposed. He reported a case in which gauze had been packed into the chest for the drainage of an abscess and in which 7 inches of the gauze were later coughed up from the bronchi. Allen, of Cleveland, places the patient on the affected side during the operation to avoid respiratory embarrassment.

Miles F. Porter, of Fort Wayne, Ind., reported a case of **encysted dropsy of the peritoneum, tubercular in character,** with hernia of a portion of the cyst; operation; recovery. The patient was a female, aged 14 years, who presented a right inguinal hernia which on operation was found to contain a portion of a large cyst which occupied the lower third of the abdomen. Porter thinks the percentage of cures of tubercular peritonitis due to operation is overestimated and that the operative cures are not due to one but to several causes, of which light and air are the most important. Tubercular foci should be removed unless there are dense adhesions. Drainage is not indicated except in mixed infection. Ransohoff, of Cincinnati, thought that the value of the X-ray in the treatment of tuberculosis of the peritoneum would be demonstrated in the future. The less the surgeon interferes, the better, after the abdomen has been opened. Halsted, of Chicago, removes tubercular foci and wipes the peritoneum.

Joseph D. Byrant read a paper on **low lateral pharyngotomy for approach to the lower portion of the pharynx, upper portion of the esophagus, and posterior surface of the larynx,** with an illustrative case, in which 5½ inches from the incisor teeth was a tumor which completely obstructed the pharynx. An incision was made in the right side of the neck, the pharynx opened low down and the tumor enucleated, leaving its mucous membrane enveloped. The pharynx was closed with catgut and a small gauze drain introduced into the sac from which the tumor had been enucleated. The tumor measured 1.7x1.5x1.75 inches and was fibrosarcomatous in character. The patient was fed by rectum for several days. Recovery ensued although the mucous sac sloughed. Ransohoff presented an X-ray picture of **a jack stone in the esophagus.**

WEDNESDAY MORNING, JUNE 11, 1902.

A. T. Jonas, of Omaha, Neb., read a paper on [illegible] **with a modified method for the cure of relapsing talipes equinovarus.** Prolonged postoperative treatment in these cases is often unsatisfactory because the patients so frequently neglect the manipulations which they are instructed to carry out. Jonas makes an incision over the inner margin of the plantar fascia and another over the astragalo-cuboid joint. These incisions meet and form a V-shaped flap which goes down to the tendo Achillis. The plantar fascia is divided transversely and the contracted structures are severed after the manner of Phelps. The bursa over the astragalus is extirpated and the neck of the bone severed with a chisel; in some cases a wedge of bone is removed. The tendo Achillis is cut and the foot is corrected and put in a plaster cast for 3 weeks. The patient is then allowed to walk if there is no [illegible] and the wound is not opened.

Wyatt H. Townsend, of New York, read a paper on **the prevention of deformity.** The physician's work embraces the prevention of deformity fully as much as its cure. One half of the deformities seen by the surgeon are preventable.

able, as those from muscular paralysis, chronic joint disease, faulty decubitus during disease, faulty positions of portions of the body; also secondary deformities, as lateral curvature resulting from one shortened lower extremity. A number of simple expedients to prevent deformity were given, such as skin grafting after extensive burns, passive motion in the bedridden, etc.

Sherman, of San Francisco, has abandoned the Phelps operation and divides the bones, ligaments and fascia subcutaneously in most cases. In some cases of flexion after excision of the knee, splints will not prevent deformity. Steele, of St. Louis, said that section of bone was not indicated in children under 4 years of age. In inveterate cases he advocates excision of the astragalus.

Wm. L. Rodman, of Philadelphia, read a paper on **gunshot wounds of cavities; civil side.** He pointed out that gunshot wounds of the thorax, unless fatal within 3 or 4 hours, usually recovered unless there had been meddlesome surgery. In these cases he advises a "masterly inactivity." Three per cent. of the penetrating wounds of the abdomen do not injure the viscera. Diagnostic errors are easily made. Anteroposterior wounds are more favorable than oblique wounds and oblique wounds are more favorable than wounds which run from flank to flank. In 537 unoperated cases the mortality was 50%. In the cases operated upon within the first few hours the mortality is 15%; this death-rate increases in proportion to the remoteness of operation from the time of the infliction of the wound. Fecal extravasation does not occur immediately because of the spasm of the muscular coats of the intestine and because of the eversion of the mucous membrane. Recovery undoubtedly occurs in some penetrating wounds, but perforating wounds more rarely recover. In the upper zone of the abdomen penetrating wounds may not injure the viscera. In civil life laparotomy is the only treatment, the sooner the better. The larger size of the leaden bullet, together with its slower velocity, makes it more likely to carry in clothing and septic material. It makes larger holes in the viscera which are practically certain to be followed by extravasation and death. The septic nature of such wounds makes drainage generally, if not invariably, necessary. The bullet should not be searched for.

McGraw pointed out that, when the anterior abdominal wall is strongly contracted, it almost touches the spine and that, if a wound were to be inflicted with the walls in that position, the viscera would be much more likely to escape injury. Grant, of Denver, thought operation indicated in military as well as in civil life. Oliver, of Cincinnati, claimed that hematemesis did not always indicate perforation of the stomach and that shock alone was of little value from the standpoint of diagnosis or treatment. Roberts, of Philadelphia, called attention to the value of venesection for pulmonary congestion in injuries of the lung and to the fact that shock and hemorrhage were entirely distinct entities. Dawbarn, of New York, stated that the usual treatment of gunshot wounds on the field consisted in the administration of a large dose of morphine.

J. C. Oliver, of Cincinnati, reported a case of **unique foreign body in the stomach.** The patient was a female, aged 10 years, who was seized with abdominal pain after eating persimmons. A large mass could be felt in the epigastrium. After opening the stomach a large mass of seeds, leaves and twigs weighing 4 ounces was removed. Recovery followed.

Jacobson, of Syracuse, also reported a case of an 11 year old girl, from whose stomach he removed a large ball of hair which weighed 15 ounces. He has collected 20 cases. In one half of the cases the diagnosis was made on the operating table and in the other half the diagnosis was made post mortem. In one of the cases the mass of hair weighed 5 pounds. In none of the operated cases did death follow.

F. G. Connel, of Leadville, Col., read a paper on the **diagnosis of intestinal perforation.** There are no pathognomonic signs of perforation except peritonitis which is a late sign. The author has made a number of experiments on dogs to determine the value of injecting air and salt solution into the peritoneal cavity and then examining the air and solution to determine the presence or absence of perforation. If there is no perforation, no ill effects follow; if perforation has occurred, the air or salt solution turns lead acetate black from the presence of sulphur and bleaches blue iodide of starch.

WEDNESDAY AFTERNOON, JUNE 11, 1902.

M. B. Tinker, of Baltimore, presented a résumé of 27 cases of **gall-stones in the common duct** which had been operated upon at the Johns Hopkins Hospital. In one-third of the cases the symptoms were of 10 years or more duration. In less than ¼ the symptoms had persisted for less than 2 years. Cholecystenterostomy is a makeshift at the best; the cystic duct may not be patent. Expression of the stone into the duodenum or bladder is not easy. No cases have been operated upon by the transduodenal route. Crushing of the stone leaves debris. In none of the above methods can it be determined whether or not the ducts are patulous. In 6 of the cases only one stone was found. For the relief of the late desperate cases a rapid cholecystotomy may be made. The method of choice consists in incising the duct, removing the stone, suturing the duct and draining the gall-bladder. This procedure was carried out in 21 of the cases without a death.

A. H. Ferguson, of Chicago, read a paper on the **surgery of the gall-bladder and bile-ducts.** The anatomy of the gall-bladder is fairly constant, the greatest variation being in the arrangement of the arterial supply. There may be an artery running across any of the ducts. The cystic is the smallest, the hepatic duct next in size and the common duct the largest. The cystic duct is spiral and one may not be able to pass a probe through it even though it be normal, but one can always force water or air through an unobstructed duct. Ferguson uses a straight incision along the outer border of the rectus for all operation on the biliary apparatus. In one of his cases he performed a hepatotomy for cholemia. The following subjects were discussed in the papers, malformations and congenital defects, displacements, injuries, cholelithiasis, catarrh, empyema, perforation, gangrene, cholangitis, tumors, hemorrhages, pyloric obstruction, peritonitis, hepatitis, cholemia and suppression of bile, fat necrosis, adhesions, strictures, intestinal obstruction, and biliary fistulæ.

Mayo places a pillow under the back and draws the liver up with a retractor; in some cases it is a good plan to sever the costal cartilages. When the gall-bladder is deeply placed, it may be separated from the liver in order to bring it to the surface of the body. Mayo warns against the extensive separation of adhesions. He places a suture on each side of the stone in the common duct to control the duct after it has been opened. He does not suture the duct but drains by tying a tube in place with catgut. Davis, of Birmingham, does not suture the duct. Ransohoff thinks any surgical condition, which is typical and not indicative of anything else, is almost sure to be gall-stones. The symptoms will never recur if all the stones have been removed. Abbe, of New York, thought it was not necessary to suture the duct and that it might be harmful in that it takes time. He places a purse-string around the tube in the gall-bladder to prevent leakage and does not suture the bladder to the abdominal wall. Weir, of New York, does not suture the duct but drains by siphonage, and places a pellet of methyl blue in the gall-bladder which stains the stools blue in a couple of days if the ducts are patulous. Ferguson has never seen a recurrence of cholelithiasis after operation. He has operated 5 times for cholelithiasis and has failed to find stones; these cases

he thinks are due to angulation of the duct. He does not suture the common duct after choledochotomy.

W. J. Mayo, of Rochester, Min., read a paper on the **surgical aspects of acute pancreatitis and fat necrosis.** The surgical study of inflammatory diseases of the pancreas may be said to be the result of the inquiry into the causation of some of the complications of gall-stone disease. Gall-stones are perhaps the most frequent cause of pancreatitis. Acute pancreatitis and fat necrosis are inseparably connected. Acute hemorrhagic pancreatitis should be treated by combating the shock and, if the patient survive, by drainage. The chronic form should be treated by draining the gall-bladder.

Monroe, of Boston, believes pancreatitis to be more frequent than is generally supposed. He had seen 9 cases in which the diagnosis has been verified, 6 had previous attacks, in 3 a tumor could be felt, in one sugar was found in the urine, gall-stones were present twice, and 2 others had jaundice. Spasm of the upper abdomen is always present. Marcy, of Boston, operated upon one case in which a tumor, presumably malignant, was present. The tumor proved to be an enlarged pancreas. Rixford has seen 3 cases of fat necrosis in association with gall-stones. Estes, of South Bethlehem, spoke of the mistakes one is liable to make in regarding chronic pancreatitis as carcinoma. Stewart, of Philadelphia reported a case of acute pancreatitis which he had operated upon for intestinal obstruction.

J. B. Deaver and G. G. Ross, of Philadelphia, read a **critical review of 416 cases of appendicitis** operated on at the German Hospital during 1901. There were 279 acute cases with a mortality of 15.3%, and 137 chronic cases with a mortality of .7%. Leukocytosis cannot be depended upon, it is often absent in gangrene and in cases which are "walled off"; the "microscopic doctor" is out of place at the bedside. Intestinal obstruction, fecal fistula and secondary abscess were discussed. The danger of delay and the false security due to faith in the ice-bag, opium, purgation, and the interval operation were pointed out. Opening of an abscess without removing the appendix does not cure appendicitis.

Parker Syms, of New York, reports **nine fatal cases of appendicitis.** Five were cases of acute gangrene of the organ, 3 perforated into a peritoneal cavity free from adhesions, and one death followed the opening of a circumscribed abscess. All had had previous attacks. Operation is much safer than any form of expectant treatment. In abscess cases the appendix should not always be removed Opium should never be used except for abdominal shock

Ernest LaPlace, of Philadelphia, read a paper on **anomalies in appendicitis.** The greatest variety of anomalies in the location and shape of the appendix, and in the clinical symptoms of inflammation of that organ occur. The point emphasized was that at no time during the duration of an attack is one sure of the condition of the appendix.

Weir operates in all cases as soon as the diagnosis is made. In one case of amebic dysentery he has used the appendix as an irrigation tube for washing out the colon, the appendix being sutured to the abdominal wall and the end cut off. Abbe stated that when a patient passed through an attack of appendicitis the disease had probably existed for 5, 10 or 20 years and that it never got well of itself. Ochsner claims a mortality of 4% in acute cases; he operates on all cases as soon as the diagnosis is made up until 36 hours after the beginning of the attack; after 36 hours he makes an effort to carry the patient over to an interval operation by lavage, no food and no catbarties. Murphy, of Chicago, claims that the diagnosis is easy and that operation should be performed in all cases as soon as diagnosis is made. Mayo operates immediately and always operates after one attack. By following Ochsner's plan he has lowered his mortality from 15 to less than 4% He does not wait for an interval but in a limited class postpones operation 24 or 48 hours.

THURSDAY MORNING, JUNE 12, 1902.

J. E. Moore, of Minneapolis, reported **three cases of intestinal obstruction by Meckel's diverticulum.**

C. L. Leonard, of Philadelphia, presented a paper on the **symptomatology of renal and ureteral disease,** based on a study of 254 cases of suspected renal or ureteral lithiasis.

E. W. Andrews, of Chicago, read a paper on **infrapubic section for prostatotomy and prostatectomy.** The disadvantage of both the suprapubic and perineal route for prostatectomy is that the urinary tract is opened, making toxemia and some mortality inevitable. Space exists beneath the pubic bone and in front of the urethra through which the prostate can be reached. The penis and spermatic cord are drawn to one side and a portion of the prostatic ring removed from the front of the urethra Some fibers of the levator ani and of the perineal fascia are severed in order to allow the relaxation of the pelvic floor, the retroprostatic pouch becoming abolished by the sinking of the outlet which becomes the lowest point. This operation has been performed three times without a death.

Eugene Fuller, of New York, read a paper on **drainage of extravesical and extraperitoneal suppuration of the male pelvis.** Extracystic extraperitoneal abscess is caused by urinary extravasation, prostatic abscess, cystic abscess laceration of the rectum, suppuration of the inguinal glands, fracture of the pelvis, abscess of the liver; it may follow various abdominal operations. The pus may extend up behind the peritoneum to the kidneys, may infiltrate the scrotum or thighs, may extend along the obturator vessels, may point through the abdominal wall, and may burst into the rectum or bladder. The treatment consists of drainage at the most dependent part.

J. C. Monroe, of Boston, read a paper on **external urethrotomy from the standpoint of the general surgeon.** In cases of stricture in which it is impossible to pass a filiform bougie the bulb is split and the filiform passed through the stricture by the aid of the eye. The mucous membrane of the urethra should be sponged very lightly. The bladder is drained through the urethra by means of a catheter; a sound is passed every 3 or 4 days. In cases of extravasation the introduction of an instrument is fallacious because of existing false passages; it is safer to incise the perineum, find the mucous membrane of the urethra and follow it. Monroe includes a report of 50 cases.

Cabot, of Boston, thought the X-ray diagnosis of renal calculi by no means certain. In the female a ureteral calculus may sometimes be detected by vaginal examination Ochsner said for the detection of renal and ureteral calculi the X-ray had been unsatisfactory in his hands He favors perineal prostatectomy. Moore believes that in the future prostatics will come to operation sooner and that it will be possible to remove the obstruction through the perineum without destroying the [illegible] Murphy removes the prostate through the perineum in one case in which the prostatic urethra was greatly dilated [illegible] portion of the prostatic urethra. Ferguson favors the perineal operation for prostatic [illegible] Mayo stated that in many of the cases in which a nephrotomy failed to locate a calculus, the stone had passed into the ureter Young of Baltimore, lauded the Bottini operation, Fuller, Syms and Monroe thought that the Bottini operation [illegible] over in a short time.

THURSDAY AFTERNOON, JUNE 12.

A. J. Ochsner, of Chicago, read a paper on **essentials in the construction of hospitals for great cities.** [illegible] structure should be based upon important principles relatively new and applicable to great cities. (1) Control of infection alone is of practical importance. Separate small buildings are unnecessary provided [illegible] single compact building divided into small wards. (2) Surface area is much more important than air [illegible]

of 50 feet. (3) High fireproof buildings are as safe as low buildings. Elevators make the handling of patients convenient. (4) Air may be taken from a tower on the roof and by revolving fans supplied to the entire house at slight expense. All of these conditions have been but recently understood. (5) It is wise to have a narrow building with the sunlight on one side in the morning and on the other side in the afternoon. Hospitals can be constructed in convenient parts of cities avoiding the harm which results from carrying some patients great distances to the hospital. Because of the compactness of such hospital it can be conducted at a small expense and more patients can be benefited. The contiguity of the hospital will save much time in going to and fro and will induce men of great ability to perform hospital work to greater advantage.

C. M. Jackson, of Columbia, Mo., read a paper entitled **anatomy for the practitioner.** Post graduate work in anatomy is necessary for the practitioner. The method of acquiring material in the various states was given and methods of preserving and making sections through the entire body for relational study were explained. C. E. Ruth, of Keokuk, Ia., and C. E. Thomson, of Scranton, read papers on the **treatment of fractures of the femoral neck,** the former advocating lateral as well as longitudinal extension, the latter practising retention by means of a plaster-of-Paris cast extending from the foot to the chest.

J. B. Roberts, of Philadelphia, read a paper on the **treatment of fracture of the patella by subcutaneous purse-string suture.** For the first week after injury the knee is placed in a comfortable position and an ice cap applied. After the swelling has been reduced, a silk or chromicized catgut suture is passed around the patella in the horizontal plane without entering the joint. A cast is then applied and the patient allowed to walk about.

W. D. Bullard of New York, read a paper on acquired nonmalignant stricture of the rectum. He believes that syphilis per se is not a cause of stricture of the rectum. Females are more prone to the condition because of the greater liability to trauma during coitus and labor. Trauma, hemorrhoids, labor, abscess, fistula and prolapse are among the most frequent causes of stricture of the rectum. The prophylaxis consists of treating any existing proctitis or ulceration of the rectum. H. L. Taylor, of New York, read a paper on the **surgery of rickets.**

J. Ransohoff, of Cincinnati, reported **two successful operations for brain tumor.** One case is well 9 years after the removal of a gliosarcoma. In the second case a tubercular mass weighing 12 gm. was removed from the right lip and arm center; the patient is still in good health. There have been 18 cases of tubercle of the brain operated upon; 4 are still living.

B. M. Ricketts, of Cincinnati, showed a number of stereopticon pictures illustrating the **experimental surgery of the heart.**

Carl Beck, of New York, read a paper on **fractures of the lower end of the radius.** The paper was illustrated by lantern slides. Beck treats these cases with a plaster-of-Paris splint.

The program for Friday morning, June 13, was as follows: **Traumatic rupture of the abdominal viscera,** by D. N. Eisendrath, of Chicago. **The remote results of the nonsurgical treatment of peritonitis,** by H. D. Niles, of Salt Lake City. **Some clinical observations in intestinal surgery,** by A. M. Vance, of Louisville. **A study of the relative merits of the various methods of intestinal anastomosis,** by R. C. Coffey, of Portland, Ore. **The improvement of general anesthesia on the basis of Schleich's principles, with special reference to anestol,** by W. Meyer, of New York. **One thousand personally conducted cases of ethyl chloride narcosis,** by M. W. Ware, of New York, and **Medullary Narcosis,** by A. W. Morton, of San Francisco.

[F. T. S.]

SECTION ON MATERIA MEDICA, PHARMACY AND THERAPEUTICS.

The work of this Section began on Tuesday, June 10, about 2.30 P. M., with Dr. Geo. F. Butler, of Alma, Mich., in the chair. While the attendance was not large at any time, what was lacking in numerical strength was made up in quality of the communications and the earnestness of the contributors. The chairman, in his address, said that while nothing of a startling character along the lines of materia medica, pharmacy or therapeutics had been evolved during the past year, many thoughtful and valuable contributions to the literature had been made. He touched upon the work of Loeb, of Chicago, but said that no lessons of a practical nature can yet be drawn from it. In speaking of the return to the practice of venesection, he said the underlying principle is the same as that which actuated those who practised it in the early thirties of the past century, viz., an effort to remove poisons, or as we say to-day, toxins, from the body, but we of to-day, in addition, employ hypodermoclysis or infusion of a normal salt solution, in part to replace the fluid removed, but especially to dilute the remaining toxin and to increase elimination. This has been applied to the treatment of delirium tremens and acute confusional insanity with such success as to merit further efforts in the same direction.

The introduction of organic salts of the metals and their use in medicine were next touched upon, especially silver and mercury, and as a result of the finding of iodine in the thyroid gland, the elaboration of a similar remedy to be applied in those conditions in which the thyroid function is believed to be perverted or depressed. The serum treatment of epilepsy, we were told, while seemingly of value, should be judged with great caution, for as is well known, almost any remedy for epilepsy may act favorably for a while after it is instituted, but the effect is not permanent. Then too, some cases improve spontaneously, so that months, even years, may intervene between attacks, and, finally, insufficient time has elapsed to judge of the permanency of the apparent amelioration or cure of cases treated by the serum. Borax, at one time highly vaunted in the treatment of epilepsy, is falling into disrepute both as a remedy, and because of its pernicious effect on the gastro-intestinal canal, liver and kidney. Dr. Butler spoke of the modern tendency to belittle the place of therapeutics. He especially deplored the attitude of the Germans, who seem to regard the patient as an appendage of the disease, and only await the autopsy to confirm the diagnosis. With them, treatment plays a minor part. He said there was a dangerous undercurrent of a similar kind in this country. Notwithstanding the fact that treatment in some form or other constituted the work of surgeons, they were given to scouting the value of medical treatment. He thought that one reason for this same frame of mind on the part of the medical student was due, first, to the immediate effect made upon him by surgical procedures, and secondly, the fact that the teaching fails to dwell with sufficient force on the value of any and every measure designed to procure the recovery of a patient.

He added that the ultimate object of all work along medical and mechanical lines is the cure of the patient, the restoration of health, and therefore, the work of this section should occupy a prominent position in the consideration. Therapeutics make medicine an art, and by it only can the art be maintained. He next referred to the employment of drugs as diagnostic measures, quoting a paper of Dr. Edwards, on the use of drugs in diagnosis, mentioning particularly atropine in ophthalmic practice, colchicum and the iodides in gout, quinine in malaria, salicylic acid in rheumatism, salol for the determination of the motor power of the stomach, thyroid gland in cretinism and thymol in ankylostomiasis. He said too much should not be expected of drugs, however. They do not constitute the sole armamentarium of the physician. Among other measures he dwelt especially upon water, used as a depurative and externally, also massage and electricity. The plan of suggestion in therapeutics was also touched upon.

Dr. Warren B. Hill, of Milwaukee, Wis., in a paper entitled **The place and importance in the college curriculum of materia medica,** said that the tendency of modern medicine was away from therapeutics based on materia medica. Notwithstanding the fact that 95% of the time of all prac-

tising physicians is devoted to the treatment of disease, especially by means of drugs. Modern text-books of medicine devote very little attention to the subject of treatment. He spoke of the greater interest manifested by students in surgical than in medical clinics, and thought it due to the immediate results of surgical procedures, though the whole system is built on a therapeutic basis. The best method of cure is the all-important factor to be kept in view. He thought much of the later skepticism is due to early and excessive credulity. To combat this he urged that a more prominent place be given from the beginning to the limitations of remedial measures, and that a thorough systematic training be given in physiology, functional pathology and pharmacodynamics. The importance of materia medica demands that it be given a place in the college curriculum equal to physiology or pathology, and, that with pharmacy and therapeutics, study in these should extend over the entire four years' course.

The chairman asked that the next two papers dealing with the above be read before and discussion be entered upon. In the absence of Dr. Jacob Allen Patton, Chicago, his paper **The place and importance in the college curriculum of pharmacy,** was read by title only.

Dr. Hobart A. Hare, of Philadelphia, **The place and importance in college curriculum of therapeutics,** apologized for his failure to prepare a formal paper, pleading lack of time, and made his remarks extemporaneously. He promised to place his paper in the hands of the secretary in the near future. After expressing his belief in the practical importance of the subject, he went on to outline the course he gives to the student at the Jefferson Medical College.

During the first year he endeavors to make them familiar with the crude drugs, including enough botany to impart an intelligent appreciation of the subject, also a study of the metals and salts employed in medicine, officinal and inofficinal names, also a study of the pharmacy of drugs. During the second year, along with the students' work in physiology, physiological therapeutics is taken up.

In the third year the application of drugs is considered, basing their employment on their physiological action, and, where possible, citing clinical instances of their use, which he terms "special therapeutics," which includes the application of heat and cold, climatic treatment, the use of electricity, and on the alternate day he holds "therapeutic conferences," a lesson having been previously appointed upon which he holds a quiz. He uses the stereopticon in teaching, showing the nature of the lesion to be treated, and explaining the remedy to be employed. Some valuable lessons may be learned in this way; for instance, after showing a consolidated pneumonic lung, it is not difficult to impress on the student the futility of using expectorants, as ipecac or ammonia, with the hope of expelling it. Such a plea would seem to conduce to thoughtfulness and added care on the part of the student.

Dr. Hare advocated the study of materia medica and therapeutics during the entire 4 years' course. He spoke of the abuse of drugs so commonly seen on the part of practitioners, and thought it primarily due to the unimportant place given the subject in most college curricula, and the tendency of faculties to belittle it. Dr. Hill had said he believed better results would be obtained by limiting the teaching to a few important and most frequently employed drugs of each class, going over them most thoroughly, but Dr. Hare objected to this, because it would likely militate against a candidate before the State Examining Board. He mentioned the deplorable state of many of our State boards, both as to the part played by politics and largely in consequence thereof, the unfitness of many of the examiners.

In the discussion Dr. LeFebre, of Bellevue Hospital Medical College, said he adopted practically the same course as Dr. Hare in his class work.

Dr. Baer, of Chicago, said that students should be urged to spend some time in a drug store as a practical acquaintance of great value could be gained in a short time, and in no other way could this be done. Among others who discussed the papers were Dr. Frances Dickerson, of Chicago; Dr. Robinson, of New York; Dr. Long, of Buffalo; H. C. Wood, Jr., of Philadelphia, Dr. Slack, of Georgia; Solis Cohen, of Philadelphia. Dr. Hill, in closing, said the classification of remedies should be on a pharmacodynamic physiological standpoint, and not on a therapeutic basis though he said such an arrangement was far from perfect, but believed it would yield the best results.

The paper of Joseph P. Remington, of Philadelphia, **The U. S. Pharmacopeia of 1900; its importance to practitioners,** was read by title, as was that of Frank W. Jay, of [illegible] **The goat in the ancient and modern medicine and therapy,** both authors being absent.

WEDNESDAY MORNING, JUNE 11.

The paper of Leon L. Solomon, Louisville, Ky., **The relative toxicity of brucine and strychnine,** had not been received. The secretary, Dr. Hallberg, said that some of the papers may have been incinerated in the recent fire which destroyed the post-office at Saratoga. The chairman suggested that the secretary communicate with the authors relative thereto.

Dr. Albert B. Lyons, of Detroit, in his paper, **The mydriatic drugs; their chemistry and active principles; the tropeins,** spoke especially of the impurity of the mydriatics. Plants of the several genera, atropia, datura, hyoscyamus, mandragora, socopola and duboisia all belonging to the natural order solanoceæ, contain certain alkaloids closely related chemically, characterized by their power to dilate the pupil of the eye. These alkaloids are called tropeins. Among these the most important are hyoscyamine and atropine, isomeric, and hyoscine and atroscine, also isomeric. Hyoscyamus is the most widely distributed of the bases, among the order. It is easily converted into atropine, so that, in the ordinary preparations, more or less of a mixture of these exists. He said that any standard based on a determination of the total alkaloid in the drug, is in the light of present knowledge unsatisfactory. Chemists are not a unit as to the nomenclature of these alkaloids. Some of them in their behavior and chemical composition are practically identical.

H. C. Wood, Jr., of Philadelphia, contributed a paper on **The physiologic action of mydriatic alkaloids.** For the sake of brevity he considered only those belonging to the tropeins, atropine and hyoscyamine being closely related as are hyoscine and scopolamine. Natural mydriatrics are divisible physiologically into 3 groups, represented by atropine, hyoscine and cocaine. In their action on the eye they dilate the pupil and paralyze accommodation. This is accomplished by stimulation of the dilators or paralysis of the sphincter muscles of the iris. That they do not act centrally is proved by their failure to affect the opposite eye when instilled into one eye, and the fact that their action is exhibited in an eye just removed from the body. The action therefore is peripheral, either on the nerves or muscles.

The action of the tropeins on the higher nerve centres was then considered, also their action on the cardiovascular system. He next considered hyoscine and scopolamine, questioning their identity as is asserted by some. He said he believed there were two different alkaloids, but that the commercial product usually sold in scopolamine and not hyoscine. Both chemical and physiological evidence of their difference exists. He spoke of the uncertain action of hyoscine and said it was due to the fact that the product sold under that name is a mixture and not a pure alkaloid.

With reference to the paper of Chas. A. Oliver, of Philadelphia, **The mydriatic drugs and their active principles,** the chairman stated that the author was unable to be present owing to illness in his family, and while it is a law of the Section that no paper be read in the absence of the author this can be overruled by a majority vote of the members. Owing to the interest of the subject Dr. Blair, of Chicago, moved that the paper be read. This was carried and the secretary read a summary of the paper. In the discussion Dr. Blair of Chicago said he knew of [illegible] cases of drugs which were given patients for years, when [illegible] Dr. Remington of New York spoke of the [illegible] of solutions for [illegible] work. He said the best vehicle for keeping the solution [illegible] was diluting as needed. In this way they [illegible] In closing the discussion Dr. Lyons expressed [illegible] he [illegible] as he felt sure that [illegible] were [illegible] a pure preparation. Dr. Wood said he was in the habit [illegible] a solution of [illegible] such a solution which had been standing [illegible] months gave him [illegible] that he [illegible] a fresh solution from the same [illegible]

the powdered drug, like solutions, is unstable, or what is more likely, that the manufacturers do not supply precisely what is called for.

AFTERNOON SESSION, WEDNESDAY, JUNE 11.

Dr. Jos. M. Patton, of Chicago, in his paper on **The cardiac stimulants,** described a group of drugs which exercise both a tonic and stimulant action upon the heart. He dealt especially with digitalis, strophanthus, sparteine, caffeine and strychnine. The great indication for their use being insufficiency of the heart muscle, irrespective of any valvular lesion. Digitalis is the most important of the group. It is generally contraindicated in the following intrinsic cardiac conditions, viz., mitral stenosis, aortic disease and myocardial disease. In mitral regurgitation alone especially, or even when combined with stenosis, it is of value, as it often is in double aortic disease, but in the latter only in the early stages. Acute myocardial degeneration as a rule precludes its use, but in chronic myocardial inflammation and degeneration, it may be employed with caution. In the senile heart, small and prolonged dosage is beneficial. Digitalin was favorably mentioned, as Beates had suggested, in larger doses than are usually employed. The advantage of combinations with vasodilators, especially nitroglycerine and sodium nitrite was referred to. Intolerance of digitalis or too large doses are apt to product dizziness, faintness and irregular heart action. As to the cumulative action of the drug, the writer said he had never seen it and believed that its toxic effect was overestimated.

Digitoxine was referred to as the most poisonous as well as the most powereful of the alkaloids. Merck's digitaline was mentioned as a safe, reliable form, probably the best in which to use the drug, giving 1/12 to 1/8 grains to the dose. Jacoby says children bear relatively larger doses than adults.

Strophanthus is not to be depended upon in muscle failure to the extent that digitalis is. It is of value prabably in mitral stenosis with dilatation and weakening of the auricular wall. The tincture is the best form in which to use it.

Sparteine is of value in nervous irritability and in myocardial weakness or disease following infectious fevers. Most valuable when prolonged use is indicated. It is rapid in action, and in urgent cases could be employed for its prompt effects, digitalis being given if necessary. Dose of the sulphate ½ to 2 grains. Caffeine is of value as a stimulant diuretic in nephritis.

Strychnine ranks next to digitalis in its range of usefulness. It can be used in any lesion at any stage. Brunton says strychnine may have some cumulative action by contracting the arterioles and thus hindering elimination. It is adapted to the treatment of senile lesions. It is less well borne in the young than in later adult life.

Canadian hemp and suprarenal glands were spoken of, but in the author's opinion were of little value in the condition herein considered, though according to Forchheimer adrenal extract seems to have a tonic action on the heart muscle.

In the discussion of the above Dr. Beates, of Philadelphia, said the loss of circulatory equilibrium, no matter how induced, was the signal for the employment of this group of drugs, and frequently in large doses. Referring to digitalis he said it contains about 9 different principles of various action and solubilities. Hence the varying results observed when the whole drug is employed. He prefers either the digitaline Germanic Merck or the infusion; this latter contains both digitaline and digitonine, the former having a stimulant, the latter a sedative action. Dr. Robinson, of New York, endorsed all that had been said about digitaline, but regretted that camphor had not been mentioned in the paper, for it is a very valuable member of this class. It may be given hypodermically dissolved in oil. As to suprarenal extract in chronic cardiac conditions, he thought its use absurd. Its action is very evanescent. It might be used as a temporary stimulant. Dr. Heinrich Stern, of New York, asked whether adonis vernalis had been used by Dr. Patton. He said he had found adonidine valuable in cases in which digitalis could not be used. Dr. H. C. Wood, Jr., of Philadelphia, insisted on the fact that heart failure means circulatory failure and not solely cardiac incompetency. He said one of the greatest stimulants to the heart is increased pripheral resistance. This in part at least, explains the beneficient action of both digitalis and strychnine. He expressed his belief in the wide value of digitalis and did not believe acute endocarditis necessarily contraindicated its use. Adrenal extract has a very slight action on the heart. It has a stronger influence on the nervous circulatory apparatus. Dr. Solis Cohen, of Philadelphia, said that the profession owe Dr. Beates a debt of gratitude for his work on digitaline Germanic Merck, and he is in entire accord with the opinion expressed by previous speakers, that the dosage generally is too small. He spoke of the value of camphor and musk as "quick spurs," but for sustained action, he placed great reliance in strychnine. He believes suprarenal extract to be of value in some cases, and reported a case of Stokes-Adams' disease in which he had advantageously employed it. The tension and strength of the pulse were promptly improved, but the benefit was not sustained. He admitted that in most cardiac cases it is valueless. When giving it he prefers to have the patient dissolve it slowly in the mouth.

Dr. W. W. Thompson, of Georgia, spoke of the value of the infusion of digitalis as a diuretic. He said it is often advisable to combine it with some other remedy, but that every case must be studied and treated individually. No general rule can be formulated, appliable to every case.

After some observations of Dr. Hallberg as to the value of this group of remedies, Dr. Patton closed the discussion by voicing the general sentiment in thanking Dr. Beates for his work in this field. He also said he had employed adonis vernalis, but that his results were not so pronounced as those quoted by Dr. Stern.

Dr. L. Faugeres Bishop, of New York, read a paper on **The cardiac sedatives,** in which he spoke of their indications and mode of employment. In acute inflammatory conditions and in any excessive cardiac action, no matter what its cause, they may be employed, but that they are so complicated in action, and their power of decreasing the activity of the circulation is so mixed with other properties, that these drugs are among the most difficult to use, and are worthy of closest attention. They are less used than formerly, as newer and safer measures have replaced them, for instance, some of the antipyretics. He spoke too of the value of the Nauheim treatment in this connection and its special value in restoring a balance of the circulatory phenomena. Among the various members of this group he mentioned tartar emetic, aconite and veratrum viride especially. Aconite reduced the force and frequency of the heart, and is said to be the most definite cardiac depressant in therapeutic use. Its action is only temporary and leaves no bad after-effects. It should be given in small, frequently repeated doses. Veratrum viride was said by the writer to be a more dangerous and more powerful drug than aconite. He concluded by saying that he believed rest in bed, nerve sedatives, cold locally and a restricted diet, as more satisfactory measures than the exhibition of those drugs known as cardiac depressants. Dr. Beates, of Philadelphia, in discussing the paper, said that he was forced to differ with the reader in his conclusion as to the relative value of aconite and veratrum viride. Syncope may result from the use of either of them, but in the case of aconite it is fatal, as aconite acts directly on the heart. Not so with veratrum viride, however, for that acts on the vessels and not on the heart muscle. Dr. Robinson, of New York, endorsed all that Dr. Beates had said with reference to veratrum viride, which he regarded as a most safe remedy, quoting a recent monograph by an Italian in support of his contention. Recovery from its effects is very prompt.

Dr. Solis Cohen, of Philadelphia, said that aconite is a distinct depressant and not a cardiac sedative. He spoke of the indication for the use of sedatives in Graves's disease.

Dr. Bishop, in closing, said that he had had no personal experience with veratrum viride, his remarks relative thereto being based solely on an article he had read, but expressed his pleasure in having learned what he believed would prove a valuable lesson, by the discussion.

Pneumonia, venesection and counterirritation, was the title of a paper read by Dr. James Tyson, of Philadelphia. He said there are two periods in which venesection may be of service in the treatment of pneumonia: in the first stage, when pain and dyspnea may be relieved thereby, and in the advanced stage, when cyanosis and overdistension of the right heart threaten the life of the patient.

Bloodletting is often of value, too, in pleural affections. Dr. Tyson said wet cupping would frequently be found preferable to venesection. The abstraction of blood gave the best results when followed by hypodermoclysis of normal salt solution. The toxins are dissolved and diluted thereby and are more readily eliminated. He thinks it advisable first to abstract the blood, else may the vascular system be surcharged. The inhalation of oxygen is a valuable practice and should be associated with the above. Blistering is of little value, often none at all. Counter-irritation is sometimes serviceable in delayed resolution.

Dr. Wells, of Chicago, in the discussion said that, though other reasons may justify the practice of venesection in pneumonia, he believed that by it a powerful toxin is removed, and that this furnished the most valid reason.

Dr. Solis Cohen, of Philadelphia, expressed his belief in the measures mentioned in the order in which he found them to be most useful, viz., saline infusion, oxygen and lastly, venesection. He said large amounts of fluid were not necessary in saline infusion, indeed, he thought better results follow if small amounts are introduced slowly. The improvement which follows hypodermoclysis and venesection, though the physical signs remain, shows that the poison has been diluted or removed or both. If now oxygen be administered, the tax on the corpuscular elements is lessened and a large amount of "pure air" furnished them than would be possible in any other way. Dr. Beates, of Philadelphia, merely referred to the order in which the measures mentioned were valued by various observers.

Dr. Thompson, of West Virginia, said he believed that venesection should be practised in sthenic cases only.

In closing the discussion, Dr. Tyson heartily concurred in the opinion expressed by Dr. Cohen as to the method of practising hypodermoclysis.

Dr. Arthur A. Stevens, of Philadelphia, read an interesting paper on **Pneumonia; its drug treatment.** He spoke of the dual nature of the disease, the fact that it may be a primary disease, or merely the local expression of some other malady. The limitations of drug therapy were then considered. In most cases really no medication is necessary. Antipneumotoxin he considered as practically of no value, nor did he attribute any specific value to saline infusion. Camphor, on the other hand, he values highly. The ammonia products may be employed, but should be used guardedly as they are prone to produce gastric disturbance. In short, symptomatic treatment is the only way open to us. Each case should be carefully studied from the standpoint of toxemia, the condition of the circulation, and the existence of any associated organic disease. Oxygen is always of value. It is usually necessary to stimulate the patient immediately following the crisis. The treatment of delayed resolution was then considered. Discussion: Dr. Robinson, of New York, said that pneumonia is not a distinct entity in the sense that typhoid fever is, but that it represented any one of a number of infections due to as many different kinds of germs, hence his belief in the absolute futility of antipneumotoxin. Dr. Wells of Chicago, said that in his opinion, many published groups of cases were simply put forth to bolster up some special plan of treatment. His experience differed from that of Dr. Stevens in that he had found the young and robust to die suddenly and unexpectedly, more frequently than those of sickly and delicate constitution. He differed also from Dr. Robinson in believing that croupous pneumonia is a specific disease. That toxins undoubtedly exist is shown by the fact that a rapid increase of leukocytes takes place, being manifest within an hour or two of the time of the initial chill.

Dr. H. C. Wood, Jr., of Philadelphia, said he could not help feeling that some material advance had been made in the treatment of the disease, but that as yet, no specific was known. Dr. Patton coincided with Dr. Wood and then spoke of delayed resolution in which case he said it was his practice to irritate the lung surface of the area involved, by means of a hypodermic needle. Dr. T. F. Reilly, of New York, expressed his belief that the integrity of the kidney has something to do with the recovery of the patient, and in his opinion the chief efficacy of the saline infusion lies in its ability to render the renal function more active. Dr. Lyons, of Detroit, mentioned the use of glycerine preparations externally. Dr. Briggs, of New Jersey, said at best the treatment must be symptomatic and expectant, and deplored the lack of a specific. Drs. Thompson, of Georgia, and Beates, of Philadelphia, continued, and in response to the latter, Dr. Wells, of Chicago, said he had found the leukocytosis of pneumonia to be of the polymorphonuclear variety with diminution or absence of eosinophiles. In closing Dr. Stevens said that he was surprised to learn that Dr. Wells' experience with the class of patients dying of the disease was counter to that of the majority of authorities and his own. He said too much stress was laid on the influence of the condition of the right ventricle in pneumonia, believing that both sides were involved. He had found hypoleukocytosis of some prognostic value, only one such case among a number having recovered. In the absence of Dr. Gustav Fütterer, of Chicago, his paper on **Wintergreen oil in constitutional states,** was read by title. Dr. W. Byron Coakley, of Chicago, presented as his subject **intra-organic treatment of the pneumonic lung,** an experimental study of the influence of high per centage saline solutions when injected into the body, upon bacteria resident in the tissues or blood. He demonstrated the instrument which he employs.

The paper was discussed by Dr. McPherson, of Leroy, N. Y.

THURSDAY, JUNE 12, MORNING SESSION

The first paper was by Dr. Heinrich Stern, of New York, on **Glycosuric symptom of disease and its medicinal treatment.** He insisted on glycosuria as a symptom merely, of some underlying trouble, and reviewed the therapeutics from the etiological standpoint. Discussion: Dr. Thompson, of Georgia, said he had never met with a case of diabetes in a negro, though they are notoriously prone to syphilis. This is strange when one considers that their diet and mode of living is quite similar to that of the whites.

Dr. H. C. Wood, Jr., of Philadelphia, said that methylene blue had not been mentioned in the treatment of glycosuria. He had used it with apparent benefit in a negro. He asked whether there was any variation in the production of sugar depending on the form of carbohydrate ingested. The Germans, for instance, speak of the possible admission of potatoes to the dietary, while bread they regard as harmful.

Dr. J. C. DeVisme, of Harrisburg, Pa., asked whether Dr. Stern had used ergot. He said it had been spoken of as [illegible] at the climacteric, at which time women are prone to develop the disease. Has it any influence?

Dr. Slack spoke of the influence of potatoes on the disease in connection with a case which he had seen in Johns Hopkins Hospital. Potatoes did not increase the sugar in the urine nearly to the extent that bread did. For instance 400 grams of bread yielded 390 grains of sugar, while 800 grams of potato gave only 90 of sugar.

Dr. Robinson, of New York, said diabetes and rheumatism are 2 imperfectly understood diseases. The value of potatoes he thought to be [illegible] in the potassium salts they [illegible]. After some rewarks by Dr. Lyons on the possible value of a proprietary remedy which he believed to contain one of the myrtaceæ. The discussion was closed by Dr. Stern. He said his paper was evidently misapprehended as he was not considering diabetes but merely of glycosuria, and he said in [illegible] of such cases the cause can be discovered and appropriate treatment instituted. He said, in answer to Dr. Thompson, that 15 deaths from diabetes in negroes had been reported to the Health Office of New York City in 11 years. The case of diabetes associated with Graves's disease which he reported before one of the other Sections occurred in a negress. He did not speak of methylene blue, as he could not give any definite facts relative thereto. It is not generally employed. Potassium salts are of little if any value so that would fail to explain the preference for potatoes among the carbohydrates. He believed it was merely because potatoes contain such an enormous amount of water and relatively little carbohydrate, that they produce less harm than bread, for instance.

Dr. Albert B. Lyons, of Detroit, read a paper on **Some new sugar tests.** Among the various tests mentioned were methylene blue, litmus, Idro safranin, picric acid, potassium ferricyanide, phenylhydrazine test and the fermentation test. He said he always begins an examination by employing the picric acid test, getting a rough estimate which is approximately quantitative. It is easy of application too. The copper test is delicate but reduction may occur from so many other urinary constituents as largely

to render its value negative. Of these the most important are uric acid and creatinine. He spoke very favorably of the phenylhydrazine test, but said it is necessary first to rid the urine of uric acid and phosphates. He next discussed the fermentation test and its fallacies, and showed an instrument of simple construction and at the same time inexpensive, which he had devised to overcome them. He mentioned the saccharometer, but granted that it was of little practical use to the physician and then touched on fallacies of the several sugar tests depending on the remedies the patient may be using.

Dr. Stern, in discussing the paper, said he did not place any dependence in the phenylhydrazine test, as it reacts equally well with glycouronic acid and the osazones. He spoke of an apparatus of his own device, for applying the fermentation test. Dr. Lyons closed the discussion.

The paper of Dr. Wm. L. Brown, of Chicago, had not been received. That of Dr. J. Moore Soniat, of New Orleans, **Alcoholics in therapy,** was read by title. The papers of Dr. Geo. H. Fish, of Saratoga Springs, and Jas. G. Kiernan, of Chicago, not having been received, they were believed to have been destroyed in the Saratoga fire. Dr. S. N. Hallberg, of Chicago, read a paper on **The external preparations and their therapy,** grouping them from a therapeutic standpoint. Various ointments, cerates, suppositories, plasters, oleates, collodion, liniments and surgical dressings and the newer dermatological preparations were considered. The paper was discussed by Dr. Baer, of Chicago.

[W. E. R.]

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

TUESDAY AFTERNOON, JUNE 10, 1902.

The Chairman, J. H. Carstens, of Detroit, called the meeting to order and delivered his address on **"What of the Future?"** He stated that the mooted questions in obstetrics had been settled. The spirit of conservatism is growing, and to-day the surgeon preserves as much of the pelvic structures as he can. It will not be long before all disputed points will be settled and then but few papers will be reported. We have already nearly reached this point. A serious question is that of sterility and the diminishing fecundity of American women. He believes that improper attention to the growing girl causes ultimate disease. These delicate young girls should not be exposed to the severe mental strain of the customary courses in schools and colleges. Prostitution and sterility of the male are responsible for a large percentage of the so-called sterility of women. A proper mode of living and eating is all that is needed in many of the simpler gynecological cases. In other words, more physiology is required and less medicine and surgery.

A. Goldspohn, of Chicago, read a paper on **the permanent and harmless results that should constitute the normal minimum requirement of surgical treatment of complicated but aseptic retroversion of the uterus in fruitful women, and by what methods they are best obtained.** He remarked that retrodisplacement is never a fatal condition. Many cases are not even attended by symptoms. Death never results, primarily nor ultimately, from its presence. Therefore the reason why some of the surgical procedures which have been adopted to correct this condition should be abandoned. A mortality exists with some; the operations of ventrofixation, vaginal fixation and ventrosuspension of the uterus by artificial ligaments often are followed by complications in labor and pregnancy or by strangulation of intestinal loops. They should therefore be abandoned. The only proper question now is how to best use the round ligaments if the most ideal results are desired. These ligaments may be shortened through the median, ventral and vaginal incisions only by reduplication or by transplantation of their strongest median portions, while their weakest distal portions remain as weak as ever. This gross inconsistency is avoided and an anatomically correct shortening of these structures is secured only from the inguinal canals from without. These canals and the internal abdominal rings admit of ample access, without cutting, for a finger to liberate all adhesions and to lead out the adnexæ for reconstructive treatment or for partial removal. Hernia does not follow such an operation if the wound be closed properly. Goldspohn has performed over 200 such operations with absolute success. He claims that the Alexander operation is the only one that has successfully stood the double test of pregnancy in nearly 100% of the 80 cases examined by various operators after a subsequent labor. There was practically no recurrence of retroversion among these cases.

J. W. Bovee, of Washington, read a paper on **the surgical treatment of uterosacral ligaments through the vagina in retroversion of the uterus.** He believes that the round ligaments play an insignificant part in holding the uterus in place, and believes that the most efficient ligaments are the uterosacral. He made a brief reference to the various other procedures for the correction of retrodisplacements of the uterus and called attention to the inefficiency of many popular operations for the relief of this condition and gave the reasons for their failure. He proposes shortening of the uterosacral ligaments through the vaginal vault as the most efficient method of correcting the displacement. Eighty-three such operations have been reported by other operators, to which he adds 7 performed by himself, the entire 90 being successful. His technique is as follows: The patient is placed in the lithotomy or in the lateral position, and an anteroposterior incision is made in the posterior vaginal fornix through all the tissues except the peritoneum. The ligaments are then dissected out and brought into the vagina. A ligature is passed over each and a loop is formed. The vaginal wound is closed transversely by means of absorbable kangaroo tendon sutures. In the discussion on these two papers Kolischer, of Chicago, stated that we know nothing whatever of the supports of the uterus. He claims that the uterosacral operation of Wertheim gives unsatisfactory results. Goffe, of New York, holds that the ligaments are the true and only supports of the uterus, and these ligaments involute after parturition just as well as the uterus. The suspension-band of ventrosuspension, because of its tissue, cannot involute. Therefore the Alexander operation is the best operation devised for the cure of displacement. The function of the round ligaments is to limit the excursion of the uterus in pregnancy and in distension of the bladder. The uterosacral ligaments are the ideal ones to operate on. He has done 3 such cases during the past winter. Goelet, of New York, believes that ventral suspension has a wider range of application than any other method. Shortening of the round ligaments draws the uterus out of the pelvis just as much as does ventral suspension. It is also difficult to decide when adhesions exist.

A. J. Downes, of Philadelphia, in his paper on **electrothermic hemostasis** gave a résumé of his previous paper on this subject, together with the list of operations performed by this method. He claimed that he had practically bloodless hysterectomies and that there were special and logical claims for its use in uterine cancer, salpingitis and extrauterine pregnancy operations. Its ideal use lay in the occlusion and exclusion of the infectious canal of the appendix. After its use there were no postoperative raw surfaces and hence no adhesions formed. Hemorrhoids may be readily and cleanly removed. Downes described some additional improvements in his instruments.

WEDNESDAY MORNING, JUNE 11.

C. C. Frederick, of Buffalo, presented a paper on **high amputation of the cervix versus hysterectomy for operable carcinoma of the cervix.** In speaking of the diagnosis of cancer he stated that squamous-celled carcinoma bleeds earlier than does adenocarcinoma, and is therefore met with earlier. He remarked that the results of hysterectomy for carcinoma of the cervix are not what the writings of some enthusiasts would lead us to expect. Only a very small percentage of these cases is cured. Relapse in the vaginal scar is the rule. McMonigle, of San Francisco, in a letter just received by Frederick, stated that he had performed 482 hysterectomies for cancer with 9 primary deaths and 471 recurrences. Amputation of the cervix at or above the internal os is much simpler and less dangerous. The results as to relapse are as favorable as hysterectomy; the peritoneum is not open; the period of relief is as long; the patient is able to be up in a shorter period; the shock of operation is less. Frederick urges high amputation of the cervix in operable carcinoma of the cervix as a substitute for hysterectomy. In 26 cases operated upon by him he

performed 14 hysterectomies and 12 high amputations; of the former all are dead or have had recurrence save one; of the latter, no recurrence is recorded as yet.

E. W. Cushing, of Boston, read upon **the operation for recurrence of cancer after hysterectomy.** He claimed that early diagnosis in radical operation gave better results than were formerly secured. The successful cases are those in which all involved lymphatics are removed, and no infection of the wound occurs at the time of operation. All cases should be observed for years. If there is a recurrence a radical operation should be performed through an abdominal incision. He reports one case so operated upon.

In the discussion on these two papers Montgomery, Philadelphia, said that he preferred to remove the entire organ. It is true that in a great majority of cases the disease returned in the cicatrix or in the vagina. The cases beginning in the columnar cells of the cervical canal are those which spread the most rapidly and give the largest number of recurrences. Noble, of Philadelphia, stated that 20% of his cases of cervical cancer remained free from recurrence for 5 years. He thinks that we can save 10% of the cases at present and that we can improve on this in the future. Early operation gives a high percentage of cures. The later cases give a higher primary mortality and a greater percentage of recurrences.

Humiston, of Cleveland, states that there is not one case alive to-day on whom he had performed radical operation for cancer of the cervix in the last 14 years. When the trinity of symptoms, pain, discharge and hemorrhage, are present, the prognosis is bad. None of his patients died from the operation. He would examine a suspicious cervix microscopically. Operation for malignant disease of the body of the uterus has given good results. Dunning, of Indianapolis, has had 2 patients recently with recurrence 6 and 7 years after operation. From 10% to 15% of the cases recover after hysterectomy. High amputation at the cervix is not an operation without mortality. Schroeder had a mortality of 8½%. The uterine appendages become diseased within 6 months and in order to give absolute relief these should be removed. Kolischer, of Chicago, would distinguish between cancer beginning in the portio vaginalis and cancer in the higher portion. There are 2 kinds of recurrences, one that is due to reinoculation from faulty technique, and the other which is due to development of the disease from cancer-cells that are left. In 150 cases of inoperable carcinoma, the bladder was involved in only 15 cases. He would prefer hysterectomy, first, because cancer of the cervix and cancer of the body may co-exist; second, the tubes and ovaries may become infected; third, there is greater danger of infecting the surrounding tissue during the removal of the cervix by high amputation. Winckel's statistics show that from 5% to 15% were without recurrence in 5 years. About 8% may be absolutely cured. Marcy, of Boston, has long abandoned the high operation. He would remove as thoroughly as possible the uterus and the circumferential tissues.

WEDNESDAY AFTERNOON.

Kolischer, of Chicago, read a paper on **deflected presentation in labor.** He stated that the normal presentation is the occiput and not the vertex. After defining deflection in labor, he gave its causes and the mechanism of rotation under the circumstances. He described anterior vertex, brow and face presentations with their complications and the preventive measures. If possible, under all circumstances, these deviated presentations should be transformed into occipital presentations. He recommended forceps in anterior vertex and in brow and face presentation. These failing, craniotomy should be performed if the child be dead, and symphysiotomy if the child be living.

C. S. Bacon, of Chicago, read a paper on **massage and exercise in the management of the puerperium.** He stated that rest in bed from 2 to 4 weeks after labor was generally desirable in order to recuperate from the exhaustion of pregnancy in labor. The maintenance of the horizontal position is especially necessary in patients with poor muscular development on account of the danger of the development of splanchnoptosis and other visceral displacements. The objections to the bed are that the muscular system becomes weakened, the circulation poor and the secretion and excretions impaired. In order to overcome these objections and retain the advantages of the bed, systematic exercises and massage are desirable. Bacon described the various exercises of the arms, legs, thighs and abdominal muscles by voluntary and resisted movements and by the use of appropriate apparatus. He also prescribed massage of the extremities, back and abdomen.

X. O. Werder, of Pittsburg, read a paper entitled a **contribution to ureteral surgery with a report of 4 cases, including a new operation for double ureterovaginal fistula.** He stated that in an experience of over 150 abdominal sections performed by him, injuries to the ureters occurred 4 times, twice in malignant tumors, and twice accidentally. Three of these accidents were followed by immediate implantation of the ureter into the bladder, two of which proved successful. In the third case, however, in which both ureters had been cut, there was a urinary discharge from the vagina on the fifth day, and on the sixth day all the urine passed away *per vaginam*, the bladder remaining perfectly empty. By a novel procedure, differing essentially from the older operation of kolpokleisis, the upper portion of the vagina was converted into a diverticulum of the bladder with a complete cure. This operation, he claims, might be termed a cystokolpostomy.

H. A. Kelly, of Baltimore, presented a paper on **stricture of the ureter.** He stated that stricture of the ureter may be congenital, inflammatory or neoplastic. For practical purposes the strictures commonly met with and amenable to treatment are inflammatory in nature. Ureteral strictures, which are quite distinct from obstruction of the ureter from surrounding tumors or inflammatory exudates, are most commonly due to tuberculosis or to other bacterial infections of the urinary tract and tissues surrounding the ureters, and rarely are gonorrheal in origin. The forms of stricture met with are, therefore, varieties of ureteritis and periureteritis. This condition may be diagnosed by passing the ureteral bougie. The commonest site for the stricture is at the vesical end of the ureter. The treatment of the condition is palliative or radical. The palliative treatment consists in getting rid of the infection and in providing sufficient ureteral dilatation to prevent complete or almost complete obstruction. The radical treatment consists in excision of the stricture and implantation of the ureter into the bladder, and in certain cases, nephrectomy and nephro-ureterectomy.

H. P. Newman, of Chicago, read a paper on **hemostasis of the broad ligament,** by means of pressure-clamps and ligatures. The advantage he claims for this method are: (1) Complete and permanent hemostasis with no possibility of the ligature slipping either off the end of the artery or of the stump. (2) Inability of the artery to contract and draw away from the grasp of the ligature and form a hematoma or hematocele. (3) By the temporary use of the angiotribe and ligature multiple thrombi are formed, plugging the vessels most securely. (4) There is no possibility of picking up or massing together of broad ligament tissue to form spots or displace other organs or structures. (5) No stimulated sumptuous remains to slough, granulate and form adhesions. (6) The amount of foreign material left in the wound is reduced to a minimum. (7) The simplicity of this method and its bloodlessness materially lessen the danger of postoperative shock. Convalescence is hastened materially and hastened to a marked degree.

H. D. Ingraham, of Buffao, read a paper on the **etiology and pathology of ectopic pregnancy.** He remarked that the diagnosis of ectopic pregnancy should be made with a reasonable degree of certainty when it follows the typical symptoms given in the text-books; yet even in such cases it is too frequently mistaken for some other morbid condition and quite often for a miscarriage. The reasons for these frequent mistakes in diagnosis must be due to a superficial examination of the patient, or cannot be attributed to the ignorance of the physician. When however, ectopic pregnancy does not follow the usual course, but deviates from the classical symptoms, it is not so

strange that a mistaken diagnosis is made. A complete history of the case, however, followed by a thorough and careful examination of the patient should in most instances enable any competent physician to be quite sure of the true position, at least after the rupture has occurred. Before rupture takes place it is possible to make a diagnosis in many cases, but the patient rarely consults a physician. Many mistakes have been made in the past, resulting in too great loss of life. With a more thorough understanding of the case the mortality should be much less than at the present time.

THURSDAY MORNING, JUNE 12.

J. R. Goffe, of New York, presented a paper on **vaginal section for the uncomplicated symptom of sterility with relief of the symptom. Report of 4 cases.** He stated that many men are sterile and the responsibility rests here. Thus in 250 cases of sterility in women, one out of every 5 were due to sterility in the man. The cause of sterilty in women may be pathological or mechanical, extraperitoneal or intraperitoneal or both. Sterility may be present in a woman free from any other symptoms pointing to disease in the pelvis. A frequent cause of sterility is an unrecognized disease of the ovaries and tubes. Adhesions around the ovary or the fimbriæ may cause sterility. It may also be due to degeneration of the ovaries, hydrosalpinx, or pus-tubes. Under these circumstances a surgeon may be justified in performing vaginal section or laparotomy for the relief of the sterility. Goffe records 4 cases to substantiate this position. Watkins, of Chicago, emphasizes the importance of ascertaining the sterility of the husband before subjecting the woman to an operation. He thinks that pregnancy after an operation on the tubes is rare. Ricketts, of Cincinnati, urges more conservative surgery of the appendages. Montgomery, of Philadelphia, after puncturing cysts in the ovary, administers thyroid extract, and has had good results follow this method of treatment as regards pregnancy. Noble, of Philadelphia, has never seen good results from operations from ovarian cysts by puncture. In his experience pregnancy has never occurred in these cases.

A. H. Goelet, of New York, read a paper on **the influence of prolapse of the kidney on the production of pelvic disease in the female.** He calls attention to the manner in which the prolapsed kidney may obstruct the recurrent circulation from the pelvis by pressure on the vena cava, in the case of the right kidney or by pressure on the left ovarian vein on the other side; pelvic congestion with all its attending evils will follow. Other conditions may be caused or maintained by prolapse of the kidney, such as endometritis, metritis, ovaritis and allied states, uterine displacement, metrorrhagia, menorrhagia, hematoma and hematocele of the pelvis, cystitis and irritable bladder, the latter being a very frequent condition. He would recommend that all gynecological patients be examined for renal prolapse. In addition to this pelvic complication there may be some influence upon the general system resulting in emaciation, anemia, prostration and nervous and gastro-intestinal symptoms. The kidney itself may become diseased, and a nephritis, a perinephritis, a hydronephrosis or a pyonephrosis result. The remedy for this condition is nephropexy. Manton, of Detroit, would distinguish between floating kidney and prolapsed kidney. The former is congenital, the latter acquired. The only treatment for the condition is fixation, especially in younger women. Dunning, of Indianapolis, stated that the operation is not a dangerous one. He has performed it from 70 to 80 times without a death. The operation, however, gives very slight relief unless it be accompanied by a course of treatment addressed to the associated condition. Fixation puts the kidney in the first degree of prolapse. Noble, of Philadelphia, has operated upon 75 cases and has found the kidney is rarely seriously damaged by prolapse.

H. O. Marcy, of Boston, read a paper **on the pathological condition of the omentum as a surgical factor with the best method of treatment.** He remarked that modern surgery has exceptionally demonstrated the physiological importance of the omentum. He referred to the pathological factors incident to the omentum, and its relationship to abdominal neoplasm. The so-called internal hernias are associated with omental diseases and are accompanied by disturbance of the gastro-intestinal tract, resulting in obstruction of the bowel or some other impairment of its function. Adhesions of the omentum through the abdominal parietes are often the cause of marked suffering on the part of the patient, the cause, however, remaining obscure until the time of operation. The omentum, when not injured, exerts a protective function in abdominal surgery. If diseased or injured it must be subjected to the proper technique which is that of the average abdominal surgeon.

W. H. Wathin, of Louisville, Ky., read a short paper upon the treatment of **umbilical and ventral hernia** in which he described the method adopted by him in his clinics. His technique is that of the average abdominal surgeon.

THURSDAY AFTERNOON.

C. A. L. Reed, of Cincinnati, presented a paper on **the restoration of the pelvic floor.** He remarked at the outstart that the pathology of injuries to the pelvic floor consists, first, in laceration of the superficial structures and, secondly and more important, in impairment of the muscular apparatus. He, by means of drawing, showed the conditions resulting from these lacerations. In order to be successful, operations for restoration of the pelvic floor must comprise a number of steps. In the first place there should be a free dissection of the parts, so as to expose the retracted ends of the muscles; secondly, the injured muscles must be carefully isolated and their integrity restored by means of appropriately applied sutures, and finally the superficial structures must be restored to their normal condition. He described an operation based upon these principles and presented a method of suturing which he claims secures the best approximation of the parts.

C. P. Noble, of Philadelphia, read a paper on **drainage versus radical operation for suppuration in the female pelvis,** in which he called attention to the mortality attendant upon radical operations for pelvic suppuration in uncomplicated and complicated cases, and claims that marked advantages resulted from the use of drainage in these cases. He makes a transverse incision in the posterior vaginal wall through which he introduces the fingers or a pair of scissors or a dressing-forceps in order to give vent to the pus. A simple incision results in a perfect cure in the small, uncomplicated abscesses. The opening into the sac, however, should be wide and free and not a small one.

W. H. Humiston, of Cleveland, presented a paper on **the advantage of the vaginal route in obese patients.** He asserted that the vaginal operations were increasing in frequency, that they were easier in the performing and attended with less danger and more prompt recovery. The length of the time necessary to perform the operation is usually less. He reported a case of a stout woman, weighing 235 pounds, so operated upon with good results. In the discussion, Gordon, of Maine, and Noble, of Philadelphia, both stated that they did not believe the vaginal route was increasing in frequency . Noble stated that Jacobs, of Brussels, and Ségond, of Paris, both former advocates of this route, have now abandoned it.

T. S. Cullen, of Baltimore, gave a series of stereopticon views of **adenomyomata of the female generative organs.** He called attention to the fact that adenomyoma of the uterus may be in 3 distinct groups, namely, those in which the uterus preserved a relatively normal contour, those which were subperitoneal or intraligamentary and those which are submucous. These adenomyomata have been found in the uterine peritoneal membrane or in a

portion of the ducts of Muller. They usually appear during the child-bearing period of life.

FRIDAY MORNING, JUNE 13.

Papers were read by L. H. Dunning, of Indianapolis, **on conservative operations upon the ovaries.** C. O. Theinhaus, of Milwaukee, **on some critical remarks on the methods of operation in vogue for cystocele with and without prolapse of the uterus,** and by W. F. Metcalf, of Detroit, **on surgical treatment of internal hemorrhoids.** [W. A. N. D.]

SECTION ON PEDIATRICS.

TUESDAY AFTERNOON, JUNE 10, 1902.

H. M. McClanahan, of Omaha, Neb., delivered the chairman's address, his subject being **lessons from current pediatric literature.** Over 400 papers were published during the year, 286 of which were devoted to the consideration of infant feeding. Cow's milk is now universally recognized as the substitute for human milk, but it should be modified. The speaker calls attention to the marvelous advance made along this line in the past 5 years. The papers on infectious diseases disclosed nothing new, either in pathology or treatment, but rendered our present ideas more clear. In the 82 papers on diphtheria, not a death was recorded when antitoxin had been employed. Scarlet fever was considered in 18 papers, especial attention being given to the diagnosis of the milder type. Measles received attention in 14 papers. The speaker called attention to the value of Koplik's sign as a means of diagnosis. Eight papers appeared on whooping cough. Of the remedies most frequently employed he mentions antipyrine and belladonna. Diseases of the respiratory tract received attention in 31 articles. Secondary pneumonia in infants is the most serious disease with which we have to deal. The treatment consists in supporting and stimulating measures, the remedies most frequently recommended being strychnine, digitalis and steam inhalations. Seventeen papers appeared on general tuberculosis. He thinks the importance of glandular tuberculosis is not appreciated. Twenty-five articles dealt with diseases of the nervous system, the relation between anæmia and nervous diseases being emphasized and 27 papers on diseases of the genito-urinary organs. The operation of circumcision is becoming more and more avoided.

T. M. Rotch, of Boston, Mass., read a paper on **tubercular peritonitis.** Pathologically 3 types are recognized. (1) miliary tuberculosis with ascites; (2) a fibrous form in which there may or may not be ascites; and (3) a later stage of the second form in which there occur large tubercular products with softening. He calls attention to the variableness of the symptoms and the difficulty of making a diagnosis. The tuberculin test, as a means of diagnosis is of value, but the speaker pays little attention to leukocytosis. Examination of the urine should be made and a swab should be inserted into the œsophagus and then examined for tubercle bacilli. Laparotomy is indicated, especially in miliary tuberculosis with ascites, and is also the best treatment in the localized chronic form. This has proved successful when all other methods failed. The prognosis is better after the first year. He reports 65 cases, 39 in boys and 30 in girls, the youngest patient being 14 months old, the average age being between 2 and 4 years. In 20 cases there was a family history of tuberculosis. Cotton, of Chicago thinks the use of tuberculin should be emphasized as a means of diagnosis. In Chicago the X-ray has been used with gratifying results, and he recommends its use when operation is contraindicated.

J. P. Crozer Griffith, of Philadelphia, read a paper entitled **cerebrospinal fever.** Owing to the great variation in symptoms, the disease is often difficult and sometimes impossible to diagnose. In some cases it is of the fulminant type, in others so mild that the child seems scarcely ill, and, too, the effect of the germ sometimes seems to be more localized in other regions of the body than the brain and spinal cord. He calls attention to the following classification: (1) Ordinary; (2) malignant; (3) mild; (4) abortive; (5) intermittent; (6) chronic, and describes 2 family epidemics and 2 chronic sporadic cases. In the first epidemic 2 sisters were the victims, in one it was severe, the child dying, in the other mild. The first chronic case occurred in a boy, 10 years old, and presented a great variation in the symptoms from day to day. The second chronic case resembled typhoid fever, the Widal reaction being positive. The disease lasted 3 months the child gradually recovering.

Wharer, of Iowa, reported a case which closely resembled enteric fever. He made the diagnosis from Kernig's sign. Abt, of Chicago, thinks these cases should be isolated. He reported a case in which they made several lumbar punctures and succeeded in isolating the diplococcus intracellularis. Rotch, of Boston, spoke of the difficulty in making a diagnosis, and the value of lumbar puncture as an aid. He thinks it should be done early. Lumbar puncture is [illegible] though in one of his cases after isolating the diplococcus intracellularis a second puncture was made, the patient improved and eventually recovered. Regarding the prognosis, the shorter the case, the more serious the disease. The danger is in the first and third week. In the chronic form the prognosis is, as a rule, bad. Acker said that in his experience the disease was worked in at night. In the treatment he advises 3 remedies, potassium bromide, Fowler's solution, and, in the convulsive stage, [illegible] of Gelsemium. Griffith said that in all the cases described Kernig's sign was absent. He is rather skeptical regarding its value. He keeps his cases in the ward, and does not believe it will spread more than typhoid fever. No results were obtained from lumbar puncture, though he believes in trying it.

E. F. Brush, of Mount Vernon, N. Y., read a paper on a **case of typhoid fever in an infant under one year of age.** Typhoid in so young an infant is very rare, but very few cases are recorded. The child was [illegible] 6 months old when its mother was taken with typhoid fever which proved to be mild, after which water that was supposed to be the source of the mother's infection was called in the child was [illegible] the disease a short time afterward. The author considers this an instance in which it must be put down as typical infection when considering the [illegible] conditions as results. A. C. Cotton, of Chicago, stated that in the Foundling's Home, of New York, [illegible] though many cases were diagnosed as typhoid. Yet he thinks children do not [illegible] intestinal lesions that are found in the adult. He considers the Widal test the only reliable one and states that children react as readily as adults. He thought it possible that, in the case under consideration, the child may have been infected by other than the contaminated water. Griffith, of Philadelphia, believes that typhoid fever is much more frequent in childhood than is thought. He reported a case of supposed typhoid in which there was intestinal hemorrhage, which is rare. Regarding the Foundling's Home, of New York, the speaker said that in the autopsy reports mention is made that many cases showed a condition resembling catarrhal [illegible] Shaw, of Albany, N. Y., reported a case in a child in which the symptoms were typical of the septic form in showing the disease. Rotch said there was no doubt about the case being typhoid. He does not consider baby contracted the disease from its mother and considers the contaminated water the source of infection.

E. Rosenthal, of Philadelphia, read a paper entitled **serum-therapy,** in which he considered the various serums now on the market. In the majority of instances he thinks they prove fallacious and misleading. Diphtheria antitoxin, however, is a specific and sure and in some cases good results have been obtained from antitetanus serum. A. C. Cotton, of Chicago, stated that the effects of antitetanus serum have been practically nil in his experience.

WEDNESDAY MORNING, JUNE 11.

M. T. Sisty, of Springfield, Ill., read a paper on **acute gastro-enteritis of infants.** Heat plays an important part in the etiology of this disease. It lowers the vitality and produces great thirst. Improper feeding, overfeeding and artificial feeding act as causes, cow's milk being responsible for this condition in many cases, even though boiled milk be given, for some toxins are not rendered innocuous by heat. No specific organism has as yet been isolated. The symptoms consist of fever followed by frequent stools with

pain. Prostration is marked. The stools vary in number from 4 to 20 a day, are foul smelling and putty-like, and in many cases of a green color. If the condition continues for many days, the feces may contain mucus and pus. The prognosis is grave in the choleric type. The treatment consists first in prophylactic measures. The child should be kept clean and cool and be given a limited quantity of proper diet. All milk food should be stopped during the attack, and calomel given to clean out the intestines. When the stools are offensive, flush out the colon. If collapse comes on, hot normal salt solution should be used, and if nausea is present, castor oil should be given. The diet should be limited, and consist of animal broth, egg water or liquid peptonoids. The infant should be given all the cool boiled water it will drink. Tonics may be indicated during convalescence.

Milk idiosyncrasies in children was the title of a paper read by Louis Fischer, of New York. He reported the following case: The mother of an infant had no milk, and a wet-nurse was secured, but only kept 3 months, as the child had gained but little weight and did not thrive. Until 3 months of age, the child had been weaned by the father, a physician, after which condensed milk was given. The child vomited frequently and was always constipated, requiring an enema every day. The stools contained shreds of mucus and were very foul smelling. Various artificial foods were tried, 15 or more, and the infant did quite well until milk in some form was added. For several weeks the child had lost weight, at the rate of 2 ounces per week. Upon examination, it was found that the infant was rachitic. The extremities were cold, and the circulation poor and feeble. A soft hemic murmur was heard at the base of the neck. The nurse stated that sometimes after feeding the child had convulsions, which persisted until the colon was flushed. Spoon feeding was finally resorted to, and milk was given in various ways: sterilized, pasteurized, raw and peptonized. When first seen by the writer, water and whey was being used. Upon this it improved, but as soon as milk was added, it became worse. Malt soup was then given, and from that time the infant began to thrive, and all symptoms disappeared. Case 2 was an infant with congenital adenoids. The child would not take the breast, but after removal of the various adenoids, it took food all right.

Thos. S. Southworth, of New York, read a paper on improvement of breast milk and prolongation of lactation. Lactation is a much neglected subject. There are simpler ways of judging the quality of milk than by a full chemical analysis, for example, with Holder's apparatus. A faulty or deficient supply of milk is often due to an unsuitable diet or lack of outdoor exercise. The improvement of breast milk is a simple matter. The diet of the mother should be first semisolid, later solid; she should drink plenty of milk, water and cocoa. Tea should be prohibited. The diet should consist of good nutritious food that the mother knows will agree with her. The administration of beer, he thinks unnecessary. Anemia should be corrected, by Blaud's pill, cascara segrada to combat any constipating effect, sleep, exercise and fresh air. The speaker considers bad nursing habits and faulty maternal diet the chief causes of trouble at 3 or 4 months. Nursing should be carried out during the greater part of the first year, assisted, if necessary, with a few bottle feedings. There is a serious responsibility in weaning, as exclusive bottle feeding causes a larger mortality than when at least partial breast feedings are maintained.

A. McAlister, of Camden, N. J., read a paper on infant feeding, in which he spoke of the superiority of breast over artificial feeding, for no chemist has given us a synthetic human milk. The milks of different individuals vary, nor is it the same at different periods in the same individual. Each mother's milk is adapted to the requirements of her child, and no artificial product can take its place. The amount of milk is determined by the infant's desire. In speaking of cow's milk, he said cow's casein is not human casein, and cannot be assimilated as readily by the infant. If cow's, or any milk other than human, be used, it should be first heated. Wahrer, of Iowa, stated that the origin of artificial foods dated back to a time when good cow's milk could not be obtained in large cities. He thinks good cow's milk, slightly modified, may be used to advantage.

Kelley, of Ohio, reported 3 cases of milk idiosyncrasy. He thinks it advisable to add malt to the mother's diet during lactation. The speaker believes that mixed feeding should not be allowed when one complete nursing cannot be secured at both breasts. Morse, of Boston, Mass., said there is no doubt there have been cases of milk idiosyncrasy, but they are rare. He thinks mixed feeding should be continued as long as the mother can nurse, no matter how small the quantity is, the infant thus getting the advantage of the ferment contained in the mother's milk. Griffith, of Philadelphia, considers that food is administered far too strong at first for the infant's requirements, and after thorough digestion disturbances, it does not react promptly, and relapses are common. He thinks the peptonoid foods are very useful. Cotton, of Chicago, stated he would like to see artificial feeding driven from the earth. It would drive us to the necessity of making the maternal fount adequate. He believes many more children are artificially fed than breastfed. The continuous use of liquid diet during lactation is a mistake, for at no time during her history is the mother better fitted for digestion. Leonard, of Massachusetts, stated that fresh air and cleanliness, as well as good food, are important factors in the growth of the infant. He gives pure cow's milk from the beginning in small amounts, far apart. Morse did not agree with Leonard that whole cow's milk be used for very young infants, and considers a 3 hour interval between feedings too long. De Voe thinks preparation should be made for good milk during the mother's pregnancy. Rosenthal, of Philadelphia, stated that as soon as he placed the mother on malt or beer, the child had colic. Jacobi, of New York, thinks we generalize too much in infant feeding, infant's requirements are different. See that cow's milk is employed that is pure, fresh and germfree. The newly-born babe should be fed well, principally with water. He calls attention to the frequency of nephritis in the newborn, and is of the opinion the administration of water will relieve it.

W. Freudenthal, of New York, read a paper on **adenoids.** Two forms are recognized, the acute and chronic. The main symptoms of the acute form is earache. The chronic form is found in all countries, warm and cold. The mode of living and poor hygiene play an important part in the etiology of this condition. It frequently follows catarrhal conditions, tuberculosis and rheumatism. Only operation will give relief. The speaker does not like to operate on children under 2 years of age, and does not, if there are no complications, and if nourishment is taken. It is impossible to carry out antisepsis, and syringing the nose before operation is dangerous. He operates with the child flat on the back, shaving the surface clean and no more.

WEDNESDAY AFTERNOON, JUNE 11.

Geo. L. Richards, of Fall River, Mass., read a paper on the **treatment of acute earache, otitis media, in young children.** Acute earache in young children is frequently severe and sudden in onset, and when it has persisted for some time, probably nothing short of paracentesis will relieve it. In the acute form, however, the speaker uses a glycerolegelatine bougie, which has given gratifying results. The formula is as follows: Carbolic acid, 7 m.; fl. ex. of opium, 6 m.; cocaine, 3 gr.; atropine sulph, 3 gr.; water, 12 m; gelatine, 18 gr. and glycerine, 15 gr. This makes 17 bougies. They should be kept in lycopodium or wrapped in tin foil. Before using, the bougie should be dipped in water, then it will readily slip into the external ear, and dissolving, set free the anodyne. Cook, of Chicago, said there is no question that glycerine and carbolic acid are of value in this condition, and thinks this value is enhanced by the other remedies which have been added.

Cook, of Chicago, read a paper describing a tumor in a girl, 13½ years old, which filled the entire abdominal cavity. The abdomen in its greatest circumference was [illegible] inches. Upon laparotomy incision, [illegible] an immense tumor, which was soft and pale gray in color. A diagnosis of inoperable sarcoma was made, the child dying 2 months later. The autopsy showed the tumor filled the entire abdominal cavity and was attached to the kidneys. Numerous metastatic growths were found scattered over the omentum. The tumor and the kidneys attached weighed 7 pounds. The specimen was exhibited.

W. C. Hollopeter, of Philadelphia, Pa., read a paper on the unrecognized causes of some of the anemias of child-

hood. The great primary cause he considers is dental decay, resulting in infection. This condition is very common in childhood, and too little attention is paid to it. The second unrecognized factor is mouth breathing, due to nasal catarrh. Acute catarrhal conditions can and should be immediately corrected. Eye strain also plays an important part in the etiology of anemia in children. This is seen especially in school children, who are compelled to study in rooms where the light is poor. Abt, of Chicago, agrees that dental caries is common in children, but does not think anemia should be assigned to dental caries, eye strain or mouth breathing. Morse, of Boston, however, thinks there can be no doubt that dental caries, mouth breathing and eye strain are causes of general debility and anemia, but does not think dental caries the most frequent cause of anemia. Cooper, of Philadelphia, is of the opinion that decayed teeth frequently cause anemia by preventing sufficient mastication, and reports a case of this character. The greatest number of anemic conditions, however, he thinks is due to nerve strain and nerve shock. Cotton, of Chicago, agrees with Hollopeter that anemia in children is frequently due to unhygienic conditions, and dental caries and mouth breathing come under this head. Kelley, of Ohio, has seen many cases of anemia in children, and thinks improper diet the most frequent cause. Children should receive more proteid and less starchy diet. Griffith, of Philadelphia, stated that rickets is an extremely common disease of children, and not only causes anemia, but predisposes to the early decay of teeth.

Morse, of Boston, read a paper on **retropharyngeal abscess in infancy,** which he divides into primary and secondary. The primary form is more common in infancy. The greatest number of cases occur between the ages of 4 months and 2 years, and it is always preceded by a retropharyngeal adenitis. Examination by the finger reveals nothing but some enlarged lymphnodes. Suppuration when it occurs, usually develops in from 5 to 6 days. With the advent of suppuration, the temperature becomes elevated. The first symptoms noticed are inability to take food, modification of the voice and snoring and snuffling breathing. The diagnosis is easy, but frequently overlooked. The throat should be inspected in all suspected cases. The prognosis depends largely on the treatment, untreated cases, as a rule, ending fatally. The abscess seldom opens spontaneously, but may rupture into the pharynx, carotid artery or externally. As soon as recognized, the abscess should be opened, and in these cases the mortality is only about 5%. Abt, of Chicago, calls attention to the relative rarity of the disease, he having seen but few cases. Fronzitle, of Buffalo, reported a case in which the child suddenly died while they were preparing for operation. He thinks death was due to pressure on the vagi. Kelley, of Ohio, reported a case in which the child promptly stopped breathing as soon as pressure was made. Intubation was immediately performed and artificial respiration resorted to, and the child recovered. Griffith, of Philadelphia, called attention to the great ease with which the diagnosis can be made, and the frequency with which it is overlooked. The turning of the head and sputtering respiration are characteristic symptoms. He is of the opinion that simple incision is not sufficient, and recommends dilating it.

A. C. Cotton, of Chicago, reported a case of **bulbar paralysis** in a school girl, 11 years old. She had the usual diseases of childhood, pneumonia when 6 years of age, and diphtheria 3 years ago. For the past 2 or 3 years there has been some impairment of hearing. Early last September her mother noticed the child had some dificulty in swallowing, and a slight defect in speech. Deglutition later became very difficult, the patient having to use the hand to retain food in the mouth. She became greatly emaciated, and the expressionless face attracted attention. She cannot wrinkle the forehead, close the lips or smile, and the tongue cannot be protruded beyond the teeth. The voice was of a nasal quality, and the mouth was continuously full of saliva. Examination of eyes and ears was negative, excepting that at times she is unable to close the eyes. Inanition steadily progressed, and, toward the last, fluids regurgitated through the nose. The post mortem has not been completed at the time of reading of this paper.

THURSDAY MORNING, JUNE 12

D. Riesman, of Philadelphia, read a paper on **synostosis of the skull with universal calcification of the arteries in a boy, 3 years of age.** Riesman stated that arterial disease is rare in children, but not as rare as believed. This case is interesting, on account of the synostosis of the skull. The child was born without instruments at term of healthy parents, and weighed 4 pounds at birth, but seemed healthy. Bottle-feeding was resorted to, but the infant did not thrive. Dentition proceeded normally as regards time, the teeth were, however, small and inclined to decay. It never acquired the power of speech, and always ate by a process of lapping. There was no evidence of rickets or scurvy. Cod-liver oil and iodide of iron were administered, but were of no avail. The boy could not digest milk and wasted away. Autopsy. Boy greatly emaciated, the legs and arms being no larger than those of the new-born infant. The left testicle had not descended. The hypogastric arteries were well marked and distinctly calcareous. The intima of the aorta was thickened and showed beginning sclerosis, and the kidneys were extensively infiltrated with calcareous matter. The sutures of the skull could not be seen; the dura mater was thick and rough, and a considerable quantity of fluid occupied the subdural space. Section of the lungs showed emphysema, and the alveolar capillaries to be infiltrated with lime salts. The brain was undeveloped, and the question arises, was the synostosis the cause of the undeveloped condition of the brain, or vice versa? Wahrer, of Iowa, asks if Cohnheim's theory would explain the production of this synostosis, or is it due to abnormal metabolism? He asks if there was any history of syphilis. Riesman said that probably abnormal metabolism was the cause. Cohnheim's theory, he thinks, is in danger of being relegated to the past. In this case no history of syphilis was obtainable.

Spontaneous hemorrhage in new-born children was the subject of a paper read by I. A. Abt, of Chicago. Two varieties of hemorrhage are observed, traumatic and spontaneous. He dealt entirely with the spontaneous variety, which may occur under the skin, in the cavities of the body, or in the mucous membranes. He reported 10 cases. The etiology is not clear. Numerous micro-organisms have been described and thought to be causes. Congenital syphilis has by some been considered a factor, and in 3 of his cases syphilis was undoubtedly present; in 2 of the cases there were septic processes, which may have been etiological factors. He does not consider the condition, however, is the result of any one factor. The sites of the hemorrhage varied, being more frequent under the skin, and from the mouth, nose and bowels. Internal treatment is of no benefit. Styptics, packing with gauze and even the local application of suprarenal extract is without influence in many cases. Gelatine has been tried, and is sometimes of benefit, but its action should be carefully observed. Engelmann, of Chicago, is of the opinion that sepsis is responsible for spontaneous hemorrhage in many instances. She has seen it also in cases undoubtedly syphilitic. Small, of Pittsburg, reported 5 cases, one in a healthy-appearing child which suffered from profuse hemorrhages at birth. Holmes, of Chicago, has used gelatine twice, injected intravenously with good results. He advises feeding the child on gelatine foods, and asks if calcium chloride would be [illegible]. Lusk, of New York, said that [illegible] in new-born children were not rare. That there [illegible] to the theories advanced [illegible] carried out during labor. He called attention to the [illegible] of the vessel walls in the new-born, and thinks this has much to do with [illegible]. The hemorrhage in the newborn is apt to [illegible] because of the [illegible] in the blood at this time. [illegible] contain less fibrin and salts than in the later life, and a [illegible] that the gas was in part responsible. Abt, in closing the discussion, said [illegible] had been [illegible] in which [illegible] administered to the mother during her pregnancy, small doses being continued after the birth of her child as a prophylactic. He agrees with Jacobi that these cases are the result of [illegible] infection; 12[illegible] porosity

of the vessel wall, and (3) the slowness with which the blood of infants coagulates.

R. Englemann, of Chicago, read a paper on **sporadic cretinism in children,** and reported a case which improved on thyroid extract. She called attention to the frequency of this condition, and thought heredity and infection were of importance as etiological factors. The relation between the thymus, thyroid and pituitary glands received considerable attention. Shelly, of Kansas, reported a case which did well on thyroid extract. Jacobi, of New York, thinks the correlation of the ductless glands deserves emphasis He pushes the thyroid extract, in one case giving 24 gr. 3 times a day. Riesman said thyroid extract failed in epidemic cretinism, (1) because the cause persists, and (2) the patients will not continue the treatment.

G. F. Wahrer, of Fort Madison, Iowa, read a paper on **chlorosis.** The diagnosis and treatment of this affection are comparatively easy, yet there are many possible sources of error. The worst cases are found among factory girls, and those confined within doors. He calls attention to the value of blood examinations, and the frequent association of tuberculosis with chlorosis. Iron is the remedy, and few preparations excel Blaud's mass. Constipation is relieved by cascara sagrada. Walls, of Chicago, referred to the investigations of Lloyd Jones, who believes that every young woman in this country is skirting along the line of chlorosis, and it takes but little to cause her to fall over the brink. He thinks the trouble is due to a lack of iron absorption. The treatment requires time and patience. Abt, of Chicago, stated that chlorosis occurs most commonly at the time of puberty, and for this reason he thinks there is some relation between the generative organs and the condition of the blood. Also at the time of puberty many girls are constipated, and toxins are generated which may cause the blood changes of chlorosis. Schutt, of Ill., has seen 2 cases in which eye symptoms were prominent. Improvement on iron was rapid.

THURSDAY AFTERNOON, JUNE 12.

L. J. Lautenbach, of Philadelphia, read a paper on the **recognition and prompt removal of postnasal adenoids in children.** Adenoids are of frequent occurrence, especially so in the scrofulous and poorly nourished. They are usually present in cases of enlarged oral tonsils, and frequently seen among deaf mutes. The finger operation, he considers the most thorough. Hollopeter, of Philadelphia, thinks enough attention is not paid to adenoids, and operation is imperative when a defect in hearing is noticed. The operation, in his experience, can be done more satisfactorily without anesthesia. He recommends the finger method, but is afraid Lautenbach's artificial finger nail is too large. Kelley, of Ohio, thinks much harm is done with the curette, and has had trouble with cocaine. Lautenbach's artificial finger nail is too long, though the shape of the finger will have to determine the size of the nail. He fastens the nail on with a bandage, as there is danger of its slipping off the finger. Fredericks favors general anesthesia, and Roch, of South Dakota, thinks it advisable to give chloroform, as children stand it well.

S. W. Kelley, of Cleveland, Ohio, read a paper on **dermoid tumors in children,** reporting 2 cases, one in the testicle, the other in the ovary. Dermoids are very rare in the testicle, but of greater frequency in the ovary. In both these cases the tumor was removed and recovery followed.

F. X. Walls, of Chicago, Ill., reported 3 cases of **sudden death in infants with lymphatic constitution.** The first case was that of a girl, 8 months old, who was fed on the breast and by bottle, and considered to be a healthy child. This child suddenly died during the mother's absence of a few moments. In this case there was universal hypertrophy of the lymphatic tissue. The second case occurred in a boy, who, while lying in bed, suddenly choked and was dead before the children who had been in the room with the boy, could find and return with his mother. In this case the lymphoid tissue of the intestine was greatly hypertrophied. The third case occurred in a boy of 2 years. There was great increase in the size of the thymus in all these cases. Abt, of Chicago, thinks it possible to diagnose some of these cases during life; that a dull note might be elecited on percussion over the enlarged thymus. Shaw, of Albany, N. Y., reported 3 cases of this condition, in all of which an enlarged thymus, and in one case a thymic abscess was found. Abt, of Chicago, regards thymic abscess pathognomonic of congenital syphilis. In closing the discussion, Walls said an enlarged thymus might possibly give a dull note on percussion. He does not consider thymic abscess pathognomonic of congenital syphilis, though it frequently is found in those cases. [H. U. N.]

SECTION ON HYGIENE AND SANITARY SCIENCE.

FIRST DAY—TUESDAY, JUNE 10, 2 P. M.

Dr. A. R. Reynolds in the chair.

A paper on **Sanitation and Politics** was read by Walter Wyman, Washington, D. C. Dr. Wyman stated that he has not given the subject deep study and research. His remarks are of a preliminary nature and are mainly intended to bring the subject before the attention of the section and stimulate further investigation. In the course of his remarks he said: "What is the object of hygiene and sanitary science? What can it be, except the elimination of preventable disease? Now, the warfare on disease, to use a military metaphor, involves two methods,—one by fortification, the other by sortie or field work. By sortie we corral disease in quarantine, we isolate the diseased persons, and hold in observation the contracts, we clean up and disinfect infected places and objects; moreover, we establish sanatoria and hospitals for the cure of disease. By fortification we fortify our bodies against disease, so that the assaults of the latter may be repellel. We accomplish this by hygiene, by provisioning ourselves with pure air and sunshine, potable water, the rapid and safe removal of excreta, and in the meantime by laboratory investigations learn all that we can concerning the nature and habits of our enemy." Of the means of combating infectious diseases, prevention is the most important, and it cannot be successfully accomplished without the aid of political organizations. "It would make an interesting chapter"—the speaker said—"to detail the interferences caused by faulty politics with sanitary affairs. No doubt all of us at this moment have in mind instances of the shameful sacrifice of sanitary health matters to the selfish and unrighteous interests of unworthy politicians, but the simple inveighing against unprincipled politicians and impure politics has no corrective tendency." Politics should not be tabooed because of dishonest politicians; on the contrary, bad politics should be remedied by substitution. An effort should be made to incorporate subjects of sanitary importance into political campaigns. Political issues might be made on disinfection, elimination of slums, the condemnation of unsanitary buildings, the conversion of foul alleys into streets and courts, and the erection, either by municipal authority or corporations, of sanitary tenements for the poor; on appointments of boards of health and health officers, sewage, water supply, etc. From present indications, it is reasonable to hope that in the near future sanitation will assume an international character. The doctrines of sanitation are spreading and may become a live issue in politics, which may be made to serve the cause of sanitation. No means of furnishing specific education of the masses in sanitary matters are superior to those afforded by political campaigns, the candidates for office advocating the sanitary welfare of the people.

Discussion. Dr. Marcy, of Boston, expressed his thanks to the speaker for his timely paper and made a few remarks on the sanitary conditions in Boston. He said that [illegible] it was a comparatively easy matter to manage sanitation, but since the sanitary authorities became subdivided among the local boards of health of the adjoining towns, the subject became much more difficult. Dr. Stephen Smith Burt, of New York, emphasized the necessity of forcing the subject of sanitation into the minds of politicians. In England, sanitation assumed a political aspect

in the time of Lord Beaconsfield. In New York, success was achieved only when politics were entered into. The Metropolitan Health Law was forced into existence by influencing certain politicians. He believes that the leading members of the legislature should be educated in sanitary matters. **Dr. Knopf,** of New York, referred to the preceding discusser as one to whom New York will remain eternally indebted for his work in sanitation. Unfortunately, things do not run so smoothly at present. Efforts to establish a sanatorium for consumptives at the Adirondacks have not met with success. We must, ourselves, enter into politics as honest, conscientious and scientific physicians. We must have a National Health Bureau, and not until then will we achieve any success. **Dr. Egbert,** of Philadelphia, said that every one has a social duty which he must perform. Something had been accomplished in Philadelphia in the way of the improvement of the sanitary conditions of the alleys. The last mayor was forced by public clamor to get up a better water supply, and in the near future the city will have as pure water as furnished to any city in the country. In his own locality considerable improvement has been made. The Village Improvement Association succeeded in getting the residents interested in sanitation and influencing the Council. He believes that there should be sanitary districts governed by a central body. The men at the head of the sanitary districts, even if corrupted by bad politics, are better than none. There is a chance in Philadelphia for the effective correlation of various departments. Thus for instance, the Department of Forestry, thanks to the efforts of Dr. Benjamin Lee, reserved large tracts of forest for the open-air treatment of consumptives.

Dr. Wyman had nothing to add in closing the discussion.

Dr. H. O. Marcy, of Boston, read a paper on **The Drainage Canal of the Valley of Mexico.** He described the physical conditions pertaining to the city and valley of Mexico. The geography, geology, climatology, etc., were discussed and illustrated by maps. The City of Mexico has been much improved of late, and Mexico holds out a good field for enterprising young men. The greatest accomplishment is the completion of the colossal system of drainage intended to prevent the frequent inundations which brought with them danger and destruction. The present elaborate scheme for the proper sewage of the city and the drainage of the valley was inaugurated by President Diaz in 1879, and the work was first under the charge of the engineer Don Louis Espinoza. The canal starts on the eastern side of the city and continues on that side to the Guadulupean range. It has a total length of nearly 30 miles. The bottom has a level of about 8 feet at its beginning and about 20 feet at its end. There is a uniform grade of about 2 feet per 1000. The depth below the surface at the starting point is about 16 feet, and at the commencement of the tunnel about 65 feet. The canal is designed to carry the largest volume of water that could pass through the tunnel, 171 cubic metres per second. The tunnel with which the canal is connected is over 6 miles long, 14 feet high and 13 feet wide. This stupendous piece of engineering is entitled to the first rank in the solution of modern sanitary problems, and compares favorably with the sewage system in Boston and the drainage system in Chicago. The sewage system of the City of Mexico proper is equally ingenious in its construction.

Discussion. Dr. Knopf of New York moved for a vote of thanks to the speaker. **Dr. Benjamin Lee,** of Philadelphia, in seconding the motion made a few remarks eulogizing Dr. Marcy and dwelling somewhat on the problems of sanitary engineering in Mexico in the past. Americans going to Mexico have a preconceived notion that they are going to teach them something, but they find that there is a great deal in Mexico for them to learn. The Mexicans are far superior in their municipal sanitation. Travel is much safer and more comfortable, the railroad being patrolled by police. In the United States, boards of health are greatly hampered by lack of means. In Philadelphia, for instance, the State Board of Health is occupying miserable quarters in the City Call. In Mexico, the Central Board of Health occupies a magnificent palace and its work is admirably systematized. The men connected with the Board of Health possess great ability and receive good salaries. Here, we clamor for raising the standard of medical education, while in Mexico this has been accomplished 50 years ago. No man can study medicine without having received a collegiate degree.

A paper on the **Microscopic Aid in the Diagnosis of Scarlet Fever,** was read by Dr. W. K. Jacques, of Chicago. He investigated the claims made by Class concerning the specific organism of scarlet fever during an extensive epidemic of the disease in Chicago. He invariably found the Class coccus in cases of scarlatina as well as in the throats of those exposed to the disease. Unless one is familiar with the micro-organism, he may mistake it for staphylococcus albus. A careful study, however, shows unmistakable individual characteristics. The organism is very sensitive to environment and is readily modified in the morphology, so that it may appear as a diplococcus, streptococcus or a streptobacillus, merging from one form into another in the same culture. It varies greatly in size, but is usually so minute that it may penetrate almost any tissue in the body. It grows well on bloodserum, and the best method of cultivation was found to be the bloodserum boxes used by the Health Department of Chicago. The Class coccus also varies in pathogenicity, requiring a susceptible individual to produce the disease. In immune persons, it may be present without causing any disturbance, or, again, it may produce a local angina without the usual symptoms of scarlet fever. It circulates in the blood for a brief period only, since the latter exerts a bactericidal action on the micro-organism. It penetrates, however, the various tissues of the body, and may be constantly found in the throat and the skin. The initial clinical symptoms together with the microscopical findings are sufficient to establish a diagnosis with absolute certainty. On many occasions, the speaker's report sent before the appearance of the rash was verified by subsequent developments. He has also been able to produce the disease experimentally in swine, both by inoculation and contact.

Discussion. **Dr. Egbert,** of Philadelphia, said that he felt interested by Dr. Jacques' paper. **Dr. Marcy,** of Boston, asked to know whether scarlet fever and diphtheria are one. **Dr. Holton** asked whether rotheln can be differentiated from scarlet fever by the microscopical method. Dr. Jaques in closing the discussion remarked that he is aware that the profession has not accepted the Class coccus as the specific organism. Yet, it is as positive as the [illegible] bacilli. It is very changeable, is not pathogenic to laboratory animals and does not produce a strong toxin. It kills by multiplication in the tissues, as is the case with anthrax. No antitoxin, therefore, is possible. Immunity should be produced by stimulating the tissues. Scarlet fever and diphtheria frequently coexist and in such cases he found diphtheria antitoxin very serviceable. Experiments on swine were completed by the speaker for the purpose with a view of establishing immunity, but definite results have been as yet obtained. The serum passed through the cuticle of the dead skin in the same way as the human being. In one instance, however, in the presence of the investigators, it was injected from the Class. It is difficult to find the Class cocci in the blood vessels of the bacteriological section, but it can be easily found in the skin. The finding of the coccus differentiated scarlet fever from rotheln as well as from the rashes from other causes. **Dr. Nelson,** of Chicago, then asked whether scarlet fever could be stayed by vaccination instead of antitoxin. **Dr. Reynolds,** of Chicago, said that the reason for not continuing the experiments is the lack of funds.

An informal discussion on the municipal control of vaccine and antitoxin was opened by **Dr. Marcy**, of Boston.

Dr. Knopf met in New York persons from the Health Department as well as private manufacturers and heard the diverse views. It has been claimed by the manufacturers that the New York Health Department sold to Chicago inferior antitoxin. He said that we have no right to interfere with the private manufacture of these products, but that we should have control of laboratories. **Dr. Benjamin Lee** said that keeping manufacturers to a high standard is preferable to the manufacture of vaccine and antitoxin by municipalities dominated by politics. Yet, certain occurrences prove that some of the manufacturer's products were inferior and even dangerous. He agreed with Dr. Knopf as to the desirability of municipal control and cited instances of inertness of the vaccine supplied by private manufacturers to Porto Rico. **Dr. Johnson**, of Illinois, said that in the city where he comes from it was found impossible to compete with the vaccine manufactured by private manufacturers, the people preferring the latter to the city product. **Dr. Egbert** agreed with Dr. Lee. He expressed his belief that the private manufacturers do keep up a high standard for purely business reasons, as it is their interest to guard against any possible error. During the last epidemic of smallpox the demand for vaccine was so great that, in the rush to supply it, certain essential precautions were neglected. He even knows of an instance in which a private manufacturer purchased from another vaccine and relabeled it. However, such occurrences may not be repeated again for the next hundred years, and it is foolish to lock the door after the horse is stolen. He believes in thorough inspection of the vaccine farms and antitoxin laboratories by especially appointed officials This would give the public a feeling of security and confidence. **Dr. Bracken**, of Minneapolis, said that the Legislative Committee of the Association favored central control of the manufacturer's products. State inspection is unsatisfactory; it should be Federal. He is in favor of private manufacture of vaccine and antitoxins. At times, the State may produce vaccine, but should not sell it. Referring to Dr. Lee's statement concerning the inertness of the vaccine supplied to Porto Rico, he remarked that the inertness may well be due to high temperature which destroyed the virus. He does not believe that the State should manufacture antitoxin. **Dr. Mitchell** sees difficulty in the question of what should constitute control. An examination of one batch of samples is no guarantee that all others are of the same quality. He believes that the efficiency of vaccine can be established by actual tests performed by health officiers. He found examination of these products extremely difficult. **Dr. Stubbert**, of Liberty, found by comparative tests that the antitubercular serum prepared by the Department in Washington is superior to any manufactured by private concerns. Of the latter he knows nothing, while of the former he knows all there is to be known. He has perfect confidence in the products of the official laboratory; he sees the ideal in centralization. **Dr. Reynolds**, of Chicago, in a few pointed remarks made a warm appeal for the municipal manufacture or control of vaccine and antitoxins. He said that in Chicago these products are thoroughly tested before they are put out for use. The antitoxin furnished by the New York City Laboratory, far from being inferior, is actually superior to any of the private manufacturer. Private products did not come up to the requirements, as the temptation to place inert products on the market for pecuniary gain is great. (He was frequently interrupted by applause).

SECOND DAY MORNING SESSION WEDNESDAY, JUNE 11.

A paper on the Present Aspect of the Tuberculosis Problem in the United States: State and Municipal Sanatoria was read by S. A. Knopf, of New York City. He presented the results of his recent investigation of the status of municipal control of tuberculosis. The following questions were sent out by him to various states, territories and cities:

What laws or regulations exist in your state to combat the spread of tuberculosis (pulmonary or other)? What recommendations, ordinances, circulars, public notices, etc., have been issued with the same purpose in view? What sanatoria, special hospitals or dispensaries, private or public, for the exclusive treatment of tuberculosis exist for adults or children? Has your state, or any city in your state, a society for the prevention of tuberculosis? What measures, laws or regulations exist in your state to combat bovine tuberculosis?

From the answers received, the following summary was made: Three states and 4 cities make the reporting of cases of tuberculosis obligatory, 4 states and 5 cities optional, in one city the matter is under litigation. Two states have general antispitting laws, 5 states have local and 13 cities individual antispitting laws. Twenty-two states and 7 cities issue circulars and recommendations concerning the prevention of tuberculosis. The United States government has 2 sanatoria for consumptives, 5 states have each a special state institution (Maryland, Massachusetts, Minnesota, Mississippi, Texas), 9 states have projected state sanatoria (Connecticut, Louisiana, Maryland, Minnesota, New Hampshire, New York, Rhode Island, Wisconsin). Tent colonies for consumptives exist only in Massachusetts and Pennsylvania. Only 3 cities have special municipal hospitals for consumptives (New York, Chicago and Buffalo). Boston cares for the poor consumptives in various private institutions; so does New York. Eleven states have 42 private institutions for consumptives. Three states have no boards of health and 20 states have done nothing regarding tuberculosis in man or beast. In conclusions, the speaker suggested that provision be made for the disposal of sputum on the streets, public buildings and homes; also the improvement of the sanitary conditions of the poor, the establishment of special sanatoria, and the establishment of a National Tuberculosis Commission. Several receptacles for sputum were shown. One of them consists of a cylindrical metal box mounted at a convenient height on a cast-iron foot, the whole resembling an ornament or flower-pot stand. The metal box conceals a spittoon for the reception of the sputum. Another device, intended for street and public places, is a conical metal receptacle mounted on an iron pipe which is connected with the sewer. The receptacle is continuously washed by a stream of water supplied through a side-tube. Also a small, flat pocket-box made of metal, for the reception of the expectoration. The box can be easily concealed in a pocket handkerchief.

The discussion of Dr. Knopf's paper was deferred until the other papers on the same subject were read.

Dr. D. M. Appel, of Ft. Bayard, N. M., then read a paper on **The U. S. Sanatorium for the Treatment of Pulmonary Tuberculosis.** He presents the following tabulated report of the results obtained up to March 31, 1902.

Admitted from October 3, 1899, to March 31, 1902.	623
Of these were readmitted after discharge	66
Remained under treatment March 31, 1902.	174
Discharged and died	449

Of these 449 the results were as follows:

	Average residence.	Number of persons.	Percentage.
Cheerfully cured	8 months 7 days	33	7.4
Considerably improved	7 " 21 "	52	11.6
Improved	5 " 15 "	157	34.9

Improved, including 17 discharged in less than a month	113	25.2
Died including 75 in less than a month	94	20.9

Result in 3 stages:

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	25	33	75	16	1	150
2	7	12	50	38	9	116
3	1	7	32	59	84	183

The patients received in this sanatorium were in all stages and, moreover, were difficult to control. In the treatment, he interdicts the use of alcohol, except when distinctly indicated. The patients remain outdoors as much as possible, passing their time in games and mild exercise. Violent exercise, such as horseback riding, is forbidden, as it increases the tendency to pulmonary hemorrhage. As to feeding, the patients receive as a rule 3 meals a day. The long intervals between the meals give the stomach a chance to digest the food, and a necessary rest. Respiratory gymnastics are practised regularly with excellent results. Under the influence of high atitudes, the quality of the blood improves markedly. This paper was followed by one on the **Sanatorium Treatment for Tuberculosis Based Upon Experience at Fort Stanton,** by P. M. Carrington, of Ft. Stanton, N. M. An analysis of 300 cases was presented. The results were quite similar to those obtained by Dr. Appel. Dr. Carrington, in conclusion, pointed to himself as an example of cured tuberculosis. The demonstration received a well merited applause. Dr. S. G. Bonney, of Denver, Col., read a paper on the **Sanatorium Treatment of Tuberculosis.** He said that it is now well established: (1) That consumption is not only communicable, but also a curable and preventable disease, and (2) that it may become occasionally arrested in spite of unfavorable climates, unhygienic surroundings, undue exposure, insufficient food and clothing and financial distress, without even the knowledge of the patient or his friends, individual resistance being the reason; (3) that there is no single climate or special manner of treatment in any way applicable to all cases of tuberculosis; (4) that the most particular and painstaking attention to the minutest details is absolutely essential to a successful treatment; (5) that the degree of successful supervision either within or without an institution depends almost entirely upon the personal influence of the physician himself. Sanatorium control is distinctly indicated in the case of those who are poor and helplessly ill, so as to remove them from society and make their last days comfortable; in the case of the consumptive poor who may find opportunities in State Sanatoria to earn a living; in the case of the ignorant and vicious who cannot be controlled outside of a closed sanatorium. Those for whom institutional treatment is still *sub judice* are those with an incipient infection and limited finances who cannot well leave their business and home. For this class of patients local sanatoria are useful. It is also questionable whether those with advanced infection, who dread to leave their families on account of separation and uncertain prognosis, should be sent away. Closed sanatoria are not unqualifiedly recommended in the cases of incipient or moderate infection. These can well be treated outside of sanatoria, in proper climates, the treatment being carried out in private homes or establishments under the direct supervision of the attending physician.

It being late, the discussion of the above papers was postponed until the afternoon session.

AFTERNOON SESSION.

The symposium on tuberculosis was continued in the absence of Dr. D. E. Salmon and R. R. Dinwiddie, abstracts of their papers were read by the secretary. Dr. D. E. Salmon, of Washington, D. C., in his paper on **Recent Investigations Concerning the Relation of Human and Bovine Tuberculosis,** arrives at the following conclusions: It appears that there is now sufficient evidence to prove that tubercle bacilli of human origin may infect cattle and produce a progressive and fatal disease in them; also that tubercle bacilli from bovine sources may infect man and produce a progressive fatal disease. Ingestion tuberculosis may have its starting point in the glands of the neck or thorax, or even in the lungs, and the number of cases of human tuberculosis showing a primary intestinal lesion is no indication of the number of cases which result from ingestion of tuberculous food. We must depend largely upon clinical evidence for a determination of the relative frequency with which man is infected by tubercular food. Dr. R. R. Dinwiddie, of Fayetteville, Ark., in his paper on the **Intertransmissibility of Human and Bovine Tuberculosis,** a review of the experimental evidence, ridicules the attempt of "those oversanguine experimenters who propose to decide the matter by one clumsily conducted inoculation test on a human victim." Truly "Fools rush in where angels fear to tread." The contributory causes are the same in human and bovine tuberculosis, such as bad ventilation, etc. The course of the disease is not dissimilar. The anatomical lesions in bovine tuberculosis are characterized by a predilection for the serous membranes, magnitude of the tubercle conglomerate, fibrous structure, tendency to calcareous deposits and relative scarcity of tubercle bacilli. Ulceration is less common than in man. The tubercle bacilli present in the discharge do not differ from those in human sputum. An important source of evidence is furnished by the accidental inoculation of human beings with bovine tuberculosis. Experiments conducted by the author at the Arkansas Agricultural Experiment Station included feeding tests on cattle with human tubercular sputum, comparative inoculation tests on cattle with human and bovine tubercle bacilli, respectively, and similar inoculation tests with artificial cultures of tubercle bacilli from these 2 sources on cattle, sheep and swine. At the same time Pearson and Ravenel conducted similar experiments. A careful study of the biological characters and the pathological conditions lead to the following deductions. The bovine tubercle bacillus has been shown to possess an indiscriminate and not a selective excess of virulence over the human specimen. Whether or not Koch's view is correct, it can hardly be said that it derives any support from the purely experimental evidence. There is a wide field for investigation yet to be covered before we as sanitarians, can feel justified in recommending the discontinuance of the safeguards against infection from tuberculous dairy products, which an unwilling public is just beginning to appreciate.

The other gentlemen on the program being absent, Dr. J. Evans Stubbert, of Liberty, N. Y., read a paper on the **Treatment of Pulmonary Tuberculosis from the Sanatorium Standpoint.** He discusses mainly the treatment of tuberculosis by medication, X rays, surgical operations, etc.

Discussion. Dr. M. P. Ravenel opened the discussion. He said that he hoped to show some specimens which are on exhibit at the Congress Hall and he asked the members to inspect them as to his mind they leave no room for a controversy. Koch's conclusion is contradicted by the experiments performed by him, showing that cattle can be successfully inoculated with human tuberculosis, a task which Koch was unable to accomplish. Virchow found in human subjects tubercular masses similar to perlsucht, showing that the disease may be quite similar in man and animals. There is now no doubt that cattle can be inoculated with human tuberculosis. This may be

brought about by overwhelming the animal and inoculating a second animal from the first. It is true, however, that animals do possess a high degree of resistance to human tuberculosis. There are reliable reports of cases of transmission of tuberculosis from man to animals. This does not prove the converse, although there is considerable evidence on record, showing that human beings may become infected from cattle. Osler, in his book, states that in skin tuberculosis the disease tends to become localized. In looking over the literature, he was able to find only one case of a fatal result from skin tuberculosis. Yet in the cases of accidental inoculation with bovine tuberculosis a number of deaths occurred. Healthy men may inhale tubercle bacilli without getting the disease. When a man of perfect physique and a good family history dies of a local tubercular infection, the evidence is fairly conclusive. Among the many cases of local infection with bovine tuberculosis at least 3 deaths are recorded. It would appear that bovine tuberculosis is at least just as dangerous as human. Experiments performed by Chaveau and others show that the skin is an extremely unfavorable soil for the tubercle bacilli. If such results follow skin infections, how much more likely are the child's intestines to become infected. The idea that food tuberculosis should be looked for in the intestines alone should be controverted. Primary food tuberculosis should be looked for in the tonsils, pharynx and esophagus, where primary tuberculosis may occur. As seen from the photograph, the lung shows evidences of tuberculosis, yet this cow was fed with tubercular material and showed not the slightest injury to the intestines. In a monkey which reacted negatively to tuberculin, feeding of tubercular material resulted in pulmonary tuberculosis with only a very slight lesion in the intestine. Any pathologist would call this a case of respiratory tuberculosis. In this case the tonsils and mediastinal glands were affected. In 3 out of 4 swine pulmonary tuberculosis was produced by feeding without any intestinal involvement. Are we not justified in believing that infection in a child takes place also by way of the tonsils, the latter being often affected w... tuberculosis? One other point, if human tuberculosis can infect cattle, it proves that either human tuberculosis may be fatal to cattle or the subject from whom the bacilli were obtained was killed by bovine tubercle bacilli. He related an experiment in which animals were infected with a culture from a mesentery gland of a child who died of tuberculosis. He believes that his child suffered from bovine tuberculosis. There is no doubt that all types of tubercle bacilil had a common progenitor. Each type adapted itself to the special environment. In fish there is the fish tubercle bacillus, in cattle—the bovine tubercle bacillus, in birds—the avian tubercle bacillus, etc. However, Noccard has shown that by cultivating the bacilli in capsules within the abdominal cavity, the bovine tubercle bacillus may be changed into the human, the human into the avian, etc. It is practically certain that, in nature, the tubercle bacillus has a great range of variability in morphology and pathogenicity. The following classification suggests itself: The bovine tubercle bacillus is the highest type, next is the human, next the avian, all possibly originating from the grass bacillus of Rabinovitz and Petri. He is convinced that bovine tuberculosis is a menace to public health. There were, it is true, exaggerations, but even if the reality was exaggerated tenfold, we should not blindfold ourselves. There is a real danger in bovine tuberculosis against which we should guard ourselves.

Dr. Knopf said that Dr. Ravenel set at rest all doubts concerning the question. He referred to Lord Lister who opposed Koch's views at the Tuberculosis Congress. Thanks to the work of Dr. Ravenel and others, we are justified in saying that human and bovine tuberculosis are intercommunicable. He criticized some points in Dr. Appel's paper and especially the latter's method of employing tuberculin for diagnostic purposes. He thought that to use tuberculin for such purpose is a crime. He knows of a case in which acute miliary tuberculosis was set up by the use of this agent. Referring to Dr. Bonney's paper, he remarked that he is an advocate of sanatorium treatment at home. Many of the poor must be treated at home. **Dr. Boardman Reed**, of Philadelphia, said that the identity of bovine and human tuberculosis was demonstrated beyond question. As to the transmissibility of bovine tuberculosis to man, it may be possible, but no actual experiment is feasible. There is only one way of doing it and that is to perform the experiment on criminals. Many of them would perfer death from tuberculosis to the gallows. He believes that the States would grant the privilege. He also made some suggestions regarding the use of lavage and electricity in tuberculosis.

Dr. Miner, of Ashville, endorses farm-work for the tuberculous. Sanatoria will never be completed without the convalescent being able to take up farm-work. If the patient is permitted to go back to his previous environment, the treatment did not accomplish any good. He thought that the sputum flask devised by Dr. Knopf was inadequate, as the opening is too small. He believes with Dr. Appel that violent exercise in tuberculosis is prejudicial. **Dr. Stubbert** has never been willing to use tuberculin, for it may light up an old case. The reaction is also produced in syphilitics. He believes that the government should use tents instead of dormitories in the treatment of tuberculosis. He observed by means of the X-rays that when the heart is small the prognosis is bad, almost universally fatal. Home and sanatorium treatment of tuberculosis can only be accomplished by educating the public and confining the efforts to incipient cases. The best method is prevention. **Dr. Bracken**, of Minneapolis, criticized Dr. Knopf's statement to the effect that the tuberculous criminals are treated better than the tubercular outside the prison walls. We must deal with conditions as we find them. The work done for lunatics and criminals should not be treated sneeringly. In Minnesota attempts are made to reduce the mortality from tuberculosis among criminals. The disease is quite prevalent among the criminals. The suppression of bovine tuberculosis in preference to human, alluded to by Dr. Knopf, is conditioned by the fact that to the legislator a cow is more valuable than a human being. The farmer can easily get a wife, but he must buy the cow. Minnesota is going to establish a sanatorium. **Dr. Moor**, of Nebraska, said that it is unfortunate that not a single paper was read on the treatment of tuberculosis in sanatoria in places not favorably situated climatically. He referred to the sanatorium at Rotland where they obtained favorable results in spite of the miserable New England climate. If such results can be obtained, it will not be necessary to transport patients 1,000 miles to a good climate. Patients cannot often be sent for various reasons, principally financially. States should establish local sanatoria. **Dr. Bonney**, in closing the discussion, said that the last speaker claimed more for eastern sanatoria than those who conduct them. There is a difference in the cases. Dr. Appel and others took the cases as they came, while at Rotland they select their cases. Dr. Appel spoke of the value of breathing exercises. He is not prepared to accept the statement that the increased chest measurement is due to the exercise. He has seen the chest measurment increased in soldiers without any exercises, simply due to the change in altitude. He is opposed to breathing exercises in high altitudes, and is also opposed to compression of the lung by nitrogen gas, unless distinctly indicated. It is the individual who is treated and not the disease. The patients should be passive and be rather taught what not to do. Dr. Appel's classification is fallacious, for no classification according to physical signs is practicable; other factors should be taken into consideration. **Dr. Appel**, in closing the discussion, said that Dr. Knopf's objection to the use of tuberculin is not supported by experience. He has no dread

of tuberculin. He obtains it from Troudeau and Baldwin who used it for years without any ill effects. He employs it cautiously and in no case were there any deleterious effects observed. He resorts to the tuberculin only in cases of doubtful diagnosis. In his opinion the test is as reliable as the Widal test for typhoid fever. Regarding dormitories, he said that only the febrile and permanently febrile are isolated. The ambulant patients are in the dormitories only at night. He does not attribute any prognostic value to the size of the heart. A large number of cases is incurable. He has never seen any bad effects from breathing exercises if performed gently. On the other hand he does not believe that the increased chest measurement can be attributed to the high altitude alone. His own chest had not enlarged until he took up the exercises, although he had previously resided in high altitudes. There is no doubt that tuberculosis may be cured in any climate. **Dr. Knopf** offered the following resolutions and made a motion for their adoption. **Dr. Benjamin Lee,** in seconding the motion, said that the question is of national importance. The resolutions: "Resolved that in view of our knowledge that several European Governments have established National Government Tuberculosis Commissions and recognizing the fact that tuberculosis is likewise with us a very prevalent and preventable disease, the Section of Hygiene and Sanitary Science recommends that the American Medical Association address an appeal requesting the proper Federal Authorities to create a U. S. National Commission for the study, mitigation and prevention of tu[illegible] in this and other countries." Dr. F. Schamberg, of Philadelphia, read a paper on the differentiation of small pox and [illegible] therewith. The slides were excellent and the talk instructive. Emphasis was laid on the differentiation between smallpox and syphilis, and slides shown illustrating the two affections. **Discussion. Dr. Bracken** claimed that smallpox was introduced into this country before the Spanish-American war. **Dr. West,** of Texas, believes that it reached Texas from Mexico. **Dr. Reynolds** referred to the work of other authors, showing that the disease broke out before the war.

[A. R.]

SECTION ON NERVOUS AND MENTAL DISEASES.

FIRST DAY, TUESDAY, JUNE 10, 2 P. M.

Dr. Dewey, in his opening address, made an urgent plea **for the establishment of neuropathic hospitals by the State,** to care for those afflicted with hysteria, neurasthenia and borderland cases which are not accepted by insane asylums and do not come within the scope of the general hospital. The increasing number of these cases and the inability of the general practitioner and the general hospitals to care for them led the speaker to the conclusion that the State should care for them much after the same manner as the care of the insane. A memorial to Dr. J. T. Eskridge was read by Dr. F. P. Norbury and Dr. Chas. K. Mills.

Dr. J. H. W. Rhein, Philadelphia, read a paper describing **the exercises for overcoming the ataxia of tabetics.** Attention was especially directed to the simplicity of the exercises, their short duration and the guarding of the patient from fatigue.

Dr. Leszynsky, New York, said that it should be remembered that only a very small percentage of cases of tabes were suitable for carrying out this treatment: that in all those cases in which the disease had advanced so far as to be associated with paresis, or in some cases with arthropathy, marked hypotonia, etc., little good could come from re-education. Dr. Rhein, in closing, said that in cases in which the paresis was so marked that the patient could not lift the legs, Goldscheider had used a pulley arrangement over the bed with a sling, into which fitted the leg, and the exercises were carried out in that way.

James D. Morgan, Washington, D. C., read a paper on **symmetrical gangrene versus endarteritis obliterans,** reporting 2 cases of this disease in one of which there was simultaneous development of gangrene in all 4 extremities. The microscopical examination revealed obliteration of the lumen of the vessel, with a proliferation of cells within the lumen, and channel formation in this mass of cells. He did not consider this to be an organized thrombus.

Dr. T. D. Crothers, Hartford, Conn., read a paper on **alcoholic epilepsy.** He considered it to be an obscure and complex psychosis intimately associated with true epilepsy and often with difficulty discriminated from it. Large numbers of cases had come under his observation, the clinical course of which varied: some dying in a few days, others extending over many years.

Dr. Lloyd, Philadelphia, said that in classifying epilepsies, which were to be considered more as a symptom group than a disease, extreme care should be used. It was not well to be dogmatic, until we understood more about the subject. He did not, however, believe that the majority of these cases were caused by alcohol. There is a type of individual ready to develop the convulsive habit, and any toxic irritant could as well be the determining factor as alcohol. The alcohol was not, therefore, to be considered as the cause of this class of cases. In another group of cases in which the epileptic was a drunkard when he came under observation, it was well to bear in mind that ordinary epileptics, with their mental instability, were as prone to carry the use of alcohol to excess, as they did other things. If the excessive use of alcohol was such a frequent cause of epilepsy, then we would have much more epilepsy among the chronic alcoholics than we have at present.

Drs. McBride, Richardson and Keniston also discussed the paper.

SECOND DAY, WEDNESDAY, JUNE 11, 9.30 A. M.

The Babinski phenomenon in insane epileptics was the title of a paper read by Dr. J. M. Keniston, Middleton, Conn. A statistical study was made of the observations from one thousand epileptics. The statistics alone were presented, the rest of the paper not being read.

Dr. D. J. McCarthy presented a paper on **exceptional forms of pressure palsies.** Cases of unilateral and bilateral [illegible] palsy, of ulnar and perineal palsy as the result of pressure were detailed. He considered that a palsy due to pressure on a nerve, lasting over a limited period of time, could only be explained by assuming a lowered vitality of the nerve due to some intoxication. This, in a large number of his cases, was found to be alcoholic, although other [illegible] and sometimes a combination of toxins, as alcoholism and syphilis, etc., were present. Prognosis was always favorable in this group of palsies, providing the intoxication could be controlled; the further treatment consisted of a general tonic treatment, with galvanism and massage. Drs. Rhein and MacBride discussed the paper.

[illegible] **phine addiction and its treatment."** He found that [illegible] of cases occurred in the families of physicians. He advocated [illegible] was necessary to support the heart during the early [illegible] habit. Dr. Tomlinson had noted a peculiar mental condi[illegible] discussed this paper.

WEDNESDAY AFTERNOON, JUNE 11.

[illegible] The etiology and pathology of epilepsy was read by Dr. F. Savage Pearce, Philadelphia. The etiology was [illegible] discussed in this paper, especial stress being laid on alcoholism, syphilis and other factors in the [illegible] traumatic epilepsy were also treated.

The psychopathology and medicolegal relation of epilepsy was read by Dr. H. A. Tomlinson, St. Peter, Minn. The different mental states, perverted ideas, and

disturbances of personality were thoroughly discussed. He divided the mental reduction into the gradual and the rapid and traced the relation between the postepileptic states and the loss of mentality. The medicolegal aspect of epilepsy was thoroughly reviewed.

The medical, hygienic and surgical treatment of epilepsy was read by Dr. D. R. Brower, Chicago. A thorough review of the modern therapy of epilepsy was detailed. Nothing new was given. The surgical treatment of essential epilepsy was declared to be unjustifiable, and had fallen into disuse as a remedial measure.

Institutions for the epileptic were treated by Dr. Wm. P. Spratling, Sonyea, N. Y. He reviewed the history of the "colony" or farm plan of treatment, and described the formation and working of the Craig Colony. The discussion was by Drs. Charles K. Mills, F. Savary Pearce, D. J. McCarthy, A. B. Richards, D. B. Brower, J. Hendrie Lloyd, Wm. P. Spratling, etc.

THIRD DAY, THURSDAY, JUNE 12.

(32) Dr. Joseph Collins, New York, read a paper entitled **"a plea for a simpler therapy of nervous diseases."** He called attention to the uselessness of drug treatment in such diseases as tabes, etc. and favored the use of massage, rest, hydrotherapy, mechanotherapy, etc., in which these could be applied. Discussion by Drs. Keniston and McCarthy.

Dr. J. H. W. Rhein, Philadelphia, read a paper on **cases illustrating involuntary movements in ataxia.** The first case was that of a woman, aged 55 years, who, together with the usual symptoms of progressive tabes dorsalis, presented a constant state of alternate flexion and extension of the toes, due to clonic spasm of the anterior and posterior calf muscles. This tremor was coarse, irregular, almost constant during waking hours and disappearing during sleep. The second case was that of a widow, aged 66 years, exhibiting the typical clinical picture and history of tabes. She suffered from a general choreiform movement similar in nature to the Sydenham type, dating one year after the initial symptoms. There were slow, irregular contractions of the fingers of both hands, when the eyes were closed. Atrophic bone changes were present in both cases, with spontaneous fracture in the first case. Dr. Moyer thought the description of these cases would point to Huntingdon's chorea and he did not see any reason why these two diseases could not occur at the same time, in the same person. Dr. McCarthy thought that the symptoms in these cases could be explained by the associated involvement of the lateral tracts of the cord which sometimes occurred in tabes. The presence of the Babinski reflex in one of these cases pointed strongly to lesions other than those ordinarily found in tabes. The description of the alternate contractions of the calf muscles in the first case reminded him of a symptom group described by von Bechterew and later by Spiller, the so-called hemihypertonia postapoplectica. He had himself reported a case which showed that it was not necessary to have an apoplectic attack, and that an irritative lesion, subcortical in position, could produce a condition of hypertonia, with alternate flexor and extensor spasm, without the production of paralysis, and independent of any apoplectic symptoms. Dr. Hughes thought that the degeneration of very few cases of advanced tabes or other systemic diseases would be found localized to the original fiber tracts involved, but would be found extending in a diffuse way beyond the original boundaries and that such a condition, indicated by the presence of the Babinski reflex, would explain these cases.

Dr. A. A. Eshner, Philadelphia, read a paper on **peripheral neuritis as a complication of whooping cough.** After a discussion of the general classification of the causes of neuritis, he laid special stress on the infectious forms of neuritis and detailed a case associated with whooping cough. He called attention to the rarity of neuritis as a complication of pertussis. A complete abstract of the cases in the literature was given.

Dr. Harold N. Moyer, Chicago, reported a case of **Huntingdon's chorea.**

Dr. H. P. Sights, Paducah, Kentucky, read a paper on **causes other than syphilis for paresis.** He considers that cause is no more to be attributed to syphilis than to other conditions which cause mental anxiety and suffering producing an irritation of the central nervous system.

Dr. Charles K. Mills, Philadelphia, read a paper entitled **"Encephalic localization, especially with reference to osteoplastic operations for brain tumors."** In this paper Dr. Mills gives an exposition of his views of the function of different areas of the cortex and their value for localizing in brain tumors, etc. He has radically modified his former views as to the sensory areas and, in this paper, applies the investigations of Flechsig, especially in the areas of cortical sensory distribution. [D. J. McC.]

AMERICAN ACADEMY OF MEDICINE.

Twenty-seventh Annual Meeting, Saratoga, June 7 and 9, 1902.

SATURDAY MORNING, JUNE 7.

After the opening address of the president, Dr. V. C. Vaughan, Ann Arbor, Dr. McIntire, Easton, Pa., read letters from Dr. Virchow, Berlin, and Dr. E. Nettleship, London, expressing appreciation at having been elected honorary members of the Academy. The rest of the morning was devoted entirely to the business of the Academy.

SATURDAY AFTERNOON, JUNE 7.

Dr. S. A. Knopf, New York, read a paper on the **family physician of the past, present and future.** Fifty years ago the general practitioner was also friend and counsellor. Nowadays he has depreciated in value on account of competition, quackery and unfair compensation. Besides, specialization when carried to excess affects the career of the general practitioner. Without the aid of the family physician the solution of the tuberculosis problem is impossible. The general practitioner of the future should be one of the great factors of civilization and one of the most important helpers in ameliorating the sanitary, social and economic conditions of the human race. Dr. H. O. Marcy, of Boston, said that there was something in physicians tending to help men and women toward what they ought to be mentally, morally and physically. In answer to Mr. Taylor, of the New York Board of Regents, Dr. Knopf stated that alcohol in very small quantities, not more than 2 ounces, may be regarded as a food. Dr. Didama believed that, contrary to Professor Atwater's views on the subject of alcohol, those expressed by Mrs. Hunt of the W. C. T. U. deserve the commendation of physicians. Dr. W. S. Hall spoke highly of Professor Atwater's work, believing that alcohol should not be classed as a food. Dr. Knopf replied that he had specifically stated that the physician would be able to combat the idea that alcohol is good for consumptives. Occasionally in the course of the disease a small amount of alcohol is justifiable.

Dr. C. M. Culver, Albany, read a paper on the **physician as an accountant.** He quoted Dr. McClintock, who believed that physicians were either altruists or truants. Bookkeeping, however distasteful, is necessary. The tired altruist should employ a clerk; but good bookkeeping is not the best, cash is better. The prime beneficiary is the physician's clientèle, then only comes the doctor's family. He believed, not that selfishness is desirable, but that every detail of the physician's work is worthy of maintenance.

Dr. W. S. Hall read a paper upon **pure science versus applied science in medicine,** stating that pure science deals with hypothetical cases. It has a value in 2 ways, stimulating the development of reasoning and of tabulating results in formulated conclusions. Applied science, on the other hand, deals in problems the conditions of which are determined by experimentation. These observations are also followed by a series of conclusions. Pure science is not indispensable in the preparation for applied science. Dr. A. L. Benedict, Buffalo, made the report of the committee on time allowance in the combined college and medical schools. Dr. L. D. Bulkley, New York, believed that entrance examinations should be made more difficult. Dr. J. B. Roberts, Philadelphia, believed that 7 years was sufficient for both college and medical courses. Inorganic chemistry should

not be taught in the medical schools, and bacteriology and histology might be better given in college.

SATURDAY EVENING, JUNE 7.

The president, Dr. V. C. Vaughan, Ann Arbor, delivered his address upon the religion of science. But few have attempted to show that the man of science is a religious being and has definite convictions concerning his duty and obligations to his fellow-men, and opinions concerning the development of the universe and the destiny of the race. He discussed religion from a purely scientific standpoint, believing that there should be harmony among all good men striving for the accomplishment of the same purpose. He denied that most scientific men were materialists, for the scientist is aware, not only of the existence of energy and its indestructibility, but also of its universality. He teaches that man is more than matter and more than the combination of energy and matter. He observes more than other men the close interdependence between mind and brain, consciousness and matter. Nor can mental phenomena be measured like other forms of energy. He believes that among educated people at least there are no atheists. The most radical difference between men is their conception of God. To the scientist God is law. Whatever be our theological belief, the existence of evil in the world must be admitted, and the highest duty of man is to eradicate evil. An action can neither be moral nor immoral without a certain degree of freedom or choice. The most beneficient and the most sacred labor of man is the search for truth in the understanding of the laws that govern light, and the best that man can do for his follows is to teach them to live in conformity with these laws. Religion is man's conception of the development and purpose of the universe and of his duties and obligations in relation thereto. This conception changes as man develops educationally and morally. He should have such a conception of the origin, development and purpose of the universe, and of his duties and obligations that will induce him to perform such duties and fulfil such obligations faithfully. Unless this be the case, religion is without effect on man. He does not mean that science has been the only means of uplifting mankind and improving the race.

(To be continued.)

Remarks Concerning the Technique of Winkelmann's Hydrocele Operation.—W. Mintz (*Centralblatt für Chirurgie*, May 17, 1902, No. 20) states that in the case reported by Lauenstein (*Centralblatt für Chirurgie*, 1901, No. 46), as well as in the case reported by Gueckel (*Centralblatt für Chirurgie*, 1902, No. 6) and in which there were recurrences, a reaccumulation of fluid was found between the tunica propria and communis, preventing adhesion. It will therefore be necessary, if Winkelmann himself is followed (*Centralblatt für Chirurgie*, 1898, No. 44) and the tunica propria is turned inside out, to replace it in the sac which is formed by the tunica communis. In order to assist in preventing the silk sutures from impeding the desired results bands are cut from the scrotum itself and attached to the opposite margins of the wound, to illustrate which a drawing accompanies the article. [M. R. D.]

The Extirpation of Carbuncles. Robert Lœwy advises extirpating large carbuncles and gives the case his ories of 19 patients upon whom the operation was performed. Lannelongue has removed carbuncles by extirpation from 20 patients, without one death. Crucial incisions are made over the carbuncle dividing it into 4 quarters, and it is extirpated after dissecting out the four skin flaps. Compresses are left upon the parts extirpated until the entire carbuncle has been removed and all bleeding vessels have been ligated. The wound is washed in hydrogen peroxide or potassium permanganate. Moist dressings of carbolic acid, 1 to 400, are then applied. In a severe case, which is described in full, cicatrization was complete in two months' time. Extirpation is the best treatment, because it removes all infected tissues; it can safely be performed upon individuals with diabetes or albuminuria; and the results have been excellent, as Lœwy's diagrams show. (*Le Bulletin Medical*, March 8, 1902.) [M. O.]

Special Article.

THE DINNER TO DR. STERNBERG.

It was a highly representative gathering that took place last Friday evening, June 13, at Delmonico's to do honor and to pay homage to the retiring Surgeon-General, George H. Sternberg. Representative practitioners of the East and the West, of the North and the South were present, and the occasion was a most enjoyable one.

Dr E. C. Janeway, in his introductory remarks, first read a telegram received from Major-General H. C. Corbin, in which he offered congratulations to Dr. Sternberg and his sense of appreciation of duty well done. Further, in speaking of Dr. Sternberg and of his long life and many years of activity, Dr. Janeway remarked that in being retired at the age of sixty-four, it could well be said that Dr. Sternberg did not retire on any grounds of insufficiency; he was not responsible for the date of his birth, and it was by an act of Congress that he was forced to give up this particular line of activity. He expressed the hope, however, for this illustrious student of bacteriology, Fellow of the American Association of Hygienists, Commissioner on the Study of Yellow Fever, author and worker, that many years would be left him in which he could carry on his work. Dr. Janeway said that it was a matter of pride for the American physician to point out the long list of achievements and attainments of their illustrious guest, which bespoke such a high mental endowment and was an evidence of work well done.

In response to this toast General Sternberg said: "Words fail me in which to express my high appreciation of the compliment you have paid me by making me your guest of honor upon this occasion. Such a compliment, coming to me from the leading members of the medical profession, at a time when by the operation of law I have reached the end of my active service as a medical officer of the Army, is especially gratifying. Accepting this testimonial as evidence of your approval of my efforts for the promotion of medical science and of the interests of the medical corps of the army, I thank you one and all most sincerely. At the same time I feel that the results accomplished have fallen much below my earnest desires and perhaps have not been commensurate with the opportunities I have had.

"My first feeble efforts in the field of investigation which has always presented the greatest attraction for me—the etiology and prevention of infectious diseases—were made at a time when no one in this country was prepared to give the instruction in methods of research and I was to a large extent thrown upon my own resources. The tubercle bacillus, the typhoid bacillus and many other well-known pathogenic micro-organisms had not yet been discovered and a most promising field of investigation was presented to my view, for I was strong in the belief that infectious diseases must be due to infectious agents capable of self-multiplication, i. e., to living disease germs. It so happened that the principal problem which I was called upon to solve was one of the most difficult that has engaged the attention of investigators, and one in which bacteriological methods have proved to be of no avail except in establishing a negative proposition, i. e., that yellow fever is not due to a micro-organism of this class. The long and persistent

work devoted by me to an investigation of the etiology of this disease might have given more fruitful results if my attention had been turned in some other direction, but while I met with a serious disappointment in my failure to discover the yellow fever germ, I have the satisfaction of knowing that my researches cleared the way for the subsequent demonstration by Reed and his associates, of the method by which this disease is transmitted from man to man. From a practical point of view this is all we require to guide us to a successful measure of prophylaxis, as has been recently demonstrated in the island of Cuba.

"But I must not occupy your time by further reference to this portion of my life-work. For nine years I have scarcely looked through a microscope, my time having been fully occupied by the important duties entrusted to my charge as Surgeon-General of the Army. While I have not been able personally to prosecute any researches having in view the advancement of medical science, it has been a source of great satisfaction to me that I have been able to provide the means and appliances for other medical officers of the Army to do so. When I commenced my research work I had to provide my own microscope and material of all kinds. There not only was no bacteriological laboratory or apparatus at any military post, but so far as I am informed none at any medical school or university in the country. At present we have a thoroughly equipped laboratory in connection with our Army Medical School in the city of Washington, at all of our general hospitals in this country and in the Philippines, and also at every military post of any importance throughout the United States. We also have a considerable number of medical officers who have been instructed in the Army Medical School, who are well prepared to take advantage of their opportunities for research work.

"The Medical Corps of the Army is to-day in a high state of efficiency and I am proud to have been the chief of this *corps d'élite* during a period when its efficiency and usefulness had been put to so severe a test. The profession, also, has reason to be proud of its members who are attached to the military service of the country. Our senior surgeons have been called upon to fill positions of great trust and responsibility during the past four years and have, as a rule, acquitted themselves with great credit. As Chief Surgeons in the Philippines, in Cuba and in Porto Rico, they have been to a large extent responsible for the administration of the affairs of the Medical Department and have been called upon not only to protect our troops from the ravages of infectious diseases, but to perform a similar service for the natives of the various islands in which American soldiers have been called upon to serve. In all of these islands we found smallpox to be widely prevalent and in all it has been practically stamped out. In Cuba yellow fever was a scourge which threatened to do us greater injury than the bullets of our foes. But thanks to Reed and his colleagues on the Board sent to study this disease, we now know how to prevent its extension and have practically stamped it out in the city of Havana, which has for many years been its principal endemic focus in the West Indies. In the Philippines bubonic plague has been kept in check by the strenuous exertions of our medical officers and the latest reports indicate that it has almost disappeared from the city of Manila. Unfortunately Asiatic cholera has recently gained a foothold in Manila and the neighboring provinces. Colonel Maus, who is at present acting as Commissioner of Public Health, is fighting this scourge with every means known to science and hopes to be able to avert a serious epidemic.

"Time will not permit me to dwell further upon the achievements of our medical officers during and since the Spanish-American war, but I make bold to say that as sanitarians, as surgeons, as all-round practitioners of medicine and as scientific investigators we have in our ranks many medical officers who are an honor to the corps and to the profession.

"I also point out with pride to our general and post hospitals. The general hospitals at the Presidio, at Fort Bayard, at Washington Barracks and at the Hot Springs, Ark., are models which bear comparison with the best civil or military hospitals in any part of the world. The same is true of our principal hospitals in the Philippines. In this country nearly every military post of any importance has a modern hospital well adapted to the requirements of the military service, provided with a well-equipped laboratory for clinical and research work and an operating room which would be regarded with satisfaction by any surgeon accustomed to the precautions necessary for successful aseptic surgery.

"When I look back for forty-one years to the time when I entered the Army as an Assistant Surgeon and consider the great advancement in scientific medicine since that day, and the superior facilities which now exist for rendering efficient aid to the sick and wounded of our army, I cannot help regretting that I knew so little then and that now I have reached the end of my active career and, like an old workhorse, am turned out to graze at a time when the results of medical and surgical practice are so much more satisfactory. On the other hand, I confess to a certain feeling of exhilaration and a disposition to kick up my heels at the thought that I am my own master and can graze in such fields as suit me best. One of my oldest and best friends, now seated at this table, will remember when at the mature age of nineteen years we left our rural homes in Otsego County for the purpose of teaching the young idea how to shoot in the New Germantown Academy in the State of New Jersey. When I graduated in medicine at the College of Physicians and Surgeons in this city, my ambition did not extend beyond the hope of securing a living practice in the country. My first venture was at a little town on Long Island, where a vacancy was supposed to exist owing to the recent death of an old and highly respected physician. Apparently I was not able to fill this vacancy, for my professional shingle was displayed for several months and I did not receive a single professional call. Not being appreciated in this conservative neighborhood, I moved my base of operations to Elizabeth City, New Jersey, and

was getting a little practice when the war tocsin sounded and my future career was determined by the favorable verdict of an Army Medical Examining Board as to my qualifications for duty as an army surgeon. Within three months I was engaged in infecting gunshot wounds with dirty fingers and unsterilized cold water dressings, and in amputating the legs and arms of unfortunate soldiers who had sustained gunshot fractures in the disastrous battle of the first 'Bull Run.' We were all blissfully ignorant of pathogenic micrococci and bacilli in those days, but having had Willard Parker as my professor of surgery, and Sands as demonstrator of anatomy, I was not entirely unprepared for the responsibilities of the battlefield.

"It would perhaps have been more profitable if I occupied the time at my disposal upon this memorable occasion in speaking in some detail of the advancement of medicine and surgery since my student days; but most of you are better qualified to discuss this interesting topic than I am, and I am sure you will pardon me if my remarks have been more or less personal and reminiscent in character. I find it hard to realize that the country youth of my name who came to this city as a student of medicine in 1858 is here to-day as the honored guest of leading members of the medical profession in the United States, whose names are a household word wherever students of scientific medicine are assembled.

"I thank you, gentlemen, again and most sincerely for this kind testimonial of your esteem. Your endorsement of my life work is of more value to me than military honors or financial competency. I have at times felt discouraged and disposed to think that I have fallen far short of what might reasonably have been expected in view of my oportunities. But it is reserved for the very few to accomplish great things,' and the physician who has won the esteem of those of his profession who are best qualified to judge of his work may well be satisfied, although he realizes that he has but a small share in promoting the advancement of scientific medicine and the interests of our beloved and humane profession."

Dr. Alexander H. Smith, in response to the toast, The United States Army, said that its work spoke for itself. He had been struck, he said, with the parallelism in the careers of Dr. Sternberg and himself. Both were from New York State, both graduated from the College of Physicians and Surgeons, both settled in New York State to practise, and thence both moved to New Jersey; and finally at the call to arms both entered the Army, whence their paths diverged very widely. Dr. Sternberg was sent to New Mexico, and for three years was busy holding on his scalp. The Commanches, the Apaches and the Navahoes were to the east of him, and frontier warfare was being carried on incessantly. It was at Fort Ellsworth, in Kansas, that he met Dr. Sternberg for the first time, and he well remembers his hospitality in the little dugout in which he then lived, and has been proud to claim him as a friend from that time.

He himself had been successful among the Arapahoes and Cheyennes in keeping his own scalp on. Out there, face to face with the savage foe, the American soldier taught the Indian object lessons, and they then learned that an unscalped Indian is only a half dead one, so they scalped him to be sure. He said that at the present time there was not a hostile Indian within the borders of the United States. They had been compelled to learn their lesson, and had become a responsible people. Dr. Smith suggested that a mental parallel might be drawn which would be of service in modern times.

He had watched the career of General Sternberg, and had shared in his honors; and throughout the Spanish War had felt great pride in his achievements. He had seen that the medical department was not second best, but first best notwithstanding all the drawbacks; the results were more satisfactory and the criticism less than in any other department of the service, and Dr. Janeway then and there demonstrated that a medical man might have executive ability outside his own lines.

Colonel Lippincott spoke of himself as being a frontier man, and said that at the present time he was stationed at Governor's Island, feeling even more in the backwoods than ever. He said that the army and his own corps all gravitate toward General Sternberg; their respect and love reach out in his direction. At the present time there is an army of 66,000 men, which before had numbered more than 100,000 men. But as far as the medical department was concerned, five corps were ready for active campaign service. The work that Dr. Sternberg has done, finding ten years ago the miserable old stuff left from the Civil War, in remodelling and reconstructing the corps so thoroughly and fundamentally is a matter to be proud of, and we are proud to have such a medical man in the army; we honor the man who made it possible and owe him a debt of gratitude.

Speaking on the subject of the work of the army in Cuba, Dr. William Osler, of Baltimore, said that it was a happy expression. "Peace hath her victories no less renowned than war." The Spanish War, he said, afforded an illustration not of prize fighting, but of a great, big giant, pomelling a puny citizen affected with general paresis or Parkinson's disease; it was not a fight, he said; it was a walkover. But there is another thing, and a totally different thing; another foe, worthy of the best of America's steel; and no chapter in the history of medicine will be able to stir the blood of the American profession as that which will tell of the battle with yellow fever. He said it was a noble tale from the earliest history when Matthew Carey, of Philadelphia, in 1793, first took up the work. Throughout the early history of medicine one reads the works of Rush and of Carey and the host of others who fought that foe. It has always been the same story in the Gulf States, the soul-stirring history of the men who have laid down their lives in the struggle with this mighty adversary. Here is the foe that General Sternberg has founght and with success; he will go down to posterity with the honor of a battle hard fought and valorously won. The victory, Dr. Osler said, was accomplished in a way that reflected great credit upon the army and upon the State. The work of Reed and Carroll was a piece of work well planned and well carried out, a demonstration to the entire world.

That, however, is not all of the story. Tuberculosis, typhoid fever, these are with us still. Never has there been an instant in the history of medicine when with such rapidity an organization has been able to wipe out a scourge. That work has been carried on by Dr. Leonard Wood and Dr. Gorgas.

Dr. Osler said that if their work had not been as successful as good fortune had made it, General Sternberg would have received the same honor, the success was his also. When Havana was occupied in 1898 he became a health officer in the spring with no very clear idea of what to do, and at first he had devoted his attention to organization and development of a sanitary department; work was started in on all lines and as well as bad had as well as good. There was little yellow fever in the spring of that year, but in the fall and winter there was a great deal. In 1900 though the general sanitary condition had immensely improved, the yellow fever was still present and the epidemic was of a severe character. There were over [illegible] cases, and [illegible] deaths, and he felt discouraged at the little progress made. In 1900 Dr. Reed, Chief of the Bureau, first directed work along the lines of the theory of the mosquito infection, and he proved, as history now so well knows, that the mosquito can be infected only during the first three days of the disease, and that

there is a period of from 12 to 25 days when the bite of the stegomyia can convey the disease.

In February, 1901, the Sanitary Department was reorganized and turned its attention to study the local conditions and their relation to the spread and development of the mosquito. The rain-barrels, the family cisterns, all breeding the stegomyia, the Chinese gardens from which came anopheles, all these were studied in much detail and a large force of 150 men was put to work. There were but few cases of yellow fever at the time, and the mosquitoes of the neighborhood were killed by fumigation, pyrethrum powder proving a very efficient mosquitocide. In January of 1891 the city was free from yellow fever; in July the suburbs received a certain amount of reinfection; but on September 28, 1901, the last case of yellow fever occurred. Since that time the land has been practically free, since Havana has been the center of infection. The success had been due to the study of the mode of propagation, which discovery had been made possible by the enthusiastic cooperation of General Sternberg.

Dr. Janeway then introduced Dr. John A. Wyeth, of New York, the retiring President of the American Medical Association. Dr. Wyeth in turn introduced Dr. Frank Billings, the recently elected President of the American Medical Association.

Dr. Billings said that he did not feel that he could add anything to what had been so well said, but that he desired to speak for the American Medical Association, the representative body of American physicians. It was a great pity, he thought, that this association does not embrace all; the reasons for this are not hard to find, however; it is in part due to the great extent of our country and the relative difficulties in transportation facilities. But these are being steadily overcome, and he hoped the time would shortly come when the entire body medical would be found standing together with all misunderstandings laid aside; that physicians would not be considering each other as doctors, but rather as men and more particularly as gentlemen who were meeting on common ground. When that day should come, and as he saw it it was very rapidly approaching, there would be no difficulty with ethics, and the new organization which had proved so successful under the guiding administrations of Dr. Wyeth and Dr. Simmons would go forward, and that the higher standards of professional integrity and scientific research would go forward through the broadening and uplifting influences of the American Medical Association.

Dr. W. H. Welch, of Baltimore, spoke of that side of the work of Dr. Sternberg which is most familiar to him, namely his work in bacteriology. Dr. Sternberg, he said, was the pioneer worker in bacteriology in this country; he had been compelled to acquire the technique from reading, and we all know how he had perfected a technique equal to that of the best. Dr. Sternberg, he said, had made many important discoveries; his work on disinfection and disinfectants alone would stand as a monument, and his work with yellow fever would stand forever. He said that it was so common a thing, in these busy days, to forget the steps which led up to any important discovery. All that Dr. Sternberg had done in the study of yellow fever was necessary work and it had to be done in just the way he did it. The ground had first to be cleared; if it were not so, the discovery had not been possible, and later discoverers themselves would have had to hunt out the large host of micro-organisms which Dr. Sternberg had described and laid aside. Dr. Welch said that his careful work had practically resulted in the view that a bacteriological origin for this disease could not be claimed, and it was on *a priori* grounds that he himself had felt that Sanarelli's bacillus was not the cause of yellow fever. His study of others' discoveries was most careful, and most critical; it was not wasted endeavor. The problem still remains, however, what the cause is, although the method of eradication has been demonstrated in a most complete and authoritative way. Dr Welch expressed the wish that Dr. Sternberg would come back to his old love, and to his test-tubes, and he welcomed him to many years of fruitful work.

Original Articles.

ABDOMINAL HYSTEROCOLPECTOMY, A NEW OPERATION FOR REMOVAL OF CANCER OF THE CERVIX UTERI.*

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Complete extirpation of the uterus and a part of the vagina is a procedure that has been practised by Kelly, Clark and others for conditions ranging from extreme prolapsus to cancer of the uterus and of adjacent structures. A consideration of the pathology and course of malignant disease of the cervix will be briefly alluded to in a manner such as would have a bearing on the methods to be adopted in the proposed operative treatment. Cancer of the cervix is one of the most common causes of death among women. There are two main varieties of the disease, carcinoma and sarcoma. Histologically carcinomata in this region are divided into two types, the epitheliomata and the adenocarcinomata. As the epithelioma is by far the most common form, I shall take it as a type in discussing symptoms and modes of extension. The growth of an epithelioma of the cervix and vagina may be divided into three stages. There is first an area of infiltration and induration with increased vascularity, presenting a reddened granular appearance. This tissue may commence to break down soon and show slight excavations. The condition is accompanied by a watery discharge. Secondly, there is pronounced sloughing and ulceration attended by a yellow discharge mixed with more or less blood. In the third stage there is pain, deep ulceration, purulent secretion, and from time to time hemorrhage; also involvement of the rectum, bladder and peritoneal cavity. Cachexia and emaciation develop at this time and metastases are not uncommon. The extension of the disease is usually by continuity of tissue, the advancing tumorcells in the periphery making their way through the lymphspaces and forming new foci. Earliest evidences of the extension are found around the vaginal vault, the bases of the broad ligaments, and in the connective tissue under the bladder. Progress of the disease is generally arrested at the internal os uteri in the early stages, though the body of the uterus is often involved at the last. Cases that permit a radical operation belong to the first two classes, and among them are those in which the growth involves the cervix, the vagina, and the adjacent cellular tissues; and also those in which there have been slight extensions to the broad ligaments. Inoperable cases are those in which the disease has extensively involved the cervix, in which the deep ulceration has produced large cavities, with hard, irregular-shaped necrotic walls, and in which the uterus is fixed in the pelvis by much thickening of one or both of the broad ligaments.

It will thus be seen that an operation that will

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give promise of a good result, that will give hope for the nonreturn of the disease or in unavoidable cases for a slow recurrence with no pain, hemorrhage and little breaking down of tissue, must be an operation devised to remove stated organs and tissues wide of the infected area. It must also be accomplished with a minimum loss of blood, and in a manner to allow a thorough inspection of the field of operation. Edebohls[1] describes a method of operating (panhysterocolpectomy) for total prolapse of the pelvic genital organs by complete removal of the uterus and vagina by the vaginal route, followed by operative obliteration of the bed of the genital tract. This obliteration or columnization is effected by means of from seven to nine buried pursestring sutures of chromicized catgut, running parallel to each other from peritoneum to perineum. In this manner a solid pelvic floor is formed, and apposition is established between the base of the bladder and the anterior surface of the rectum, conditions similar to those obtaining in the male pelvis. With the technique of this operation in mind it seemed to me that, if the abdominal route were used, this method or its modification might be available for the radical treatment of certain cases of cancer of the cervix, and of cases involving both the cervix and a part of the vagina. Such a measure would permit the resection of a greater part or all of the vagina and would allow a most thorough excision of the surrounding connective tissues, thereby tending to prevent extension of the disease by continuity. It would also permit the removal of the uterus, ovaries, tubes and broad ligaments and of all the pelvic connective tissues out to the bony walls, as well as to allow the palpation and possible dissection of any enlarged glands to be found in the pelvis, or about its brim. Although the operation requires two sittings, and though a considerable resection is done per vaginam, I have called the measure as a whole an abdominal hysterocolpectomy.

I submit the technique, because it represents a new principle in operative procedure. A patient suffering from cancer of the cervix in presenting herself for operation, should receive a most careful examination. In the early stages, when there is little outgrowth from the cervix, no thickening of the broad ligaments, and the uterus is freely movable, an operation may be promptly performed. However, later on, when there is extensive disease of the cervix, a decision as to the advisability of operation should be judiciously rendered. If the uterus is adherent and fixed in the pelvis, and if the broad ligaments are thickened and hard, the case should be at once rejected. When there is no fixation, the extent of the disease should be noted, and, if the vagina is involved, the bladder or rectum or both should be examined according to the location of the growth. If these organs are apparently normal and the patient is in good condition, being free from a suspicion of cachexia, then the preliminary operation may be undertaken.

Preliminary Operation.—The patient having been prepared for curettage, the diseased tissue should be thoroughly extirpated with a sharp curette. Beginning with the cervix, the growth is scraped away from above downward. The cervix and vagina are then washed out with a 2 per cent. lysol solution, and the bleeding points controlled by contact with the actual cautery. The cervix is then dilated and the whole endometrium is removed with the curette, and, if the cervix is not too much involved, the diseased portion is excised by a wedge-shaped incision, the edges being brought together by sutures of silkworm gut. The edges of the diseased vaginal areas are then to be incised, the underlying cellular tissue dissected out, and the various vaginal openings enlarged to the form of elliptical incisions, these incisions to be also carefully united with silkworm gut. This plastic procedure makes possible the resection some 12 days later of the vagina and uterus with little danger of septic infection or of the implantation of cancer cells. The operation also serves as a means for diagnosis, as tissue is secured for microscopical examination. Also, after the use of the curette, and after examination, bimanually, if the growth is found to be more extensive than anticipated before anesthesia, further efforts to eradicate the disease may then be abandoned, the preliminary operation serving as a measure in palliative treatment. During the interval between the first and second operations the patient is to receive three hot bichloride of mercury douches daily, each of four quarts of the 1 to 5000 solution. If her general condition is good, the second operation may be done after 12 days, as it takes this time to obtain fair union in the vagina.

Operation.—The abdomen and vulva are prepared before anesthesia, the vagina being undisturbed. Ureteral bougies may be inserted if desired as guides to the positions of the ureters. The patient is anesthetized and placed in the lithotomy position. The vagina is washed out carefully with soap and water, the silkwormgut sutures being left *in situ*, as they add strength to the healed vaginal incisions, and are also of much help later on as guides when dissecting about the vaginal vault. The soap and water is succeeded by the free use of ether, followed in turn by irrigations of the solution of bichloride of mercury 1 to 1000 and of sterilized water. A retracting speculum is then inserted and the vagina is thoroughly dried with mops of sterilized gauze. A twist of absorbent cotton is forced into the cervical canal and the external os, or more correctly, what remains of the cervical canal is tightly shut off with two or three silk mattress sutures passed from before backwards with return and knot on the anterior surface of the cervix. The parts are again dried, and the cervix together with the whole surface of the vagina down to one inch from the outlet is to be painted over with a 95 per cent. solution of carbolic acid. These surfaces, after a few moments, are to be sponged over with absolute alcohol. This method of preparation not only destroys secondary organisms, but effectually sterilizes all superficial necrotic tissue without affecting the healing properties of submucous structures. Re-

tractors are now placed just within the vaginal outlet and a circular incision is made at least one and one-half inches below the apparent limit of the disease. This incision is dissected up and the cuff thus formed is turned upward for the space of one inch. Bleeding is controlled with the Paquelin cautery and the denuded surface and outlet is lightly packed with gauze. This circular incision marks the lower limit of the proposed resection and should always be well within healthy tissue even if the dissection leads to the very outlet. The patient is then placed in the Trendelenberg position and an incision of at least four inches is made in the median line, extending from the pubes toward the umbilicus. The abdomen being opened, the uterus is seized with traction forceps and drawn upward. The right ovarian artery is then ligated in the infundibulopelvic ligament. The round ligament is also ligated at a point situated as far from the uterus as possible, and clamps are applied to the ovarian artery and round ligament at the uterine cornu. Similar ligatures and clamps should be placed about the ovarian artery and round ligament of the opposite side. The infundibulopelvic ligament, just outside the abdominal mouth of the tube, the round ligament between the ligature and the clamps, and the broad ligament, as far as the uterus, should then be divided on each side. A transverse incision next divides the peritoneum across the anterior surface of the uterus, immediately below the line of the reflection of the peritoneum from the uterus to the bladder. This incision should join at each end the incisions made in dividing the broad ligaments. The bladder should then be dissected free from the uterus, cervix and broad ligaments. The broad ligament of the most accessible side is next opened, the anterior and posterior layers of which are to be retracted and the cellular tissue separated by blunt dissection. This dissection is very carefully carried down to the pelvic floor and well out to the side in the region of the anterior branch of the internal iliac artery. The uterine artery is thus easily found by locating the pulsations and is freed and lifted up over an aneurysm needle. The ureter is then isolated by its cordlike character, and it and its parallel tissues are gently separated from the artery and pushed aside. Two ligatures are placed around the uterine artery and the vessel is divided between them. The ends of the distal ligature are left long. Slight traction is made with them and the uterine artery is drawn up and it and its surrounding cellular tissue is dissected toward the uterus. The course of the ureter is kept in view by sense of touch and it is to be constantly freed and pushed away from the tissue surrounding the artery. The detached tissue and vessels having been dissected down to the cervix, the retracting ligature is cut off and a further freeing of the ureter to the point at which it enters the bladder is proceeded with. This dissection, ligation of the uterine artery, and the detaching and lifting of the ureter away from the field of operation is also completed on the other side. The bladder is next dissected free from the vaginal vault. The uterus is then held forward by the traction forceps and the rectum is also separated from the vagina to a point well below the level of the external os. The presence of the silkworm gut sutures in the vagina are now found to be valuable guides in keeping the resection outside the limits of the disease. While the uterus is still held forward, the pelvis is thoroughly palpated for enlarged glands. Special care should be taken to follow the course of the common iliac artery down to and below the bifurcation, as nodules found in these regions are always enlarged glands. If such are found, they are to be removed. The peritoneum is incised over a director placed beneath it and parallel to the vessels, and after the extirpation of the glands and their surrounding cellular tissue it is to be united with a continuous suture.

The operation is then continued by freeing the vaginal fornices to the lower level of the anterior dissection between the bladder and vagina, to join posteriorly to the lower limits of the separation between the vagina and rectum. We have now the uterus, adnexa, pelvic cellular tissue and the vault of the vagina held forward by traction at the fundus, the whole mass being retained in the pelvis only by a narrow circle of vaginal tissue. A small longitudinal incision is then made into the vagina in front and the forefinger of the left hand is passed in to act as a guide. There should be little bleeding from this incision, as the circulation is practically shut off from above and below. The whole mass is pulled gently outward and, with the finger in the vagina as a guide, the attached portion of the vaginal wall is gradually separated from its surrounding structures by dissection with curved, blunt pointed scissors. One should be cautious in separating the urethra from the vagina in order to avoid wounding the urethra and establishing a possible fistula. When the dissection is completed the resected tissue mass should be lifted out of the abdominal incision by the operator himself, his forefinger still within the opening made into the upper portion of the vagina. His hands are to be immediately washed and all instruments used, after the vagina is incised, are to be disposed with for the rest of the operation. The cavity should be at once sponged dry and all bleeding points taken up with catgut. I use catgut to control small vessels and to repair the peritoneum, and small silk as ligatures for the ovarian and uterine arteries. The gauze-pack, which was placed in the vaginal outlet, is now withdrawn from below by an assistant, and a strip of gauze one inch wide and rolled on itself is placed in the line of the vaginal canal extending from the rectal peritoneum to the vulva.

The bed of the genital tract is now to be obliterated around this piece of gauze, which should be left in a position to act as a central drain. For this purpose the remains of the vaginal wall are caught up by two traction forceps, one placed anteriorly and the other posteriorly, and a suture of No. 2 chromicized catgut is passed from above downward, from near the median line in front, describing a half-

circle, through the submucous vaginal tissues to a point near the median line behind. A corresponding suture is then to be passed on the other side of the vagina. Other sutures are passed about one-half inch above these two parallel with each other and with the gauze drain which should be between them. Each suture should gather the raw surfaces from above, the side and below, and draw and purse them together near the median line. When the second pair of sutures is passed, the first two are tied and cut and the ends are buried when the sutures are tied above them. In this manner two rows of parallel pursestring sutures are passed, tied and buried, which extend from the remains of the vagina below to the peritoneum above, and which successfully close off nearly all raw surfaces and provide for drainage. Care should be taken not to include the ureters within the sutures when approaching the upper part of the resected area. The vesical peritoneum is to be lifted forward and the ureters and bladder placed in normal position before the last four gathering sutures are passed. When all the sutures are tied, the drain is next seized with forceps from below and drawn gently outward in order to loosen it. The gauze is then cut off and the end left in the vaginal opening. The pelvic cavity is closed by uniting the peritoneal reflection from the bladder with that of the rectum, by a continuous catgut suture extending from brim to floor and to brim on the opposite side. The abdominal incision is now closed.

This completes an operation in which little blood is lost, an operation that can be accomplished in a reasonable length of time, and, if the technique is strictly adhered to, should be accompanied by little danger either of septic infection or of the implanting of carcinomatous cells. It also provides for a very extensive removal of tissue, thereby giving hope for the radical cure of cases operated on early in the disease. Again, by the obliteration of the tract of the enucleation, the maintenance of a large granulating surface is avoided, thereby eliminating the dangers of a secondary infection.

As to a review of the operative treatment of carcinoma of the cervix: There has been a gradual improvement in the method of operating for this condition. Schröder and his contemporaries commenced with curettage, cauterization, and vaginal amputation of the cervix. This stage of treatment was succeeded by the removal of the disease by vaginal hysterectomy. According to Robert Sorel[2], amputation of the cervix can only be regarded as a palliative remedy, and vaginal hysterectomy, in spite of its low mortality, cannot be regarded as a radical operation, as it leaves behind the glands and perituterine tissues. These measures were in turn succeeded by the abdominal hysterectomy, as adopted by Freund,[3] its modification by the catheterization of the ureters, as described by Pawlik[4] and Kelly, and the more radical operation done simultaneously by Rumpf,[5] Ries,[6] and Clark,[7] consisting in the removal of the iliac glands. There is still another method, as performed by Werder of Pittsburg, and recommended and described in detail by Cullen.[8] In this operation the broken-down tissue is removed a few days before. After section, the ovarian vessels and round ligaments are ligated as usual, and the bladder is freed from the uterus. The broad ligaments are opened, the ureters are located and freed up to the bladder. The uterine vessels are then ligated near their points of origin. The bladder and rectum are then dissected from the vaginal vault. The pelvic lymphglands are next removed. The two folds of peritoneum are united, closing in the pelvic cavity, an assistant meanwhile making strong traction on the cervix from below. The abdomen is closed, and after placing retractors in the vagina the vaginal vault is ringed with a thermocautery, which sets the uterus and its surrounding vaginal mucosa free, which structures are delivered through the vaginal canal.

As will be noted, this operation is accompanied by a minimum danger of cancer transplantation, but leaves a large space in the vaginal vault to heal by granulation. It also provides for the removal only of a limited portion of the vagina and of little of its surrounding cellular tissue.

H. A. Kelly[9] claims that "cervical cancer in many instances extends down the vagina in an invisible form under the mucosa, without at first causing any perceptible infiltration or blush of color to excite suspicion." He finds it necessary, therefore, to "give the disease a wide berth in the vaginal side, cutting at least 2 to 2.5 centimeters away from it." He also states that in his opinion "cancer of the cervix usually extends by direct involvement of the contiguous tissues. Extension by glandular metastases *per saltum* is unusual in the earlier operable stages of the disease." Regarding the operation, Kelly says that "the old plan of skinning or shelling out the bare uterus is of all methods the most liable to be followed by a recurrence, and must be abandoned." He describes his method of "quadrisection of the uterus" which he sometimes adopts for the complete removal of the disease, removing the uterus and the vagina an inch below the diseased area by way of the vaginal route. Kelly[10] again states that we cannot reason too closely on the supposed analogy between cancer of the uterus and cancer of the breast. He says that glandular metastasis, which plays so important a role in mammary cancer, has very little to do with the extension of the disease in uterine cancer. The latter progresses through the tissues from its cervical focus. The aim should be, then, to give the diseased cervix the widest possible berth. He places little importance on removal of the pelvic glands in the early stages of the disease, but that the frequent recurrence in the vaginal vault should emphasize the importance of beginning enucleation at a point as distant as possible from the junction of the vagina with the cervix.

Now, as to choice of operation—suppose one were to consider an ideal case, in which the uterus was movable, and in every way favorable for operation: which should one choose—the vaginal or abdominal route, or some of their various modifications?

Authorities do not all agree on this question, though the bulk of evidence seems to be in favor of abdominal methods. König[11] finds that the "more favorable the immediate results of vaginal hysterectomy, the less satisfactory are the after-histories." He prefers abdominal hysterectomy and removes the pelvic cellular tissue and glands. Sorel,[2] as I have already stated, does not regard vaginal hysterectomy as a radical procedure, and believes in the suprapubic operation. Pryor[12] advocates radical treatment. He says "that recurrence after operation is seen in the perimetric structures in 96 per cent. of cases, so that a successful operation must remove not only the uterus and adnexa, but a considerable portion of the vagina and adjacent glands." Pryor, however, believes that "in cervical cancer, the sum total of human life saved by palliative methods is far greater by vaginal hysterectomy." Picque and Manclaire[13] make the statement that simple vaginal hysterectomy is not the most radical method of dealing with cancer of the uterus. They say that in order to remove all the disease the operation not only must be undertaken as early as possible, but must be a thorough one, and that this can be accomplished only by the abdominal route. It would thus seem, in reviewing the different methods of operating, and on taking into consideration the statements I have just quoted—that there is yet a diversity of opinion as to the proper course to pursue. However, on the following point authorities are agreed, that local recurrence takes place in the majority of cases; hence the absolute necessity for an operation that removes the growth widely. It is for this reason that I recommend the operation I have described as abdominal hysterocolpectomy. The technique of this procedure, while apparently extensive, is nevertheless safe, and would seem to meet the requirements established by all, for a thorough and careful enucleation of the disease. The contraindications to the operation are: Heart disease, kidney disease, diabetes, debility and excessive stoutness.

The following is the report of a case: On October 3rd., 1901, I was called to see a case under the care of Dr. Sargent, of Pittsfield. The patient, aged 52, the mother of five children, was a well nourishhed and healthy-looking woman. Her last menstrual period occurred about three years before. She remained well until within six months of my visit, when she began to notice a watery vaginal discharge. This discharge gradually increased in quantity, and also became thicker and slightly yellow. There had been only a few streaks of blood, no odor and very little pain. The patient's normal weight was about 140 pounds, and there had been very little or no loss of flesh. An examination showed an epithelioma without vegetations involving the posterior lip of the cervix, extending thence posteriorly and to the sides, covering the vault of the vagina to a point at least an inch from the junction of the vagina and cervix. The growth was covered with a thin yellowish discharge. The uterus was freely movable, and there was no apparent thickening of the broad ligaments. The rectum and bladder were also free from disease. The condition found on examination was explained to those interested, who were told that the disease could be removed; but as the extent of the growth was so wide, it would probably recur in a short time. The patient and her friends insisted on some effort being made to remove the disease and with that in view she entered the hospital on October 10th. The preliminary operation was performed 2 days later. The diseased mucosa was scraped away with a sharp curette, and bleeding was controlled with the thermocautery. The cervix was next dilated and the endometrium removed. The rough edges of the vaginal mucous membrane were then elevated and excised and the edges brought together with silkworm gut sutures in a manner nearly to cover the whole of the denuded surfaces. Small radiating incisions were also made, which helped to bring the mucosa forward and approximate it. In the period between this and the next operation the patient received the local treatment already spoken of and passed the time in the bed or chair. On October 23rd. she was again anesthetized. The parts were treated with carbolic acid and alcohol as described; and the uterus filled with cotton and closed with silk sutures. A ring-like incision was then made through the vaginal tissues at a point one and one-half inches within the outlet, and a cuff one inch wide was turned forward. Bleeding was again controlled with the cautery and the raw space was lightly packed with gauze. The abdomen was opened with a free incision. On palpation and inspection the fundus, broad ligaments, tubes and ovaries were found to be unaffected. The various stages of the operation were then proceeded with, after the manner I have described in detail, viz: The ovarian vessels and round ligaments were ligated, clamped and divided. The bladder was freed from the uterus down to the vaginal vault. The broad ligaments were then opened, and the uterine vessels tied near their points of origin, the ureters being freed up to the bladder, and lifted up and away from the field of operation. The cellular tissue, including the veins and arteries at each side of the cervix, was dissected down to and left attached to the uterus. The bladder was next detached from the vaginal vault and the rectum was separated from the vagina. Some difficulty was experienced here in the dissection, as there was much thickening of the tissues beneath the involved portion of the vagina. The parts were, however, gradually separated to a point below the growth with blunt scissors, cutting from time to time as firm tissue was met with. I used the silkwormgut sutures as guides, cutting outside them and keeping close to the rectum. Search was then made for enlarged pelvic glands, but none were palpable. The resection was continued by freeing the vaginal fornices to the level of the detachment from the rectum. An incision was made into the vaginal vault anteriorly, and my left forefinger was passed in to act as a guide in dissecting free the rest of the vagina down to the reflected cuff. Traction was then made on the fundus, while I continued the separation of the vagina. This was rapidly effected, and the whole tissue mass was delivered through the abdominal incision. Bleeding was controlled with catgut, and a strip of gauze carefully rolled was placed in the vaginal tract. A parallel row of pursestring sutures were then placed, extending from the remains of the vagina below to the peritoneum above. These sutures gathered in the raw surfaces and approximated the base of the bladder and the anterior surface of the rectum. The peritoneum was united with a running suture of catgut, closing off the pelvic cavity. The intestines and omentum were drawn forward and the abdominal wall was united by the layer method. Convalescence was uneventful, the temperature and pulse at no time going above 100. The gauze drain in the vagina was removed on the third day, and replaced at two different times with shorter strips. This was followed by antiseptic irrigations daily. The patient remained in bed two weeks and made the journey home, a railway trip of 50 miles, on November 23rd., exactly one month from the time of operation.

The subsequent history of the case.—The patient remained well, had a good appetite, got out of doors every day and gained flesh until February 23rd., when she consulted Dr. Sargent in regard to a discharge from the vagina. She came to see me the next day, and I found a recurrence, high up in the tract, at a point corresponding to the area of hardened tissue I had met in separating the vagina and rectum. The growth was about ¼ inch in diameter. I am well aware that one might deduce from this that a procedure that gives immunity for four months only, gives little hope in treatment, but I claim, that if cases are received early, and if a wide dissection by this method is made through tissues assuredly healthy; then, the outlook for the future may be brighter

I report this case, not on account of the result obtained, as I undoubtedly cut through infiltrated tissue in dissecting the rectum free, but rather to show that this operation may be done without shock, and with good prospects of recovery. The question might now be asked as to whether it is worth while to operate on any case of cancer of the uterus. In answer to this question I will quote the following statistics: Kelly[9] writes of one hundred and three cases of his own in which microscopical examination was carefully carried out. He divides them as follows:—

"Well without relapse on January 1st, 1900; (1) Squamous called carcinoma of the cervix, 61 cases, 13 in all living, or 21%; (2) adenocarcinoma of the cervix, 12 cases, 2 in all living, or 16%; (3) adenocarcinoma of the body, 30 cases, 19 in all living, or 63%; the time elapsed varied from 6 years to 11 months." Fränkel[14] also found that 30 per cent. survived for more than 5 years without recurrence in 230 cases of cancer of the cervix. Sorel[2] claims that surgeons agree the results are deplorable, that cure is the exception, and survival over three years is rare. That, in a collection of 884 recoveries, 93 lived 3 years, and 26 as long as 5 years. It is only fair to state, however, that these cases were not selected, and that many of them must have been far advanced. While the percentage of immunes after several years seems comparatively small, yet one must take into consideration the fact, that recoveries without recurrence are undoubtedly of those who have been operated on early in the disease. Terrier[17] states that astonishingly good temporary results follow hysterectomies, when the disease is so far advanced that recurrence must be almost immediate. He advises extensive resection. That more radical procedures have been generally entertained by the profession at large, was illustrated by a discussion of the subject before the New York Academy of Medicine[16] in the latter part of 1900. Boldt, Meyer, Pryor, Dudley, Janvrin, Wall and Ramsay, discussed the matter, and admitted they were seeking methods offering a great deal more assurance than the accepted treatment of that time.

Thus, to sum up the conclusions to be drawn from the foregoing remarks and study of statistics, they might be expressed as follows, as an answer to the question—is is advisable to operate? I would say first, as there have been undoubted recoveries of cases, diagnosed correctly, clinically and pathologically, that early cases with an established microscopical diagnosis, should receive prompt treatment, with removal of the uterus, adnexa, and at least the vault of the vagina. Secondly, in more advanced, though operable cases, I would claim that it is justifiable to operate in an effort to make the patient's condition somewhat more tolerable.

In regard to the value of a correct diagnosis and early treatment as an important factor, bearing on the minute results to be obtained from operations. Much of the recent literature on cancer of the cervix has been a plea for earlier diagnosis. At the present time, patients often present themselves so late for operative relief, that the records of some hospitals show nearly as many cases turned away as are received.

The conditions which might be mistaken for a cancerous cervix are:

1. Endocervicitis (endometritis) with hemorrhage.
2. Ulceration and erosion.
3. Hypertrophy of the mucosa.
4. Polypi.
5. Submucous myomata.
6. Polypi.

These should be suspected of possible malignancy by the practitioner, and investigated in every case, when there is irregular bleeding before or after the menopause. Cervical carcinoma is a very insidious disease, and may reach an advanced stage before its symptoms are recognized. During the early growth of carcinoma, the tumor is local and circumscribed, but later becomes hopelessly disseminated. The primary symptoms simulate functional disturbances of menstruation. After the climacteric, any hemorrhage from the uterus is always pathological. Bleeding at this time may be due to uterine myofibromata, uterine polypi, atheroma of the uterine bloodvessels, and cancer of the uterus. In the latter, watery discharge and hemorrhage are the danger signals. If they are appreciated as such, and operative treatment is promptly undertaken, the result may be years of comfort and health to the victim; otherwise, a horrible death awaits her. Further, as to a correct knowledge by the laity of facts concerning the menopause. It is commonly believed by women that "change of life" accounts for any intermittent bleeding or vaginal discharge during a considerable period of years. It is the duty of the family physician to advise against this belief and to attempt the teaching of watchfulness, without worry; so that those under his care may be insured in a measure against the unrecognized inroads of cancer of the cervix. One is safe in making the statement, that, barring a discovery of a more surgical cure, our hope for a lessened primary mortality and a smaller percentage of recurrences lies in work along the lines of education and early operative interference.

Therefore, in conclusion, I would briefly repeat the following cardinal points in treatment:

First, the importance of an early diagnosis, clinically and microscopically.

Second, the necessity of an immediate operation, with extensive removal of tissues so wide as the operator and his consultant may think consistent with the condition of the patient.

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10. [illegible]
11. [illegible]
12. [illegible]
13. [illegible]
14. [illegible]
15. [illegible]
16. [illegible]
17. [illegible]

FOURTEEN CASES OF SPASTIC SPINAL PARALYSIS OCCURRING IN ONE FAMILY.*

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The existence of a spinal form of family spastic paralysis, as distinguished from the cerebral form, has been much disputed. Clinical cases of the former type are not numerous in the literature, and no necropsy has been obtained in any typical case in which the disease had commenced in childhood. Strümpell[1], some years ago, reported the microscopical examination in a case of the type described by him. The motor cortex, internal capsule and nerve roots were normal. The crossed pyramidal tracts of the spinal cord were degenerated; more in the lumbar and thoracic regions, and less in the cervical region. The degeneration was not found in the motor tracts above the motor decussation. The columns of Goll and the direct cerebellar tracts were partially degenerated.

Recently Strümpell[2] has described the microscopical findings in another case of his type. The spastic rigidity of the lower limbs began when the patient was sixty-one years of age, and the case was observed by Strümpell for nearly fifteen years. The grandfather, father, two uncles and a brother of the patient were said to have had a stiff gait. Strümpell found in this case degeneration of the pyramidal tracts, most intense in the lower thoracic and lumbar regions. The degeneration did not extend above the pyramids. The columns of Goll were slightly degenerated in the cervical region. The nerve cell-bodies of the anterior horns were perfectly normal. The direct cerebellar tracts may have been slightly degenerated.

Bischoff[3] has recently reported two cases of spastic spinal paralysis in brothers. The disease was of chronic course. It began with rigidity of the lower limbs when the patients were each ten years of age. Later the rigidity extended to the upper limbs. Weakness of the muscles and mental symptoms developed, so that the cases were not typical. The lateral ventricles of the brain were somewhat dilated, the crossed pyramidal tracts in the spinal cord and the columns of Goll were partially degenerated. The nerve cell-bodies of the anterior horns were much diminished in number. The pathological findings in this case suggest amyotrophic lateral sclerosis, but muscular atrophy did not exist. Interesting as these findings are, the cases are by no means typical and can not be regarded as explaining very fully the pathology of the family form of spastic spinal paralysis.

The peculiarities of Strümpell's type are: Commencement of the disease between the twenty-fifth and thirtieth year of life with spasticity of the lower limbs; very slow progression of the disease to paraplegia; occasionally implication of the upper limbs; integrity of sensation and of the functions of the bladder and rectum; hereditary and family manifestation of the disease and only in male members.

As a contrast to this type we have the cases described by Erb, Hochhaus and Souques in which the symptom-complex, such as Strümpell describes, commences in early childhood and is not confined to the male members of the family.

Any case with mental symptoms, implication of cranial nerves—unless possibly strabismus may be regarded as unimportant—history of traumatism at birth, symptoms existing from birth, epileptic attacks, disturbances of sensation, or muscular atrophy, can hardly be regarded as a typical example of the spinal form of spastic family paralysis. Naturally, cases of general spasticity dating from birth, such as result from injury or from premature birth, must be excluded. The family form of spastic paraplegia seems to be the result of degeneration of the distal portions of the pyramidal tracts from some imperfection of development, and probably differs from the cases of Little's disease resulting from premature birth, in that in the latter the pyramidal tracts are arrested in their development, but are capable of further development even many years after birth, and probably do not degenerate. In the form of family spastic paralysis occurring in childhood the pyramidal tracts probably degenerate at their distal ends early, while in Strümpell's type the resistance of these tracts seems to be greater, and disturbance of function does not occur until adult life.

I omit all discussion of the complicated and obscure cases reported in the literature. They are referred to by Erb, Hochhaus, Higier and others.

In some families the cerebral type seems to occur in certain members and the spinal type in others (Bernhardt, Pribram, Melotti and Cantalemessa). This would seem to indicate that there may be a close relation between these two types.

Newmark[4] has reported the occurrence of spastic paraplegia in a brother and sister, and of bilateral spastic hemiplegia in their first cousin. In all three patients the disease began in early infancy. Spastic paraplegia had not occurred previously in the same family, so far as could be determined. He has reported also three similar cases in brothers, and the condition had not been observed previously in the family. The oldest boy became affected when about fourteen or fifteen years old; the second when seven and a half years old; and the third when about nine years old. The knee jerks in some of the other children of this family were exaggerated.

Erb has reported two cases of hereditary spastic paralysis in sisters. In each the disease began at the age of four years. The parents were related.

*These cases were reported at the annual meeting of the American Neurological Association, June 6, 1902.

1. Struempell. Arch. f. Psych. Vol. XVII.
2. Struempell. Neurologisches Centralblatt, July 1, 1901, No. 13, p. 658.
3. Bischoff. Jahrbucher fuer Psychiatrie und Neurologie, XXII.

4. Newmark. Amer. Journ. of the Med. Sciences, 1892, Vol. [illegible]

The symptoms consisted of moderate paresis of the lower limbs, with more or less muscular rigidity, exaggerated tendon reflexes and typical spastic gait. Sensation and skin reflexes were normal, and the sphincters functionated normally. No atrophy was observed. The upper limbs, cranial nerves and brain were not affected. Erb places these cases in the same class as those described by Bernhardt,[5] Strümpell[6], von Krafft-Ebing[7] and Newmark and yet Strümpell's and Bernhardt's cases had some very important differences—only males were affected and the development of the disease began late in life, although a sister of Bernhardt's patients may have had the disease. Krafft-Ebing's cases have not been accepted by all as typical.

Erb[8] does not accept the opinion of those who hold that cases such as his are of cerebral origin, but he believes that degeneration of the pyramidal tracts (or lateral columns) in the lower portion of the spinal cord occurs, possibly because the lower limbs are more used that the upper.

Hochhaus'[9] three cases of the family form of spastic paralysis were in children of the same family. In each case the disease began in the second year of life. The symptoms were spastic paresis of the lower limbs with exaggeration of the reflexes and ankle clonus and without sensory disturbances, bladder or rectal symptoms. In only one case was atrophy observed, and that was in the leg below the knee, and was attributed to contracture of the calf muscles. The parents were perfectly healthy and not related. In one case improvement occurred, while in another progression of the disease was observed about the eighth year. Hochhaus holds the same opinion as Erb regarding the nature of the disease. In neither his nor Erb's cases does the disease seem to have been transmitted from parent to child.

Hochhaus refers to Pribram's[10] two cases, one of which at least he regards as typical of this form of spinal paralysis.

Souques'[11] cases were as follows: Two children of healthy and not blood related parents, boy and girl, developed slow progressive spastic paresis of the lower limbs, one in the fourth year of life, the other in the fifth. The patellar reflex was exaggerated and ankle clonus was present. These were the only symptoms.

The cases of family spastic spinal paralysis that I report were referred to the neurological and surgical clinics of the University Hospital, University of Pennsylvania, by Dr. Burns. I am indebted also to Dr. A. C. Wood for sending the cases to the neurological clinic. The family history has been given by the intelligent man described as Case one. Both he and his second son are affected, and in both the symptoms are merely spastic paresis of the lower limbs with contractures and exaggerated reflexes of these limbs. Both patients are very intelligent. I have no personal knowledge of the other members of this exceedingly interesting family, but the elder patient (Case one) informs me that of late years the disease is said to have commenced before or about the fifth year of life, and that it has always presented the same symptoms. The patient described as Case 2 is said to have been affected earlier than any other member of the family (at 18 months). The disease has been almost as common in the female sex as in the male.



[illegible]

CASE 1.—Father of the boy described as Case 2. C. F., 32 years of age, is a telegraph operator. The symptoms began when he was about five years old. At the present time the lower limbs are not atrophied. The left foot is in a talipes varus position, while the right foot is much less contractured. The left foot is smaller than the right and the instep is high. The patient has very little voluntary movement of the toes and feet, and the weakness is extremely marked on the left side. Sensation for touch and pain is normal everywhere. The knee jerks are much exaggerated. Ankle clonus and the Babinski reflex are distinct on each side. The feet are tender in walking. The gait is very spastic. When the patient walks the right foot is turned inward but when he is sitting the right foot is placed straight on the ground. The muscles all resistant

5. Bernhardt. Virchow's Arch., 1891. CXXVI, p. 39.

6. Strumpell. Arch. f. Psych. u. Nerv., 1886. XVII, p. 217, and Deutsche Zeitschrift f. Nerv., 1893. IV, p. 172.

7. Krafft-Ebing. Wien. klin. Wochenschr., 1893. No. 37. (Sitzungsberichte) p. 681.

8. Erb. Deutsche Zeitschrift f. Nerv., VI., Dec., 1894, p. 137.

9. Hochhaus. Deutsche Zeitschrift f. Nervenheilkunde. Aug., 1894. Nov. 12, p. 291.

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to the faradic current, but a strong current is required. The muscles of the upper limbs are well developed and the patient has a powerful grasp of the hand.

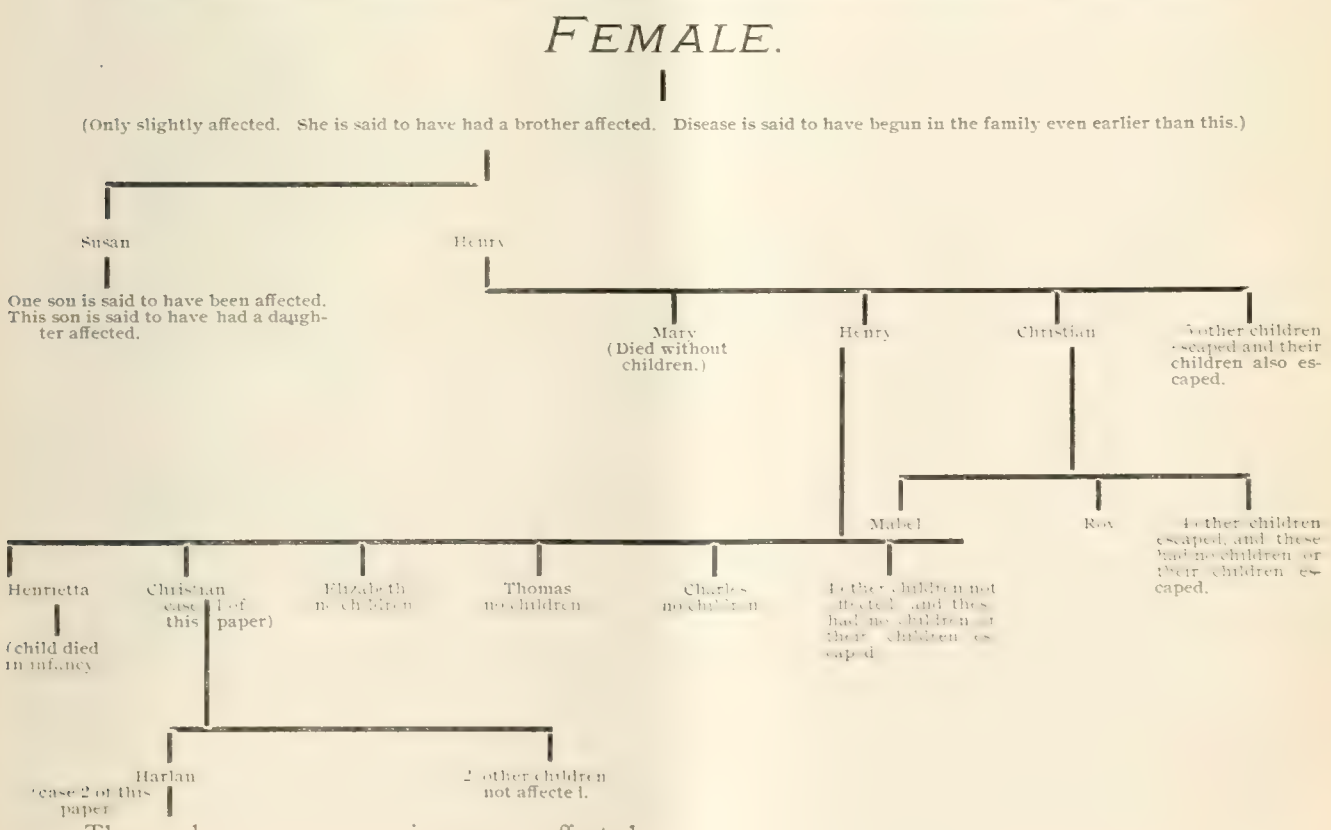


FIG. 2.—Spastic spinal paralysis. (Case 2). The talipes equinovarus is more pronounced when the boy is standing.

CASE 2.—Son of the man described as Case 1. H. B. F., eight years of age, is the fourteenth in descent from his great-great-grandmother—as shown in the accompanying table—to have the disease. The mother is healthy. Two other children, three and six years old respectively, are apparently healthy, but the child, three years old, has weak knees, according to the mother's statement. In my examination of him I failed to detect any distinct evidence of the disease. The mother noticed that when H. B. F. began to walk at about 18 months of age, he waddled and had a tendency to fall backward, and from that time his feet began gradually to turn inward and he walked on the outside of his feet. He can walk now without assistance, but walks on the toes and outer side of the feet. When standing or walking the knees are retroflexed. The knee jerks are much exaggerated. The calf muscles are contractured and the feet are in the position of talipes equinovarus, but can be forcibly straightened. The muscles are not atrophied and those of the thighs and legs respond to the faradic current. Ankle clonus is distinctly present on each side. The Babinski reflex is present on each side, but not very prompt, possibly because of contracture of the muscles. Sensation for touch and pain is normal in all parts. The reflexes in the upper limbs are not exaggerated. Resistance to passive movements is much diminished in the lower limbs, but is normal in the upper limbs. The power of voluntary movement in the toes and ankles is very slight.

An Epidemic of Tetanus. Arnozan describes a small epidemic of tetanus in the women's medical ward of the St. André Hospital in Bordeaux. (*Journal de Médecine de Bordeaux*, March 2, 1902.) In December a woman was brought in with tetanus, who died the next day. In the following February, 2 cases of tetanus developed in the ward, both ending fatally. Their case-histories follow in full. The source of the contagion in the first case could not be discovered. From none of the cases were the bacilli of Nicolaier cultivated. In spite of this and the fact that 46 days had elapsed before the other 2 cases appeared, Arnozan believes that these cases were true tetanus, by direct contagion from the first case. No more cases developed because all women with skin lesions and open wounds were removed from the ward. Clinical symptoms and anatomical lesions were typical of tetanus. [M. O.]

Table showing the occurrence of fourteen cases of spastic spinal paralysis in one family.



Those whose names are given were affected.

PRIMARY SARCOMA OF THE OMENTUM. THE CLINICAL REPORT OF A CASE.*

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A growth destructive of life in a part of the human body not frequented by primary disease is of more than passing interest, but when that neoplasm is so coy as to elude all search of diagnosticians, both medical and surgical, during the life of its victim, and after death likewise comes off victorious in its deception while held up in the fullest light by the pathologist, it ought to be worthy the attention of this Society, and to that end I have asked Dr. D. S. Lamb, who conducted the necropsy, to present this very rare specimen to you to-night.

It is a primary sarcoma of the omentum. Dr. Wm. Gerry Morgan and Dr. James Kerr, who frequently saw the case with me, will doubtless more learnedly entertain you in the discussion. But before reading my clinical report I desire to invite your attention to the extreme rarity of this disease, its obscurity in our medical literature, being seldom mentioned by writers on medicine or surgery, and, when alluded to at all, it is usually with such lack of precision in location and character of the disease as to leave one in a maze of doubt and inquiry. The omentum being a reduplication of the peritoneum, we find the malady recorded under the name of the latter membrane in the majority of cases, the omentum being almost never mentioned.

Our gynecic friends are somtimes our most accomplished abdominal surgeons, doing anything, from a bullet to a barrel, from the xiphoid to the pubes, but they are not the purveyors of information on malignant disease of the omentum or even the peritoneum. It is not mentioned by any one of the many excellent works on this great specialty in my library.

The works on general medicine with which I am familiar are mostly either silent or meager on this subject. Flint[1], Bartholow[2], Whittaker[3] and Allen[4] are silent on both sarcoma and carcinoma of this region. Pepper[5], Tyson[6], Thomson[7] and Eichhorst[8] are silent as to sarcoma, mentioning only carcinoma. Pepper is noncommittal as to its primary existence in the peritoneum. Tyson says: "Primary cancer of the peritoneum is an event of extreme rarity. Its occurence as a true epithelial cancer must, however, be admitted." Eichhorst: "As a rule carcinoma of the peritoneum is secondary," but admits "rarely it is primary."

Musser[9] mentions sarcoma only as a retroperitoneal disease, and of carcinoma he says "occasionally it is primary." Osler[10]: "Primary malignant disease of the peritoneum is extremely rare. It is probable that so-called primary cancers of the serous membranes are endotheliomata and not carcinomata." Allbutt[11] hails sarcoma when present in the peritoneum due, as a rule, to its primary existence in testicle or ovary, and learnedly says: "It is probable that more of the cases formerly recorded as 'peritoneal cancer' were really examples of sarcoma. The most usual situation is the retroperitoneal connective tissue; less commonly they involve the omentum. An extremely interesting feature presented by some of them is that of a mixed growth, in which the histological features of sarcoma and carcinoma are associated. The existence of primary cancer of the peritoneum is much in dispute. Histologically there can be no doubt that primary tumors connected with the peritoneum do occur. By those who deny that serous tissue can give rise to epithelial growths such neoplasms are named 'alveolar sarcoma.'"

So much for medical references. My surgical citations are few. Wyeth[12], and also the International Text-Book of Surgery, the latter two replete volumes, published 1900, are silent on sarcoma and carcinoma of the peritoneum or omentum. Gross[13] defines sarcomata thus: "They hold an intermediate position between benign and malignant growths, inasmuch as they have a local, innocent period during which they are amenable to the knife, but may later assume a malignant form." Gross does not mention sarcoma or carcinoma of either omentum or peritoneum.

Craig Smith[14]: "Of the various malignant diseases which may attack the omentum, colloid cancer is the most important." In his second volume Smith says "Tumors of the omentum are rare and in my experience they are usually secondary to some malignant disease elsewhere in the abdomen." The American Text-Book of Surgery says: "Primary carcinoma of the omentum does not occur. A primary malignant tumor which springs from the omentum is always sarcoma." Maurice H. Richardson in Park's Surgery[15] tells us "carcinoma is never primary in the omentum. Sarcoma has been observed as a primary omental growth."

My clinical report begins March 16, 1902, when I was first called to see Mrs. T., aet. 55, a native of Loudoun County, Virginia, where she lived until she came to this city in the autumn, 1901. On the maternal side two aunts died from cancer of the breast at the ages of 57 and 62 years. She has three sisters living and dead and as with the interesting history that she had an abdominal tumor and under the treatment of Dr. J. Taber Johnson stipulated that, if, when he opened the abdomen, he believed the removal of the tumor would endanger her life he would close the wound without removing the neoplasm. The doctor opened the abdominal cavity at his private sanatorium in this city, but she returned to Virginia with her tumor intact and there about nearly two years before she succumbed.

Mrs. T. has light hair, steel-grey eyes, general appearance not of frail type, is of more than medium height, neither stout or skinny, but commonly about rather thin unless so than is usually seen in women of her age and general build. She survived the usual diseases of childhood without especial history of tuberculosis had typhoid fever at the age of fifteen. She is the mother of seven children, all, except one, living and of splendid intellect and health. The youngest is 18, the eldest 39 years old. For many years Mrs. T. has been a sufferer with abdominal pain usually occurring her to bed from three days to as many weeks. In that respect she had not been worse this than previous winters. It was remarked that she sought warmth at the register more than other members of the family and more than she had been other winters. She had more dullness and took cold more readily, though she went about as usual. She had gone to Georgetown to see the high water at the

*Read before the Medical Society District of Columbia May 21, 1902.

aqueduct bridge eight days before I saw her. I found her having pronounced nausea. Palpation revealed no tenderness of abdomen. There was no acute pain, but she complained of what she called "agony" in the epigastric region extending over the umbilical and the right and left lumbar spaces. Respiration was 20, temperature 100° F. and pulse 120. She complained also of "cold in the head"—rhinitis. For the latter I gave:

℞

Ext. belladonnæ		gr. ¼
Quininæ sulphatis		
Camphoræ	āā	gr. ss

M. ft. tab. I.

S.: One every 3 hours.

Salophen and phenacetine, combined, were also given. The rhinorrhea yielded, but the gastric agony remained, though the nausea diminished after slight catharsis from minute doses of calomel, ipecac and soda combined. The second night I tried bromides, sodium and potassium combined, 3ii in broken doses produced drowsiness but no peaceful sleep. After a few days of bromides in excessive doses without satisfactory relief, I replaced them by sulphonal, giving the latter in 15-grain doses, repeated two and three times. This was less effective than bromides. Dover's powders in grs. ii ss tablets were next given after a large dose of sulphonal, but less than grs. x Dover's powder did not produce sleep. There was no edema of ankles or feet. Quantity of urine usually 2½ pints in 24 hours. Sp. gr. 1020, acid, normal as to odor, color and indican, negative as to albumin and sugar. Food was never desired and poorly borne in spite of hydrocyanic acid and bismuth before and frequently pepsin after, with and without HCl. Scraped beef, beef extract, fresh beef juice of broiled beef, and Armour's soluble beef were all tried with and without toast, also milk 1-10 to 1-5 lime water, white of egg in iced water, raw eggs, egg-nog, etc., each in turn was borne only in small quantity and soon rejected. She would not stand or even sit up except at my request and then only by short intervals with manifest increase of suffering. The latter led me to suspect gastroptosis or enteroptosis with dilatation of the viscus usually accompanying ptosis, of which we hear so much of late from our gastro-enteric specialists. Having tried lavage without satisfactory success, I asked Dr. Wm. Gerry Morgan to see the patient with me March 18. I told him frankly I had been unable to find the cause of suffering, though I had searched for malignant disease, biliary calculi, splanchnoptosis and dilatation of the viscus. I need not tell you his examination was most thorough, but it proved negative as to everything suggested by me and additionally by him. Jointly we diagnosticated indigestion with excessive nervousness. This also satisfied the family, who readily agreed she was no worse then than they had often seen her within the last twenty years.

Instead of lavage sodium bicarbonate 3i to a pint of hot water was now given daily on empty stomach. In about a week this was rejected and was replaced by Rochelle salts, and that in turn by other saline aperients. In washing out the colon with hot normal salt solution much mucus and some shreads passed per rectum. The colon was filled with olive oil at night for a few times. The oil brought away a great deal of mucus such as we see in mucous colitis but not the usual quantity of shreds.

On March 29 I noticed the fluctuation of fluid in the abdominal cavity, but believed it was encysted. March 30 edema in right ankle: on March 31 I asked Dr. Morgan to see the patient with me the second time. One inclined to believe we had a case of hydronephrosis, the other hepatic cirrhosis. Neither was firm enough to argue his belief. We saw the patient jointly on April 1, 2 and 4. Acetate of potassium, squill and digitalis made no decided impression on the dropsy, but it increased flow of urine. Morphine hypodermically had to be given with increasing frequency and the above combination replaced by strychnine under the skin.

April 5, Dr. James Kerr saw the patient with us. The thoroughness and skill of his examination could not be excelled anywhere, but he admitted he could not make a diagnosis with much certainty. "I am inclined to believe it is malignant disease of the peritoneum," was his language. He withdrew fluid from the abdominal cavity through a hypodermic needle. Dr. Morgan had the fluid analyzed and found it to be ordinary peritoneal fluid. The fluctuation was not like that of ascites, nor would the fluid distend the lower abdomen when the patient sat or stood erect. The wall of the abdomen formed perpendicular folds which hung pendulous on the lower part of the body. A horizontal band appeared to constrict the cavity directly below the umbilicus and hold the fluid from going below, thus strongly suggesting a cyst.

April 11. Dr. Kerr met us the second time and with a good sized trocar withdrew nearly two gallons of ascitic fluid. The patient being too much prostrated for further examination after this tapping, Dr. Kerr came again April 13, when the cavity was not distended with fluid. He found nothing confirmatory of his belief of malignant neoplasm in the peritoneum but was led to believe there was cirrhosis of the liver. The doctor told us on his first visit that the case was not operable and stood by that decision during subsequent visits.

April 24, I used the trocar and withdrew a gallon of ascitic fluid, which gave her a respite of a few days from her greater suffering, for she had manifested signs of dissolution several times recently. But, soon, food was borne less well again, the suffering increased and at 3 A. M., May 2, she died.

For nearly eight weeks I saw this patient never less than twice, more often three times, a day, even oftener somtimes, being sent for at all hours day or night, occasionally at 2 and 3 o'clock, A. M. Sharp pains were perhaps never present unless from manipulation or change of position. The patient sometimes described her agony as "throbbing and aching there" pointing to the umbilical region. Tossing about in the bed, loud and distressing groans were constant except when subdued by opiates or morphine. The nodular masses, described so graphically in the books as being hard and easily felt, were never percepticle, in this case, through the abdominal wall. In the post mortem handling these growths proved softer to my senses than the abdominal wall. They were almost strawberry color, some of them not unlike that berry in shape and of rough villous outer appearance, but to the touch they were very soft and the pedicles were so frail that many fell off like ripe fruit by their own weight and rolled down over the table on the floor.

No diagnosis having been made, Dr. Lamb at the autopsy voluntarily exclaimed "A primary cancer of the omentum." But a few days later he advised me it proved to be a sarcoma. The liver, not much at variance from the normal in size, was abnormally white and macroscopically indicated slight cirrhosis, but this proved microscopically to be more fatty than cirrhotic.

The gall-bladder was distended with a handful of calculi, but the cyst did not protrude below the lower border of the liver nor come down flush with its inferior edge. It appeared bound as if by inflammatory process higher up, and posteriorily, so that detection must have been difficult if not impossible. Dr. Morgan counted thirty-one of these calculi at the autopsy, but some of the smaller ones were lost We still have twenty one here. They are mostly of the size of small hazelnuts. Of special interest to me are these, because a few years ago Dr. Halsted of Johns Hopkins University, when operating on a patient of mine for biliary calculi, told me he had made notes of a series of cases with that disease and found a history of typhoid in nearly all of them. He even found typhoid bacilli within the

stone. The patient then being operated on had had typhoid four years previously. The patient reported to you to-night had typhoid in 1861, when she was 15 years old. Did she carry these calculi in the hepatic cyst 41 years?



×400

A, Endothelial spaces; b, giant cell; nuclei; c, bloodvessels; d, proliferating nuclei.

AUTOPSY.

Dr. D. S. Lamb, of the Army Medical Museum, reports as follows:

"Necroscopy by Dr. D. S. Lamb; some emaciation. Some emphysema, hypostatic congestion and edema of lungs. Heart small; liver fatty; gall-bladder full of facetted calculi. Peritoneum, both visceral and parietal, showed many soft reddish nodules, rather pediculated; along the transverse colon and in the greater omentum these were massed together; Dr. Carroll, of the Army Laboratory, states that these growths are endothelial sarcomata. Spleen, pancreas, stomach, intestines and kidneys normal. Small cysts and atrophy of ovaries. Abdomen containing much turbid liquid."

HISTOLOGY.

The above plate from Dr. James Carroll, of the histological department of the Army Medical Museum, illustrates the minute structure from my specimen of sarcoma of the omentum and is further explained below in his own language:

REPORT OF MICROSCOPICAL EXAMINATION OF A PORTION OF THE LIVER AND A SMALL NODULAR MASS DETACHED FROM THE OMENTUM.

By JAMES CARROLL, M. D.,

These were received from Dr. D. S. Lamb. The section from the liver shows a quite extensive fatty infiltration, with cloudy swelling and slight granular and fatty degeneration. The capillaries are markedlyly engorged, and there are slight evidences of a beginning increase of connective tissue, suggesting, in places, an early stage of hypertrophic cirrhosis.

The tumor section, under the low power, bears considerable resemblance to an adenocarcinoma from the presence of endothelial spaces with columns and masses of cells with varying arrangement. It contains everywhere numerous thin walled bloodvessels that are distended with blood. The very delicate stroma in and about the walls of these vessels appears to be the only supporting connective tissue stroma the growth contains. The cells of the new growth vary in size and type from the low cuboidal cell with small vesicular nucleus to the large giant cell, including a comparatively high columnar type, frequently seen in the margins of the lymphspaces. The nuclei especially exhibit marked evidences of proliferative activity manifested by the presence of numerous large, intensely stained, lobulated or mulberry-like masses of chromatin, surrounded by a relatively small amount of protoplasm. The endothelial spaces, many of which are plainly shown, are bounded by walls of moderately high columnar or cuboidal cells, seldom or never in a single layer, but superimposed upon aggregations of cells, of a lower type, the marginal layer of columnar cells appearing to have been raised from their basement stroma by the active proliferation taking place beneath them. In one part of the section this activity is shown by the presence of an almost continuous double row of large cells containing enormous mulberry-like nuclei. Between these rows of cells containing a few bloodvessels extending to the end of the projection where the endothelial cells unite to form a pointed process. The explanation is as follows. By mutual pressure in the rapidity of their growth the endothelial cells have been raised from their basement stroma, carrying with them the bloodvessels and connective tissue, the whole forming a papilliform process. The described nuclear changes and the marked variation in size and type of the cell are seldom or never seen in epithelial new growth. This growth, being primarily and solely confined to the omentum, is necessarily of endothelial origin and, the vascular endothelium being unaffected, the diagnosis must be endothelial sarcoma, or perhaps, more properly, endothelial lymphangiosarcoma.

Discussion.

There would be no further discussion of my paper except for the pertinence of the letter from Dr. Halsted which answers the interesting question put in the last sentence of my report as to the biliary lithiasis of forty-one years duration. I prefer Dr. Halsted to be permitted to answer in his own language and to that end have asked the secretary of the Society to read his letter to which we will now listen.

"Dear Dr. Miller:—

I remember the details of Mrs. St.'s case very well and often think of her. We have obtained a history of typhoid fever in not more than about one-third of our cases unless I am mistaken, but I remember at one time we had quite a long series of almost consecutive cases which gave a history of typhoid. I will go over our histories and try to tell you the exact proportion of cases in which there has been a typhoid history. I am very much interested to hear what you say about your case of gall-stones. I believe that it is quite possible for stones to be present so many years without giving symptoms. Last year I operated upon a woman who, twenty-five years before, had had a definite attack of biliary colic, but until the operation twenty-five years later had not had any symptoms which her physician, Dr. Ellis, of Elkton, could refer to gall-stones. Dr. Ellis, as you know, is a physician of very high standing and two years ago was president of the College of Physicians and Surgeons of Maryland. The pathologists, as you of course know, often find a bladder full of stones which, so far as was known, had never given any symptoms. If they can exist twenty-five years in a gall-bladder, why not forty-one years or longer? But the typhoid bacilli are evidently not the only micro-organisms which cause biliary calculi. The colon bacillus, for example, is a common etiological factor in the production of gall-stones, and it is believed that almost

any micro-organism may be responsible for their formation.

Yours very truly,

W. S. Halsted."

The triple pathological condition found in this liver viz; cirrhosis, fatty degeneration and gallstones; and the relation of cause or effect of any one of these conditions to the other; or any or all of them to the neoplasm of the omentum is a matter for fine scientific inquiry. Be it remembered the pancreas, spleen, heart, uterus, kidneys, stomach and intestines were free from any disease whatsoever.

A few years ago the doctrine of relationship between biliary lithiasis and malignant disease of the peritoneum was somewhat promulgated and almost became fashionable. My case would appear to lend itself to the support of that doctrine. With me, however, that belief could not obtain for the all-sufficient reason that malignant disease of the peritoneum is of extreme rarity, while biliary calculi are not infrequent.

The rarity of this disease is referred to in the first paragraph of my paper, and again by the authors cited. Personally I desire to say that, in an experience of twenty-eight years, this was the first primary sarcoma of the omentum I have been called to treat in my private practice, and in all my life I have seen nothing resembling it except once; that was a patient of Segond in the city of Paris, now more than four years ago. It was a private patient —a lady of refinement, perhaps 50 years old. The brilliant French surgeon debated only between tuberculosis and malignant disease of the peritoneum. That patient was emaciated so that the face and thorax presented a gastly appearance of protuberence of bones under a skin of deathly pallor robbed of all its padding of muscle and fat. The abdomen was less than flat when she lay on her back —the bowl-like depression of the center with its crest of pelvis and thorax gave it a craterform aspect.

A nodular feel of rough and hardened surface under the attenuated abdominal wall was perceptible, through this flaccid wall Segond made an exploratory incision, then lifted it high from the peritoneum, giving my eyes full sweep of everything beneath it. The most striking feature was the mottled peritoneum varying in shade from purple to vivid red, irregularly shaped and circular dots, also multiform excrescences some of which resembled strawberries in shape and color. So striking is this picture that, when seen once, one will not readily forget it. I had not seen anything like it before and was instantly reminded of it when Dr. Lamb exposed the omentum of the case here reported.

In Segond's case, when he passed his fingers over the exposed neoplasm, his eyes flashed knowingly as he exclaimed one word only, in the excellent French of unaccented syllables noticeable in the cultured native of that tongue, "Car-ce-nome." With that brief discourse, Segond sewed up his incision and I heard no more about the case except when we drove away in his carriage I asked him what further he would do, to which he answered "nothing; nothing more to do except to make her as comfortable as possible until she dies." I regret now that my note book, containing so many clinical records of Paris, does not have a full history of this case, which I believe would prove very unlike my case—as distinctly different as was her general appearance, though the neoplasm of the one presented a striking resemblance to that of the other so far as the eye could discern. To the touch through the abdominal wall the French case was hard; mine was soft.

If I have refrained from saying anything as to curative treatment, it is because of the doubt I have entertained that I am entitled to be heard. I scarcely need tell you that such treatment is not yet known; though I have found a few cases reported cured by removal with the knife, but I could not ascertain the period of time intervening between operation and report of cure. I agree that if a diagnosis of sarcoma of the omentum could be made sufficiently early, its successful removal might be not impossible.

I suspect no surgeon would at this time have the temerity to implant streptococci upon these tumors of the peritoneum as is sometimes done when sarcoma is inoperable in more superficial, and less vital, parts of the body; notably by Wyeth, of New York.

Should some novice in abdominal surgery open a sarcomatous peritoneum and accidently develop a suppurative peritonitis, it is possible and even probable that his knife would blaze a path through a fronded wold yet primeval and dark to the most sagacious path-finder among our confrères of the scalpel.

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OSTEITIS DEFORMANS.*

By M. HOWARD FUSSELL, M. D.

of Philadelphia.

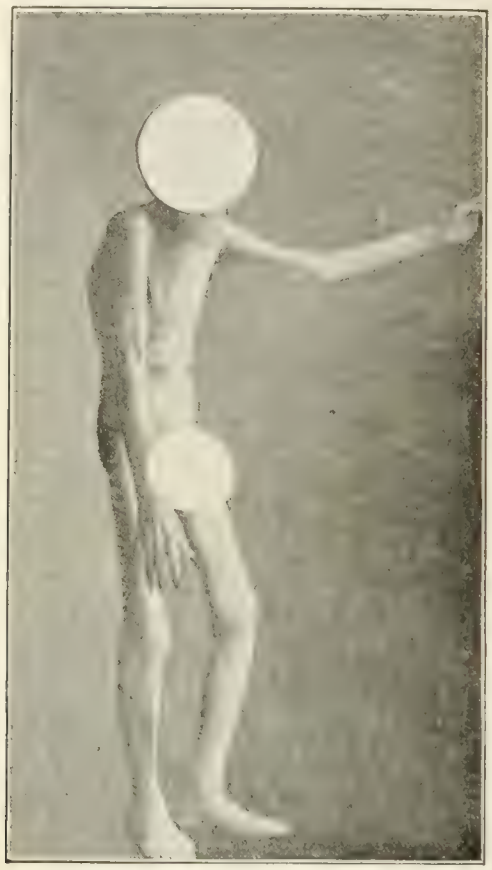
Thomas W., aged 78 years. His parents lived, each of them, to an age over 80 years; he had eight brothers and sisters, of whom none survives; but they all lived to about the age of the patient. He is married and has had two children, one of whom died at four years, the other, a daughter, is living and well.

When he was 50 years old(28 years ago), he had an attack of pneumonia, and since that time he has never been entirely well, having had repeated attacks of asthma, and in the last 10 years, a marked dyspnea with signs of failing heart, due to an emphysema. He has taken large quantities of opium, and at present he is in a mental state resembling senile dementia.

On examination, he is badly emaciated with an edema of both legs; he has a complete right inguinal hernia; he has marked abdominal breathing with a typical barrel-shaped chest; there is hyperresonance over the whole chest and marked prolongation of expiration. The chest expansion is ¾ inch.

*Read in the discussion on osteitis deformans at the meeting of the Association of American Physicians held in Washington, April 29 and 30, 1902.

The heart dulness extends from the right border of the sternum to half an inch inside the nipple line, and to the upper border of the third rib. There is a marked systolic murmur in the region of the tricuspid valve. This murmur has existed for the last five years and is gradually increasing in severity. For the last 20 years his family has noticed that he has gradually become stooped, that his legs have become bowed, and that his head was increasing in size. The point that especially attracted their attention was the enlargement of the head with marked irregularities over the cranial surface. When stripped and



examined, with special attention to the bony deformities that exist, the following conditions were noted: The head is large, flat on the top, with a triangular face. The chin is thrust forward and down on the chest. The spine is curved posteriorly, giving a marked round-shouldered appearance. The legs are very markedly bowed, as seen in the photographs, the greatest bowing being in the femora. His height, 20 years ago, was 5 feet 10 inches; at present it is 5 feet 5½ inches.

Head.—The fontanelles are all closed. The head is enlarged, both parietal protuberances are remarkably prominent. It is flat on top; scattered irregularly over the surface of the cranium are marked prominences alternating with depressions. These prominences and depressions are yearly growing more marked, being due, doubtless to irregular thickening of the vault of the cranium. The circumference of the head is 23½ inches. The distance from meatus to meatus is 12 inches. The distance from the occipital protuberance to the base of the nose is 13½ inches. The bones of the face are not changed, neither is the lower jaw. The lack of enlargement in the face compared with the enlarged skull gives the face an especially small appearance.

Upper Extremities. *Clavicles.* Both clavicles are very prominent and much thickened. The right is much thicker than the left, the greatest amount of thickening being in the middle portion. There is a marked backward curve of the clavicle at this point of thickening.

Scapulæ. The outline of both scapulæ is normal, but the spines of both are markedly increased in thickness, and the scapulæ themselves are increased in thickness.

Humeri. Neither of these bones is changed to any extent.

Ulna and Radius. Right. Both of these bones are enlarged but not markedly bent. *Left.* They are both thickened the ulna particularly so in its middle portion, and are both bent outward.

Hands. There is no change in the bones of the hands or wrist, there is no involvement of the joints of the upper extremities.

Spinal Column. The spinal column is almost immobile; there is marked bowing posteriorly, the greatest amount of bend being in the thoracic region. So great is the bowing and so limited is the motion that it is impossible for the patient to touch the head and the shoulders at the same time against the upright for measurement.

Ribs. The ribs are very markedly thickened, measuring about 1½ inches.

Pelvis. Both ilia are markedly thickened and flattened, giving the pelvis an extremely broad appearance. The distance between the anterior superior spinous processes is 12½ inches.

Lower Extremities. *Right.* The femur is very markedly thickened and is bowed anteriorly and outwardly. The greatest bowing is in the upper third. About the same



condition exists in the left. The lower ends of both femora are thickened.

Tibiæ. Both tibiæ are markedly thickened and bowed anteriorly and outwardly. The fibulæ are also thickened and bowed anteriorly and outwardly. The bones of the ankle and foot are not changed.

As noted above, the lower ends of both femora are thickened, but there is no arthritis, and the movement in the joints is perfect and painless. There is marked muscular wasting, but this can unquestionably be accounted for by the general condition of the patient, his long confinement to the house, and his distressing illness compunsequent which lasted for so many years.

The patellar reflexes are normal; the pupillary reflexes are normal, and the cremasteric reflexes are normal.



In view of the excellent papers of Packard, Kirkbride and Steele and of Prince, the literature and pathology of this rare condition is not considered in this communication.

REPORT OF FIVE CASES OF ASTHMA TREATED WITH SILVER NITRATE INJECTIONS.*

By H. T. BASS, M. D.,
of Tarboro, North Carolina.

While at the Philadelphia Polyclinic last January, attending a special week in medicine, I saw Dr. Thomas J. Mays treat phthisis, chronic bronchitis and asthma with silver nitrate injections with apparent benefit; in fact, the patients said they were better, their physical signs were less, and the patients' general condition was so much improved that I decided to try it on a number of asthmatics.

CASE I.—Mrs. L., colored, aged 40. Called on February 1st., 1901, to consult me about her asthma; said she had been a sufferer for many years at times, and now it had grown so bad she could not sleep, as the attacks come on at night after going to bed, and would last her for several hours, nor did the attacks pass off until she was exhausted and overpowered by sleep. The nose and throat were clear from obstruction and breathing was regular. I injected 5 drops of a 2½% solution of silver nitrate in the neck under the skin over the vagus nerve, a little to the outer side of the carotid artery—about midway between the angle of the jaw and the clavicle, according to the instructions of Dr. Mays, and sent her home to return within eight days, which she did, and reported that she was much improved. She said she had been able to sleep and that her attacks were very slight. I repeated the injection on the side first injected and continued the treatment every eighth day until 6 injections had been given. She reported entire relief and has not had a return of the trouble up to this date. A few weeks after she stopped treatment she contracted pneumonia and recovered without any asthmatic symptoms.

CASE 2.—Mrs. M., colored, aged 30. Came to the office in June with asthma. You could hear her wheeze across the room. She said she had come because she had heard of Mrs. L.'s relief. I injected 5 drops of a 2½% solution of silver nitrate under the skin of the neck, over the vagus nerve. She said she had suffered for 3 or 4 years, and that she had asthma nearly all the time, and especially if she cooked a meal. She reported within 8 days much improved, with a small abscess at the site of injection, which often follows the injection. I repeated the injection every 8 days until 8 treatments were given, with entire relief to the patient.

CASE 3.— Mr. H., colored, aged 26. He came to me July 10th., suffering very much as case No. 2. You could have heard him across the room and see the heaving of his chest. I gave him an injection of 5 drops of a 2½% solution of silver nitrate. He reported in 8 days somewhat improved. I repeated the injection, and on his return he was very much relieved and encouraged. I repeated the injection and on his return he was not so well; I made another injection and put him on 10 grains K. I. On his return I opened a small abscess in the neck, the result of the injection; he had lost what he gained. Continued the K. I. He did not return for further treatment.

CASE 4.—Mr. W., aged 18. He was an asthmatic. Contracted pneumonia in April and was sick for 4 weeks. After he began to recuperate he had a return of the asthma. I gave him an injection June 10th. He returned within 8 days improved; repeated the treatment. He was entirely relieved with two injections and remained so up to Dec. 1st., when he had another attack. On the 14th. I repeated the injection. He is now under treatment.

CASE 5.—Mr. P., aged 35, an asthmatic of 10 years' standing. Gave injection on July 8th. in the right side of the neck. Did not get any relief. He returned on the 10th.; repeated the injection. He returned within 8 days. Was much improved. Had not had a paroxysm since the 10th. I emptied a small abscess which had formed from the last injection, and injected him again. On his return within 8 days there was another abscess to be opened. I did not repeat the injection, as he had a paroxysm, and both sides of the neck had abscesses, and he objected. There seemed to be enough irritation at the time, and I gave him 15 grains K. I. three times a day. I did not see him for some weeks. He said he was not much improved, and was not so well off as during the treatment. He admitted that he was better during the treatment than he was before, or had been since he stopped, but it hurt him too bad to continue.

Cases 1 and 2 are relieved up to this time; Case 4 to Dec. 1st., and 3 and 5 seemed to be relieved somewhat while under the active treatment.

Dr. Mays is very hopeful for the treatment in asthma and is enthusiastic over silver nitrate injection in the neck in phthisis and endorses the silver nitrate injection strongly in his well-written book on consumption.

*Read before the Seaboard Medical Association of North Carolina and Virginia. Meeting held December 18, 1901, at Norfolk, Va.

The Differential Diagnosis Between Syphilitic and Diphtheritic Sore Throat.—In an interesting article in the *Archives de Médecine et de Pharmacie Militaires* for April, 1902, Petges gives the case-histories of 4 patients with pseudomembranous angina diagnosed diphtheria, which were really syphilitic, and of 3 patients with diphtheria which was diagnosticated syphilis. The absence of diphtheria bacilli and the appearance of other symptoms of syphilis settled the diagnosis in the former; while the unexpected presence of Klebs-Löffler bacilli made the diagnosis in the latter. He concludes that pseudomembranous syphilitic angina is not rare, that bacteriological examination alone assures a correct diagnosis, and that antitoxin should be given to all doubtful cases at once. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending June 14, 1902:

			C.	D.
CALIFORNIA:	San Francisco.	May 18-25.	6	
COLORADO.	Denver.	May 24-31.	1	
FLORIDA.	Oakhill.	June 4.	4	
	Palmetto.	June 4.	1	
ILLINOIS.	Belleville	May 31-June 7	1	
	Chicago	May 31-June 7	21	
	Freeport.	May 24-31.	2	
INDIANA:	Indianapolis.	May 24-31.	8	
	Muncie.	May 1-31.	9	
	South Bend.	May 24-31.	2	
	Terre Haute	May 24-31.	1	
IOWA:	Ottumwa.	May 3-31.	7	
KANSAS:	Wichita.	May 24-31.	4	
KENTUCKY:	Covington	May 31-June 7	16	
MARYLAND.	Baltimore	May 31-June 7		1
	Cumberland.	May 1-31.	1	
MASSACHUSETTS:	Boston.	May 31-June 7	16	5
	Cambridge.	May 31-June 7	3	1
	Chelsea.	May 31-June 7	1	
	Everett.	May 31-June 7	2	
	Lowell.	May 31-June 7	5	
	Malden.	May 31-June 7	1	1
	Somerville.	May 31-June 7	4	
MICHIGAN:	Detroit.	May 31-June 7	9	1
	Grand Rapids	May 24-June 7	2	
	Lexington	May 17-June 8	28	
NEBRASKA:	Omaha.	June 1-8.	23	
	South Omaha	May 25-June 1	33	
NEW HAMPSHIRE	Nashua.	May 31-June 7	7	
NEW JERSEY:	Hudson County, Jersey City included.	May 25-June 1	38	9
	Newark	May 31-June 7	33	13
	Passaic.	May 25-June 7	1	
NEW YORK.	New York	May 31-June 7	62	19
	Yonkers	May 30-June 6	1	
OHIO:	Hamilton	May 31-June 7	5	
	Cincinnati	May 30-June 6	12	1
	Cleveland	May 31-June 7	61	1
	Toledo.	May 25-31.	3	1
PENNSYLVANIA:	Johnstown	May 31-June 7	2	
	McKeesport	May 31-June 7	1	
	Philadelphia	May 31-June 7	16	2
	Pittsburg.	May 24-June 7	48	3
RHODE ISLAND:	Providence.	Mar.31-June 7	1	
SOUTH DAKOTA.	Sioux Falls	May 24-31.	1	
UTAH:	Ogden.	May 1-31.	8	
	Salt Lake City.	May 25-31.	3	
WISCONSIN:	Green Bay.	June 1-8.	3	
	Janesville	May 27-June 7	3	
	Milwaukee	May 31-June 7	4	
	SMALLPOX—Insular.			
PHILIPPINES:	Manila	Apr. 19-26	4	2
	SMALLPOX—Foreign.			
BELGIUM:	Antwerp	May 17-24	7	3
BRAZIL:	Rio de Janeiro	Apr. 20-May 4		8
CANADA:	Quebec.	May 24-June 7	19	
	Vancouver	May 1-31	1	
	Winnipeg	May 31-June 7	1	
CHINA:	Hongkong	Apr. 12-26	7	
COLOMBIA:	Bocas del Toro	May 12-19		1
FRANCE:	Rheims.	May 18-25.	1	
GREAT BRITAIN:	Birmingham	May 19-24	6	
	Glasgow	May 22-29	1	1
	Liverpool	May 19-24	1	
	London.	May 7-24.	307	24
INDIA:	Bombay.	Apr. 26-May 10		16
	Calcutta	Apr. 26-May 10		8
	Karachi.	Apr. 20-May 11	8	5
	Madras.	Apr. 26-May 2		2
ITALY:	Palermo	May 10-24	24	9
JAPAN:	Formosa	Feb. 1-28	78	
	Formosa	Mar. 1-31	91	
MEXICO:	Vera Cruz	May 24-31.	2	1
RUSSIA:	Moscow	May 10-17.	25	1
	Odessa.	May 17-24.	13	3
	St Petersburg	May 3-17	21	3
	Warsaw	Apr. 19-May 3		4
	YELLOW FEVER.			
BRAZIL:	Rio de Janeiro.	Apr. 19-May 4		93
MEXICO:	Vera Cruz.	May 24-31.	35	14
	CHOLERA—Insular.			
PHILIPPINES:	Manila	Mar 29-Apr 27	496	400
	Albay Province	Mar 30-Apr 27	3	
	Bataam Province	Mar 30-Apr 27	694	575
	Bulacan Province	Mar 30-Apr 27	216	231
	Camarines Province.	Mar 30-Apr 27	696	488
	Cavite Province	Mar 30-Apr 27	10	8
	Ilocos Norte Province	Mar 30-Apr 27	2	2
	Laguna Province	Mar 30-Apr 27	2	2
	Pampanga Province	Mar 30-Apr 27	292	202
	Pangasinan Province.	Mar 30-Apr 27	3	3
	Rizal Province	Mar 30-Apr 27	163	112

	CHOLERA—Foreign.			
CHINA:	Hongkong	Apr. 12-26	49	45
INDIA:	Bombay.	Apr. 20-May 13		3
	Calcutta.	Apr. 26-May 10		156
STRAITS SETTLEMENTS:	Singapore.	Apr. 19-26.		32
	PLAGUE.			
CHINA:	Hongkong	Apr. 12-26	12	11
INDIA	Bombay.	Apr. 26-May 13		731
	Calcutta	Apr. 26-May 10		721
	Karachi	Apr. 20-May 11		41
JAPAN	Formosa.	Feb. 1-28	182	163
	Formosa	Mar. 1-31	221	201
	Nagasaki.	May 24	1	1

BOLNITCHNAIA GAZETA BOTKINA.

February 27, 1902. (Vol. XIII, No. 9.)

1. On the Influence of Disinfection by Steam on Some of the Physical Properties of Clothing-material. P. A. PATSANOVSKI.
2. On the Employment of Atropine in Intestinal Obstruction. E. DIATCHENKO.
3. On the Medicosanitary Organization Between the Districts and Governments in Russia. F. KASTORSKI.

1.—Will be abstracted when concluded.

2.—Diatchenko discusses the indication for the employment of atropine. The physiological action of this drug is summarized by the statement that in small doses it paralizes some of the fibers of the splanchnic nerves leading to Auerbach's plexus, while the sensory and vasomotor fibers remain unaffected. Medium doses of atropine paralyze also the motor ganglia of the intestines, while large doses paralyze the muscular fibers as well. Therefore, the effect of atropine is a paralyzing one rather than exciting, the degree of the paralysis being in direct proportion to the size of the dose. By the use of this drug peristalsis can be increased only when the cause of the obstruction lies in the increased tonus of the splanchnic nerves and in that case the dose should be small, as otherwise the motor ganglia and the muscular fibers are also paralyzed. Atropine is indicated in acute ileus depending on intussusception, volvulus and incarceration. In intussusception atropine is contraindicated in small doses which tend, by the increased peristalsis, to increase the intussusception. In large doses it is inferior to opium which quiets peristalsis by stimulating the splanchnic nerves. In volvulus atropine is practically useless, since spontaneous untwisting occurs very rarely. In incarceration, atropine should not be relied upon and the strangulation should be remedied by mechanical or operative means. However, if for some reason the operation is delayed, atropine may be employed along with other remedial agents. The only possible good to be derived from atropine in intussusception and volvulus is through its sustaining effect on the circulation. Batsch as well as the author, observed cases of strangulation in which the strangulated part was kept alive by the circulation being kept up by the atropine. In intestinal obstruction atropine is indicated in doses which increase peristalsis. It is also indicated in dynamic ileus. In the paralytic form of ileus atropine is indicated if the intestinal muscular fibers and motor ganglia are in an atonic condition and are unable to overcome the action of the splanchnic nerves; but if the entire portion of the intestine is paralyzed, atropine is useless. Atropine is also useful in reflex intestinal spasms occurring in the course of renal and hepatic colic, cardialgia, rheumatism, disease of the generative organs, hysteria, neurasthenia etc. Here the beneficial effect is due to the action of atropine on the splanchnic nerves and the vagus. The author also agrees with the recommendation of Ostermayer to use atropine in appendicitis. Here it helps to evacuate the bowels, and, in large doses, reduces peristalsis without leading to the subsequent atony which usually follows the administration of opium. In conclusion, 3 cases (2 of volvulus and one of intestinal paralysis) are reported to illustrate the author's views. In none of the cases was atropine effective. [A. R.]

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The Case of Edward VII.—As we are about to go to press the startling news comes to hand that the illness of the English King has taken a turn for the worse and that his Majesty is suffering from appendicitis. An operation for that disease was performed on Tuesday, the 24th. inst., only two days before the date fixed for the Coronation. The bulletin announcing the fact was signed by Sir Joseph Lister, Sir Francis Laking, Sir Frederick Treves, Sir Thomas Smith and Sir Thomas Barlow.

These medical and surgical attendants on the King seem to have been most successful in concealing from the public the nature of his Majesty's illness, but with what wise purpose is not very apparent. That the King was ill for several days before the operation, was well known, but the public seems not to have suspected that he had appendicitis. His treatment and mode of life during those several days certainly did not indicate it. He was allowed a measure of liberty which is not usually accorded to a patient with this disease. A man with acute appendicitis, or "perityphlitis," is not in a fit condition to be crowned king. The medical world will doubt less be wondering how the evil hour was put off so long, and why in the meantime the sick man was pushed along through the preliminaries for the great state ceremonial.

The King's Case for a Text.—Whatever the issue may be, the case of King Edward will be looked upon as an awful example. Whatever the responsibility for delay may be, and wherever it may rest, the case will be an object-lesson to the world—not soon to be forgotten—of the dreadful disadvantages that come from delay.

We believe that this responsibilty does not rest entirely upon the distinguished men who have had the King's case in charge. Statements in the press, which seem to be authentic, indicate that the royal patient himself opposed the operation until the alternative was bluntly stated to him—the knife or death. The circumstances were altogether extraordinary. A nation was waiting for the consummation of a brilliant and exceptional ceremony. There was every temptation to delay and to take chances. The King himself took the chances, and his surgeons should be exempt.

The object-lesson to the world will have this value—that it will teach how little is to be gained by delay and how great a peril is incurred by it. We have recognized for a long time that the teaching and practice in this country on the subject of appendicitis were in advance of those that prevail in Britain. The conservatism there has been extreme. The practice has verged upon timidity. The American rule, we believe, is the better one; and, whether the King lives or dies, this fact will remain proven. If the King lives, it will only be by passing through a great peril which in almost all similar cases can be averted by prompt operation.

What is to be gained by allowing a man to go about for ten days with pus forming in his abdomen? There can be but one answer to this question. Early operation, while the case is merely one of appendiceal colic, usually means cure. Deferred operation inevitably means protracted convalescence, invalidism or, in too many cases, death. The value of the King's case will arise from the fact that it will be educational to the public, and that hereafter it will be even more difficult for a conservative surgeon to refuse to operate.

The New Surgeon-General.—Dr. William H. Forwood comes to his high office—to which he is justly entitled by reason of his meritorious record—rather late in his official career and with not enough time left him to allow him to make much impress upon its administration. He will retire for age in September next. The rule in the Service that advances him to first place is a just one, but the age limit that will retire him so soon is not without its disadvantages. We doubt not that the same observation applies to him as to the retiring surgeon-general. Both men have, in the ordinary course of nature, some good years left to them of activity and usefulness. It is to be regretted that they are

both to be retired at such a comparatively early age.

General Sternberg has expressed his gratification that he is to be freed from official responsibility, and is to be allowed to "kick up his heels" in such pastures as he may choose for himself. He is surely entitled to his freedom. In the case of General Forwood we do not know how that officer feels about the prospect of retirement, but we are sure we speak for all the profession when we say that we wish he was to have a longer chance, and that we desire for him, anyhow, success and happiness in his brief tenure of this important office.

Nothing, if Not Critical.—In the midst of all the congratulations which the American Medical Association is justly receiving on the success of its recent meeting at Saratoga—congratulations in which we ourselves have cordially joined—it would be unwise to attempt to disguise the fact that the quality of the scientific work in the sections was somewhat too uneven. The Association suffers from a plethora. There is not enough selective action in its interior workings. It is a free-for-all contest, in which the disparity of the contestants is sometimes painfully evident.

At the recent meeting the best work was done in the Sections on General Medicine, on Surgery and on Obstetrics and Gynecology. There was unquestionably good work, too, in the sections devoted to the various specialties, but on the whole the work in these special sections (or in some of them) was not so good as that done in the various national special associations. A sentiment should be created in favor of no man appearing before any section of this great Association who is not ready to put his best foot forward—and who has not got a best foot.

The motive that inspires us to utter a word of criticism is our interest in the welfare of the Association itself. This body is, in a sense, the only *real* representative medical body in America. Therefore it should represent, not the *average* work, but the *best* work done in the United States. This sentiment is becoming more and more predominant. The officers of the several sections are responsible, and must see to it that the work in all of them equals the best. If they fail to do this, they will fail to give a good account of their stewardship.

The Last Blow to Koch's Theory.—The ill-conceived and prematurely delivered theory of Dr. Koch is destined to pass into the realm of oblivion never to rise again. The scientific world received his startling announcement with a great deal of incredulity and doubt. Yet, coming, as it did, from Koch it caused the scientists to pause and reflect before they were ready to pass final judgment. It has been also felt that additional experimental evidence for or against the theory was essential to a just and impartial conclusion. Almost a year has passed since Koch made his announcement, a year of painstaking research on the part of a number of able investigators, and now we are ready to sum up the evidence. This has been admirably done by Dr. Salmon, Chief of the Bureau of Animal Industry. In several papers on the subject this able scientist marshalled an array of arguments which prove incontestibly that Koch is wrong. At the meeting of the Section on Hygiene and Sanitary Science, a full account of which is given in this **Journal**, two papers were presented followed by a discussion—all three serving as the death-warrant to Koch's theory. Dr. Salmon, in his paper prepared for the section, repeated what he has already said in previous publications and presented his conclusions which leave no room for argument. Dr. Dinwiddie, himself an able experimenter, although somewhat more cautious in his assertions, was nevertheless ready to affirm that the bacilli of human and bovine tuberculosis are not very dissimilar and that Koch's assertion is not based on sufficient scientific evidence. The most effectual work in disproving the false theory, however, was done by Dr. Ravenel, of the Veterinary Department of the University of Pennsylvania. Opposed to the theory from the first, he put forward his best efforts to accumulate sufficient experimental data in support of his opposing views. That he succeeded admirably was evident from his discussion at the meeting mentioned. Koch based his assertion on the dissimilarity between the tubercle bacilli of human and bovine origin. Ravenel proves that the two are interchangeable and belong to the same tubercle bacillus group. Koch failed to produce tuberculosis in cattle by inoculating tubercle bacilli of human origin. Ravenel accomplished this by passing the bacillus from one animal (swine) to another, the second animal developing the disease. Koch argued that primary intestinal tuberculosis is rare. Ravenel proves by a considerable number of experiments that pulmonary tuberculosis may result from ingestion of tubercular material, without intestinal lesions being produced. In these cases, the tonsils and mediastinal glands are the primary seats of infection. Koch surmised that bovine tuberculosis is not infectious to man. Ravenel points to a considerable number of cases of accidental infec-

tion with bovine tuberculosis, resulting in some cases even in death.

Self-Indulgence in Human Vivisection.—The man who experiments on himself by attempting to inoculate his person with a deadly disease, is usually not popular in the medical profession. This may be due to the suspicious attitude which physicians are prone to take towards people who may be merely trying to raise a sensation. It may also be due to an instinctive aversion on the part of doctors to being caught even in secret sympathy with any form of human vivisection.

Such an individual has come to the front again. This time it is Dr. Garnault, of Paris, who proposes to prove that Koch is all wrong, and who to this end has inoculated himself with matter from a tuberculous cow. Dr. Garnault, of course, hopes to get tuberculosis. We hope that he will not. But whether he gets it or whether he does not get it, is not a very important matter, except to Dr. Garnault. If he contracts tuberculosis he will have proved what most people already believe, and if he does not contract it, he will simply have proved nothing.

The Pathological Exhibit at Saratoga.—The introduction of art into pathology marks a new era in the rapid development of that fundamental branch of the medical sciences. It is somewhat of a grim irony to use the adjective "beautiful" in connection with pathological specimens, but one could not help feeling that many of the pathological preparations on exhibit at Saratoga were beautiful in proportion as they were true to nature. The remarkable effect of Kaiserling's fluid in preserving the natural colors of the tissues, when employed by skilful hands, was made evident by the collection exhibited by the Bellevue Hospital Medical College. The remarkable possibilities in modifications of Kaiserling's in combination with gelatine were demonstrated by a series of pathological specimens mounted in Petri dishes exhibited by the Boston University School of Medicine. Aside from the artistic qualities, the exhibit was of great scientific interest and educational value. A teaching series of macroscopical specimens of the eye in glycerine jelly was exhibited by H. V. Würdman and N. M. Black, of Milwaukee. A rich collection of gall-stones was shown by Dr. Evans, of La Crosse, Wis. A very fine and instructive collection of appendices was exhibited by R. Abbe, of New York. Excellent anatomical and pathological dry preparations were shown by the College of Physicians and Surgeons of Chicago. The Cornell University Medical College, the Albany Medical College, the Indiana Medical College, the New York Hospital for Ruptured and Crippled, the Darmouth Medical School, the Rush Medical College, the Hygienic Laboratory of the U. S. Marine-Hospital Service, Dr. Ravenel, Dr. Schamberg and several others contributed their full share in making the exhibit well worth seeing and not one to be readily forgotten.

It was a source of surprise that our great teaching institutions of Philadelphia were conspicuous by their absence.

Hysteria in Animals.—The pathology of the lower animals has been extensively studied, both for its own sake and for the light which it throws on the diseases of man. It is perhaps in the nervous system that the least advance has been made in comparative pathology, especially in the domain of the psychoses. At first thought the mention of mental affections in the lower animals is apt to excite incredulity, or even a smile. But the occurrence of hysteria among them has long been recognized. In fact, there is nothing odd about this. Many of the lower animals are endowed with the most lively emotions; and disordered emotions are fruitful causes of the various psychoses. The emotions of the dog, the cat and the horse are familiar to all.

A French veterinary surgeon, M. Lepinay, has just discoursed entertainingly in *La Nature* on this subject. Fear and joy, according to Lepinav, are the two emotions which act most disastrously upon the nervous system of animals. Thus, a dog was separated from its mistress for several months of each year; when the time for a reunion came it was necessary to act with great caution, otherwise the excessive joy of the animal caused a nervous crisis, the effects of which lasted several months. M. Lepinay had a canary bird, which, while singing in its cage, was frightened by a prowling cat. The bird fell unconscious and was revived with difficulty. Complete aphonia resulted and lasted for six weeks; this hysterical stigma then disappeared suddenly, just as in the human subject, and the bird resumed its singing. A traumatic shock can cause hysterical paraplegia in a cat, as was observed by Lepinay. The animal was attacked and bitten by a dog, and was left completely paraplegic, dragging its hind quarters as it tried to walk. This persisted for two months, when the animal was suddenly cured by being thrown from a window by a cruel servant. It jumped up and ran away.

This subject has been studied by the French, and has not been neglected by Gilles de la Tourette in his treatise on hysteria.

The coronation of a King of England has no

special interest for medical men except as it may bring forth a crop of medical knights and baronets. We have no suggestions to offer on such a delicate subject, except to say that we should like to see Mr. Jonathan Hutchinson made a knight, if he has not been made one already. We once dubbed him knight erroneously in these columns, and we should like to do so now by divine right. He is an able and interesting man, and not least so when urging his fish theory of leprosy.

An American knight once existed in the person of Sir Benjamin Thompson, or Count Rumford, of Massachusetts. He studied medicine for a while, and finally left his native country and went to England. He would probably never have been a knight if he had remained here—especially as the Revolution came on before his knighthood was in bloom. But Count Rumford was a cosmopolitan and a little bit of several other things, likewise a Tory, and cannot properly be classed in the peerage of Massachusetts.

Current Comment.

BLASTING THE HOSPITALS.

No institution in New York has suffered more inconvenience from the subway blasting than the Manhattan Eye and Ear Hospital at Park avenue and Forty-first street. It suffered from the big dynamite explosion that caused so much damage in that neighborhood, but that of course was an accident. Since then there has been more or less blasting work in the subway and in the big excavation for a new building at the corner of Forty-second street and Park avenue. Because of the delicacy of many of the operations on the eye performed in this hospital, these blasts have frequently interfered with the work of the surgeons. Warning is sent to the hospital before each blast and the surgeons who are engaged in delicate work are forced to suspend until the shock is over.

—*New York Sun.*

FISH AND LEPROSY.

A discussion on leprosy was held at a recent meeting of the Medico-Chirurgical Society of London, the special point discussed being the etiology of the disease. According to a report cabled to the *New York Times*, Dr. Hansen, of Bergen contended that leprosy was entirely contagious, and that to prove Hutchinson's theory it would be necessary to discover the bacillus of leprosy in the cured fish. He declared that the people of Norway were now eating more fish than ever before, yet leprosy was disappearing because of its strict segregation. He said that several Norwegian lepers had emigrated to the United States, and that their descendants were unleprous, which went to prove that leprosy was not hereditary, but simply contagious. Dr. Thin also supported the contagion theory. Mr. Jonathan Hutchinson, however, stoutly reiterated his belief, which he said had been strengthened by his recent researches in South Africa, that leprosy resulted from eating badly cured fish. He declared his faith that the leprous bacillus would soon be found in the fish, and he reasserted his reasons from his experience for not believing the disease to be contagious.

—*The Medical Record.*

BUSINESS HINTS TO DOCTORS.

Gratitude decreases in inverse ratio with the lapse of time following the beneficent act.

The longer you allow an account to stand, the harder it is to collect.

A favor is soon forgotten, but an injury is brooded over, [illegible] strongest with the years.

Short accounts make long friends.

You can only your patient's contempt for your business methods when you allow him indefinite time for the payment of his bill.

Medicine is a business as well as a science and the physician who is most business-like in his methods is most esteemed.

It is a mistake to make your patients your boon social companions.

—*The Medical Record.*

THE CORONATION.

A coronation nowadays presents little of specially medical [illegible] the accidents which may take place in [illegible] the hopes which may be fostered or extinct in [illegible] of the profession. But of old things and thoughts were different, and we are almost startled to find one of the greatest intellects of the middle ages, whose vast system of theology still forms the authorized doctrine of the largest body of Christians, basing his proof of the value or efficacy of the ceremony mainly on its medical effects. There is no better evidence, says St. Thomas Aquinas, that divine grace is granted to anointed monarchs than the antiquity [illegible] that [illegible] healing were formerly bestowed upon the eldest son of the Church, Clovis the Frank. Similar powers were claimed by all his successors, who were anointed with the supernatural oil supposed to have miraculously descended from heaven at his baptismal coronation down to Charles X., to whom the celebrated Dupuytren is said to have introduced, doubtless with becoming gravity, scrofulous patients to be "touched" a few days after his coronation in 1824.

—*The Medical Magazine.*

Correspondence.

EXHAUSTION PARALYSIS IN EPILEPSY.

By J. H. McBRIDE, M. D., Los Angeles, California.

To the Editor of the **Philadelphia Medical Journal**:

In the very interesting article by Doctors McCarthy and Francine published in the *Journal of June 14th* the authors do not explain why the facial paralysis was of short duration.

Hughlings-Jackson has, I think, made the explanation possible. He calls attention to the fact that large muscles are supplied by large nerve cells, small muscles by small nerve cells. The small muscle contractions being of short duration and rapid in succession, would require nerve cells that could be quickly restored to function, after exhaustion. In the small cell this is especially provided for, because in it there is a relatively large surface exposed to the nutritive material.

Therfore, in exhaustion paralysis affecting small muscles, the nerve cells would quickly recuperate and the paralysis would be of brief duration.

This explanation needs to be qualified by the statement that in highly voluntary muscles, like those of the hand, exhaustion paralysis would last longer (other things being equal) because the face muscles are more automatic and less under conscious control.

The centers for the hand, representing a highly evolved and voluntary structure, are correspondingly unstable and are more exhausted by a spasm than if they were less voluntary.

American News and Notes.

PHILADELPHIA AND PENNSYLVANIA.

Philadelphia Hospital. Seven physicians have been appointed residents at the Philadelphia Hospital from the University of Pennsylvania, Jefferson Medical College and the Medico-Chirurgical College. But 2 women physicians were appointed by the Woman's Medical College. As there was one vacancy, therefore, in the number of residents to be appointed, another graduate of the University of Pennsylvania was given this place, at the meeting held June 19.

Wills' Eye Hospital. A citizen of Philadelphia has offered to give $15,000 to the fund for the endowment of the Wills' Eye Hospital, provided the sum of $100,000 shall be collected by subscription by January 1, 1903. The institution was founded in 1831, and now has a total invested capital of over $500,000. The income from this is, however, not enough for the support of the hospital to the full measure of its possible usefulness, and it is on this account that subscriptions are urged. Subscriptions to this endowment fund, payable after the whole sum has been subscribed, may be sent to E. S. Buckley, chairman of the Committee of the Wills' Hospital, 505 Chestnut street, Philadelphia.

A Resignation. Dr. T. H. Andrews, chief surgeon of the Bureau of Police and Fire, Philadelphia, has resigned, his resignation to take effect July 1. Dr. Andrews has held this position for 14 years. Dr. W. M. Augney has been appointed in his place.

Polyclinic Hospital. At the meeting held June 17, Dr. H. M. Christian, for years adjunct professor, was elected professor of genito-urinary surgery in the place recently made vacant by the resignation of Dr. T. R. Neilson.

Altoona Hospital. It is reported that Mr. C. M. Schwab, president of the U. S. Steel Corporation, has given $35,000 to the Altoona Hospital.

NEW YORK AND NEW JERSEY.

Section on Cutaneous Medicine and Surgery, American Medical Association.—The following resolution, introduced by Dr. L. Weiss, of New York, and seconded by Dr. D. L. Bulkley, of New York, was unanimously adopted by the Section on Cutaneous Medicine and Surgery of the American Medical Association at its recent meeting. This resolution was presented to the Section on Hygiene and Sanitary Science of the American Medical Association for co-operation. Whereas: There is a burning necessity to check the spread of venereal diseases, and assuming that the States cannot with impunity ignore the condition, it lies in the province of the medical profession to discuss and recommend to the respective State Legislatures and Municipalities means, not regulamentative, but social, economic, educative and sanitary in their character, to diminish the danger from venereal disease. Resolved: That the section on Cutaneous Medicine and Surgery of the American Medical Association invite the Section on Hygiene and Sanitary Science to co-operate with the Section on Cutaneous Medicine and Surgery in bringing about a propaganda in the different States, looking forward to a proper recognition of the dangers from venereal diseases, and to arrange for a national meeting under the auspices of the American Medical Association for the prophylaxis of venereal diseases similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year at Brussels under the authority of the Belgian Government. At a meeting of the House of Delegates of the American Medical Association, a committee was appointed to study this matter and report at next year's meeting. This committee consists of 3 members from the Section on Hygiene and Sanitary Science and 3 from the Section of Cutaneous Medicine and Surgery.

Harlem Hospital, New York City.—Dr. William M. Leszynsky has just been appointed consulting neurologist.

Tuberculosis War in New York.—The Charity Organization Society, at its meeting, June 17, appointed a committee for the prevention of tuberculosis, consisting of a number of well-known physicians. The social, physical and financial aspects of tuberculosis will be thoroughly investigated. The best treatment at the least cost will be sought.

To Prevent X-ray Burns.—Dr. J. M. Bleyer, of New York, has demonstrated that the application of paraffine will prevent the occurrence of burns during the process of taking X-ray photographs or of treating malignant disease of the skin by the X-rays.

The Smallest Infant in New York.—A baby was born June 21, in New York City, who weighed 26 ounces and measured but 10 inches in height. He is relatively well developed and seems in good condition.

A Cherry Stone in the Postnasal Cavity.—A woman in Pleasantville, N. J., thought she swallowed a cherry stone 3 years ago. About 2 years ago she noticed pains in her eyes and nose, which had lately become so severe that she was almost constantly under the influence of a narcotic. A few days ago she was seized with a violent fit of coughing and expectorated a hard substance, which proved to be the sprouting cherry stone. Since that time symptoms have entirely disappeared.

SOUTHERN STATES.

The Fight Against Mosquitoes in Baltimore.—But $3000 have been appropriated by the Baltimore City Council for exterminating the mosquito. As the Health Commissioner had expected $15,000, he has been much disappointed at the result. He states that nothing can be done with that amount, and recommends that the people throughout the city turn their attention to the work themselves, using kerosene to prevent the breeding of mosquitoes. He is powerless to do anything on account of the small sum appropriated.

University of Maryland.—At the meeting held June 13, Dr. J. H. Smith was elected professor of anatomy, Dr. Randolph Winslow, professor of surgery, Dr. D. M. R. Culbreth, professor of materia medica, Drs. Frank Martin and St. Clair Spruill, professors of clinical surgery, and Dr. J. W. Holland, demonstrator of anatomy.

Mosquitoes in New Orleans.—The progressive union, a commercial organization in New Orleans, convinced that mosquitoes are a common injury to the commerce of the city, has decided to aid the efforts of the Health Society in their campaign against the mosquitoes. It is reported that the doctrine that mosquitoes propagate disease has worked some unexpected results. The home for lepers at Elkhorn was burned by the people of the neighborhood, from the fear that the mosquitoes would communicate the disease. Besides mosquitoes in New Orleans, ants have become a pest. After exterminating the mosquitoes, it is to be hoped that the ants will also be destroyed.

St. Lukeland Sanatorium, Maryland.—This cottage, owned by the Baltimore Hospital Relief Association, was opened June 26 for convalescent women, each of whom will be allowed to remain at the sanatorium, located near Catonsville, for 2 weeks during the summer free of charge.

Death of Dr. Goldsborough.—Dr. Griffin Washington Goldsborough, a graduate of the University of Maryland Medical School in 1838, State Senator from Caroline county, Maryland, in 1886 and 1888, died in his home at Greensboro, Maryland, June 14, aged 87 years. After graduating in medicine, he first located in St. Louis, but returned to Maryland in 1842, since which time he has been in active practice. For 60 years he was the personification of the old school country doctor, whose services were at the demand of the poor as freely as at that of the rich. His skill in diagnosis and in treatment and his sturdy common sense, together with his standard in the community and his autocratic manner enabled him to exercise beneficiently in matters hygienic and clinical, as well as in politics.

MISCELLANY.

A New Hospital Ship.—The Navy Department has decided to use the former training ship *Dixie* as a hospital ship. Orders have been given for equipping the boat at the New York Navy Yard for this purpose. When necessary, however, she may also be employed as a transport. The *Dixie* will have accommodations for about 100 sick and quarters besides for as many more convalescents.

Infectious Diseases.—Cholera is on the increase in Shanghai, about 30 foreigners and a large number of natives dying daily.—Smallpox is reported by officers of the U. S. M.-H. S. at Palmetto, Florida. The disease is supposed to have spread from a camp of negro laborers.—For the week

ending May 4, 34 deaths from yellow fever, a decrease of 25 from the preceding week, were reported at Rio de Janeiro.—While yellow fever is reported from various South American cities and from Vera Cruz, Mexico, it should be noted that not a single case has occurred in Cuba or Porto Rico. For the week ending May 31, 107 cases with 48 deaths were reported from Vera Cruz, with the probability of an increase, since the rainy season, which has already begun, will be followed by an increase in the number of mosquitoes.

Army Medical Corps.—As a result of the recent examination by the Army Examining Board in Washington, but 18 out of 129 candidates passed. This leaves 48 vacancies in the Army Medical Corps. The 18 physicians who passed the examinations have been commissioned first lieutenants and assistant surgeons.

Cholera in the Philippines.— Under date of June 24, the total number of cases and deaths from the epidemic in Manila was 1607 cases and 1281 deaths; in the provinces 8488 cases and 6272 deaths. Ninety American soldiers have died from cholera since the disease broke out. Heroic measures have been resorted to by the medical officers in the Philippines, but in spite of this the death-list continues to increase. It is found that Americans are just as susceptible to the disease as the natives. That the disease has more natives for its victims than Europeans is due to the fact that the natives will not observe strict sanitary rules. The cholera has already spread to 22 different places in the archipelago. As there is naturally great danger of the introduction of cholera into the United States by homecoming troops, the strictest quarantine regulations have been established. Destructive epidemics of cholera occurred in the Philippines in 1889 and in 1882. Major J. F. Kennedy pays a high compliment to Colonel F. L. Maus, U. S. M. H. S., for his work on the Manila Board of Health, the extraordinary efforts he made, and the ability with which he handled the situation. The native population antagonizes all efforts to eradicate the disease, consequently business interests are much embarrassed and a great deal of the shipping is at a standstill. The hottest season of the year is beginning now, and will last through July and August. Unless the rainy season begins early, there is strong apprehension that the ravages of the disease will become even more pronounced. The death-rate now is 75%, but is much higher when only the natives are taken into consideration. In 1882, when 30,000 deaths occurred from cholera, the only thing that stopped the disease was the coming of the rainy season.

Obituary. Dr. Isaac S. Eshleman, at Oakland, Cal., June 13, aged 82 years.—Dr. Edwin W. Magann, at Evanston, Ill., June 14, aged 69 years.—Dr. Francis Daniel Muller, at London, England, June 17.—Dr. Robert A. Work, at Bethlehem, Pa., June 17, aged 34 years.—Dr. George F. Carey, at New York City, June 17, aged 66 years.—Dr. Obed L. Lusk, at Rockaway Beach, N. Y., June 20, aged 45 years.—Dr. Jacob F. Meyer, at Buffalo, N. Y., June 20.—Dr. William H. Barton, at New York City, June 20, aged 31 years.—Dr. Allen Jones, at Kinsman, Ohio, June 7.—Dr. Curtis E. Munn, at Topeka, Kansas, June 7.—Dr. William D. Duff, at Garden Grove, Iowa, June 7.—Dr. James A. Black, at Pleasant Mound, Ill., June 1, aged 67 years.—Dr. William Christie Wilson, at New Orleans, La., June 8, aged 78 years.—Dr. Moses D. Schmalhorst, at St. Louis, Mo., June 2, aged 35 years.—Dr. John J. Briley, at Lawrenceville, Pa., June 4, aged 28 years.—Dr. Benjamin A. Church, at Oneonta, N. Y., June 5, aged 47 years.—Dr. William Mason, at Vergennes, Vt., June 1, aged 64 years.—Dr. Samuel C. Fitzgerald, at Washington Barracks, D. C., June 1.—Dr. Walter R. Godfrey, at La Porte, Ind., June 7.—Dr. William R. Feskera, at New Bremen, Ohio, June 5.—Dr. James S. Hottel, at Conicville, Va., June 3, aged 32 years.—Dr. A. L. Elder, at Hebron, Neb., June 5.

GREAT BRITAIN, ETC.

The King's Illness.—The cause of the illness of King Edward VII, who had a severe chill, June 15, was only made public June 24, after his physicians had already decided to operate. It was then announced that the King had appendicitis, and that operation would be performed that afternoon. The reason for the delay in operating was supposed to have been the King's unwillingness to disappoint his people. He hoped, since enormous preparations had been made for his coronation, that, with the aid of his physicians, he could be so well supported that operation could be put off until after the coronation. The sudden occurrence of severe symptoms, however, forced the King's physicians to operate. The anesthetic was given by Dr. F. W. Hewitt, while Sir Frederick Treves performed the operation, making an incision 4 inches long, through which a large pericecal abscess was evacuated. The other physicians in attendance upon the King are Sir Joseph Lister, Sir Francis Laking, Sir Thomas Smith and Sir Thomas Barlow. Though the operation is naturally a serious one, especially upon a patient over 60 years of age, excessively obese, the latest reports, as we go to press, state that the King's condition is perfectly satisfactory.

The Plague in India.—A statement made by the Government, June 21, regarding the condition of India in respect to the plague from its first outbreak in Bombay in September, 1896, to March, 1902, shows a total of reported deaths from the disease during that period of 536,600 in the Bombay Presidency and 315,400 in other parts of India, or a total of 852,000 for the whole of British India and the native States. Making allowance for untraced and unreported deaths it is calculated that a million died during the period mentioned. During the first 3 months of 1902 the deaths reported in the Bombay Presidency were 42,007 compared with 17,806 in the corresponding period of 1901. Other parts of India show a corresponding increase, especially in the Punjab, where the deaths in 1900 were 515, in 1901, 15,245, while in the first months of 1902 the figures have risen enormously. The deaths reported in March alone numbered 42,788.

The Linnean Society's Gold Medal.—At the annual meeting of the Linnean Society of London, May 24, the gold medal was conferred upon Professor R. A. von Kölliker, of Würzburg, for his work in zoology.

CONTINENTAL EUROPE.

Inoculated Himself With Tuberculosis.—Dr. Garnault, who is convinced that human beings may contract tuberculosis from cattle, has been inoculated with tubercular material taken from a diseased cow. The day before, Dr. Garnault blistered his forearm, and after exposing the wound, from which the blood was freely flowing, he is said to have applied glandular matter from the cow. This was left on for 2 hours and was then injected in a guinea-pig. It is stated that of 10 known cases of tuberculosis contracted in this manner by men at work in the slaughter house, 3 have died and the others have phthisis. In case this experiment should fail, Dr. Garnault intends to consult Dr. Theobald Smith, of Boston, and Professor Baumgarten, of Tübingen, upon another more decisive experiment which he hopes to practise upon himself.

University Notes.—Berlin: Dr. Robert Kutner has been appointed professor of genito-urinary surgery.—Dr. Wilhelm Kolle has been appointed director of the Institute for Infectious Diseases in Berlin, and Dr. August Wassermann has been appointed chief of the department of infectious diseases.—**Bordeaux:** Dr. Chauffet has just been appointed chief of the children's clinic.—Dr. Lebœuf has been appointed professor of pathology.—**Budapest:** Dr. Julius Boké has been made professor of otology.—**Freiburg:** Dr. Ernst Roos has been apointed professor of internal medicine.—**Göttingen:** At a full meeting of the senate of the University it was decided not to allow women to matriculate.—**Heidelberg:** Dr. Czerny, professor of surgery, celebrated his 25th anniversary as chief of the Heidelberg surgical clinic June 18.—Dr. F. A. Kehrer, professor of obstetrics and gynecology and director of the gynecological clinic, is to be retired October 1.—**Leipsic:** Dr. Sauer has been appointed professor of pathological anatomy.—**Vienna:** Dr. S. R. von Basch has been appointed professor of experimental pathology.—Dr. Leopold Oser, professor of internal medicine, and Dr. Max Mayr, professor of pediatrics.—Dr. Hochenegg, professor of surgery, has been appointed director of the first surgical department of the Vienna General Hospital in place of Professor Weinlechner, recently retired.

Obituary.—Dr. Michael Tichomirow, professor of anatomy and dean of the medical faculty in Kiew, died May 30, aged 54 years.—Dr. N. N. Doschashin died recently in an insane asylum, at St. Petersburg.

The Latest Literature.

BRITISH MEDICAL JOURNAL.

June 7, 1902. (No. 2162.)

1. Observations on Tuberculin as a Remedy in Tuberculosis of the Lungs. W. CAMAC WILKINSON.
2. The Administrative Control of the Tuberculous Diseases. B. COOPER PATTIN.
3. On a Model Sanatorium for Consumptives. LAUDER BRUNTON.
4. The Technique of the Intratracheal "Direct" Method of Treatment of Phthisis. COLIN CAMPBELL.
5. Arsenical Beer Poisoning at the Halifax Union Poorlaw Hospital. J. F. WOODYATT.

1.—The treatment of tuberculosis with tuberculin is specific. It is of no avail except for tuberculous disease and if other complicating conditions exist, that is to say, if other micro-organisms are associated with the bacillus tuberculosis in the morbid process, tuberculin may fail absolutely to arrest or to modify the disease, and, indeed, it may do harm. Tuberculin treatment aims at a progressive process of active immunization radically different from the passive process in which antitoxic serum is supplied ready made. In the presence of various micro-organisms, such as streptococci, the energy of the cells may be so depressed that active immunization by means of tuberculin cannot be expected. In the experience of Wilkinson tuberculin has proved itself of undoubted value in the treatment of tuberculosis. He has treated 70 cases and does not remember a single instance in which there was no improvement, provided, of course, that there was no mixed infection. By improvement he means that the cough grows less and finally disappears, the sputum becomes diminished in quantity and finally ceases, and that, if tubercle bacilli have been found, they disappear. If hemoptysis has been present, tuberculin stops it. The author thinks that the treatment of tuberculosis, uncomplicated by infection with the pyogenic organisms, the pneumococcus or the influenza bacillus, by tuberculin is more satisfactory than the sanitorium treatment. [J. M. S.]

2.—Pattin contributes an article on **the administrative control of the tuberculous diseases.** Before setting out upon an attempt to control these diseases we need: (1) reliable information as to their whereabout, which can be acquired by obligatory notification only. (2) Rigorous adoption of consequential administrative measures as to the desstruction of sputum, disinfection and improvement of infected dwellings and sometimes their condemnation and removal. (3) Provision of sanatoria for recuperative treatment. (4) Instruction in all elementary schools in the means of propagation and the methods of prevention of tuberculous disease. [J. M. S.]

3.—Brunton describes a model sanatorium for consumptives. [J. M. S.]

4.—Campbell describes the **technique of the intratracheal direct method of the treatment of phthisis.** He uses the following formulæ: (1) Thymol, 1 dram; salol, 2 drams; menthol, 1 dram; glycerine, 5 ounces. (2) Medicinal izal, 3 drams; menthol, 2 drams; glycerine, 5 ounces. He injects from 2 drams to 12 drams twice a day at a temperature of 140° F. Sometimes he administers both formulæ at the same time and in other instances he uses formula No. 1 for a week and then starts in with formulæ No. 2. In some cases it is more satisfactory to start the treatment with a weaker emulsion of izal than that indicated. The instruments are an intratracheal syringe and a laryngoscope which he prefers should be made of plated metal. He claims that neither irritation, coughing nor choking occur by this method if it is properly employed. The injection is best given at the beginning of inspiration. The duration of the treatment depends upon a variety of circumstances. He reports a case in which he continued the treatment for 5 months. The patient's improvement was marked. [J. M. S.]

5.—Woodyatt reports 2 cases of arsenical beer poisoning, which occurred in Halifax. One one-hundredth of a grain of arsenic, it is said, may be allowed to exist in a gallon of beer without detriment. [J. M. S.]

LANCET.

June 7, 1902.

1. Lettsomian Lectures on Certain Diseases of the Blood-vessels. A. PEARCE GOULD.
2. The Ingleby Lectures on Chronic Hypertrophy of the Faucial and Pharyngeal Lymphoid or Adenoid Tissues. Lecture I. F. MARSH.
3. Concerning Injurious Constituents in Whiskey and their Relation to Flavor. LAUDER BRUNTON and F. W. TUNNICLIFFE.
4. Dilatation of the Heart and other Manifestations of Weakening of the Heart as Results of Rheumatism. THEODORE FISHER.
5. The Ventilation of Ships with a Description of an Efficacious Method. WILLIAM EDWARD HOME.
6. Difficulties in Diagnosis; Chicken-pox or Smallpox. W. M. YOUNG.
7. Primary Gangrene of the Tonsils. ROBERT FULLERTON.

1.—Gould delivered the third lecture **on diseases of the bloodvessels** before the Medical Society, of London, on March 17, 1902. In this lecture he points out that the blood changes which may bring about thrombosis may be due to one or more of the following: (1) A change in the corpuscles leading to their disintegration; (2) an increase in the viscosity of the platelets; (3) an increase in the fibrin ferment; and (4) an increased liberation of the fibrin ferment. He also writes that micro-organisms or their toxins may have some influence on either the formation of platelets or the production of fibrin ferment. The local conditions which seem to influence thrombosis may be grouped under two headings: (1) Changes in the condition of the vessel-walls, and (2) changes in the regular equable flow of the blood. He then discusses in detail the various changes that occur in the vessel-walls and factors concerned in the disturbance of the regular equable flow of the bloood. [F. J. K.]

2.—Marsh delivered the first lecture **on chronic hypertrophy of the faucial and pharyngeal lymphoid or adenoid tissues,** at the University, Birmingham, on May 27, 1902. He refers to the histology of the tonsil, pointing out that this structure is composed of a network of loose connective tissue in the meshes of which are held the lymphoid follicles, and, according to Sajous, conglomerate glands. The tonsils are covered with cylindrical epithelium and are richly supplied with bloodvessels. Enlarged tonsils, the common term used to express hypertrophy of the faucial tonsils or hypertrophy of Luschka's tonsil, have been spoken of as "adenoid vegetations in the nasopharynx," "adenoid growths," "postnasal growths," "postnasal adenoids" and now as "adenoids," while hypertrophy of the scattered patches and bands in the pharynx is termed "chronic faucial or granular pharyngitis. He states that considerable diversity of opinion exists as to the influence of the most of the assigned causes, namely, heredity, scrofula, lymphatic temperament, climate, anterior nasal stenosis, cleft palate, vaginal secretions at birth, the acute exanthemata, whooping cough and nasal and nasopharyngeal catarrh. He thinks that heredity, bad climate, bad food, bad hygiene and neglected cold account for the majority of cases. Three varieties of enlarged tonsils are described: (1) When the hypertrophy is chiefly in the horizontal diameter—the projecting tonsil; (2) when the hypertrophy is chiefly in the vertical diameter—the elongated tonsil, and (3) when the hypertrophy is chiefly in the anteroposterior diameter—the broad sessile or flat tonsil. He discusses the symptoms caused by enlarged tonsils under 3 headings: (1) Obstructive symptoms; (2) catarrhal symptoms and (3) reflex symptoms. He considers operative treatment necessary when the enlarged tonsils produce mechanical obstructive symptoms even if otherwise healthy when they are the cause of frequent or prolonged catarrhal attacks or acute inflammatory attacks, when they are responsible for lymphoid adenitis, when the crypts or recesses are occluded with caseous which does not yield to other treatment and when they are the probable source of reflex coughs. An anesthetic is usually necessary in children, but in older children, who are not nervous or sensitive, the operation may be performed with local anesthesia. He describes

at some length the various operative procedures and the postoperative treatment—the essentials of the latter are (1) Avoidance of exertion. (2) An equable temperature during the healing process. (3) Suitable diet. (4) A cleansing wash. The reports of a number of cases are included in this article. [F. J. K.]

3.—Brunton and Tunnicliffe refer to some of the injurious constituents in whiskey and their relation to flavor. From their considerations they seem justified in concluding that the aldehydes, to which the initial irritating taste and flavor of raw pot-still whiskey must be ascribed, are only indirectly—viz.: by their disappearance—concerned with the ultimate bouquet of old whiskey It further appears that, since at least some of the energy of the maturation is spent upon the disappearance of these substances, it is probable that an initially dealdehyded spirit will become mature in a shorter time than an ordinary one. The last conclusion that they would draw is that since the aldehydes and furfural do not seem necessary for the production of whiskey, they are, from the point of view of the public health, better removed from it. [F. J. K.]

4.—Dilatation of the heart and other manifestations of weakening of the heart as results of rheumatism, are discussed by Fisher. He thinks that the most reasonable explanation of dilatation of the heart occurring in fibrous pericarditis, due to rheumatic fever, is poisoning of the heart, while he further thinks that in some cases of rheumatism, hypertrophy of the heart follows without the occurrence of either pericarditis or endocarditis, which he thinks may be explained on the ground of rheumatic poisoning of the heart muscle. He considers the various points in connection with disease of the cardiac muscle following rheumatism. In a brief summary he writes as follows: (1) That dilatation of the heart ending in death may occasionally occur without valvular disease or general adhesion of the pericardium being present; (2) that in rare instances, hypertrophy of the heart may occur without valvular disease or general adhesion of the pericardium; (3) that there is evidence that myocarditis may exist in the absence of pericarditis, and (4) that slight weakening of the myocardium may be shown by loss of physical energy, by attacks of cardiac pain or by tachycardia. The causation of dilatation and of hypertrophy of the heart associated with rheumatic pericarditis or with general adhesion of the pericardium has been considered, and it has been thought that the most reasonable explanation of both is poisoning of the cardiac muscles. [F. J. K.]

5.—Home describes an efficacious method for the ventilation of ships, which was devised by Mr Thomas Utley, of Liverpool. This ventilator is so constructed that fresh air is supplied into ships during all kinds of weather without allowing the sea-water to gain access through the ventilating apparatus. An illustration of the Utley port-hole ventilator accompanies this article. [F. J. K.]

6.—W. M. Young refers to the difficulties in the diagnosis of smallpox or chicken-pox, which be encountered in a case presenting a papular eruption which bore a marked relation to a manifestation of bronchism which occurred in an adult. The papular eruption made its appearance on the face and wrists. Fever was present but declined during the early stage of the development of the eruption, and marked constitutional symptoms, particularly lumbar pain, all pointed to the diagnosis of varioloid. Headache, nausea and vomiting were absent, and the papules matured so rapidly into vesicles that the case was considered one of chicken-pox. [F. J. K.]

7.—Robert Fullerton reports a case of primary gangrene of the tonsils, which occurred in a man, 37 years of age. The patient presented himself on June 13 1900 stating that in the middle of May he had had a severe cold in the head, accompanied by a considerable amount of nasal discharge, also pain in both ears and in the nasopharyngeal region, which confined him to the house for a week. A week after recovery the tonsils became acutely inflamed and his temperature rose to 103° F. A week after this onset an ulcer formed on the right side of the upper lip near the angle of the mouth and a slough appeared on each tonsil. When the patient was seen by the author, his throat was acutely painful, the voice was nasal and the lymphatic glands at the angle of the jaw were enlarged and tender. The tonsils were swollen and both were covered with a greenish-yellow slough, while neither the epiglottis nor larynx were involved. He reports another case which occurred in a girl, 23 years of age, seen by him on November 2, 1900, who had, 4 weeks previous to this date, caught cold when her tonsils became inflamed and remained so up to the time he saw her. Three days before the patient came under his observation, she complained of great pain on the right side of the throat, and the lymphatic glands behind the angle of the jaw on the right side became enlarged and tender. On examination, he found a large slough, identical with the one described in the first case on the right tonsil, while the left tonsil was inflamed. The condition became worse and persisted for 4 weeks. About a year later the patient died. An autopsy revealed a tuberculous pneumonia and pleurisy. He considers both of these cases as examples of *primary gangrene of the tonsils*. He points out that the treatment of gangrene of the tonsils should be prompt and energetic: iron and quinine should be administered and opium given freely, while locally the electric cautery should be thoroughly applied to the ulcerated surfaces. [F. J. K.]

MEDICAL RECORD.

June 21, 1902.

1. Post-Graduate Instruction in Great Britain.
2. Post-Graduate Instruction in Germany and Austria.
3. Post-Graduate Instruction in the United States.
4. Certain Clinical Types of Brain Syphilis.
5. Multiple Neuritis.

MEDICAL NEWS.

June 21, 1902.

1. The Relation of Yale to Medicine.
   WILLIAM HENRY WELCH.
2. The Local Treatment of the Organs.
   W. BYRON COAKLEY.
3. Neurectomy for Facial Neuralgia. E. M. MAGRUDER.
4. Medical Photography. MILTON FRANKLIN.

2.—Will be abstracted when concluded.

3.—Magruder refers to 3 ways of relief in cases of facial neuralgia: (1) Division of the nerve trunk or branch that gives pain. (2) excision of the ganglion of Gasser: (3) excision of a portion of the offending nerves. The author has had experience with the last operation and reports a very interesting case with marked improvement. [T. M. T.]

BOSTON MEDICAL AND SURGICAL JOURNAL.

June 19, 1902.

1. The Relation of Medical Science to Commerce.
   FRANK BILLINGS.
2. Suture of Heart Wounds. H. M. SHERMAN.
3. The Necessity for An Elective System in a School of Medicine, and its Disadvantages.
   H. L. BURRELL.
4. Report of a Case of Chronic, Continuous Hypersecretion with Hyperchlorhydria (Reichmann's Disease), with Especial Reference to Treatment.
   R. F. CHASE.
5. The Use of Suprarenal Extract in Hay Fever.
   J. P. CLARK.

1.—See Philadelphia Medical Journal, June 21, 1902, page 1077.

2. See Philadelphia Medical Journal June 14 1902 page 1030.

3.—Burrell believes that certain fundamental studies, anatomy, surgical histology and embryology, physiology, including physiological chemistry, pathology, including bacteriology, medicine, surgery and obstetrics should be prescribed for all students, but as soon as these are completed students should elect studies leading toward special lines of work. Advanced requirements or a college degree should be necessary to enter the medical school. He thinks that clinical knowledge will increase with laboratory knowledge, and that both will advance together. But a single human mind cannot grasp all medical knowledge nowadays. Still the public demands specially informed men on all subjects. An elective system will give free play to the different capacities of students and to their

different methods of work; they will elect a subject which interests them; and it will give freedom to both student and instructor. Therefore, **an elective system is needed in a medical school.** Yet it has disadvantages, for it is difficult to determine what is absolutely necessary to form the foundation; the loss of a broad general education is considerable; the teachers cannot tell just what the students know; some students will want tests from time to time, to find what progress they are making; an uninteresting, even though important subject, with a stiff examination will be shunned by students; and a student who knows not what he is to do eventually will find it difficult to specialize. To overcome this difficulty, a full course should be provided for those unable to choose a special line of work. Thorough examinations should be given in the fundamental branches, teaching the knowledge which should be possessed by every well-grounded medical man. Finally he added that the elective system is already in use.

[M. O.]

4.—Chase reports in detail a rare case of **Reichmann's disease** in a man of 30. Epigastric pain began 15 years before, with continuous hypersecretion and hyperchlorhydria. The diagnosis is easy when proper methods of examination are employed. It must be distinguished from stasis from any cause, and from gastric ulcer. Stasis and dilatation may result secondarily. There are also heartburn, eructations, vomiting, gastralgia, increased appetite, constipation and emaciation. In the treatment Chase used nitrogenous diet, slight doses of antacids, and daily lavage. When pain recurred, the patient fasted, using rectal feeding. He has greatly improved upon this treatment. [M. O.]

5.—Clark has used **suprarenal extract in the treatment of hay fever** for two years. After reporting 5 case-histories, he concludes that it gives favorable results when used locally, in simple vasomotor rhinitis without discoverable local abnormality or general dyscrasia; that, in cases of hay fever in which there is some local abnormality in the nose, it only acts favorably after such abnormal condition has been remedied, and then it may be found to be unnecessary; and that in cases in which rheumatism or other dyscrasia exists, it causes some reaction at first, but does not act as favorably as in uncomplicated cases. [M. O.]

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

June 21, 1902.

1. Analysis of Ninety-six Operations for the Relief of Tuberculosis of the Testicle. ORVILLE HORWITZ.
2. What of the Future? J. H. CARSTENS.
3. Physical Diagnosis as Related to Dental College Curriculua. A. H. PECK.
4. The Embryology of the Dental Pulp. R. R. ANDREWS.
5. Gangrene Following Thrombosis of the Abdominal Aorta and its Branches. R. EDWARD GARRETT.
6. Maternal Impression "Marks" Child for a Frog. J. W. COOLIDGE.

1.—Orville Horwitz presents an **analysis of 96 operations for the relief of tuberculosis of the testicle,** of which 55 were castrations and 25 epididymectomies. The following conclusions were reached: (1) A primary tubercular infection of either the epididymis or testicle may occur, the former being by far the more common. (2) A primary infection of the epididymis, secondarily that of the testicle, is more common that the descending one. (3) Primary involvement of either the epididymis or testicle usually takes place through the circulation, the soil being predisposed to the location of the tubercle bacillus either by a slight traumatism or by some infective condition which has given rise to inflammation of the organ, most commonly an attack of gonorrhea. (4) Secondary tubercular involvement of the epididymis or testicle sometimes follows a primary focus of the disease in other portions of the body, more commonly in those organs that are in direct anatomical connection with the sexual glands, such as the seminal vesicles, prostate, urethra, bladder, ureter or kidney. (5) The invasion of the testicle may be rapid, associated with acute inflammatory symptoms, an abscess soon developing; or the onset may be slow, the symptoms simulating those of either chronic syphilitic orchitis or malignant disease of the organ. (6) Tuberculin test should always be employed in doubtful cases in which only one focus of the disease is known to exist. (7) In doubtful cases associated with hydrocele, the fluid should be examined for the tubercle bacillus and inoculation experiments made. (8) The injections of either emulsions of iodoform or of sulphate of zinc into the diseased part are not to be recommended. (9) In all cases of encapsulated caseous nodules quiescent in the epididymis, epididymectomy should be performed. (10) Epididymectomy together with resection of the vas deferens is not attended by either atrophy of the testicle or sexual weakness. (11) The drainage of tubercular abscess is followed by the use of the curette is only to be employed when radical treatment is not permissible, as it is attended with more or less danger and is generally unsatisfactory in its results. (12) In instances in which the epididymis alone is involved, a resection of the diseased structure is all that is required; whether a partial or complete resection of the vas deferens is to be undertaken is still undetermined. (13) Double orchidectomy should be performed when both glands are diseased, provided there is no extensive co-existing tubercular infection of other organs. (14) Whether infected seminal vesicles should always be removed at the time that the epididymis or testicle is resected is a question open for discussion. From the fact that in a large majority of cases the removal of the primary seat of the disease is followed by a subsidence of the tubercular involvement of the vesicles, it is deemed wiser, as a rule, to wait and remove the vesicles later, if necessary. (15) Hygienic and climatic influences play as important parts after operations in fortifying the constitution against further invasion as they do in other tubercular conditions. (16) The antitubercular remedies are of great value in controlling the disease and should always be employed in conjunction with whatever surgical procedure may be deemed necessary. [J. H. G.]

2.—Carstens remarks that obstetrics is based on purely mechanical laws and in the vast majority of cases nature needs no help. The small percentage of cases that require the assistance of the obstetrician are well understood. The moot questions in obstetrics are now virtually all settled. This is also true of many gynecological questions. The future of the gynecologist therefore, will be one of prophylaxis. The care of the young girl, her physical and moral training, the educational system that she will be trained in, will all require the attention of gynecologists. Especially prostitution is a very important subject, and will require much more attention than is given to it at present. Neurasthenia, the result of competition in school life and in the professions, must be contended with. It is also important thoroughly to study the effects and the results of erotism on the human body. We must learn how we can more thoroughly bring about the more perfect marriage relationship, and prevent the frequent mismating as shown in our courts.

[W. A. N. D.]

3.—Peck states that he has been much impressed with the necessity of adding physical diagnosis to the dental college curriculum. He hopes to see the prospective dentists so instructed in the future that they will be able to recognize diseased conditions, at least of the vital organs, and thus avoid serious and possibly fatal mistakes. [F. J. K.]

4.—Andrews describes at some length **the embryology of the dental pulp.** He describes the growth of the dentine germ from the earliest signs of its development, the formation of the dentine from the germ and, lastly, the fully formed and functionally mature pulp. [F. J. K.]

5.—Garrett reports a case af **gangrene following thrombosis of the abdominal aorta and its branches,** which occurred in a female patient, 34 years of age, who was admitted into the Maryland Hospital for the Insane on April 25, 1900, suffering from melancholia agitata. On admission her mental condition was the subject under discussion; her heart, lungs and general condition, however, appeared somewhat below par. On March 5, she complained of pain in the legs and was unable to stand or walk. Her tem-

perature rose to 100°F, subsequently her pulse-rate ranged between 140 and 160 and, for several hours, the patient was in a semicomatose condition. She gradually gained consciousness. Several days later, dry gangrene of the small toe of the right foot set in and in quick succession the remaining toes and foot became involved. On examination obliteration of the pulse and of the arteries on both sides from slightly above the bifurication of the aorta to the popliteal, was found. A hard nonpulsating cord could be felt in the position of the femorals. Amputation was performed through the right thigh. The patient made an uneventful recovery but was kept in bed for some time so that the collateral circulation of the left thigh might become well established. The amputated part revealed thrombosis of the femoral and popliteal arteries. [F. J. K.]

6.—Coolidge reports a case of **anencephalus**, a common fetal monstrosity, which he attributes to a maternal impression, the mother having seen a dead frog. [W. A. N. D.]

AMERICAN MEDICINE.

June 21, 1902.

1. Hyperchlorhydria. MAX EINHORN.
2. A Clinical Study of Thirty-seven Cases of Nephritis, with Especial Reference to the Terminal Symptoms. J. N. HALL and R. W. ARNDT.
3. The Relation of the Caliber of the Urethra, and Especially of the Meatus Urinarius to Vesical Tone. G. FRANK LYDSTON.
4. The Evaporation Bath in Typhoid Fever. J. MORGAN COFFIN
5. Report of a Case of Diaphragmatic Hernia, Following a Penetrating Wound of the Thorax. FREDERICK FLAHERTY.
6. The Diagnosis and Treatment of Incipient Pulmonary Tuberculosis. GEORGE C. JOHNSTON.

1.—Einhorn presents a brief discussion of **hyperchlorhydria.** As to the treatment of the condition it is yet a subject of great controversy. Some clinicians forbid starchy food entirely and nourish their patient principally on an animal diet. Their reason for forbidding the starches is that the amylolysis in hyperacidity is greatly diminished, the acid checking the conversion of starch into sugar quite early. On the other hand, a number of physicians forbid meat to patients with hyperchlorhydria on account of its property of producing an increased flow of gastric juice. Differences of opinion also exist regarding the frequency of the meals to be advised. Einhorn is in favor of frequent meals, three large ones consisting of food commonly taken as breakfast, lunch and supper with the exception of acid, too greasy and indigestible substances. Highly seasoned food is especially to be avoided and butter should be allowed in plenty. The medicinal treatment consists in administering alkalies one or two hours after meals. Intragastric faradization and also galvanization often exert great benefit. Einhorn does not approve generally of a **gastro-enterostomy** for this condition. [T. L. C.]

2.—Hall and Arndt contribute a **clinical study of 37 cases of nephritis with especial reference to the terminal symptoms.** Of these patients 28 were males and 9 females. Five patients suffered from **acute parenchymatous nephritis,** of which 3 recovered and 2 died, each of the latter on the fifth day of uremia, the 3 that recovered were girls of 8, 11 and 19 years respectively. Ten cases presented **chronic interstitial nephritis;** all were males, 6 are dead and 1 of the 4 living is in a critical condition. Two occurred in the fourth decade, 3 in the fifth, 3 in the sixth and 2 in the seventh. In 5 patients there was well marked alcoholism and in 3 syphilis was acknowledged, in 1 emphysema was present. The duration of these cases averaged over 2½ years after the diagnosis was made. Nineteen cases were well marked examples of **chronic parenchymatous nephritis,** 14 of these were fatal, 4 patients are in a very serious condition and one is comfortable temporarily, 15 were males and 4 females. As to the etiology of these cases syphilis was found in 3 and alcoholism in 12. The cases averaged 18 months in duration when seen. Great **edema** was noted in 11, repeated tapping of the abdomen being required in 8; **cardiac complications** were frequent. **Uremia** was noted in 7 cases. **Albuminuric retinitis** was found in 2 cases and the vision was poor in 3 others. [T. L. C.]

3.—Lydston discusses **the relation of the caliber of the urethra and especially of the meatus urinarius to vesical tone.** He concludes that the normal vesical tonus depends upon a certain degree of physiological obstruction to the urinary outflow. Upon this same resistance depends the structural and functional integrity of the bladder walls. The resistance is normally most marked at the meatus, although the entire urethra is a factor in its production. This resistance is both elastic and inelastic at different points in the urethra and under varying conditions. An exaggeration of this resistance produces atony of the bladder in old subjects, hypertrophy and exaggerated power in the young, exceptionally, it produces atony in the young, but, as a rule, only as a reflex neurosis. A marked diminution of this resistance, such as results from urethrotomy, and especially meatotomy, produces vesical atony of greater or less degree. The foregoing should be borne in mind by the surgeon, and, in certain cases, the resistance of the meatus preserved by careful operative technique. In most cases the resulting atony is of little moment, but it is always worthy of consideration, and in some cases of sufficient prominence to be worthy of serious attention. In cases in which a free urethrotomy has been performed, it is wise to instruct the patient to compress the meatus somewhat during micturition, so as to maintain the normal vesical tonus by offering sufficient resistance to the outflowing urine to exercise the vesical muscle properly. [T. L. C.]

4.—Coffin tubulates the **cases of typhoid fever treated by the evaporation-bath method** in the Presbyterian Hospital during a period of 3 months. This method gave the least satisfactory results as compared with tubs or sponges and the course was almost identical with a series of cases in which no hydrotherapy was used. The baths were distasteful to the patients and in addition the entire ward was disturbed by the constant buzzing of the electric fan. There was practically no response except in temperature. Although the series was somewhat short for comparison (22 cases) the mortality was 18.2 % as compared with 10.5 %, in all other typhoid cases during the same period. [T. L. C.]

NEUROLOGISCHES CENTRALBLATT.

November 1, 1901.

1. Reflex Epilepsy in Spastic Stenosis of the Esophagus. L. BREGMAN
2. The Preservation of Nerve Fiber Stains. E. STRANSKY.
3. The Spinal Motor Localization and the Theory of Metameren. C. PARHON and M. GOLDSTEIN

1.—Bregman points the case [illegible] who, at the age of 10 years, developed difficulty in swallowing either liquids or solids. Occasionally he vomited a small quantity of blood. At the age of 18 or 19 he began to have attacks while eating. The body hands and feet were numb, then all would grow dark and he would fall unconscious often seriously injuring himself. His general condition remained good. The sound showed the presence of an obstruction low in the esophagus, and as about 4 oz. of water could be poured into that organ it was greatly dilated. It appears that this must have been some functional stenosis of the esophagus, diverticulum being excluded. Bregman believes that this is certainly a case **of reflex epilepsy due to irritation of the esophagus,** because the attacks occurred only during eating, they developed after several years' duration of the disease and no other etiological factor could be discovered. [J. S.]

2.—Stransky, having found that the nerve fiber stained with osmic acid and saffranin lost its color rapidly in glycerine, employed **paraffine oil as a mounting medium** with entire satisfaction. [J. S.]

3.—Parhon and Goldstein in continuation of their article state that they failed to find adequate reasons for accepting the theory of the localization of the segments in the spinal cord, in the experiments that they performed. For example sometimes certain cell groups would represent certain muscles, and at other times other muscles. Regarding the sensory segmental localization, they believe that the facts are so indefinite at present that no dogmatic statements can be made. [J. S.]

Society Reports.

MEETING OF THE AMERICAN MEDICAL ASSOCIATION AT SARATOGA SPRINGS, JUNE 10 TO 13, 1902. SECTION ON HYGIENE AND SANITARY SCIENCE.

(Continued from page 1119.)

THURSDAY MORNING, JUNE 12.

Dr. H. M. Biggs, New York, read a paper on **sanitary measures for the prevention of tuberculosis in New York City and their results.** No problem is as important as that of tuberculosis. Tuberculosis is gradually declining. Thus, in the Boroughs of Manhattan and Bronx the death-rate from tuberculosis decreased from 4.42% in 1886 to 2.89% in 1901. The importance of prevention is only partly realized, for the people, legislators and the profession have become indifferent to the ravages of this terrible disease. In New York City the following method has been evolved: Cases of tuberculosis must be reported; free examination of sputum is provided; inspection of premises where patients live; disinfection and, if necessary, renovation of the house occupied by a consumptive, after his death or removal; and the enforcement of antispitting laws. New York City in this matter has been followed by the rest of the civilized world. Pulmonary tuberculosis is declared to be a dangerous infectious and communicable disease. It is not contagious. In the case of tuberculosis, the distinction should always be made that it is communicable but not contagious as is smallpox. When the resolutions making tuberculosis a reportable disease were first adopted, every medical society in the city entered a protest, showing that they did not appreciate the importance of the subject. The action of the Department was followed by an increase of knowledge. At first the Department did not adhere stringently to the rules. Many cases are still unreported, but advances are gradually made. Thus, during 1894, 4,263 cases were reported, 3 years later 9,872 cases were reported, while during 1901 the number of reported cases increased to 17,588. A careful index is kept, the reported cases being registered on a special map. These maps show the prevalence of the disease in certain sections of the city. An enormous number of cases occur in the Chinese quarter. About 66% of all deaths among the Chinese being due to tuberculosis. The tenements furnish the largest number of cases. To the reported cases from 1-3 to 1-2 more should be added. The conditions in New York are approximated in every large city in the country. The gradual increase in the number of specimens of sputum submitted for examination shows the increasing confidence of the profession in the Department. Each case of tuberculosis among the poor is visited by an inspector. If the patient has removed, the inspector makes the following recommendations: Calcimine the walls repeatedly, repaper the walls and wash the woodwork with antiseptic solutions and repaint. The premises are re-inspected and if the recommendations have not been complied with, they are enforced legally. Renovation is more efficient than disinfection; it leaves the appartments in better condition, and it is easier to get co-operation of the tenants. A carbonate of soda solution is preferable to the more dangerous germicides for cleansing. Goods are disinfected by steam. Examination of the sputum is a great aid in the control of the disease, every positive result of examination equalling a report of the case. Physicians do not report all cases. Reports from institutions furnish the largest number of cases, but here error is possible. Pneumonia and bronchitis are given as the causes of death in concealed cases of tuberculosis. The death of every person over 15 is investigated. In Manhattan and Bronx about 80% of all cases of death from tuberculosis have been previously brought to the attention of the Department. In other boroughs the percentage is not over 40%. No other method of diffusing knowledge among the ignorant immigrants is possible. The influence on other sanitary authorities is wholesome, the system being copied by other health-boards. The most pressing need at present, is the sanitary inspection of shops, factories, etc., and the enforcement of the measures relating to them. It is evident that progress is being made, and we may anticipate an almost complete eradication of this, the most fatal disease with which the sanitary authorities have to deal.

Dr. Knopf, New York, said that he had followed Dr. Biggs' work for the past 10 years. He would endorse the reporting of cases as unobjectionable. Registration has accomplished a great deal. People who are interested in tenement reform were able to see what is going on in the tenement districts and in consequence wholesome agitation has been inaugurated. He urged the need of a special dispensary for consumptives. Dr. Carrington, Ft. Stanton, asked whether receptacles for spitting are provided. Tubercular sputum in the streets is just as dangerous as on the sidewalk. Dr. Sterns remarked that many cases of tuberculosis leave New York and die at other places. Dr. Johnson, Illinois, asked for particulars regarding the carbonate of soda solution. Dr. Reynolds, Chicago, said that the question of reporting tuberculosis is an important one. In Chicago, the profession does not feel that it should be done. The chief objection is that tuberculosis is not in the same class with other contagious diseases. A man with tuberculosis may live 20 years, and, if careful, will do no harm to his neighbors. Certain measures, while beneficial in New York, may not be desirable in other communities. Chicago is not as congested as New York. An objection to reporting tuberculosis is that, when a disease is reported, the sanitary authorities should do something, otherwise the report is of no use. In Chicago, they rely largely upon educating the public by press-bulletins which are eagerly read by the public. There is danger that fear of germs of all kinds will do more harm than good. Dr. Biggs, in closing, said people must get rid of the idea that reportable diseases are dangerous diseases. The sanitary authorities should have control over all preventable diseases. Lately malaria had been made reportable for the purpose of improving sanitary conditions. Pneumonia is also intended to be included in the list of reportable diseases, in order that its epidemiology may be learned. Eventually all infectious diseases will be reported. In regard to the necessity of special dispensaries for consumptives, suggested by Dr. Knopf, he is now considering the establishment of such dispensaries. Tubercular sputum is not as objectionable on the street as on sidewalks, light and sunshine acting destructively on the germs, while the sputum on the sidewalks is carried home. The dried sputum on the stairs of a public building was examined and found to contain numerous tubercle bacilli. In depots and other public places receptacles for sputum are provided. In the matter of disinfection financial difficulties are encountered on account of the enormity of the problem. With regard to the reliability of the statistical data, there is no way of eliminating all sources of error. However, the error in the mortality record occasioned by the removal of consumptives to other places is fairly well counterbalanced by the immigration of consumptives from other cities.

Dr. Herman Spalding, Chicago, read a paper on **some facts about smallpox and vaccination.** Many physicians do not know what constitutes successful vaccination. He cited an instance of a vaccinated child suffering from smallpox. When seen by him, he found that the vaccination was not successful, although the scar resembled a vaccination scar somewhat. Severe sores are often caused by extraneous matter and these cause confusion. Lymph is often inert. Another serious source of error is to record persons as vaccinated when the vaccination was performed after exposure to smallpox. In any case in which the vaccination did not take the person should be revaccinated, and any vaccination that lacks the typical symptoms should be looked upon with suspicion. No person is insusceptible to

vaccination. He cited an instance in which 13 attempts were made before vaccination took. The protection afforded by vaccination will last from 5 to 30 years. Most people can be successfully inoculated twice. One scar is as good as several. The resulting reaction is systemic. His own extensive observations led him to believe that vaccination gives a far better protection than even the best records show. Repeated vaccination is an absolute protection against smallpox. In no instance have the employés of the Chicago Health Department contracted the disease, neither have the policemen who came in contact with smallpox patients. Several cases of smallpox were found among school children, but in every case there was a false certificate of previous vaccination. A large number of medical students entered the Isolation Hospital for studying the disease, every one of them being vaccinated. Not one contracted the disease. In private families, only the non-vaccinated members contracted smallpox. Among the 591 cases of smallpox in the Isolation Hospital only a few had been vaccinated, and in these the vaccination was not performed according to modern methods. He made a plea for a restudy of vaccination statistics. He urged that every case should be investigated. No statement should be accepted unless verified.

Dr. Edges, New Jersey, reported a case of smallpox in a family, all the members of which had been vaccinated, excepting one, who escaped to avoid vaccination. He subsequently became ill. No other person in the family contracted the disease, although they were intimately associated with the patient. Dr. Johnson, Illinois, said that those who know most about vaccination doubt its efficacy least. Dr. Bracken experienced considerable trouble on account of so-called vaccination. During the recent epidemic, smallpox broke out in a cerain village despite the fact that the inhabitants were reported to have been vaccinated. The attending physician admitted that he had not seen the arms of those supposed to have been vaccinated. Investigation proved that in every case a misstatement was made. Vaccination was claimed because an attempt at vaccination had been made. In no case was successful recent vaccination followed by smallpox. He believes that vaccination affords better protection than smallpox. Dr. Hang, Brooklyn, said that about 5 out of every 10 physicians do not know how to vaccinate. Dr. Reynolds affirmed his strong belief in the efficacy of vaccination. Dr. Spalding, in closing, described the typical scar resulting from successful vaccination. As to the preparation of the arm, any antiseptic may be used, provided it is removed by thorough washing with sterile water. His own method is to use soap and water followed by alcohol. The virus is rubbed into the skin without previous scarification

THURSDAY AFTERNOON, JUNE 12.

Dr. E. F. Wells, Chicago, read a paper on **pneumonia: its increasing prevalence and fatality, with suggestions for individual and communal prophylaxis**, stating that pneumonia has attracted the attention of physicians from time immemorial, having figured largely in the mortality statistics. He gave a brief description of the pneumococcus and a discussion of the epidemiology. He was not prepared to say that the disease is increasing in fatality. The great mass of statistics reviewed by him preclude any definite conclusion. He has tabulated nearly 400,000 cases with a mortality of 22%, these figures embracing cases from all parts of the world. The death-rate is probably underestimated. It has remained nearly the same during the last 80 years, as shown by statistics. Statistics from some hospitals (Massachusetts, New York, etc.,) show an increased mortality, while Washington reports a gradual decline. The prevalence of the disease has undoubtedly increased. This may be accounted for mainly by the greater distribution of the pneumococcus, owing to increased travel and other means of communication. His conclusions were that the fatality of the disease increased but little, while the prevalence increased considerably during the last 50 years. Individual prophylaxis is essential and should consist in keeping the nasopharynx free from secretion, which should be destroyed by disinfectants. Chilling and exposure should be avoided. Information concerning the infectious nature and the prophylaxis of pneumonia should be spread among the people, and Boards of Health should seek information on the subject, and, for that purpose, should make the disease reportable.

Dr. J. J. Walsh, New York, read a paper on the **epidemicity and increasing fatality of pneumonia**, stating the mortality is increasing. Pneumonia has now, in the words of Osler, taken the place of tuberculosis. The best clinicians agree that it is a contagious disease. Epidemics have been observed among soldiers, in hospitals and schools. The public should be informed concerning the contagious nature of the disease. Secretions should be destroyed in the same manner as in tuberculosis. Pneumonia is by no means limited to cold weather. It may occur in the spring and fall, the absence of sun and light and the presence of moisture favoring the growth of the pneumococcus. The latter may grow as a saprophyte and be distributed by the dust Street-cleaning should be enforced. Other forms of dust inhalation, as in crowded halls, churches, theatres, etc., should be removed. This may be partially accomplished by forbidding carpets and rugs at such places. Sudden exposure to cold may form a favorable opportunity for the invasion of the germ. Drs. Davis, Chicago; Hover, Washington; Bracken, Minneapolis, and Reynolds, Chicago agreed upon the increased prevalence of the disease, especially during the last epidemic of influenza. Dr. Hover was inclined to attribute this increase to the increased consumption of alcohol.

Influenza and the nervous system was the subject of a paper read by Dr. S. E. Jelliffe, New York, who said that the relationship between the influenza bacillus and the nervous system is a well established clinical fact. The history of the present epidemic shows that it differs from previous epidemics, in being more persistent and more fatal. It also shows a predilection for the nervous system, being characterized by peculiar nervous and mental manifestations. The influenza bacillus, like the diphtheria bacillus, has a special affinity for the nervous system. The most frequent forms of mental disturbance are acute confusion and melancholia, the latter frequently leading to suicide. A number of suicides have occurred which may be justly attributed to influenza. The disease often resembles a cold but can be readily diagnosticated by bacteriological examination. Influenza is highly contagious and prophylactic measures, similar to those employed in other contagious diseases should be instituted as far as possible.

Dr. F. E. Wynekoop, Chicago, read a paper on **a further study of the influenza bacillus.** He stated that many of the affections of the mucous membranes may be due to the influenza bacillus. Acute catarrhal laryngitis has been caused by this organism, often closely resembling diphtheria. The power of the influenza bacillus to excite local disturbances should be carefully considered. The field of action of this micro-organism is not limited to any particular portion of the body, since it will attack any part with lowered vital resistance. "Pink eye" has been found in a number of instances to have been caused by the influenza bacillus. The condition often resembles gonorrheal conjunctivitis. In one case, a false membrane formed on the conjunctiva. The speaker alluded to the work of Rimovitch, a Russian physician, who found the influenza bacillus to be identical with the organism described by Koch-Weeks. He has had no opportunity to verify the assertion but is preparing to do so in the near future.

Before adjourning Dr. Bracken, Minneapolis, was elected chairman for next year.

AMERICAN ORTHOPEDIC ASSOCIATION.

Philadelphia, June 5-7, 1902.

(Continued from Page 1056).

FRIDAY MORNING, JUNE 6.

Dr. R. W. Lovett, Boston, discussed the **diagnosis of hip disease,** from the analysis of 95 cases. After 4 years' observation, two-thirds of the cases had proved to be destructive tubercular bone disease. Twenty-three cases recovered rapidly, and have kept entirely well. Fifteen cases proved to be other diseases, not tubercular. He concluded that the diagnosis cannot as a rule be made off-hand, from certain symptoms, generally considered characteristic, but should be made with great care after long observation. Dr. R. T. Taylor, Baltimore, read a paper on the **rational and combined treatment of coxalgia,** being a preliminary report. He referred to the necessity of good skiagraphs for diagnosis and a guide to operation. He described the operation, disinfection of the joint, and after-treatment. Dr. N. M. Schaffer, New York, spoke of the **remittent limp of the first stage of hip disease,** reporting a case. He lays special stress upon an early limp from which the patient seems to recover, but which returns from time to time as the hip-joint disease advances. Dr. J. K. Young, Philadelphia, discussed **operation in hip-joint disease.** He divided procedures into those for correcting deformity, and those for relieving the arthritis. Operation was not always a necessity. Aspiration of the joint has never been satisfactory, but erasion is of use in children. He does not approve of early excision, nor does he endorse amputation of the hip. Dr. T. H. Myers referred to the differential diagnosis between rheumatism and traumatism. Dr. Bradford discussed characteristic tubercular joint symptoms. Dr. H. L. Taylor referred to a benign form of hip disease. Dr. Galloway reported a case. Dr. Sayre mentioned a case of infantile paralysis, accompanied by neuritis, in which it was impossible to make a diagnosis. Dr. Weigel exhibited some X-ray negatives of cases of hip disease. Dr. Davis had drilled through the greater trochanter to deplete the part in the acute stage. Prolonged treatment by mechanical devices was often necessary. Dr. Sherman considered the X-rays a means of diagnosis only. Dr. Hoffmann reported several cases. Dr. Ridlon questioned whether all cases of this disease were tubercular in character.

FRIDAY AFTERNOON, JUNE 6.

Dr. R. T. Taylor, in closing the debate upon hip disease, thought that the X-rays proved a great deal. He was also in favor of operation.

Dr. A. H. Freiberg, Cincinnati, read a paper on **Wolff's law of transformation.** He referred to the functional conformation of the bones and the pathogenesis of deformity, giving an interesting lantern exhibition. Considered from a purely mathematical aspect, Wolff's law agrees with observations made up to this time. Dr. Dane thought that this subject was of great advantage to orthopedics, and hoped that more work would be done in comparative anatomy. Dr. Weigel spoke of the changes occurring in tubercular knee-joint disease, questioning how long the knee should be immobilized.

Dr. Royal Whitman, New York, discussed **the treatment of congenital dislocation of the hip.** He believed that operation would be necessary at some time in every case. Failure follows manipulation more often than success. A cablegram from Dr. Hoffa, Berlin, was then read by the president. Dr. E. H. Bradford, Boston, discussed the **causes of relapse after reduction of congenital dislocation of the hip,** presenting a number of skiagraphs. In one case relapse followed operation. In many cases there is a twist in the neck of the femur, so that as soon as the foot is brought out, dislocation recurs. Dr. Ridlon has seen 40 cases of congenital dislocation in the last 10 years, having operated upon half of them. He kept the leg well adjusted for from 8 to 12 months, and relapse did not recur. Dr. Sherman reported a case of bloodless reduction with a splendid result. Dr. Bradford discussed simplification of lateral curvature, referring to precision in treatment and to accuracy in noting the progress of the disease and in recording the case.

SATURDAY MORNING, JUNE 7.

Dr. R. H. Sayre, New York, discussed **the necessity of supporting the head in cases of scoliosis in the upper dorsal region.** Many cases of scoliosis need an apparatus extending down the trunk along the spine. Attached to this should be a head-support. Though one of the patients had congenital dislocation of the hip, he did not believe that this caused lateral curvature. Dr. R. W. Lovett, Boston, demonstrated **rotation in lateral curvature** on a model, stating that no intelligent recognition of round shoulders has been found in American or English text-books. The mechanical device exhibited for correcting round shoulders and faulty attitude has been in use 2 years. Details of the apparatus follow. Dr. L. A. Weigel, Rochester, read a paper on the **anatomical changes in severe scoliosis.** He stated that the amount of rotation does not necessarily depend on the degree of lateral curvature. Most of his demonstration consisted in showing anatomical pictures of deformities. Dr. H. P. H. Galloway, Toronto, spoke of the **operative treatment of claw-hand** resulting from fracture of the forearm. The first operation did not improve the contraction of the flexor tendons. After the second operation, in which 6 tendons were cut, the arm was put in plaster-of-Paris extension. After that it improved rapidly. Dr. A. H. Freiberg, Cincinnati, discussed **apparatus for flat-feet and deformities of the toes.** He said that celluloid was unsatisfactory, though it might be used in hammer-toe. He described his process of making a model of flat-foot. Dr. Sherman and Dr. Ridlon also described their methods.

Dr. G. R. Elliott, New York, read a paper on some types of **bone disease affecting the vertebral column,** associated with pressure paralysis, reporting several cases. He also read a **contribution to the treatment of spasmodic wryneck,** showing an apparatus for the relief of this condition.

Dr. Philip Hoffmann, St. Louis, discussed the **passive carrying-function of the arm;** its importance, its destruction and an operation for its relief. He said that the normal arm is not straight, its 2 segments joining at an angle of 70 degrees. Consequently, the forearms diverge from the body when the upper arms are held parallel to it. This enables one to carry weights without touching the side or interfering with locomotion. Anything that changes the direction of the articular surface, making the elbow-angle an inward one, destroys the ability of the arm passively to hold weights away from the side. This comparatively common disability is caused by various elbow injuries. Dr. Painter reported a few such cases. Dr. Cotton referred to certain operations for this condition. The cause is often transverse fracture above the condyle. Should the disease persist, scoliosis and in some cases rotary curvature result. Dr. Davis thanked Dr. Hoffmann for suggesting this method of treatment. As the operation is a simple osteotomy, there is but little danger. He believed in cutting from the inside of the angle. Care must be taken not to sever the musculospiral nerve, which is, however, on the outside. Dr. J. C. Pegram, Jr., Providence, exhibited an interesting **mechanical apparatus called a "back-brace."** Dr. A. J. Steele, St. Louis, reported a case of **congenital absence** of the tibia.

AMERICAN ACADEMY OF MEDICINE.

(Continued from Page 1120)

MONDAY MORNING, JUNE 9.

Dr. J. L. Taylor, Wheelersburg, Ohio, first vice-president, presided at this session. It was recommended to continue the committee on time allowance in the combined collegiate and medical course. Dr. W. H. Welch, of Johns Hopkins University, was elected an honorary member, and all other business before the society was concluded.

Dr. E. L. Devine, New York, read a paper on **the medical profession and social reform.** He spoke of the conquest of yellow fever in Cuba. The recurrence of the disease in Havana a little over a year ago demonstrated that it was not a filth disease. The acceptance of the mosquito theory followed, which has been been proved by the remedy, total destruction of the mosquito. The maintenance of a high professional standard in the practice of medicine is of the utmost social importance. He believed that physicians should take into their confidence that part of the general public which had shown an interest in social welfare, and should welcome the co-operation of the public press, charitable agencies and public officials, including those who from

any point touched officially the living conditions of the masses. The prevention of disease remains a most neglected public duty. In the prevention of tuberculosis, he spoke of 4 lines of possible co-operation between the medical profession and agencies for social betterment: (1) The promulgation of the idea that the consumptive must properly care for his sputum, that treatment must be early, that nutritious food is necessary, and that an intelligent and conscientious consumptive is not necessarily dangerous to others. (2) The erection of numerous buildings for advanced cases with conditions of cheerfulness and physical comfort. (3) Well equipped hospitals for the treatment of pulmonary disease, favorably situated as to climate, altitude, etc. (4) Increased knowledge as to the relations of overcrowding and tuberculosis. He urged that more knowledge was needed as to the wisdom of removing patients to a more favorable climate and as to their means of support after removal. He stated that as leaders of public opinion, physicians count for more now than at any previous time. The legitimate call of public duty, however, never obscures the call of the individual. The plea for increased co-operation assumed that greater usefulness would result to the individual patient. Dr. D. R. Brower, Chicago, believed that physicians should deliver public lectures upon subjects pertaining to sanitary science. Dr. H. A. Tomlinson, St. Peter, Minn., questions whether the results achieved in Cuba would have followed had the Governor-General been a layman instead of a physician. He could not be induced under any circumstances to say a word to a newspaper reporter, as he had never known the newspaper reports of any medical undertaking to be in any way correct. Dr. W. L. Pyle, Philadelphia, thought the newspaper the most valuable means of dissemination of medicine and hygiene, but believed that all such matters to be published should be prepared by a medical editor. Dr. A. L. Benedict, Buffalo, said that medical matters could be brought before the people by public speaking and by the press. Dr. P. M. Foshay, Cleveland, advocated the method of having a committee on public health appointed to consider epidemics and other matters of importance, and that the results of these considerations then be published. Dr. R. Englemann, Chicago, believed that much good could be accomplished by teaching something of the intercommunicability and prevention of disease in public schools, for thus knowledge of sanitation would reach the parents.

Dr. J. B. Roberts, Philadelphia, delivered an address on **the political side of medicine.** Politics in its broadest sense is the science and art of business as applied to aggregations and people. For a doctor to neglect personal attention to civic and political problems is selfish and unjustifiable. If the man of education, brains, and capability does not give a part of each day to the community, he is not doing his full duty to mankind. As few men have greater personal capacity than physicians, few owe more to the State. It may not be clear to all that the broad education of the young and systematic beautification of cities attract desirable residents, raise the value of property, and increase the happiness of the community. Whenever medicine has touched politics, politics has been bettered. It is almost a truism that whenever politics has touched medicine, medicine has been smirched. The physician has frequent opportunities of showing his skill in the executive business of hospitals, medical schools and medical societies, often called medical politics. Medical men are of decided advantage in the governing board of institutions. The result of expecting the doctor to perform hospital service for nothing is often the appointment of inexperienced men with plenty of time and no private practice, or of older or more experienced men who slight their hospital work because of a large private practice. The State medical societies have performed good work in elevating the standard of medical education.

MONDAY AFTERNOON, JUNE 9.

Dr. D. C. Hawley, Burlington, Vt., read a paper upon **the relation of the physician to politics.** The object of his paper was to controvert the sentiment that the physician should not take a prominent part in public affairs. He referred to politics in its broadest sense as the science of government and the art of governing, and in its generally accepted sense, as the art of influencing public opinion and State policy through party organization. The physician by education, training and daily experience is especially qualified to grasp the fundamental principles of abstract politics, and to take an active and intelligent part in practical politics. As the physician is better acquainted with men and has a deeper knowledge of human nature than the average individual, he should be a man of higher ideals. Possessing such ideals, he is morally obligated to assume the responsibility of leadership. Dr. T. D. Davis, Pittsburg, emphasized the importance of medical service and the inadequacy of pay as compared with other professional service, in a paper entitled **compensation for medical service rendered the State.**

Dr. A. A. Eshner, Philadelphia, discussed **medical representation in hospital management.** The practice of medicine stands up in a higher ethical plane than general commercial pursuits. Medical representation on hospital boards can be given by electing members of the staff to the board, by periodic conferences between the staff and the board, and by conferences between committees of the staff and of the board. Dr. S. D. Risley, Philadelphia, believed that it was the duty of the physician to take an active part in civic affairs. Dr. Foshay agreed with Dr. Roberts.

Dr. P. M. Foshay, Cleveland, read a paper entitled **"may hospitals steal?"** He related the instance of a hospital surgeon operating without charge on the employé of a large corporation whose surgeon had offered to operate for a good fee. Hospitals should adopt adequate means for rigidly investigating the ability to pay fees of those who ask for treatment or medicine.

Dr. S. D. Risley, Philadelphia, discussed **good vision as a factor in the educational process.** The examination of the eyes of school children has demonstrated the great prevalence of congenital abnormality of refraction, and that from these defective eyes resulted the steadily advancing percentage of myopia, with serious pathological states of the fundus. Correction of the congenital anomaly caused decided improvement. He urged the importance of examining the eyes of every child before admission to school. Dr. Charles McIntire, Easton, Pa., read a paper on **State aid for medical schools and hospitals.** He gave in tabulated form a statement of the custom of each State in making appropriations for hospitals and medical schools.

Dr. R. Englemann, Chicago, spoke of the **children of the poor in cities.** She considered industrial education necessary to fit them for useful and lucrative service. She urged school assembly halls, public baths, and small parks, and spoke in favor of extinction rather than restriction of child labor. Dr. Knopf, New York, commended the principles expressed in this paper and spoke of the practical work done in Boston.

AMERICAN NEUROLOGICAL ASSOCIATION.

Twenty-eighth Annual Meeting.

New York, June 5-7, 1902.

After the address of the president, Dr. Joseph Collins, Dr. G. L. Walton, Boston, read a paper entitled **a contribution to the study of the myospasms: myokymia, myoclonus multiplex, myotonia acquisita and intention spasm.** This was an attempt to clear up the confusion resulting from the unfortunate grouping of various forms of muscular spasm not due to determinable organic disease. He advocated the restriction of the significance of the term myoclonus multiplex to bilateral clonic spasm affecting the larger muscles and particularly involving those of the trunk. He prefers the term myokymia for the persistent quivering of the muscles which sometimes occurs in adults, because it gives rise to less confusion and is more descriptive. He discussed the nature of myotonia acquisita intention spasm and these cases associated with internal disease. Dr. Starr described a case of myotonia: Dr. Prince one in which, as a result of stretching the nerves in the arm, an apparent cure occurred. Sachs mentioned a patient whom he had observed with Dr. Brill. Putnam discussed the use of the rest cure in these cases. Mills mentioned a case of myotonia a brain tumor being found at autopsy. Smith-Baker discussed the psychical significance of these conditions. Deroum mentioned certain psychical conditions, particularly the anxiety which have to be carefully discriminated. In conclusion, Dr. Walton stated that the question of fibrillary twitching in the

muscles, as an indication of degeneration, had not been discussed. He insisted that there are cases in which the psychical element is lacking.

Dr. F. W. Langdon, of Cincinnati, reported the subsequent history of a case of **paramyoclonus multiplex** that he had previously described. The man had suddenly recovered and remained fairly well. He then described a case of a girl, 13 years of age, who, as a result of alleged fright, developed violent, shock-like clonic contractions of the muscles of the trunk, especially those attaching the limbs. These occurred from 30 to 80 times per minute. The peripheral portions of the extremities remained flaccid even during violent muscular contractions of other parts. These contractions were slightly more violent on the left side. They ceased during sleep, but never for more than a few minutes while the patient was awake, and the case has now been under observation for six weeks. Various antispasmodics and tonics were used, including hyoscine, potassium iodide and cactus grandiflora, but the results have been entirely negative. Dr. Brill exhibited a girl of 18 who had persistent violent clonic movements of practically all the muscles of the body. Dr. Sachs, who had had the patient under observation previously, stated that the movements were more violent when the patient was excited, as was the case while under the observation of the Society. In spite of these movements she was able to perform such delicate actions as taking off and putting on her hat, passing the pins through her hair without ever injuring herself. This the patient did before the Society.

Dr. W. G. Spiller, Philadelphia, read a paper on **disseminated sclerosis causing ocular palsies and spasticity with lost knee jerks.** The necropsy showed the existence of numerous sclerotic areas throughout the brain and spinal cord. In 1891 the patient, a woman of 41, complained of numbness in the feet. Progressive loss of power in the lower limbs followed with staggering gait. Within 2 days numbness extended to the waist, with girdle sensation and complete paralysis of the legs. She also had incontinence of urine and feces. The disturbance of gait soon disappeared and she was able to walk until 1899. She complained of shooting pains at times in the knees, extending to the ankles. In 1901 her speech was somewhat drawling, the lower limbs were completely paralyzed, wasted, and spastic, slight irritation causing the limbs to be drawn up involuntarily, and yet patellar and Achilles reflexes were absent. Knees and feet were inverted. The Babinski reflex was very pronounced. Sensation was normal everywhere. Voluntary movement in the upper limbs was impaired, and the grasp of the hands was very feeble. The hands were very much atrophied. Reflexes of the upper limbs were normal. Mentality was feeble. She had almost complete external ophthalmoplegia and partial atrophic cupping of each optic nerve. Iritic response was good. The interesting features of this case were: The pronounced muscular atrophy; secondary degeneration of the pyramidal tracts in a case of disseminated sclerosis; the loss of the patellar and Achilles reflexes with great spasticity of the lower limbs; and the almost complete external ophthalmoplegia resulting from a sclerotic area in the nuclei of the third and fourth nerves. Dr. Spiller then read a paper upon **traumatic myelitis causing symptoms of central hematomyelia.** This case was reported because of the dissociation of sensation of the syringomyelic type following a fall without fracture of the vertebræ. Minor has assumed that under such conditions this symptom-complex indicates hematomyelia. The case showed that traumatic myelitis with very insignificant hemorrhages could produce the same dissociation of sensation as hematomyelia. The recovery of motor power might exist even when the degeneration of these tracts was considerable. The nerve cell-bodies of the anterior horns of the cervical swelling, especially at the eighth cervical segment, were much degenerated, and this explained the greater intensity of the paralysis in the hands and fingers, even though the mild traumatic myelitis was above the sixth cervical segment. The case showed that degeneration of nerve fibers and cell-bodies from trauma may occur within the spinal cord without fracture of the vertebræ, and may resemble that produced experimentally. This fact has much medicolegal importance. Dr. Spiller also reported 2 cases of **partial internal hydrocephalus**, one resulting from partial closure of the foramen of Monro by an inflammatory exudate; the other of occlusion of the aqueduct of Sylvius by proliferation of the neuroglia. Dr. Spiller spoke of the existence of intense bilateral contracture in the first case resulting from a unilateral lesion, a fact very little known, and of symptoms of cerebellar tumor in the second case, caused by the internal hydrocephalus. Knapp mentioned a case of acute hydrocephalus. Walton, who mentioned another case in which autopsy had not been obtained, suggested that hypotonicity may sometimes cause loss of the knee jerks. Prince has observed spasticity of the sound side in cases of hemiplegia, another proof of the fact that all of the fibers in the pyramidal columns do not decussate. Starr mentioned a case of multiple sclerosis with marked spasticity of the lower extremities. Putnam discussed the subject of traumatic myelitis, particularly with reference to the organic basis of this disease. Sinkler questioned the diagnosis of disseminated sclerosis, stating that from the symptoms he would be more likely to think of disseminated myelitis. McCarthy mentioned a case of hemorrhage into the medulla without disturbance of sensation, in which the reflex action had been atypical. Spiller, in closing, stated that the microscopical examination of the tissues in the case of disseminated sclerosis proved conclusively that it was not one of disseminated myelitis.

Dr. Wharton Sinkler, Philadelphia, reported a case presenting interesting and complex symptoms. There was swaying on standing with the eyes closed; loss of knee jerks, ataxia, loss of virility. The pupils were normal; there was no nystagmus or scanning speech, but a distinct intention tremor. There was a history of probable syphilitic infection, and the patient suffered from diabetes insipidus, complicated by cystitis. The patient had recently developed fulgurant pains in the legs, nocturnal micturition and partial loss of control of the sphincters. Holle mentioned a similar case that he had observed.

(To be Continued.)

AMERICAN SURGICAL ASSOCIATION.

Albany, June 3-5, 1902.

(Continued from Page 1057).

WEDNESDAY MORNING, JUNE 4.

Dr. W. G. Macdonald, Albany, described his method of performing **hysterectomy.** Kelly's side-to-side method is not suited to the majority of the cases. To secure the pedicle in the lower angle of the wound is unsurgical. After freeing the uterus, heavy forceps are put on the cornua and the organ is bisected with a scalpel. Three ligatures are placed in each broad ligament. The cervix is severed by an incision running transversely out from the cut which bisects the uterus and each half is removed. In some cases of fibroids, large masses are enucleated before hysterectomy is attempted. This saves the ureters from injury. The peritoneum is sutured where it has been divided.

Dr. A. J. McCosh, New York, read a paper on **myomectomy vs. hysterectomy.** There has been a general tendency in pelvic surgery towards conservatism, but this has been less marked in fibroma of the uterus than in other fields of gynecological surgery. Hemorrhage, pain and exhaustion which threaten life are the only indications for radical operation. In all other cases which present symptoms myomectomy is the operation of choice. When the growth is large, an incision may be made around the mass; when it is small, it may be enucleated through a cut made directly over it. It may be necessary to bisect the uterus in order to reach a fibroma which lies deep in the walls of the organ, which is just beneath the mucous membrane. The uterine cavity is always preserved and the bisected organ is reunited by means of 3 layers of catgut sutures. There is very little bleeding, rarely requiring ligatures. The masses should be forcibly and rapidly enucleated without paying any attention to bleeding. The dangers are as great as those following hysterectomy. Of the 47 cases which McCosh has operated upon, not one presented alarming hemorrhage. There was shock in 10%. There was no death from sepsis, though the temperature was elevated for several days after operation. Of the 32 cases which

were traced, 27 menstruated normally, in 2 the bleeding was excessive and in the remainder there was associated pain. Three have become pregnant since operation.

Dr. M. H. Richardson, Boston, in an article on the choice between the suprapubic and infrapubic methods of reaching tumors and other surgical lesions of the pelvic organs, stated that little could be said in favor of the infrapubic method. The nature of the process could better be determined from above. When a growth was limited to the cervix and was not adherent, it might be removed from below. When close to the ureters it should be attacked from above. Pelvic abscesses should be drained from below only when they point in the vagina. Dissection is easier when working through the abdominal wall; there are fewer blunders and when blunders do occur they are recognized and remedied. Uncontrollable bleeding in a small uterus may be treated by vaginal hysterectomy.

Dr. R. Abbe, New York, discussed the abdominal route for approaching rectal tumors. The distance from the anus to the peritoneal fold is 3¼ inches; growths in this region can not be seen from above and are suited for perineal operation. In the perineal operation one is apt to cut too near the disease. When the abdomen has been opened the enlarged lymphatic glands can be detected and excised, and a good view can be obtained by placing the patient in the Trendelenburg posture. The fact that the vessels can be ligated from above is an advantage. The operation may be completed through the perineum by the Maunsell method. Abbe prefers sewing the end of the upper stump in the inguinal region, as an artificial anus here gives rest to the irritated parts in the pelvis, is under better control and anticipates a return of the disease. One method is not applicable to all cases. It is not necessary to make an artificial anus before operation. Homans, Boston, stated that in many of the chronic inflammatory pelvic cases it is better to remove the uterus with the tubes. Dr. Elliott has done 75 hysterectomies since 1894, 13 by the combined method with one death, and 62 from above with one death. He objects to bisection of the uterus because of the danger of infection. He does not favor myomectomy when such a procedure opens the uterine cavity, but intends to enucleate fibroids more frequently in the future. In several cases in which he performed vaginal salpingectomy he opened the abdomen immediately afterwards and found an unopened abscess in one, a bleeding vessel in another, and in a third a portion of the tube which had not been removed. If there are dense adhesions to the bowel one would almost surely tear the bowel in operating through the vagina, causing a fecal fistula. Dr. Allen considers cancer of the cervix, even with infiltration of the vaginal walls, suited for operation from below. Dr. Mayo, Rochester, Minn., spoke of the small mortality and the satisfaction gained from operations for benign disease and the unsatisfactory results of cancer of the cervix. In his cases removal of the iliac lymphglands has had no effect in preventing recurrence. He believes that many of these are inoculated at operation, especially when this is done through the vagina. In cancer of the cervix one is unable to go sufficiently far away from the mass to prevent recurrence. In performing vaginal hysterectomy for cancer Mayo excises the uterus with the cautery and does not put on a ligature until that organ is outside the body. Dr. Carson, St. Louis, inspects the uterus through the vagina by opening between the bladder and uterus. Dr. Bevan, Chicago, favors the Kraske operation for cancer of the rectum, stopping the bleeding with powerful clamps which are left in place. He would limit the term rectum to that portion of the lower bowel not covered with peritoneum. Dr. Harris, Chicago, pointed out the advantages of removing the rectum in females through the vagina. Dr. McCargil, Chicago, believes it to be advantageous to make the artificial anus in the posterior vaginal *cul-de-sac* in the female. Dr. McCosh stated that in 28 of the cases in which he had operated, the uterine cavity had been found sterile. Dr. Richardson could not recall a case of cancer of the uterus in which the iliac glands had been found enlarged at operation. He has not seen an operable case of cancer of the rectum in several years. Dr. O. H. Allis, Philadelphia, gave a demonstration of a method of performing intestinal anastomosis, for which see **Philadelphia Medical Journal**, Vol. 9, No. 22, p. 965.

(To be Continued.)

Special Article.

THE MILK SUPPLY AND INFANT-FEEDING.

With the coming of the summer the milk problem looms up afresh with all its Gordian knots which the sanitarian has of late made a determined effort to untie. Heretofore, the fitness of milk for consumption was judged only from the amount of fat and the presence of preservatives. (The problem has been largely a commercial one.) Now, thanks mainly to the efforts of Park, of the New York Municipal Laboratory, we are beginning to appreciate the importance of a sanitary standard for the wholesomeness of milk. Milk watered with pure water is a fraud which affects mainly the purse, but milk containing millions of bacteria per cc. is a menace to public health. Park has shown that the New Yorkers are consuming milk averaging in many cases close to six million bacteria per cc. Even in midwinter he found in some samples of milk furnished to the tenements from one to ten and half million bacteria per cc., while in September the number of bacteria ranges from five to over twenty-one millions. We have no reason to think that these conditions are peculiar to New York and do not prevail in other large cities. It is self-evident that such high bacteria content renders the milk unfit for human consumption, especially for feeding infants. Aside from the possibility of the presence of pathogenic germs, the saprophytes are by no means indifferent living substances. Many of them, like the bacillus mesentericus vulgatus and various anaerobes, cause peptonization of the milk-proteids and elaborate dangerous toxins which are the frequent cause of severe gastro-intestinal irritation.

It would appear at first sight that the problem could be effectually solved by sterilization of the milk. Unfortunately, however, the solution is not so simple. Sterilization for half to one hour, as is usually practised, does not kill the spores of the peptonizing bacteria and, what is of greater importance, renders the milk unfit from a dietetic standpoint for infant-feeding. Sterilized milk differs materially from fresh milk both in chemical composition and digestibility. Under the influence of boiling, nearly all of the constituents of milk are more or less changed. There is a loss of gases and a change in the character of the fat, rendering it less digestible. Lactalbumin is coagulated even before the milk reaches the boiling point (72° C.); the organic combinations of phosphorus are changed into phosphates which are assimilated with difficulty, lecithin is destroyed, the calcium salts are changed into insoluble phosphates and the milk sugar partially destroyed (Davis and Leeds). Altogether the changes are of so serious a nature as to render sterilization of milk for infant-feeding a questionable procedure. In view of this fact, pasteurization of the milk has been suggested and is being gradually introduced as the best method of preparing milk. Pasteurization at a temperature of 60° C. does not change the milk in the least and destroys all the vegetative bacteria.

including the pathogenic varieties. But even pasteurization possesses serious imperfections. In the first place, the spore-forming peptonizing bacteria are not affected, the poisonous products of their metabolism are but partially destroyed, and, if the milk is kept in a warm place after pasteurization, both the bacteria and their products multiply to an enormous extent (Park). In the second place, great care in the method of pasteurization is necessary to destroy the tubercle bacillus. It has been shown by Theobald Smith and Russell that, unless the vessel is kept closed so that no scalded "skin" forms on the surface, the tubercle bacillus is not distroyed by the temperatures at which pasteurization is effected. Finally, we are still lacking a convenient and cheap pasteurizer for domestic use.

The entire milk problem resolves itself, primarily, into the question of a sanitary milk-supply. The public should be educated to the demand for a milk containing a minimum number of bacteria. Such a milk, when pasteurized and rapidly cooled, would make an ideal substitute for mother's milk.

REVUE DE MEDECINE.

March 1st, 1902. (21me. Année. No. 3.)

1. Clinical and Experimental Researches on the Pressure of Pleural Effusions. L. BARD.
2. Potato Cure in Diabetes Mellitus and Diabetic Complications. A. MOSSE.
3. The State of the Nervous System in Patients Suffering from Phthisis and its Influence upon the Course of Tuberculosis. A. CHELMONSKI.
4. The Diseases Observed in the Doubtful Ward of the Hospital *des Enfants Malades* of Paris, from March 1 to September 1, 1900. BACALOGLU.

3.—From a study of the nervous system in patients suffering from phthisis Chelmonski concludes: (1) That almost all phthisical patients present symptoms of neurasthenia, hysteria or hystero-neurasthenia. (2) That certain mental troubles which have been observed for a long time in many phthisical patients are not characteristic of that disease but are merely symptoms of weakness of the nervous system. (3) That the state of the nervous system in patients suffering from phthisis has an influence upon the course of the disease. (4) That the nervous system ought to be taken into consideration in the treatment of tuberculosis more than in the treatment of any other chronic disease. [J. M. S.]

4.—Bronchopneumonia often follows an infection of nasal, buccal or pharyngeal origin. For that reason it is of importance to render the nasopharynx and the mouth as nearly antiseptic as possible in all cases of acute infectious disease. For this purpose irrigations with solution of boracic acid or alkaline water are to be employed. In the purulent coryza of scarlet fever equal parts of hydrogen peroxide and a 2% solution of sodium bicarbonate should be used. After washing out the nose and the nasopharynx with this solution, a few drops of a 3% ointment of resorcin or menthol in vaseline should be instilled into the nose. For cardiac weakness occurring in the course of the disease Bacaloglu advises the use of digitalis. For the persistent cough, which is so troublesome during convalescence, he advises the employment of cod-liver oil, iodotannic syrup or an arsenical preparation. [J. M. S.]

Original Articles.

A REMARKABLE CASE OF COMA, APPARENTLY DUE TO ACID INTOXICATION SUI GENERIS.

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of Philadelphia.

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Read before the Section of Practical Medicine and Alfred Stengel, M. D., Secretary.

The intoxication which occurs in diabetes and the coma in which this disease frequently ends were long looked upon as being peculiar to this particular affection, both in clinical characteristics and in etiology. It has, however, been known for years that certain other grave chronic diseases—especially carcinoma and severe anemias—sometimes exhibit signs of an intoxication which has the same peculiar features as that seen in diabetes, and in rare instances terminate in coma closely resembling diabetic coma; and in some acute conditions, particularly acute infectious diseases, mild intoxication of the same form is not uncommon, and a coma with the same clinical characteristics and with marked evidences of the same form of poisoning has been repeatedly, though quite rarely, observed. In all these cases, a severe and well-recognized general disease is evidently the primary condition, and the intoxication causing the coma is quite as evidently the result; hence, while the coma may imperil the patient's life or actually take life, it is clearly a secondary condition and the reason for the occurrence of intoxication is readily found. In another small group of cases, however, general disease was either absent or insignificant, and yet symptoms of a severe intoxication, which exhibited the same characteristics, appeared, even advanced to the occurrence of coma, and death has occurred in such cases, anatomical changes sufficient to explain the fatal issue being absent.

The marked clinical characteristics of this form of intoxication, whether the primary disease be diabetes or some other condition, are usually drowsiness, stupor or coma—at times preceded by nervous excitement and even convulsions—peculiar deep respirations, reduction of temperature, an odor of acetone, and the presence of acetone, diacetic acid and oxybutyric acid in the urine. It is now recognized that this form of intoxication is due to an excess of acids; and those cases which show an absence of a primary general disease of such a character as to offer a fair explanation of the occurrence of intoxication are classed under the term acid intoxication *sui generis*, or cryptogenic acid intoxication.

Acid intoxication has been shown to be chiefly the result of the decomposition of the fats of either the food or the tissues, or both; though it can scarcely be doubted that proteins play some part in its production. That acid intoxication is likely to occur in diabetes is, therefore, readily understood; for in this disease patients necessarily take large amounts of fats and proteins, and the digestive organs and the tissues are constantly required to deal with wholly unusual and abnormal amounts of these foods. Then, too, in many cases, the patient is certainly break-

ing down considerable amounts of his body tissues at the time of the onset of coma, and is intoxicating himself through this excessive tissue destruction,—though the recent work of Magnus-Levy and others has shown that excessive tissue breakdown is by no means so constant an accompaniment of diabetic coma as it was once thought to be. The main reasons that acid intoxication occasionally occurs in other severe chronic diseases are fairly clear, for such patients are frequently breaking down tissue at an abnormal rate, and their oxidative processes are often subnormal; they are, for the latter reason, unable to oxidize the acids to harmless products and are, therefore, more readily subject to intoxication than are those persons whose oxidative processes are active. In acute infectious diseases and similar states the conditions do not seem quite so clear, but possible sources of such an intoxication may readily be found in the suboxidation and gastro-intestinal disturbance often attending such diseases. Indeed, in all the conditions mentioned there are likely to be gastro-intestinal disturbances which may result in the formation and absorption of large amounts of acids or acid-producing substances; there is always some form of metabolic disturbance which may readily lead to the formation of abnormal amounts of acids, or interfere with the proper oxidation of those formed; and, in diabetes in particular, the character of the food is strongly conducive to acid intoxication.

In so-called acid intoxication *sui generis*, the occurrence of the poisoning is much less easily understood. The evidences of general disease are lacking, and even the symptoms referable to the gastro-intestinal tract may be comparatively slight; and yet the symptoms of acid intoxication may be severe and the chemical evidences of its presence pronounced. This lack of apparent source of the intoxication has led to some skepticism as to the correctness of the conclusions drawn in the cases reported; and, since severe cases are rarely observed, acid intoxication of this variety receives but little discussion. Indeed, many clinicians seem to doubt the existence of such a clinical entity.

That it does exist is, however, satisfactorily established by a considerable series of recorded cases, in which symptoms that are known to be characteristic of acid intoxication—whether this be produced by experiment or disease—occurred, together with the urinary evidences of such an intoxication (the presence of large amounts of oxybutyric acid, diacetic acid or acetone); in which also the symptoms of intoxication ran a course parallel with the amounts of acetone and diacetic acid, or of oxybutyric acid, in the urine; and in which, further, the evidences of other kinds of intoxication or other sources of intoxication were absent.

The cases may be grouped into three general classes:

1. Mild acetonuria is not uncommonly found in gastro-intestinal disturbance, both when disorder of the digestive tract is the main condition present, and when this is secondary to some other disease. There are, in this class of cases, often no other notable signs of any form of intoxication; or, if there is other evidence of intoxication, there seems to be no close relation between the symptoms which it presents and the acetonuria, and the intoxication does not show the characteristics of acid intoxication. In cases of this kind there is no reason to consider the acetonuria as being of much importance. It certainly indicates the existence of some degree of acid intoxication, but it is unquestionably mild and is a secondary matter.

2. In another group of cases marked acetonuria occurs and is often accompanied by diaceturia; and, in a number of instances, considerable quantities of oxybutyric acid have been found. The distinctive symptoms of acid intoxication are, however, not present. Gastro-intestinal disturbance has usually been present in these cases, as in those previously mentioned. Sometimes it is associated with evidences of marked irritation of the nervous system or with psychic disturbances; sometimes these nervous symptoms are absent; in some of the cases severe psychic disturbance or other nervous symptoms are present, without notable gastro-intestinal disorder; and, finally, in some of the cases there are signs of other diseases—more particularly of nephritis—in which other forms of intoxication occur. The intensity of the symptoms and of the reactions for acetone and diacetic acid often run fairly parallel courses; and, with the disappearance of the symptoms of poisoning, the acetonuria and diaceturia vanish more or less completely. In these cases there are, then, evidences of decided acid intoxication; but the more characteristic symptoms of acid intoxication are absent, symptoms that are not seen in definite examples of acid intoxication are prominent, and in some cases intoxication of another kind is almost certainly present, and is probably the main cause of the symptoms. Hence, while we are justified in considering that acid intoxication is present in these cases and that it probably has a distinct share in the production of symptoms, we must believe that it is not by any means the sole cause of the symptoms. In many of the cases it is almost certainly not even a very important cause; in some it seems, on the contrary, to have been of decided importance, but in all the conditions are mixed and these cases do not belong distinctively under the heading acid intoxication. Frequently, however, treatment of the acid intoxication will undoubtedly be wise in these cases.

3. In still another group, however, there are very marked urinary evidences of acid intoxication, and the symptoms more or less closely approach those seen in the condition which is recognized to be acid intoxication, namely, diabetic coma and the stages preceding coma. The symptoms also increase and decrease with corresponding changes in the urinary evidences of acid intoxication, and other forms of intoxication are apparently absent. The most notable examples of such cases have been reported by Lorenz, Litten, and Kraus.

In Litten's series, for instance, there are five cases, two of them in children and three in adults, in which,

after several days of digestive disturbance, the patients first exhibited nervous depression with excitability, headache and sleeplessness, followed by increasing stupor, and finally by partial coma. There was a strong odor of acetone, and the urine gave a marked ferric-chloride reaction for diacetic acid. These conditions persisted for several days, when the acetone and diacetic acid and the symptoms of intoxication gradually disappeared together. Albumin and casts were absent; there were no symptoms of uremia, and no evidence of organic disease other than the digestive disturbance.

Kraus reported two fatal cases. In the first, an acute attack of digestive disturbance, associated with acetonuria, was accompanied by signs of retrobulbar neuritis and of meningeal irritation. The latter signs disappeared, but the changes in the optic papilla persisted. No further observations of the patient were made until five years later, when she was readmitted. The intraocular changes were still present, but she had, throughout the five years, been free from other signs of cerebral disease. She was again suffering from an acute attack of gastro-enteritis, without determinable cause; and, after this had continued for two weeks, evidences of meningeal irritation again appeared. As the symptoms became more pronounced, an odor of acetone was observed, coma came on, and death followed. The urine contained no sugar; there were traces of albumin and large amounts of acetone and diacetic acid and oxybutyric acid were present. An autopsy could not be made, and it was not known whether any cerebral affection was present.

In the second case, a woman, whose eyesight had previously been good, complained of visual disturbance. This continued for a week, when her eyes were examined and evidences of retrobulbar neuritis were found. Albumin and sugar were absent from the urine. It is not stated whether gastro-intestinal symptoms were present or not. The next day she was very stupid and the eye changes had increased. On the following day the latter were still more marked and the patient was evidently in extremis. She died the following day. Autopsy showed no intracranial lesions. The heart and aorta were small; there was gastro-intestinal catarrh. The urine on the day of death showed 2.5 per cent. of oxybutyric acid.

Kraus, who gives a very able review of the literature, concludes that these two nondiabetic persons died of acid intoxication of intestinal origin. He refers to the fact that gastro-intestinal disturbances are occasionally present in acid intoxication, whether this be of cryptogenic, infectious, carcinomatous or diabetic origin, and thinks that one must admit that acid intoxication may be due to digestive disturbances, and must also consider the possibility that all forms of acid intoxication are actually accidental intestinal intoxications. He insists, however, that even if the intestinal tract were determined to be the ultimate source of the intoxication, we should not be justified in considering that the disturbance of intestinal function, of itself and alone, produces the intoxication with acetone and acids of the oxybutyric type; the appearance of the acids and the digestive disturbance may much more properly be considered to be evidences of a complex nutritional disturbance, depending upon intestinal derangement. Nevertheless, Kraus considers the diagnostic value of the acetone and the acids unquestionable.

This general statement of the literature concerning the question is sufficient to bring out the important points in a case which has recently been under my observation, the main features of which were as follows:

A man, in apparently fairly good health, was suddenly overcome by vertigo followed by prolonged coma. The coma lasted about ten hours, during which time the patient was given alkaline transfusions. He exhibited during this time the symptoms and the urinary signs of acid intoxication. He then rapidly recovered and subsequently remained perfectly well, the symptoms as well as the urinary signs of the acid intoxication disappearing coincidently with his improvement. The signs of diabetes were absent at all times.

In detail, the case was as follows:

A. B., a milkman, 63 years of age, was admitted to Dr. Stengel's service in the University Hospital at 8.30 A. M., November 27, 1900. The history, as afterward obtained from the family and the patient himself, was wholly negative as to any condition of interest in the immediate members of the family or in the collateral branches. The man had been a milkman all his life. He had always been active. He had habitually used small amounts of alcohol (2 or 3 drinks of whiskey a day); but persistent investigation failed to reveal a history of anything approaching intemperance. He had no history of venereal disease. He had had some of the diseases of childhood; which, he did not remember. He had otherwise been healthy all his life, with the exception of a brief attack, twelve years before admission, in which he had had some pain in the back and scanty urine. At that time he had been told that he had Bright's disease; but he had had no edema and no other symptoms that he could remember, and had no recollection of having ever had his urine examined. The symptoms passed off quickly under treatment. Recently he had felt perfectly well, excepting for occasional attacks of indigestion, which consisted almost solely of nausea, particularly before breakfast, and some fulness and discomfort after taking food. He was habitually constipated.

The immediate history of the attack is as follows: On the day before, he had been in his usual condition. On the morning of the 27th., he had risen at 6 o'clock, feeling nauseated and rather weak, and with a general sense of being ill, without more definite symptoms. He was unable to eat, but drank a cup of coffee and about an ounce of whiskey. Immediately afterwards he drove to the railroad station, where, while rolling milk cans to his wagon, he became conscious that he was seriously ill. He rapidly became very giddy, and, fearing that he would fall, allowed himself to sink to the floor. He did not fall, and was entirely conscious, although he felt somewhat confused. He remembered perfectly well being carried into a neighboring room and remaining there for some time, awaiting the arrival of the police patrol; and he protested against being taken to the hospital. He knew that he was placed in the patrol wagon, but he soon afterwards lost consciousness entirely, remembering nothing for about 12 hours thereafter.

Upon his admision to the hospital, Dr. Evans, the resident physician, found him completely unconscious, and exhibiting marked cyanosis. The respirations were full and deep—18 to 20 to the minute. There was no stertor, but the breathing was at first slightly irregular, a pause occupying the time of one or two respirations occurring after 4 or 5 regular breaths. The pulse was full, strong, 90 to the minute. The arteries were decidedly sclerosed; the heart sounds

weak. The temperature was low, and the thermometer in the axilla failed to register. The eyes deviated toward the right. The pupils were of moderate size and responded to light. There was no evidence of paralysis in any of the extremities. No edema was present. Very slight convulsive movements occurred at intervals, the arms being slightly flexed for a few moments, and the chin drawn toward the chest. There was an odor of acetone to the breath so pronounced as to lead Dr. Evans to catheterize the man at once and examine his urine. This was found to be strongly acid, with a specific gravity of 1026; there was no albumin; an imperfect reduction of Fehling's solution was obtained after adding a good deal of urine; there was a marked reaction for acetone.

The man was stimulated with aromatic spirits of ammonia and strychnine. He remained in the same condition excepting that the cyanosis deepened somewhat, while the respiration became regular. I saw him at about noon. We then emptied the bladder of the small amount of urine which it contained, and I examined it for sugar, acetone, and diacetic acid. Sugar was probably absent. There was no reduction of Fehling's unless large quantities of urine were added; and even then, the reduction was but slight. Other tests were not used because of the necessity for haste. There was a marked reaction for acetone (Legal's test) and for diacetic acid. Oxybutric acid was not looked for, as the polarimeter chanced to be out of order and the amount of urine was too small for a crotonic acid test.

The striking facts upon seeing the man were the sickening odor of acetone, which was so strong as to be noticeable immediately upon entering the side ward in which he lay; and the peculiar character of the respirations, which were of normal rapidity, but extremely strong and deep. His condition was about the same as noted by Dr. Evans. He was intensely cyanosed; but the pulse remained strong and full, although the heart sounds were weak. Otherwise, the cardiac signs were negative, the dulness being normal and murmurs absent. The examination of the lungs and abdomen was wholly negative. There was no evidence of any paralysis; all the extremities showing slight resistance upon movement, and, as was afterwards apparent, he was capable of moving them voluntarily. The tendon reflexes were decreased in activity, but were present. He responded to energetic pricking with a pin everywhere by very slight movement and an occasional faint moan. The eyes usually deviated toward the right, though there was often left lateral deviation, and frequently there was no deviation at all. The pupils responded feebly to light.

At this time, we had absolutely no history of the case except that given by the police officer (afterward shown to be incorrect) that the man had fallen from his wagon and was picked up unconscious. It was, of course, suspected that it was a case of apoplexy. In the absence, however, of all signs of apoplexy except the coma, and with the presence of conditions so characteristic of diabetic coma, it was decided that the case was one of the latter kind, and three pints of a three per cent. solution of sodium bicarbonate were introduced into the right median basilic vein. Williamson's blood test was made at the same time, but proved negative.

As the fluid was introduced, the man opened his eyes, made a slight attempt to turn to the side, moved all his limbs, and groaned feebly. His pulse became decidedly weak and irregular; the breathing also became irregular. The introduction of the fluid was temporarily stopped, and these symptoms entirely disappeared, the patient lapsing into his former condition. A similar disturbance occurred several times during the administration of the alkali, ceasing each time the flow of the fluid was checked. After the introduction of the fluid, the cyanosis was distinctly less, but there were no signs of returning consciousness.

At 3 o'clock the man's condition was the same as it had been at 12. At this time, the left median basilic was opened; 14 ounces of blood were removed, and at the same time, two pints more of a 3 per cent. sodium bicarbonate solution were introduced into the vein on the right. The sugar of the removed blood was estimated by precipitating with sodium sulphate and then determining the amount of copper reduced by the filtrate. It was found to be 0.12 per cent.—hence practically normal.

After this administration of alkali, the patient showed slight signs of returning consciousness. His color distinctly improved; he made a feeble effort to resist the manipulations, and groaned repeatedly. He soon, however, relapsed into practically the same condition as before. After the second administration of alkali he was given a hypodermic of one-tenth of a grain of strychnine; oxygen, also, had been repeatedly administered.

His condition remained about the same until shortly after six o'clock, when, after nearly eleven hours of coma, he showed the first pronounced signs of returning consciousness. Soon after this he asked where he was, but seemed confused and apparently decidedly deaf. He was still very somnolent, sleeping most of the time, but was not comatose, could be easily roused, and apparently understood questions, although it was necessary to shout in order to make him hear. He repeatedly attempted to speak, but almost unintelligibly, until about 11 o'clock, when he spoke clearly and apparently with entire intelligence.

Urine was passed at midnight: it had a specific gravity of 1020; was highly alkaline, contained no albumin, no sugar, no casts, and no diacetic acid. It gave a questionable reaction for acetone. The quantity was 15 ounces. At this time the patient showed no symptoms with the exception of somnolence, deafness and weakness with some confusion of mind. There was absolutely no paralysis.

The following morning he was perfectly conscious and his intelligence was entirely good. He showed slight deafness, but otherwise there was no indication of a previous attack. He was pallid, but not cyanosed. The volume of the pulse was smaller than on the preceding day, but of fair strength. The heart sounds remained weak. He said that he felt a little confused mentally and was weak. He gave us, at this time, a perfectly intelligent account of the onset of the attack and of his condition previous thereto. He realized that he was slightly deaf, and said that he had not been so previously. In the latter part of the day his mind became perfectly clear, and he said that he felt quite normal, except for slight weakness. His deafness also completely disappeared within 24 hours. His eye-grounds, examined on the afternoon of this day, showed normal conditions. His urine was entirely normal, except for the strongly alkaline reaction: neither at this time nor subsequently could any albumin, casts, sugar, diacetic acid or acetone be found. The subsequent course of his case was absolutely uneventful. He was discharged on December 12th., feeling perfectly well. His cardiac sounds had become stronger; his arteries, of course, showed pronounced sclerosis; otherwise, his condition was that of an entirely healthy man of his age.

I saw him twice recently. He has had no symptoms of any kind since his attack, with the exception of occasional slight precordial oppression and slight gastric symptoms. He has been at his occupation constantly from the time of his discharge from the hospital, and says that he feels perfectly well. His urine shows absolutely no abnormality. He is still rather pallid, exhibits marked arteriosclerosis and the heart sounds are rather weak, and are of obscure quality. There are no murmurs. The heart action is regular, and the cardiac dulness normal. Otherwise, his physical signs are normal, and he is decidedly active for a man of his age.

The conditions which, at the time and subsequently, came into consideration from the standpoint of diagnosis were: Apoplexy from hemorrhage, embolism, or thrombosis; uremia; diabetes; alcoholism; acute internal hydrocephalus, and an acid intoxication *sui generis*. The condition during the attack and subsequently seems to exclude surely apoplexy from any cause. The patient had no paralytic symptoms, and—more important—it is almost impossible to believe that, if he had had apoplexy from any cause which was sufficient to produce such severe and prolonged coma, there could have been such complete recovery in so short a time, without any symptoms referable to the attack. Further, apoplexy would be insufficient to explain the unanimated symptoms of some description which he exhibited.

As in uremia, the symptoms were not those of

that condition, and at no time had he in the urine any evidences of disease of the kidneys.

Diabetes is clearly excluded by the previous history and, more particularly, the utter lack, while he was under our observation or more recently, of any evidences of that disease.

It would, of course, be possible to explain the coma by a diagnosis of acute internal hydrocephalus, and the subsequent presence of deafness suggests such a condition, especially because of the findings of Burr and McCarthy in their case. I have, however, in the literature concerning acute internal hydrocephalus found no clear case in which severe evidences of the condition came on as did the attack in this man, with an almost complete absence of direct premonitory signs, produced so severe and prolonged a coma and disappeared so rapidly and completely; and it seems improbable that such a course could occur in acute internal hydrocephalus. More important than this, however, is the fact that the patient had definite evidences of an acid intoxication. If an acute internal hydrocephalus was present, it was probably secondary to the acid intoxication. It is absolutely impossible to demonstrate either that the man had an acute internal hydrocephalus or that he had not. It may be admitted that possibly such a condition was present, but such a diagnosis is both unnecessary and of itself insufficient to explain the signs of intoxication connected with the attack.

For the same reasons alcoholism is, of itself, an insufficient diagnosis. If there was alcoholism, there was with it an acid intoxication, and the general character of the symptoms and the results of treatment are enough to indicate that the acid intoxication was the most important poisoning present. Alcoholism, particularly when chronic, does tend to produce acid intoxication; indeed, the ferric chloride reaction for diacetic acid was first described by Gerhardt in cases of alcoholism. But in this case I think we are wholly unjustified in believing that alcoholism had any relation to the attack. A very careful investigation of his habits and subsequent observation of him have satisfactorily demonstrated that neither at the time of the attack nor at any other time was he addicted to excessive use of alcohol, and in the twelve hours preceding his attack he had had no more than one portion of whiskey.

The only satisfactory diagnosis that can be made in the case is that of cryptogenic acid intoxication, which was, in all probability, of gastro-intestinal origin. The man's tendency to digestive disturbance and the presence of such disturbance for some hours preceding his attack make this source of the intoxication a likely one. It is somewhat difficult to understand how in this case and in some others on record a comparatively slight gastro-intestinal disturbance could give rise to a profound intoxication, for the amount of toxic substances produced in the intestine is certainly not likely to be sufficient to cause such a state directly. A clearer understanding, however, is reached through Kraus' very wise suggestion that in most instances, if not in all, we may much more properly consider that the disturbance of the gastro-intestinal tract sets in motion a general disturbance of metabolism, which results in excessive production or imperfect destruction of the acids, rather than that the acids are themselves produced in the digestive tract. We may also refer to the fact that it has been demonstrated, particularly by Magnus-Levy, that the occurrence of severe symptoms of intoxication with acids is less dependent upon the actual dosage with the acids than upon the ability of the organism to oxidize the acids to harmless substances. In diabetes, if the oxidative powers are permanently poor, intoxication will become severe much more quickly; and if, through any temporary cause, the oxidative powers are, for the time being, reduced, severe intoxication and coma are likely to occur suddenly. Analogous conditions undoubtedly exist in other diseases in which acid intoxication at times occurs, and in this man's case there was a complicating factor which would render him more liable to an intoxication of this kind, *i. e.*, poor circulation, with severe arteriosclerosis and myocardial weakness.

That, however, the signs of at least moderate acid intoxication may be largely due to actual absorption of acids or acidproducing substances from the digestive tract, is fairly well shown by a recent report of Waldvogel and Hagenberg, who demonstrated that a very large increase of the acetone of the urine (it is normally present in small amounts) was observed after adding increased quantities of fats to the diet, even when actual gastro-intestinal disturbances were absent.

The case which I report is, in certain clinical features, apparently unique, so far as the literature regarding the question is concerned. I have found no other case recorded in which signs of acid intoxication of great severity appeared with such remarkable rapidity and none other in which there was absence of prolonged gastro-intestinal or other symptoms before the appearance of the signs of acid intoxication. Even in the cases in which all symptoms other than those referable to the gastro-intestinal tract were absent, there had been gastric or intestinal disturbance for at least several days before the onset of severe acid intoxication. The final course of the coma in this case was quite as remarkable. Complete recovery within a few hours, without any notable symptoms remaining behind, is without an analogue in the reported cases of this condition. It is probable that this rapidity of recovery, and perhaps the occurrence of recovery, were due to the rather heroic treatment. The man was completely saturated with alkali: he was given about 75 gm. (2½ oz.) of sodium bicarbonate intravenously, and his urine, which was tested with each portion passed, remained distinctly alkaline for about seventy hours after the alkaline transfusions were given. I know of no other case of acid intoxication of nondiabetic origin which was treated in this way, either successfully or unsuccessfully. There can be no doubt that direct alkaline treatment of nondiabetic acid intoxication

would oftentimes be useful. At present there does not seem to be a proper recognition of the occurrence of the condition. This is undoubtedly due largely to the fact that it is not often looked for.

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DYSMENORRHEA.*

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Mr. President and Gentlemen:

In selecting dysmenorrhea as the subject for my paper this evening I felt it would be of interest, since the condition is so commonly met with in general practice and is one about the etiology and pathology of which there is such a diversity of opinion, I thought that by discussing it from an entirely practical standpoint you might gain something of value.

The direct causation of the pain is, I believe, due to the following factors: (1) Hyperesthesia and spasm of the internal os uteri (2) clot formation within the uterine cavity and (3) uterine contractions. I will try to show you that these conditions are always present in those women who suffer during menstruation and demonstrate that the conditions found on examination in these cases, whether intra- or extra-uterine, cause dysmenorrhea by increasing one or all of these factors.

The diagnosis is ordinarily easy, yet many mistakes have been made, and it is to be remembered that the congestion present just before or during menstruation often causes pain in an adherent appendix, urethral caruncle, hemorrhoids and in cystitis, the pain of which may closely resemble dysmenorrhea. Abortion, miscarriage, dermoids and extra-uterine pregnancy are conditions at times responsible for error in diagnosis, the latter after rupture, when we have colicky pains and discharge of clots, is so like dysmenorrhea that it could easily mislead the hasty observer. My remarks are especially confined to the pain related closely to the uterus and its appendages and do not relate to the many reflex-symptoms so common during the menstrual flow, such as headache, backache, irregular heart and kidney action, dysuria, hot flashes, hysteria, etc.

The pain is almost invariably intermittent, and when it is described as being continuous I believe it is due to the overlapping of the uterine contractions giving the sensation of a continuous spasm: its location is usually central, at times over one or both ovaries shooting down the inside of the thighs or out onto the iliac crest; it is variously described as labor-like, as colicky, bearing down, or dragging; some say it is stabbing, boring or neuralgic; the colored women describe it as they do pain elsewhere, as "misery."

The past history will help us in determining whether or not the pain is dysmennorrhea, not only as to menstrual suffering, but the patient's general history, special attention being given to scarlet fever, malaria, rheumatism, heart disease, phthisis, gonorrhea and syphilis, all of which are common indirect causes of menstrual discomfort; when we stop to think that almost every condition which comes under the head of gynecology may cause pain at this time, we find the etiological factor a difficult one.

The subject is so divided at present as to make 6 types of dysmenorrhea; that this classification is not satisfactory, and to present to you a more plausible explanation of the condition is the purpose of my paper.

The divisions are: First, inflammatory; second, spasmodic; third, neuralgic; fourth, mechanical or obstructive; fifth, membranous; and sixth, ovarian. These are not only confusing but open to serious objections.

The inflammatory type confines us to those cases in which there is some inflammatory condition of the uterus or its appendages, and does not explain why many of these patients feel better while menstruating than between their periods; as a rule, the women who would be placed in this class suffer most several days previous to the flow, from an increase of blood to organs already inflamed. Inflammation in no way accounts for the colicky intermittent pain just before or during the flow after the subsidence of the backache and heavy feeling in the pelvis. Again, there are many women with even pyosalpinx and ovarian abscess who do not have the slightest pain while menstruating.

2. The spasmodic theory implies that the pain is due to the uterine contractions alone, and those advancing this theory confess that these cases may suffer from attacks of pain independent of menstruation, which pain could hardly be classed dysmenorrheal; granting that there may be a spasmodic type, it is hard to understand why all women do not have dysmenorrhea, as the contractions, I believe, are always present.

3. The class of cases coming under the head of neuralgical dysmenorrhea are those in women who suffer from rheumatism, gout or malaria, usually anemic, of a highly susceptible nervous temperament and often hysterical; the fact that some of these patients, though by no means all, have painful menstruation, does not, to my mind, explain the direct cause of their suffering.

4. The mechanical or obstructive theory is especially applied to cases in which from some congenital defect or acquired condition as stricture, the menstrual secretion is impeded. When we stop

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to think that only about 5 ounces of blood are lost at each menstrual period, and taking 5 days as the average duration, with only one drop of blood escaping every 3 minutes, it is hard to see how there could be much suffering in a canal which is at least three-sixteenths of an inch in diameter, unless there is at some point in this canal a spot that is hyperesthetic to pressure.

There are many women with cervical stenosis, interstitial fibroids, extreme flexions, etc., who have menorrhagia and metrorrhagia, and yet who do not suffer, although the cervical canal will admit only the finest probe.

5. The membranous theory does not account for those cases in which membranes are passed without pain, nor why there is suffering only at intervals of 2, 3 or 4 periods.

6. What I have already said in regard to the inflammatory type may be applied to the ovarian, *i. e.*, that many women with ovarian disease do not have pain during menstruation.

Allow me to repeat that the theories ascribing painful menstruation to inflammation, spasm of the uterus, neuralgia, mechanical obstruction, passage of membranes or ovarian disease, do not satisfactorily settle the etiological conditions, since there are many dysmenorrheas in which one or all of these, with the exception of uterine contractions, may be absent, while, on the other hand, dysmenorrhea may occur without any inflammation, obstruction, neuralgia, membranes or ovarian disease, and, as I have already said, uterine contractions alone will not account for the pain, as they occur when it is not present.

To determine definitely the etiology of dysmenorrhea it is necessary to collect the data of past experience, and with that to begin a new series of deductions which will point to causes that can be shown to be always operative.

It is well known that in a certain number of cases in which a sound is passed there is marked pain, sometimes, in fact, the pain is so severe that the sound can only be passed while the patient is under the influence of an anesthetic, and without such an aid even a fine probe could be passed with difficulty.

This is obviously due to a temporary contraction, caused by the introduction of a foreign body, of the sensitive fibers of the internal os. The internal os is the smallest and most sensitive spot in the uterine canal and is surrounded by a circular band of muscular fibers forming the so-called sphincter. Increase the sensitiveness of this normally sensitive point and what happens when it is irritated? A spasm. It is evident, then, that pain may be caused by a spasm of the internal os. It is a fact, moreover, that the passage of a sound has cured patients suffering from dysmenorrhea.

It is only reasonable to suppose in such cases that the pain, since pain can be so caused, was due to spasm of the internal os and not due to mechanical obstruction, as many women whose cervical canals present such obstruction do not suffer pain.

In so far as an obstruction causes retention of blood, and therefore favors clotting, does it seem to be a factor in dysmenorrhea.

If we have clots of blood in the uterine cavity, which eventually have to be passed, we can readily see how the hyperesthetic os, which is normally only about three-sixteenths of an inch in diameter, may be thrown into spasm and cause pain; as a matter of fact most, if not all, women who suffer during menstruation pass clots at this time. Patients will tell you "that the pain brings clots away," which are frequently no larger than an orange-pith; any foreign body in the uterus will cause it to contract.

During pregnancy we have, after 3 months, the contractions giving us the Braxton-Hicks sign. A fibroid, especially one in the uterine wall, will cause contraction, as will interuterine injections and applications, or any object, such as a small bit of cotton tampon, etc. It seems only natural to infer that the retained menstrual blood, especially when clotted, will give rise to contractions, which causes the intermittent pain like that occurring in dysmenorrhea.

I have questioned 100 women who suffer during menstruation, and 97 of these said they passed clots during this time; it is to be remembered that the "clods," as many patients call them, are often small, and it seems possible that at times the acid vaginal secretions may dissolve the clots which come from the uterine cavity, as it is well known that blood taken as it appears at the external os will coagulate as blood taken from any other part of the body, but the menstrual blood, as ordinarily seen, does not do so on account of its admixture with the acid secretions in the vagina; one part pure acetic acid to 60 parts of blood will prevent coagulation.

The women's general condition has at times close relation to their suffering, as they will frequently tell you that they suffer only when run down, overworked, nervous or worried.

I have had the opportunity of watching several patients who passed membranes when menstruating and they had pain only when their general health was poor; as a rule these pieces, some as large as a half-dollar, were passed without the slightest inconvenience.

This form of dysmenorrhea is the one most rebellious to treatment, and frequently the only assured cure we can offer these women is the menopause or ovariotomy.

In regard to treatment the patient's general condition should receive its full share, as I feel confident that I have seen the menstrual suffering, if not entirely cured, at least much lessened by the building up of a generally run down system.

Should she be anemic, iron, codliver oil and the syrup of hypophosphites seem to act very satisfactorily. Basham's mixture and Blaud's pills are two of the best iron preparations; the latter in 5-grain pills, with ex. nux vomica 3 to 6 daily, is one usually to be relied on.

The salicylates and quinine seem at times to act

beneficially, but to what extent I am unable to say, as the relief from pain was as great in those women who had not rheumatic or malarial diathesis as in those who had.

The bowels should be carefully looked after, the salines perhaps acting better, as they seem to relieve the congestion which is present quicker than other laxatives. A good but not elegant formula is the following saline mixture:

℞

Iron sulphate	gr. xii
Magnesia sulphate	ʒ i
Sulphuric acid	*m* xii
Infusion gentian	q. s. ad. ʒ vi

This may be given for months, if necessary, with no deleterious effects and is not followed by constipation on its withdrawal.

One important part of the treatment is rest; I mean rest in bed, one, two or three days previous to the expected flow, also during this time; this of itself will at times lessen materially the suffering.

Vaginal injections of hot water, 100° to 110° F., used twice daily up to the day previous to the expected flow and recommenced a few days after the flow has ceased, will be found of the greatest benefit; the failure in some cases to procure any relief from hot douches, and this applies to all vaginal injections, no matter what the indication may be, is due to the women not knowing how to use them properly. They should always use a bulb syringe with a nozzle made of horn or some other nonconductor of heat, although a metal-tip may be covered with a piece of India-rubber tubing, and inject at least two to four quarts with or without medication.

These injections should invariably be taken while lying down; this is awkward for a woman to do herself and is one reason why they sit over a basin or commode, and one why many are not benefited by douches. They should always be given by some one other than the patient. A fountain syringe does little more than bathe the vagina in a puddle of warm water, especially if the patient is upright, and what we want most is the relief of the congestion in the pelvic vessels, which is procured much more quickly by the impulse of the jet of water from a bulb syringe like the Davidson, which excites the vessels to contraction. At times women will complain of weight and discomfort in the pelvis after these douches; in these cases, by reducing the temperature of the water to about 95° F., they can be well borne.

When there is much congestion present in the pelvis, and whenever we find tenderness, the application of iodine, first removing the mucus by means of forceps dressed with cotton, followed by the introduction of a glycerine tampon, will be of benefit.

These applications should be made twice weekly, so long as marked tenderness exists as ascertained by the finger.

The bromides will help many cases, used between the periods in small doses and then increased two or three days previous to the flow. I can offer no explanation for it, but these women seem especially prone to bromide acne; perhaps it may be the poor blood condition which is often present in such cases.

In patients in whom there is intense suffering with scanty or suppressed flow, usually seen in young girls, the same treatment may be used as in aborting a coryza. Morphine should not be used unless absolutely necessary, and then only hypodermically, and should always be given by a physician.

The acceptance of this theory will demonstrate at once, when general treatment fails, that the proper procedure is a dilatation of the cervical canal, one in which the internal os is not only stretched, but some of its circular fibers torn; a procedure much like that carried out for fissures of the anus, and it may be just possible that a fissure may exist at the internal os uteri in some of these women suffering from dysmenorrhea.

It is natural to suppose that the benefits derived are brought about by relief of spasm at the internal os, which allows a free escape of blood, thereby preventing clot formation, which lessens uterine contractions. Those who claim it is the straightening of a flexure or the enlargement of the external os which helps these women, overlook the fact that the flexure is reproduced almost immediately on withdrawing the dilator and that many women with pin-hole os do not have the slightest pain while menstruating.

I do not wish it to be understood that I advise dilatation in all cases of dysmenorrhea, but the gratifying results obtained in selected cases make it a procedure of much value; by selected cases I mean those in which there is no acute tubal or ovarian disease, chronic pelvic trouble, in which we find much tenderness on vaginal examination, or a lacerated cervix.

The failure to procure relief after dilatation is, in many cases, due to the fact that the dilatation is not carried far enough.

In virgins and in those cases of rigid pin-hole os it should be at least three-quarters of an inch, and in the parous women one to one and a quarter inches.

This may seem extreme to some, yet experience in my own cases and the results obtained by others have convinced me of its safety and efficiency.

If the dilatation is done under an anesthetic, extra care as to cleanliness may be taken. The operation may be done gradually, taking ten to fifteen minutes to reach this dilatation, using only the pressure of one hand. The dilator may be allowed to remain in the canal ten or fifteen minutes or longer so that there need be little fear of harm, although, at times, shock will follow even the slightest dilatation of a stenosed uterine canal.

The best time for dilatation is about one week after a menstrual period, the woman remaining in bed at least five days or, should there be pelvic pain, until this has subsided.

Finally, when all other remedies fail and the woman is unable to stand the monthly suffering,

the question of ovariotomy must be carefully considered.

Menstruation as to amount.		As to time.	
Increased	53	Regular	95
Scanty	25	Irregular	45
Normal	37		
Irregular	35		

The average duration of the flow, based on 650 cases, 5 days.

Clots passed in 97 out of 100 cases.

Pathological conditions found on examination.

Inflammatory disease of the appendages	30
Fixation of appendages	19
Fibroid tumor	11
Prolapsed ovary	5
Complete procidentia	2
Retroflexion and stenosis	9
Retroflexion	15
Anteflexion	12
Cervical stenosis	7
Cervical stenosis and prolapsed ovary	2
Lacerated cervix and perineum	27
Urethral caruncle	1
Membranous endometritis	10
Total number of cases	150

TINNITUS AURIUM.

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The subject of my paper is one which not only merits but has received much consideration from many of our leading aurists, the literature pertaining to it being almost inexhaustible. I do not therefore choose it with the expectation of evolving any new theory or idea relative thereto, but shall endeavor merely to present a compendium of tinnitus aurium; first, for the benefit of the practitioner of general medicine, whose opprobrium it has ever been, and secondly, with the hope of reviving the interest of the aurist, the greater share of whose daily work is combating this most distressing and discouraging symptom.

Tinnitus aurium is perhaps the most frequent symptom of aural disease, occurring in fully two-thirds of all ear cases. It is common alike in all classes of society, often pursuing its victims by night as well as by day, and when it becomes pronounced and constant it is capable of making one miserable beyond conception. In not a few instances patients have sought self-destruction as a respite from its persistent torture.

Patients often have difficulty in locating the sound. By the majority it is described as being within the ear; some locate it in the back, side or top of the head while to others it seems to emanate from a distance. Sometimes it seems to radiate from the ear over the head, "a circumstance which is especially apt to occur in the beginning of the affection when the subjective sensations may be thought to be objective noises and until experience rectifies the false conception." (10)

The imagination and descriptive power of each patient varies in regard to the character of the noise experienced. They often employ terms of comparison suggested by their peculiar surroundings or occupations and liken the tinnitus to the noises they are most accustomed to hear; thus, to the railroad man it may simulate the ringing of bells, the tooting of whistles or the escape of steam; to the farmer, the warbling of birds, the rushing of water, the chirping of the cricket, or the rustling of the leaves in the forest; and to the housewife, the boiling of water, the frying of food, etc. There is hardlly a sound familiar to the daily walks of life that has not been likened to some form of tinnitus. Most patients complain of a noise similar to that heard when holding a shell to the ear. Many have a tinkling or ringing, some have a hammering or pounding, some a cracking or snapping, some a whistling or hissing and occasionally, though rarely, those of a pleasant nature are experienced, such as the sound of distant music, of familiar voices, etc.

Occasionally tinnitus is objective, being heard almost as well by the observer as by the patient; in fact, sometimes when very loud, it can be detected at a distance. Such noises are usually of a blowing, snapping or cracking character and may be due, first, to the mucus rales in the Eustachian tubes; second, to a spasmodic contraction of the muscles of the palate or Eustachian tubes, acting on the pharyngeal opening of the tube and producing a valve-like noise; third, to a spasmodic action of the intrinsic muscles of the ear which is especially liable to be associated with spasm of the facial muscles. There is also a form of pulsating tinnitus which is occasionally objective, being accompanied by cardiac bruit.

Subjective sensations may be intermittent or continuous but in either case their intensity is seldom uniform, being usually affected by external influences or somatic conditions. Those dependent upon some form of aural disease usually become more annoying as the disease progresses. The state of the weather is also to a great extent responsible for this variation. Continuous rainy, cloudy or windy weather will usually increase the noises while warm, sunshiny weather will decrease them. In some cases they are only produced or aggravated by the use of stimulants, overexertion, mental emotion, colds in the head, etc. They are usually more noticeable at night or during stillness. Many patients who have acquired a tolerance for the noises during the bustle of their daily work are made very uncomfortable by them in the quietness of their homes. Strong, healthy persons usually become gradually accustomed to the sensation which is so unpleasant at the beginning and scarcely note its existence, while nervous, sensitive, anemic, ill-fed individuals suffer more and more and frequently have their minds unbalanced by this harrassing, unceasing din.

Tinnitus which takes the form of articulate speech, musical melodies, etc., generally constitutes the earliest symptoms of a subsequent mental derangement and under these conditions musical people may give harmonious coloring to the acoustic phenomena experienced.

In coarse and brutal individuals the effect may be quite different, producing hideous, demoniacal imaginings.

Children suffer less from tinnitus than adults on

account of the more yielding condition of the membranes of the middle ear, but when they are affected with it they seldom complain of its unpleasantness.

There is no doubt but that middle ear disease is the greatest factor in the causation of tinnitus. The slightest catarrhal inflammation of this cavity may give rise to excessive subjective noises in some cases, while in others a severe inflammation of the same kind would be entirely free from this symptom.

A catarrhal condition of the Eustachian tube is, as is well known, responsible for most cases of otitis media. This condition in the tubes alone previous to the involvement of the middle ear is a frequent cause of tinnitus, either on account of the moisture within the tubes or on account of their diminished caliber which renders more audible the passage of the air through them.

Partial or total exclusion of air from the middle ear will produce mechanical dilatation of the tympanic vessels, a condition which cannot long be maintained without passing into inflammation with its accompanying tinnitus which frequently remains long after a healthy state of the tubes is restored.

Chronic suppurative otitis media is, as a rule, much more free from subjective symptoms than the chronic catarrhal or noncatarrhal forms. This is no doubt due to a large perforation of the membrana tympani which invariably accompanies the former, allowing drainage and preventing pressure upon the oval or round windows.

Subjective sensations of hearing due to moisture within the tubes or tympanum are usually intermittent and of a bubbling or gurgling nature.

When there is ankylosis of the ossiculæ auditus or of the oval window, rendering the stapes immovable; when there are adhesive bands of connective tissue, resulting from inflammation and interfering with the movement of the ossicles or membrana tympani, or, when changes in the structure of the tympanic membrane from pathological causes result in inflammation, thickening, loss or increase of tension, noises are more or less present.

Impacted cerumen, foreign substances or any changes in the integument of the auricle or external auditory canal may cause tinnitus by producing peripheral irritation of the cutaneous nerves.

The subjective noises which are apt to be the most persistent and annoying and the least responsive to treatment are those which originated in the internal ear through increased tension brought about by labyrinthine inflammation or exudation, swelling or retained secretion in the middle ear or depressed membrana tympani. Such tinnitus is usually of a high-pitched hissing or singing character and is frequently accompanied by vertigo.

Tinnitus is frequently a symptom of disorders of the circulation such as anemia, hyperemia, aneurysm or heart disease. The jugular vein passes just beneath the floor of the tympanic cavity and the internal carotid artery winds through the apex of the petrous bone, although, strange to say, in normal conditions we are not conscious of the flow of blood through these great vessels notwithstanding their proximity to the ear.

"In abnormal states, however, especially when the conducting mechanism of the ear is interfered with, hitherto undulatory movements of the blood in the neighborhood of the ear, and their sounds are taken cognizance of through intervening tissues, especially the osseous." (19.)

Those due to arterial congestion are of a distinct, pulsating character or synchronous with the apex-beat and can be checked by the compression of the carotid artery in the neck or of the vertebral artery in the suboccipital triangle, while those due to venous congestion are usually continuous, of a buzzing, bubbling or blowing character and are aggravated by stimulants, constipation, ingestion of food or the lying posture. Those due to anemia are usually of a humming nature, are relieved by stimulants, the ingestion of food and the recumbent posture, while pressure on the internal jugular vein will increase their severity.

Pressure on the cerebral bloodvessels from congestion, exudation or growths within the cranium or constriction of the foramina through which the vessels pass may cause tinnitus.

The intimate relationship of the middle and internal ears, through the circulatory and nervous systems, with the general economy makes the auditory nerve more usually affected by general medication than any of the other nerves of sense. Certain drugs, such as quinine and the salicylates, are therefore particularly liable to affect the ear. Large doses will produce a tinnitus which will almost invariably pass off after a time, unless the drug influence is pushed to such an extent that structural changes are brought about within the labyrinth, in which case more or less permanent deafness or tinnitus may result. Excessive use of alcoholic beverages or tobacco may have the same effect.

"Tinnitus may not only arise from diseased conditions of the auditory apparatus itself, but also from similar conditions in other parts of the head or body, being transmitted to the ear either directly along mechanical channels or indirectly by reflex action from the sympathetic or cerebrospinal nerves to the auditory nerve." Lennox Brown believes that the bilateral tinnitus signifies a constitutional, the unilateral a local cause. Kramer describes tinnitus as "a completely local affection of the ear which may be produced and is always proportionately increased by sympathy with general derangement of the system." Thus it may result reflexly from neuralgia of the trigeminus, glaucoma, affections of the nose, nasopharynx, throat, teeth, digestive tract, uterus, kidneys, liver, general cutaneous surface, etc. In reflex tinnitus there is usually little or no impairment of hearing and it occurs generally in excitable, nervous persons, with overstrained mental conditions, in exhausted conditions, during convalescence from severe febrile affections, etc.

Dr. Theobald, of Baltimore, claims that tinnitus in some cases, tinnitus of indecision, is due to refractive errors which produce a reflex vasomotor disturbance in the vessels of the middle ear and labyrinth. Dr. Conner, of Detroit, reports a case in which subjective noises were cured by the correction of heterophoria of the eyes. Woakes declares that many cases of progressive deafness which are almost invariably accompanied by tinnitus are due to the presence of necrosis in the ethmoidal region of the nose, which

acts as a persistent irritation to the branches of the fifth nerve, and, by means of the connection of its nucleus with that of the auditory is reflexly made to implicate the cochlear branch of this nerve.

To ascertain the cause of tinnitus in any given case is perhaps the most difficult problem the aurist is called upon to solve, yet he must solve it if he expects favorable results from his treatment. To accomplish this, he must make a thorough study of each individual case. He must become acquainted with the nature of the noise, with the habits and occupation of the patient, with the general condition of the patient, especially observing whether or not there is any coryza, tonsillitis, nasopharyngitis, etc. He must inspect the external auditory canal and the membrana tympani. He must make a thorough examination with the tuning fork to ascertain whether or not there is an abnormal condition of the ear, and if so, locate it. He must inflate the Eustachian tubes to see if they are occluded or if they or the tympanic cavity contain moisture. He must use the Siegel otoscope to see if the membrana tympani responds to sound waves and is not bound down by adhesions. He must press the carotid artery and the internal jugular vein to ascertain whether or not there are circulatory disturbances. Tinnitus due to impeded sound conduction will be intensified if the impediment is increased by holding a finger in the ear. The tinnitus which is produced by alternate contraction and relaxation of the muscles of the middle ear will usually cease temporarily upon application of an extrinsic sound to the affected ear, while the administration of nitroglycerine or the inhalation of nitrite of amyl will lessen the tinnitus due to anemia and increase that due to hyperemia. These and many other points too numerous to mention in this paper must be considered in each instance.

The prognosis of tinnitus aurium depends upon its nature, cause and duration. The longer it has existed and the more continuous and unvarying its character and the higher the pitch, the less promising is the prognosis. That due to acute trouble is usually temporary while that due to structural changes or chronic affections is more apt to continue through life, being constant or intermittent. In some cases, after years of annoyance when deafness becomes complete, it ceases, a circumstance which is probably due to the loss of functional activity of the auditory nerve.

If inflation or massage of the membrana tympani does not diminish or increase the noise, the prognosis is usually unfavorable.

The different methods advocated in the treatment of tinnitus are as numerous as its causes, and the proper selection of the former depends wholly upon a thorough understanding of the latter. Counter irritants behind the ear, such as stimulating linaments, blisters, etc., are only occasionally beneficial. The same may be said of electricity, either galvanic or faradic. Inflation of the tympanum may be of benefit in many cases of tubal catarrh or middle ear disease, by opening the tube, ventilating the middle ear and relieving depression of the tympanic membrane. Perforation or removal of the membrana tympani may benefit those with ankylosis or adhesions of the ossicles or with thickened or immovable membrana tympani, by decreasing tension and permitting passage of the sound waves through the middle ear to the oval window. By this procedure, however, the tympanic cavity is exposed to the atmosphere which renders it more prone to disease. Removal of the ossiculæ may be of temporary benefit, when they are ankylosed or necrosed, by decreasing the tympanic pressure and permitting sound waves to come in contact with the oval window, but the results from this operation are not permanent in the majority of cases. Such operations should never be performed, however, if the sounds heard are of a high pitch, indicating involvement of the internal ear. Tenotomy of the intrinsic muscles of the middle ear, when they are in a spasmodic state, may relieve tension and increase the mobility of the ossicles and membrana tympani. The vapors of chloroform, iodine, sulphuric ether, menthol, etc., introduced into the tympanum promotes absorption of the connective tissue bands in many cases in which there is no increased intratympanic pressure. Dr. Seiss, of Philadelphia, treats tinnitus of a vascular origin by freezing the mastoid region with the chloride of ethyl spray. Massage of the membrana tympani and ossicles by use of Siegel's otoscope, Lucæ's pressure probe, Delstanche's masseur or Wigmore's ear masseur loosens and renders more movable a thickened, depressed or adherent membrana tympani, ankylosed or adherent ossicles and lessens spasmodic contraction of the intrinsic muscles. This is the writer's treatment *par excellence* for tinnitus due to the above mentioned causes. The most desirable of the aural masseurs is perhaps Wigmore's which can be operated by hand, by compressed air or by connection with an electric motor. The intensity of the vibrations may be regulated by a little thum screw, which is intended for that purpose, and the rapidity of the vibrations may be easily controlled by using compressed air with a pressure regulator. Several other instruments have been constructed in which the massage is produced by a series of sound waves. This method is to be commended in some cases, but it is not so practical and effective as the method just referred to. A little more severe and, in some cases, a more effective method of massage is one which has recently been adopted in Bavaria, and for which the Bavarian aurists claim marvelous results especially in cases of tinnitus due to hyperemia. It consists of a chamber into which compressed air is forced. It is an easy task for the writer to understand the efficacy of such treatment when he recalls his experience in 1891, in the Hudson River Tunnel, 3600 feet from the Jersey City side. During his entrance he passed through three caissons, the last of which, he was told, had an air pressure of 45 pounds to the square inch. When the compressed air was turned into the caisson his membranæ tympani were forcibly pressed in, notwithstanding his efforts to relieve by Valsalva's method of inflation. His head fairly whirled and he experienced a noise resembling the din of a great battle. During the exit from the tunnel, when the compressed air was exhausted from the caissons, just the reverse effect was noticed, namely, the membranæ tympani were forced out-

ward and little, if any, relief was experienced by inserting the finger tips into the external auditory meatuses. During his conversation with one of the inspectors at the time he was informed that several of the workmen, who were previously deaf, had been greatly benefited since they began work in the tunnel. There is no doubt that compressed air is destined to become a great factor in the treatment of aural disease.

Dr. E. L. Vansant, of Philadelphia, claims prompt and permanent relief in many cases of tinnitus, especially those due to catarrhal conditions, by forcing dry, hot air through the Eustachian tubes and accessory sinuses of the nose and thus not only expelling retained gases and fluids but also restoring the equilibrium of the tympanic pressure.

The selection of internal remedies in the treatment of tinnitus should not depend wholly upon the patient's description of the nature of the noise although our text-books and medical journals are full of such erroneous indications.

A number of years ago quite a furor was created for treating tinnitus with hydrobromic acid. Now, as then, many prescribe it without considering the cause of the subjective sensations. There is no doubt that it is the best remedy to administer internally for the form of tinnitus due to vascular disturbances, such as hyperemia of the labyrinth, especially if it is associated with vertigo. Field says that it is useful in those cases in which the noise is synchronous with the pulse-beat. The proper method of administering hydrobromic acid is to give ten or fifteen drops three times a day largely diluted with sweetened water. Pilocarpine administered hypodermically is especially useful in recent cases of exudation within the labyrinth. Kramer treats tinnitus, which is unaccompanied by deafness, by injecting an aqueous solution of strychnine (one grain to the ounce) through the Eustachian catheter into the tympanic cavity. Gleason's favorite remedy for tinnitus due to middle ear catarrh is a pill containing silver nitrate gr. ¼.; ext. hyoscyamus gr. 1-3 and strychnine gr. 1/13, one to be taken after each meal. Gruber and Wilde prescribe tincture of arnica, 15 drops three times a day, when there is no congestion. Dunkanson gives muriate of ammonia in nervous tinnitus. Gomez reports excellent results from the use of conium hydrobromate gr. 1-60 three times a day, in nearly all forms of tinnitus. Many of the leading foreign aurists are now recommending the use of quinine in periodic tinnitus with vertigo. They administer it in small doses once or twice a day, just sufficient visibly to improve the circulation and relieve the aural anemia.

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A CASE OF ACUTE ARTICULAR RHEUMATISM WITH PYEMIC TEMPERATURE TREATED WITH ANTI-STREPTOCOCCIC SERUM.

By R. J. CHIPMAN, M. D.,

of Portland, Oregon.

Patient Miss W., age 25, was exposed to cold wind and low temperature in Seattle about August 31st and came home from a street car ride chilled through. For a week afterward she complained of great nervousness, general malaise and anorexia. On Saturday, September 8th she developed a severe chill followed by a temperature of 101 and general muscular pains. The next day the finger and wrist joints of both hands became painful on motion with slight swelling and a few purpuric spots appeared on the arms and legs. She was immediately put on salicylates internally and externally in the form of salicylic acid inunctions and the joints wrapped in laudanum and soda fomentations. The pain and swelling travelled from one finger to the other from day to day and finally subsided at the end of the second week, leaving the mid-phalangeal joint of the left index finger enlarged and stiffened. The temperature ranged from 102° to 104°. The body was bathed in acid sweats and the patient experienced a chill with a temperature of 104° every three or four days. The salicylates were tried in different forms and finally discarded entirely, owing to their intolerance by the stomach. Quinine and other antipyretics were tried with no effect and she was then treated symptomatically with cold sponging to reduce the temperature and opiates to relieve the pain. At the end of the second week the chills became more frequent and the fluctuations in temperature more marked. The left knee became acutely inflamed and was followed by swelling of the dorsum of the foot and great toe joint. The leg was put in a plaster cast from the toes to the hip, the knee remaining tense and swollen and causing great suffering. The heart sounds during this time were muffled and indistinct, the apex beat being slightly accentuated, there was no increase of cardiac dullness and no subjective symptoms were complained of. Pulse rate 110 to 116. There was complete anorexia with flatulent distention of the stomach which gave continual trouble. The spleen was enlarged and tender. The third and fourth weeks were marked by the increasing number of chills ranging now from one to three in twenty-four hours when the temperature would shoot up to 105° and drop in a few hours to 97°, the patient would be drenched in cold sweats with lips and finger tips cyanosed. The beginning of the fifth week saw a slight remission of the symptoms for three days, when there were no chills, and the temperature ranged from 97° to 102°, diaphoresis still excessive. On

October 10th, after these three days respite, the chills commenced again with increased severity and greater prostration, an axillary temperature was then taken, patient being unable to hold the thermometer in the mouth, it ranged from 97° to 103.6°. On October 11th, at 2 A. M. the temperature was 98.6°, there was a chill and in three hours (5 o'clock) it was 104°, there was another chill and the axillary temperature taken for ten minutes three times was 105.4°, at 8 o'clock it was 103°, and at 8.30 there was another chill and temperature of 104°. It was decided to try as a last resort the use of anti-streptococcic serum with the hope that it might antagonize the profound septicemic condition present, which seemed due to some germ infection, possibly the streptococcus. On that day, October 11th, at 2 P. M., the first injection of 10 cc. was given under the skin of the abdomen and the temperature did not go above 100° the rest of that day.

October 12th. At 9 A. M. next morning temperature was 100°. A second injection was given and at 10.30 the temperature was 97° (mouth), pulse 108. (Previous pulse-rate 110-130). At 12.40 temperature was 97°, pulse 98; at 2 P. M. temperature was 97.2°, pulse 108; at 4.30 P. M. temperature was 98.6°, pulse 120, and at 6.45 there was another chill, lasting a few minutes and temperature at 7.25 was 102°. At 9.45 P. M. a third injection of serum was given, the last that could be obtained in the city.

October 13th, at 2 A. M. temperature was 97.4°; no more chills that day and highest temperature was 102°. Patient felt well, did not perspire any and complained of pain in the knee only at night; before that it was almost incessant.

October 14th, temperature ranged from 98.6° to 102°. October 15th morning temperature was 100.2°, at 1 P. M. More serum having been sent from Spokane and Seattle, a fourth injection was given, temperature 99.6°. At 4 P. M. it was 100°, at 6 P. M. it was 100° and at 8.20 it was 99°.

October 16th temperature was 98.6° to 101°. A fifth injection was given that night at 10.30. October 17th temperature at 1 A. M. was 99°, pulse 104, at 7.30 it was 99.2°, at 12.20 it was 100.4°, pulse 120, at 3.10 it was 100.2°, at 5.30 it was 100°, at 9 P. M. it was 100.8°, pulse 120. At 11 P. M. a sixth injection, and next morning, October 18th, at 8.30, the seventh and last injection was given, and temperature ranged from 98.8° to 99.2°; on October 19th, 98° to 99°, October 20th, 98.2° to 100°; October 21st, 98.4° to 99°. On October 23d a severe attack of urticaria developed, involving the whole surface of the body and causing great distress. This lasted for six days, being worse at night.

At this time, November 7th, being two months from date of onset, the patient is sitting up, having convalesced very rapidly. The swelling in left knee has almost entirely subsided and only slight stiffness remains. The left index finger is still slightly stiff and enlarged in the mid-phalangeal joint. Heart sounds normal.

In reviewing the history of this case, it seems impossible to ascribe the sudden remission of symptoms to mere coincidence. The patient was greatly prostrated physically and mentally and seemed to be rapidly progressing toward a lethal ending. All her symptoms were being intensified when the serum was commenced and the improvement was marked from the first injection and her condition was practically normal from the third injection. In looking over the small amount of literature at my disposal, I was able to find case-reports of serum being used with marked success in erysipelas, cellulitis and puerperal scepticemia and of its signal failure in pneumonia.

In the **Philadelphia Medical Journal**, October 19, 1901, one observer reports finding in a case of acute articular rheumatism an organism closely resembling the streptococcus, which, on being inoculated into animals, produced a disease presenting the clinical picture of acute articular rheumatism. Autopsy showed marked inflammatory changes in and about the joints and the latter contained a small amount of turbid fluid. In one of the guinea-pigs inoculated, a well-developed endocarditis was found. It is noteworthy that the patient from whom this organism was originally obtained had a relapse and the same organism was found the second time. No mention was made of serum therapy in this case, nor am I aware of its having been used in any case of acute rheumatism.

TWO CASES OF HYDROCELE PRESENTING UNUSUAL FEATURES.

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of New York.
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The treatment of hydrocele is established upon such a rational basis that failure to obtain an immediate cure by one or other of the recognized methods of procedure may well excite the surgeon's wonder.

The first of two cases in which the writer experienced great difficulty before securing final success was as follows:

E., a custom-house clerk, single, aged 23 years. From an unknown cause swelling in the right half of the scrotum took place three years ago. Without the aid of illumination his physician diagnosing hydrocele punctured, and drew off fluid. Sharp pain was felt at the time and the patient was compelled to lie on his back for a week. He has since contended that his testicle was punctured at that time. A year later fluid having reformed, the patient underwent operation at a hospital by the open method of incision and gauze packing in the cavity of the tunica. Two weeks later he was discharged with a rapidly granulating wound. A third refilling was taking place when he came under my observation. Examination showed a well healed scar three inches in length extending obliquely toward the apex, upon the right side of the scrotum. Candle illumination demonstrated the presence of clear fluid with the testicle in outline. By the aid of a trocar and cannula 2 ounces of straw-colored fluid were withdrawn and 5 drops of carbolic acid were injected and diffused over the cavity walls. Closing the site of puncture with cotton and collodion, the scrotum was elevated with a suspensory bandage. The patient continued at work with tenderness from the inflammatory reaction lasting 3 or 4 days. The next week, while all pain had passed away, there was apparently fluid still within the sac. Localizing by means of candle light fully an ounce of clear fluid was withdrawn, and carbolic acid injected as before. Reaction occurred as kindly as at first, but within the next 10 days I was compelled to locate and again withdraw half an ounce of pocketed serum, repeating the injection. From this time on there was no further refilling. The testicle being insensible to ordinary examining pressure, the only signs remaining was the scar and sense of thickening by palpation. A year later this patient returned, suffering from acute gonorrhœa. Within the first week a violent epididymitis developed upon the left side. The right side was not affected and the patient informed me had given no trouble since my previous treatments.

The second case occurred in F., a driver, single, aged 26 years. Ten years ago swelling began from a possible traumatism in the lower part of the left side of the scrotum and had developed slowly without painful manifestations. It is pyriform with the base extending outward and away from the body, smooth, tense and without signs of inflammation. Fluctuating and dull on percussion. Examined by candle light, clear fluid was demonstrable with a testicle the lobules of which seemed somewhat more separated than normal by pockets of fluid. Entering the main cavity of the tunica vaginalis I drew off 4 ounces of serum and injected 2 fluid drams of tincture of iodine. The patient suffered but little discomfort; however, in the course of the next few weeks refilling took place. Under cocaine anesthesia I

made two small incisions and connected them by a gauze drain. The patient, but little disturbed, kept at his work and the wounds healed quickly without infection. One month later I was compelled to tap again and I drew off one ounce of fluid from an apparently isolated pocket. Owing to the previous treatment the tunica had become thickened and toughened and required some force to penetrate, the patient felt a sharp pain at the entrance to the cavity, manifested by the loss of sense of resistance. Though I used the same care as formerly, my trocar must have punctured the seminiferous tubules of a distorted portion of a lobule of the testis. Next day pain and swelling were marked and I put the man in bed in the hospital, where he suffered for 3 weeks, in spite of active local treatment, from the results of inflammatory reaction. Slowly recovering from tenderness of the part, after a month's time, his testicle and tunica appeared about one-third larger than normal. Eighteen months later I saw this man and he told me that, while he had never had a return of symptoms upon the left side, the right side had been gradually filling up. Owing to the previous unfortunate circumstances he had determined that no treatment was the best treatment for the present condition.

CENTRALBLATT FUER INNERE MEDICIN.

March 8, 1902.

Statistics Concerning Pleurisy. J. A. GROBER.

Grober first discusses pleurisy as a disease preliminary to the outbreak of phthisis. His statistics were derived from 1000 cases. The age is first given: by all odds the great majority of cases were seen between the tenth and fortieth years, and 4/10 of the cases occurred in the third decennium. Very few children, however, were treated in the clinic at any time. Of these 1000 cases of phthisis, 400 showed a family history of tuberculosis; in 60, this point was doubtful; and in 540, there was no family tendency to the disease. As to the frequency of pleurisy before the outbreak of phthisis, 88 cases showed a previous history of pleurisy; 68 showed a history of pleurisy during the course of phthisis. Of the 88 first mentioned, 34 showed a family history of phthisis, 6 were doubtful, and 48 showed no family history. 8.8 per cent. of all these cases of phthisis, therefore, showed a previous history of pleurisy. Considering the great frequency of tuberculosis, this is a relatively large percentage. The author believs that it supports Penzoldt's statement that every person with pleurisy should be suspected of phthisis. Grober then discusses the etiology of pleurisy. Two hundred cases of this were seen; 140 in men, and 60 in women. Twenty-one were tuberculous, 22 were suspected of being tuberculous, 7 were postrheumatic, 8 were postpneumonic, 2 were postinfluenzal, 12 were traumatic, 5 occurred in heart disease, 5 with malignant growths, 12 with other infections, and 106 were so-called idiopathic cases without known cause. The percentage of tuberculous cases is extremely high. Thirty of the so-called idiopathic cases showed marked phthisical tendencies, and probably should be reckoned with the tuberculous cases. This would make a percentage of 36.5 of tuberculous cases. One hundred and thirty of the cases were exudative; 46 dry. [D. L. E.]

The Genesis of Spina Bifida.—In an interesting study of the subject, in *Médecine Moderne* for April 16, 1902 Etienne Rabaud states that, omitting the amyelinic form of spina bifida which accompanies anencephaly, all the other forms of myelocystocele and myelomeningocole have a common origin. In the development of spina bifida the neuro-epithelium covering the spinal canal increases very slowly, the skin above it varying in thickness, and the connective tissue about it will also vary, because its development is retarded. Besides this delay, the neuro-epithelium fails to become differentiated, remaining thin in most cases, without nervous properties. Following the deformity thus caused, the spinal ganglia and nerves are also found in an abnormal position. His conclusions are based entirely upon embryological investigations. [M. O.]

Health Reports.

Health Reports: The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Public Health and Marine-Hospital Service, during the week ending June 21, 1902:

SMALLPOX—United States.

			C.	D.
CALIFORNIA:	Los Angeles.	May 31-June 7	7	
	Sacramento.	May 31-June 7	1	
	San Francisco.	May 31-June 7	6	
ILLINOIS:	[illegible]	June 7-14.	1	
	Chicago.	June 7-14.	4	
	Freeport.	June 7-14.	1	
INDIANA:	Evansville.	June 7-14.	3	
	Indianapolis.	May 31-June 7	11	
	South Bend.	May 31-June 7	1	
	Terre Haute.	May 31-June 7	2	
KANSAS:	Wichita.	May 31-June 24	2	
KENTUCKY:	Covington.	June 7-14.	1	
MASSACHUSETTS:	Boston.	June 7-14.	32	9
	Lawrence.	May 31-June 7		1
	Lowell.	June 7-14.	2	2
	Malden.	June 7-14.	1	
	Newton.	June 7-14.	1	
MICHIGAN:	Detroit.	June 7-14.	4	1
MISSOURI	St. Louis.	June 7-14.	12	2
MONTANA:	Butte.	June 7-14.	6	
NEBRASKA:	Omaha.	June 7-14.	17	
NEW HAMPSHIRE	Nashua.	June 7-14.	11	
NEW JERSEY:	Hudson County, Jersey City included.	June 7-14.	77	14
	Newark.	June 7-14.	26	4
NEW YORK.	Buffalo.	May 31-June 7	2	
	New York.	June 7-14.	8	13
	Yonkers.	June 7-14.	2	
OHIO:	Cincinnati.	June 7-14.	2	5
	Lorain.	June 7-14.	1	
	Toledo.	May 31-June 14.	1	
OREGON:	Portland.	June 7-14.	2	
PENNSYLVANIA:	Johnstown.	June 7-14.	1	
	McKeesport.	June 7-14.	1	
	Philadelphia.	June 7-14.	8	3
	Pittsburg.	June 7-14.	28	
	Scranton.	June 7-14.	2	
UTAH:	Salt Lake City.	May 31-June 14.	15	
WISCONSIN:	Green Bay.	June 7-14.	1	
	Milwaukee.	May 31-June 7	1	
	Racine.	June 7-14.	1	

SMALLPOX—Foreign.

AUSTRIA:	Prague.	May 17-24.	1	
BELGIUM:	Antwerp.	May 11-18.	1	1
	Brussels.	May 4-11.	1	
CHINA:	Hongkong.	May 3-May 8	4	3
COLOMBIA:	Barranquilla.	May 4-11.	15	
GREAT BRITAIN:	Birmingham.	May 4-11.	1	
	Cardiff.	May 4-11.	1	
	Liverpool.	May 4-11.	6	
	London.	May 4-11.	22	9
	Manchester.	May 4-11.	1	
INDIA	Bombay.	May 3-10.	4	
	Calcutta.	May 3-10.	3	
	Madras.	May 3-10.	1	
ITALY	Messina.	May 4-11.	1	
MEXICO.	City of Mexico.	May 4-11.	1	1
RUSSIA:	Moscow.	May 4-11.	14	
	St. Petersburg.	May 4-11.	4	

YELLOW FEVER

MEXICO	City of Mexico.	May 31-June 7	1	1
	Vera Cruz.	May 31-June 7	1	1

CHOLERA—Insular.

PHILIPPINE ISLANDS.	Manila.	May 3-10.	77	74
	Province.	May 3-10.	44	41
	Province.	May 3-10.	36	36
	Province.	May 3-10.	29	28
	Province.	May 3-10.	1	1
	Laguna Province.	May 3-10.	14	13
	Province.	May 3-10.	1	1
	Province.	May 3-10.	55	51
	Province.	May 3-10.	1	1
	Province.	May 3-10.	4	4

CHOLERA—Foreign.

INDIA	Bombay.	May 13-20.	1	
	Calcutta.	May 10-17.	94	
	Madras.	May 10-17.	1	
STRAITS SETTLEMENTS:	Singapore.	Apr. 27-May 3.	2	
	Straits Settlements.	Apr. 27-May 3.	84	

PLAGUE—United States.

CALIFORNIA	San Francisco.	May 24-31.	1	
	San Francisco.	May 31-June 7	1	
	San Francisco.	May 31-June 7	1	
	San Francisco.	May 31-June 7	1	

PLAGUE—Foreign.

INDIA:	Bombay.	May 13-20.	24	
	Calcutta.	May 10-17.	109	
	Karachi.	May 11-18.	34	34

INDEX

Abdomen, contusions of the, 24
wounds of the, 101, 870, 911
subcutaneous traumatic hemorrhage of the, 21
Abdominal and pelvic surgery, conservatism in, 1005
hysterocolpectomy, a new operation for removal of cancer of the cervix uteri, 1123
incision, closure of the, 314
inflammations, the latent period in the course of, 956
injuries, 109, 944
injury, two remarkable cases of, 4
organs, disease of the, 439
pain, 430
tumors, with ascites, 389
wall, complete relaxation of the, under anesthesia, 1086
suture of the, 965
Aberdeen University, 514
Abiotrophy, 778
Abnormal growths in cabbages, 881
Abortion, artificial, by electricity, 924
attempted criminal, in extrauterine fetation, 96
criminal, 201
Abscess cavities, poultice method of healing, 393
of the liver, tropical, 1040
peritonsillar, 736
subdiaphragmatic, 525
Abuse, a growing, 634
Acetanilid poisoning, 102
Acne Rosacea, Fanghi di Sclafani in, 572
Acroparesthesia, 1002
Actinic light, the penetration of the human body by ordinary, 736
Actinomycosis, 163, 434, 816
Adami, J. George, M. D., 88
an explanation, 885
criticism of Koch, 337
human and bovine tuberculosis, 356, 681
Addiment, disappearance of, from antimicrobic serums, 160
Addison's disease, 162, 550, 672, 1013
Adenitis, tubercular, of the anterior mediastinum, 478
Adenoid vegetations and their influence upon the palatial arch, 366
Adenoids in French children, 996
Adenolipomatosis, tuberculous cervical, 320
Adenoma in both adrenals, 111
Adenocarcinoma of the liver, 475
Adhesion, recent, best method of breaking down, 201
Adiposis dolorosa, a case of, 761
two cases of, one in a man, complicated by epilepsy; another in a woman, presenting also circinate retinitis, 396
Adrenalin, 922
chloride in ophthalmic, etc., surgery, 956
Advertisements, indecent and immoral, 810
Ages at which different diseases cause death, 225
Agglutination in normal blood, 573
of the tubercle bacillus, 265
researches, 572
Agglutinations obtained by intraperitoneal insertion of celloidin capsules, 319
Agglutinins in the blood, 734
Alboferin, 1047
Albumin, a new test for, 473
destruction, attempts to control, in a sheep suffering from fever, 949
in the urine, 958
metabolism, 169
Albuminuria, cyclic, 252, 319
hypostatic, of splenic origin, 516
in life insurance, 767
intermittent, in scarlatinal nephritis, 720
Alcohol, action of, 869
in therapeutics, 515, 520
influence on the human organism, 526
Alcoholism and the gastric juice, 251
apomorphine hydrochlorate in, 476
Alopecia areata, 924
Aldrich, Charles J., M. D., a case of thrombosis of the left jugular, basilic and median basilic veins, of unexplained origin, 629
Alexia from cyst caused by gunshot wound of the brain, 316
Alexin, the united effect of, 1044
Alexins, the absorption of, by tubercle bacilli, 56
Algiers Medical School, 91
Alkaptonuria, 107, 570
congenital, 744
Allen, Charles Lewis, M. D., arteriosclerosis and the nervous system, 590
Alloxur-bodies and the leukocytes, 46
Alopecia areata, 608, 788
Altmann's granules, significance of, in malignant tumors, 254
Altoona Hospital, 1113
Altruism, the, of the murderer, 193
Amaurosis, alcoholic, 162
and its treatment by strychnine injections, 913
Amberg, Emil, M. D., the young physician, 544
Ambulance patrol, the, 866
American Medical Association, presidential address, 1058
meeting of the, 1077
the oration on State medicine, 1029
Climatological Association, the tour of the, 726
physicians in Australia, 559
Amputation, circular, with lateral flaps, 574
Amyloid disease, 525
Amylolytic ferment, the, of the blood serum in the normal and diseased blood, 923
Anal fissure, 702
Anatomical research bill, 637
Anderson, John, M. D., The ferment of the appendix, 812
Andrews, Ed. T. H., 1113
Anemia, a case of fatal, with unusual blood changes, 956
in infancy, 111
pernicious, 239, 396, 701
with skin pigmentation, 648
progressive pernicious in a syphilitic, 154
so-called von Jaksch, 114
Anemias of severe gastro-intestinal origin, 1042
secondary to gastro-intestinal disease, 610
splenic, 837
Anesthesia, a second contribution to the study of, by nitrous oxide gas and ether, 886
and chloroform., 1041
chloroform, death from, 205
complete relaxation of the abdominal wall under, 1086
dangers of, 1029
general, in the plethoric, 736
throat surgery, 336
massive infiltration., with weak analgesia solution, 15
spinal, 1013
the epidural route in, 693
tropococaine in, 566, 649
Anesthetic, a new, 470, 513
management of the, in operations on the respiratory tract, 203
Anesthetics, curative action of, 989
the administration of, 5
Aneurysm, aortic, 312, 503
arteriovenous, 24, 963
cause of death in, 246
of the pulmonary artery, 807, 829
superior profunda artery, 645
traumatic, 605
treated with silver wire and electricity, 101
treatment of, with gelatine, 492
Angina cruris, 78, 643
pectoris, 915
brachial anesthesia in, 167
Angiosarcoma of the clavicle, 237
Angiospasmodic disease, 852
Anguillula aceti in the urine mistaken for strongylodes intestinalis, 1006
Ankle clonus, muscular factors in, 870
Ankylosis of the vertebral column, 919
Annapolis Emergency Hospital, 309
Anniversary, 732
Anophthalmus, an, 778
Anorectal transplantation, 740
Anthrax, 54, 105, 251, 481
facial, treated with carbolic acid, 696
caustic potash, 249
Antiphthisic serum, 564
Antipyrin and the animal aneurysm, 247
Antiseptic dressing, an, 188
Antitoxin injections, modification of Gabritshewski's syringe, 99
Antituberculosis Dispensary in Paris, 236
Anuria in individual with one kidney, 480
Aortic stenosis, 865
acquired, and chronic aortitis in childhood, 775
system, congenital narrowness, 632
Aortitis, syphilitic, 749
Apnea, traumatic, or asphyxia, 56
Apoplexy, cerebral, 188
late, following trauma, 19
Apparatus for class work in the bacteriological laboratory, suggestions for certain cheap and convenient forms of, 1060
Appendectomy, subserous, 355
Appendicitis, 387, 418, 479, 563, 645, 692, 737
acute, can we diagnosticate it? 642
and typhoid fever, 96
conservative treatment, 164
etiology of, 770
gangrenous without any cardinal symptom, 604
hematemesis in, 884
leukocyte count in, 571
leukocytosis a point of prognosis, 642
lymphatic and portal injection following, 295
pelvic, 396
pus formation in, 528
rheumatic, 692
treated by operation, 393
the various lesions in, 1087
work, gauze packing in, 563
Appendix, advisability of removing, 238
some reasons for considering it as a gland, 886
the ferment of the, 812
the vermiform, 159
Appointments, 63, 90, 336, 556, 557, 731, 862, 904, 908, 909
Argyll-Robertson pupillary reaction, 320
Army Medical School, 637, 644, 1037
corps, 952, 1114
surgeons in demand, 308
Arsenic, a mountain of, 122
in the United States, 998
Arsenical beer poisoning, 1145
Arteries, suture of, 669
Arteriosclerosis, 804, 963
and the nervous system, 590
Arthritis, a case of pneumococcic, accompanying acute croupous pneumonia, 186
gonnorrheal, 749
multiple in a child of 2 years, suffering from gonorrheal vulvovaginitis, 970
pneumococcic, 695, 1006
Articular traumatism and disorders of sensation, 785
Ascites, a case of, due to hepatic cirrhosis treated by transplanting the omentum between the periotneum and abdominal wall, 400
an unusual cause of, 901
due to hepatic cirrhosis, surgical treatment of, 343, 825
in solid abdominal tumors, note on the occurrence of, 928
spontaneous rupture through the umbilicus in a case of, 614
Assassin, the anonymous, 1033
Assassination, political, 225
Association of American Physicians, the meeting of the, 807
the, of military surgeons of the United States, 998
Astasia-abasia, 166
Asthenopia. Graduated tenotomy, Prisms, 896
Asthma, dyspeptic, 242
five cases of, treated with silver nitrate injections, 1137
Asylum, new, for female insane, 157
Asylums, a "ripper" bill for the, 302
Asymmetry, human, 643
Asystole, splenohepatic, 524
Athletics by proxy, 418
Atmospheric purification, 908
Atresia, congenital, and stenosis of rectum and anus, 162
Atropine in intestinal obstruction, 18
poisoning, 529
Attendants and nursemaids, 960
Auricle, accidental removal of the, by midwifery forceps, 159
Auscultation, the decay of, 396
Auto-intoxication and disease, 350
Automobile evil, the, 599
Avulsion of the scalp, with report of a case, 1020
Bacillus, a new, 902
aerogenes capsulatus, probably invading the body from a gangrenous lung, 645
coli communis, 296, 611, 692
Bacteria on money, 953
specificity of, 60
Bacteriemia, 919
Bacteriohemagglutinins and antihemagglutinins, 828
Bacteriologic substances, the, in normal goats' serum, 526
Bacteriological examination of potable waters, 53
Balantidium coli, the pathogenic importance of the, 1075
Baldness in man, 9
Baldy, J. M., M. D., primary carcinoma of the uterine fundus, 131

Balloon, up in a, 339
Baltimore, death-rate of, 512
Franklin Square Hospital, 776
General Dispensary, 196
Municipal Hospital bill, 308
Union Protestant Infirmary, 684
unpreparedness of, 308
Bandages, disinfection of, 658
Bard, Dr. Cephas L., 830
Memorial Hospital, Ventura, Cal., 156
Barr, Malcolm W., M. D., The recognition and training of mental defectives, 494
Bass, H. T., M. D., report of two cases of asthma, treated with silver nitrate injections, 1137
Beahan, A. L., M. D. The immediate repair of injuries of parturition, 133
Beaumont, William, 362, 405
Becker, Edward W., M. D. The report of a case of obliterative pericarditis with hepatic enlargement and ascites, 180
Becquerel rays and bacteria, 366
Beef-worm in the orbital cavity, 161
Begg, Colin Lucke, A. B., M. D. Directions to patients suffering from venereal diseases, 1025
Belfast Medical Institute, 777
Belgian Academy of Medicine, 479
Belgrave Hospital for Children, 686
Bell's palsy, double, 149
Ben Holt, 681
Bennett Hospital burned, 344
Bennett, Sir William, on renal calculus, 37; some points relating to renal calculus, 385
Bequests, 8, 10, 50, 59, 51, 88, 90, 195, 232, 234, 343, 344, 469, 691, 692, 636, 638, 684, 686, 908, 1035
Beuchet, A. L., M. D. Self-castration in the insane, 1034
Bergmann, Professor von, 346
Beri Beri, epidemic of, 856
in Liverpool, 52
patients, arsenic in the hair of, 85
Berkeley Deaf, Dumb and Blind Institute, 8
Bertillon system, the, exemplified, 463
Beverly's doctors' trust, 8
Bewer, 1051
Bierhoff, Frederic, M. D., on cystoscopy, its value and dangers, 984
Bile acids, intermediary circulation of, 247
duct, common, obstruction in the, 779
ducts, the so-called newly formed, 19
the surgery of the, 917
pigment and bile acids, some experiments on the formation of; a contribution to our knowledge of icterus, 75, 142
the formation of, 148
salts, Hay's reaction for, 639
Biliary apparatus, operations upon the, 37
Billings, Frank, M. D., oration on medicine, 1077
Biltong, 778
Binocular phenomenon, 167
Blindness, on the study of, 814
Birth- and death-rate as influenced by obstetrics and gynecology, 169
Births, illegitimate in cities, 9
Bivings, W. Troy, A. B., Ph. B., M. D. Excision of the scalp, with report of a case, 1020
Blackmail, 723
Blackmer v. Knight, 892
Blackwater fever, 311, 822, 908
a native remedy for, 348
Bladder, congenital fissure of the, 60
double perforation of the, 681
extrophy of the, 111
removal from the, through the cystoscope, of a needle, 98
"strumming" of the, and urethra, 347
stone of the, in a child, 824
Blasting the hospitals, 1117
Blastomycetic dermatitis, 242
Blastomycosis of the skin, 661, 1092
Blind, library for the, 286
persons in Philadelphia, 155
Blindness from congenital deformity of the occiput, 245
of the retina due to exposure, 287
prevalence of, 272
transient monocular, 1004
Blood, alkalinity of the, 146
in infections, 431
biology of the, 58
changes in typhoid and malaria, 771
postoperative, of the, 478
coagulation of the, 87
count, the, at high altitudes, 24
examination, 205, 611
and surgery, 521
in appendicitis, 24
microscopic in carcinoma and gastric ulcer, 115
fixing of, on coverglasses, 167
from cases of filariasis, 905
human and animal, 256
value of the eosinophile count in differential diagnosis, 429
immunity substances of the, 649, 650
in disease, alkalinity and gluten tension of, 908
influence of various heavy metals on the morphological composition of the, 17
method of determining the stability of the, 550
phagocytic power of the leukocytes of the, 199
poisoning in amputation, 528, 1041
pressure, clinical observations of, 103
in man, fluctuations of, 519
measuring of the, 8
under the influence of acute overstraining of the heart, 781
relationship of man and the anthropoid apes, 258
salt contents of certain waters influencing the coagulation of the, 169
serum, specific bactericidal therapy with, from convalescents from acute infectious diseases, 84
serum test for, 787
soluble ferments of the, in intercellular digestion, 52
the, in filariasis, 534
the, in infancy and childhood, 99
vital staining of the, 208
Bloodcorpuscles, estimating the number of, 551
Bloodvessels, diseases of the, 1141
Bloodgood, Dr. Delavan, 636
Bloodless surgery, 747
Bloodvessels, diseases of the, 516, 605
of mammals and birds, 562
Boehroen, M. H., M. D. Surgical diseases of the
Bodies, human, more wanted, 309
Bogey state, the, 559
Boiler explosions, 89
Bone lesions in Darlings
marrow tissue of the, in regeneration of the, during hibernation, 142
Bones and joints, parascorbutic affections of the, 49
Booth, Arthur W., M. D. Report of a primary carcinoma of the small intestine, 886
Borax and boric acid as food preservatives, 521
experiments, 1138
in the United States
Boston City Hospital, 776
Franklin Hospital, 884
health of, 112
population of, 602
Botha's operation, the
Bowel perforation, 709
Bowdy, Arthur C., M. D., F. R. C. S. Tumors of the
ynx, 9
Brain, abscess, otitic, 1
anatomy and "degeneracy theories", 152
atrophy, senile, 272
injury, three cases of, 23
lesions, resulting
tumor in peripheral
of the, localized
Roentgen rays, with
to the use of the
Branchial cyst, a, the wall of which contained
Breast, infarct of the
tumors
Breslau hospital, 1
Brewster infirmary, 1
Bright's disease, 30, 1
albuminuria
in children, 768
ocular symptoms
skin eruptions in
surgical treatment
British death-list, 52
hospitals, 90
Bronchitis, 487
fibrinous, 916
Brookline, Mass., free hospital for women, 507
Brooklyn Jewish Hospital, 747
Health Bulletin, 787
Naval Hospital, 907
Brown, E. K., M. D. Remarks on early ectopic gestation, 146
Brussels Institute of Bacteriology, 346
Bryn Mawr Hospital, 50
Bucharest Pathological Institute, 481
Bucke, Dr. Richard M., 423
Budapest Pasteur Institute, 424
Bulbospinal asthenia, 1
Bullet wound of the motor region of the eye, 237
Burnett, Dr. Charles H., 233
Burns from
Burr, Charles W., M. D. The prevention of neurasthenia after surgical operations, 13
Butter, bogus, 681
Buttermilk as infant food, 29, 89
Buxton, B. H., M. D. Bacteria, purification of sewage, 621
reply to criticism of the author, 94
Cancer, 1
Calculus, impacted, in the urethra of children, 21
Calgary, N. W. Territory, wants a consumptive sanatorium, 1
California, health results, 49
State Board of Health, 29
Calorimeter tests, 484
Cambridge Hospital, Dorchester County,
Campbell, T. D., M. D., C. M., Vaccination, 69
Can this
Canada Medical
Canadian hospital for South Africa, 88
hospitals, 157
Journal of Medicine and Surgery, 88
prohibitories, how
Cancer, 28
a possible predisposing cause, 258
sarcoma, parasites of, in human beings
cure, still another, 91
in New York, 2
esophagus, 694
lips, 653
pylorus, 250
prostate, 82
rectum,
patients, for incurable,
the parasites of
Carcinoma, Senn, and sporosis in
Carbolic acid, treatment of, with the
Carcinoma, 1
Carcinomatous
of the
Carbuncle of the upper lip,
Carbonated waters, 414
Cardiac dilatation and asthenia,
hypertrophy, 745, 746
neuroses, 393
Cardiac
Carcinoma
Cataract,
Caterpillars,
Catheter, permanent, means of securing a, 524

Caustic holder, new, 108 a
Cecum and colon, anomalous position, 784
resection of the, 826
Cell, unveiling of the, 431
Cellular secretions, 259
Census Bureau, a permanent, 398
Cerebellar ataxia, hereditary, 1051
tumor, a case of, 298
Cerebral abscess, 902
bulbar palsy, a case of, with a study of the localization of the tongue and lip centers, 275
cortex, irritability of the region of the, controlling movements after cutting various cerebral tracts, 741
localization, 1139
in the "motor," 42
hemorrhage, 392
Cerebrospinal cord lesions, orthopedic operations for intractable, 942
fever, an epidemic of, 639
treated with antipyrine, 1039
fluid, chromodiagnosis of the, 632, 749
Cervical ribs, 526, 569, 749
Cesarean section, 32, 854, 960, 1088
Champagne and cancer, 468
Chancre, soft, and syphilis, 702
Chancroid of the eyelid, 519
Changes suggested by Dr. Shoemaker, 7
Charge, an ugly, 47
Chase, Richard F., M. D. Some gastric conditions as found in forty healthy persons, 1064
Chase, Robert Howland, M. D., static electricity in the treatment of insanity, 800
Chemistry, some clinical aspects of, 960
Chest, diseases of the, methods of physical diagnosis, 1087
Chicago and Alton Railroad, 234
dispensaries, 684
low death-rate, 8
Medical College, 344
morality of, 344
Pasteur Institute, 344
suicides in, 398, 1051
Chickenpox, an epidemic of, 576
an outbreak of, among children convalescent from smallpox, with remarks upon the relationship of these two diseases, 442
or smallpox, difficulties in diagnosis, 1146
to be reported, 998
Child labor in New Jersey, 855
Children born while the mother was insane, 1001
walk, when, 235
welfare and protection of, 732
Chinoline-bismuth rhondanate (Edinger) as an antigonorrheal preparation, 650
Chipman, R. J., M. D., a case of acute articular rheumatism with pyemic temperature treated with streptococcus serum, 1166
Chlorides of the stomach and the cause of the lack of HCl, 109
Chlorine in the urine, compounds of, 525
Chloroform, a safe anesthetic, 424
administration, death during, 817
for patients with heart disease, 971
in animal tissues, 92
Chloroma, 910
Chocolate for milk, 861
Cholecystitis, acute, with gangrene, 915
and cholangitis, experimental of autoinfectious origin, 700
Cholelithiasis, 692, 1092
cholecystitis and cholangitis, 737
indications for surgical treatment, 820
Cholera, 51, 513, 558, 631, 637, 68, 731, 855, 1027
and religion, 769
antibodies and bacteriolytic immune bodies of, 700
Manila, 603, 685, 777
the Philippines, 854, 861, 998, 1084, 1141
prevention of the spread of, in Bosnia and Herzegovina, 954
stamping out, with tea, 773
Cholesteatoma of the breast, 749
Chorea, chronic progressive, 918
Choroid, injuries of the, 96
"Christian Science" in Germany, 383
Christmas gift, a, 7
Chromodiagnosis and the cerebrospinal fluid, 632, 749
Cigarette habit, 422
Cigars, danger in, 632
Cincinnati City Hospital, 998
Cinematograph, the, in surgery, 509
Civilization brings insanity, 556
Claudication, intermittent, a case of, terminating in gangrene, 661
due to obliterating arteritis, 392
Cleft palate, 205, 315, 315, 427, 472
Cleveland, O., Lakeside Hospital, 234
Climatotherapy, 1025
Clinical lectures on therapeutics, 435
Clymer, Dr. Meredith, 730
Coal miners, the, and the doctors, 95
Cobb, Carolus M., M. D. A discussion of the morbid condition of the upper respiratory tract resulting from the infectious diseases, 349
Cobb, J. O., M. D., The danger to the public from the ambulant consumptive, 753
Cobra venom as a remedy, 427
Cocaine and eucaine, 394
detection, 862
Codman, E. A., M. D. A study of the cases of accidental X-ray burns hitherto recorded, 138, 439
Cœliscopy, 633
Colitis, membranous, 698
Collins, Joseph, M. D. Remarks on the treatment of syphilis of the nervous system, 296
Colon bacillus, the identification of the, by reactions produced in culture media containing neutral red, 476
Colorado and the consumptives, 613
Columbia University Medical School, 1051
Columbian University, Washington, 557
Coma, a remarkable case of, probably due to acid intoxication sui generis, 1155
Commercial control of therapeutic serums, vaccine, etc., 150
Common sense, 949
Concentration camps, the, 157
Confetti and rice, dangers of, 1084
Congress and the doctors, 5
Conjunctival sac, bacterial symbiosis in infections of the, 1000
Conjunctivitis, granular, bolinic in, 922
membranous, 32
Connective tissue artificially produced by agar agar injections, 243
Consumption and butchers, 413
cure, 158, 198, 42
goats' milk in, 637
in Colorado, 973
open air treatment of, 88
prevention of the spread of, 602
pulmonary, early diagnosis of, 92
sanatorium burned, 953
supposed, 234
the struggle against, 1000
Consumptive, danger to the public from the ambulant, 753
the, Irish immigrant Boden, 566
what shall we do with the, 314
Consumptives, aid in treating, 512
desert climate for, 309
free hospital for poor, 466
hospital for, 82
needed in Long Island, 602
house for, in Colorado Springs, 156
isolated pavilion for, Blackwell's Island, 233
sanatoria for, 202
two new Canadian sanatoria for, 861
Contagion, one way to fight, 473
Conundrum, a, 858
Cooper prize, the Sir Astley, 310
Coplin, W. M. L., M. D., microchemical reactions of tube casts, 444
and J. Coles Brick, M. D., a branchial cyst, the wall of which contained a small hemangioma, 760
Copper in canned peas, 191
Cornea, curvature of the, 98
Corneal complications in conjunctivitis, report of several cases of, due to the Koch-Weeks bacillus, 765
Coronation, the, 1142
Coroner's inquest, the anachronism of the, 305
Corpus callosum, the, 570
Correction, a, 282, 569
and an explanation, 302
Correspondence, a, between Dr. Regis and Dr. Spitzka, 750
Corsets, a bill against, 546
Cortical localization, of topographical memory, 320
Costo-dextra fluctuans, 115
Counter drainage, 477
Cover glasses, a substitute for, 881
Cowa vara, double rudder, 1008
Crain, E. A., M. D. The tallest man, 462
Craniotome, a new trephine-like, 748
Crede silver therapy in gynecology and obstetrics, 21
Cremation, cost of, 52
Crematory needed, 196
Cretinism, 394
sporadic, with relapse, owing to omission of thyroid extract, 1039
Crime and finger prints, 418
Crippled children, a new school for, 8
Criticism, a, 84
Croftan, Alfred C., M. D. Some experiments on the formation of bile pigment and bile acids; a contribution to our knowledge of icterus, 75, 142
Crook, James K., A. M., M. D. Florida in February—Notes and impressions of a brief midwinter tour, 61
Croup without angina, 414
Cryoscopy, 158
Cuba, the health of, 960
Custom, a nasty, 995
Cutaneous diseases, therapeutics of, 564
Cyclopedias, comparative value of, 822
Cyst, extradural serous, following ancient fracture, 139
of the round ligament, 260
Cysticercus cellulosae under the retina, 432
Cystic swelling of the vesical end of the ureter, 480
Cystitis and colitis, 929
Cystoperitonitis, tuberculous, and ovarian cysts, 188
Cystoscope, a new, for both ureters, 473
Cystoscopy, suprapubic, 688, 736
value and dangers of, 484
Cysts of the tongue, congenital, 515
ureter, 887
Cytology, cytoscopy and hemolysis, 1048
Czolgosz, Leon F., the trial, execution, autopsy and mental status of, alias Fred. Nieman, the assassin of President McKinley, 31
Damages against a physician, 343
for the morphine habit, 552
of $30,000 for lost feet, 386
Dairy products, hygiene of, 649, 659
Dana, Charles L., A. M., M. D. A case of cerebral bulbar palsy, with a study of the localization of the tongue and lip centers, 275
Danger from fire and danger from firemen, 229
Danysz bacillus, the, 632
Davis, Edward P., A. M., M. D. Polyhydramnios; its differential diagnosis and treatment, with the report of cases, 883
Dead man's view, a, 773
Deaf-mutes, investigations among, 479
the offspring of, 776
Deafness, hysterical, 651
new treatment, 821
of middle ear origin, 639
Death and catalepsy, new method of distinguishing, 694
from lemon extract, 51
-rate of large European cities, 633
Deaths from vehicles, 158
in the Alps, 198
Deaver, H. C., M. D. Finger amputations, 542
Deaver, John B., M. D. Medical Education, 183
perineal prostatectomy, 706
Defecation made easier by external manipulation, 256
Defective children in Massachusetts, 88
Deformities due to muscular paralysis, 821
Degeneracy howl, the, 199
Degeneration, stigmata of, 970
Delaware State Hospital for Insane, 776
Delirium, acute, 200
Dementia, precocious, 45, 246
Dengue, 324, 796, 731
Dental anomalies, 783
caries causing necrosis of the inferior maxilla, 576
value in the pathology of, 1147
surgery, asepsis in, 736
Dentition, early, 882
Dercum, F. X., M. D. Hypochondria, 283
Two cases of adiposis dolorosa; one in a man complicated by epilepsy; another in a woman, presenting also chronic retinitis, 396
Dermatitis, blastomycetic, 929
pachymeningitis, 1087
Dermatomycosis and Allen's iodine test, 720
Dermatomycota, multiple, 107
Dermatosis, 657
Dermoid cysts, ovarian origin of, 780
and reproduction of, 98
Detroit Clinical Laboratory, 8

Diabetic coma, 413
Diabetes, 569
acid intoxication of, and prognosis, 318
adrenal, 651
and pregnancy, 699
the eye, 609
tuberculosis, 105
bronzed, 924
due to suprarenal capsules, 108
insipidus, animal gum in, 917
twin pregnancy, polyhydramnios and post partum hemorrhage, 887
renal, 1051
mellitus, 118, 350
the relation between the Islands of Langerhans and, 1006
Diagnosis, modern methods of, 241
physical, as related to dental college curricula, 1147
Diaphragm, the, 528
Diarrhea, epidemic, in an infant, treated by irrigation of the bowel, 55
summer, 781
Diatheses, in relation to infection, 574
Diazo-reaction, the, 1039
Digestive ferments, the use and abuse of, 1068
glands, utility of the work of the, 352
work of the, 866
Digital examination by the vagina in labor, 243
Digitalis, 95
in cardiac pathology, 820
Digitalis group, effect of substances of the, on the vessels, 921
Dimethylamidobenzaldehyde reaction, Ehrlich's, 651
Dimethylsulphuricesters, toxicity of, 921
Diphtheria, 51, 179, 195, 196, 233, 344, 425, 829, 908
an unusual case of, 943
antitoxin, duration of immunity by, 69
New York State, 556
efficacy of, 816
bacilli, the fate of, in the intestinal canal, 871
eruptions, 426
intubation and tracheotomy in, 969
statistics, 676, 828
theory, Behring's latest, 1007
toxin, cardiac death from, 1046
Diplobacillus, a, in cerebrospinal meningitis, 511
Diplococcic infection, 525
Discharges and douches, 1001
Disease, some atypical forms of, 1005
Disinfectants, experiments on, 862
Disinfection of localities inhabited by phthisical patients, 784
of libraries, the, 1037
new clothes, 426
versus vaccination, 995
Dissecting room cadavers, 99
Division of the fee, 230
Divorce in Europe, 72
Dixon, Dr. William C., 155
Doctor, a, in search of a sensation, 304
statue of a, for the Capitol at Washington, 349
the, and the soldier, 1021
in politics, 1052
Doctors and blackmailers, 341
the cheerfulness of, 395
trust, a, 775
Dog's hair on a child's head, 342
Dogs prevent suicide, 158
Dominion Medical Council, 637
registration, 512
Dose measures, popular, 352
Doubtful ward, the, of the Paris Children's Hospital, 868
Dougherty, S. W., M. D., 195
Charles W., M. D., twin pregnancy in a uterus bipartitus, 731
Dowie's daughter, death of, 992
Downes, Andrew J., M. D. Electrothermic hysterectomy, a correction, 997
Dropsy, combined fetal and maternal, 312
Drug-giving, the passing of, 243
Drummond, Dr. H. W., 731
Drunkenness, a legal definition of, 84
Dry points versus glycerinized virus, 729
Duane, Alexander, M. D. A correction, 251
Dubuque, Ia., new hospital, 997
Duckworth, Sir Dyce, M. D., LL.D. Rheumatic fever and its counterfeits, 28
Duclaux, Professor, 310
Dulles, Charles W., M. D. Note on the treatment of follicular tonsilitis 72
Duodenal ulcer, 12, 1069
perforated, 656
Dura mater, traumatic hematoma of, 1021
Durand, W. S., M. D. A case of herpes zoster ophthalmicus, 793
Dysentery, acute, a protozoon found in a case of, 574
in the United States, 964
as an acute infectious disease, 946
asylum, 517
Chronic temporary colostomy in, 702
epidemic, 529
in Japan, 256, 258
pathogenic unity of, 1067
Flehus's treatment of, 694
prophylaxis of, 881
rarer complications of, 530
sequels of, 825, 881
treated by rectal injections, 312
two epidemics in the Champs de Chalons, France, 1011
Dysmenorrhea, 1039, 1160
Dyspepsia, 704
following goiter operations, 355
Dyspeptic disturbances and disorders of the female genital tract, 969
Dystocia due to fibromata, 658
following ventrofixation, 97
Ear, an injury to the, 42
diseases, acute, 924
of children, 777, 873
of interest to insurance examiners, 913
Eberth's bacillus in the blood of typhoid patients, 63
Echinococcus, cyst, abdominal, 780
of the kidney, 524
disease in North America, 246
Eclampsia, 98, 294, 921
Eczema, 248, 426
infantile, the neurotic element in, 14
Eddyism dethroned, 151
Edematous catarrh, epidemic of, 861
Edsall, D. L., M. D. A remarkable case of coma, apparently due to acid intoxication, see page 55
The relation of [illegible] and xanthin bases to gout and the [illegible] acid diathesis, 756
Edward VII, the case of the
the case of for the
Ehrlich's theory of immunity, criticism of, 881
Ensler, Dr. Observations on leprosy in the United States, 963
Elbow fractures in children, 965
Elective system in the [illegible] for [illegible] a school of medicine, 734
Electric light, 89
and internal infection, 700
ozonation, 243
shocks, 592, 641
Electricity and chloroform, 228
static in treatment of [illegible], 79
Elephantiasis in a Siamese dancer, 649
Elmira Reformatory, the, 567
Embalming fluid, the new, 654
process, a new, 51
the cost, 976
Embolism of the superior mesenteric artery, 96
Emergency medical and surgical, [illegible]
Emigration from Germany, 96
Encephalitis, acute hemorrhagic, 748
Encephaloceles, sphenoidal and ethmoidal, 139
Endometritis, 70, 652, 96
vegetative mitral, etc., 656
Engelmann, George J. [illegible] fecundity concomitant with the progress of obstetric and gynecic science, 121
English, Dr. Thomas [illegible], 62
English addresses, recent, on coronation regulations, 784
visitors, 684
Enlargement of the hands and feet of neuritic origin, 742
Enteritis, primary phlegmonous (streptococcus), 698
Enterocolitis with hydrocephalus, 77
Enterococcus infection, general, 78
Enuresis in females, 190
Epidemic disease, new, passing down on the Illinois, 692
Epidemics, French registration of, 512
Epilepsy, 159
cases presenting night terrors and, 41
a new method of treatment for, 220, 784
exhaustion paralysis in, 77
facial, followed by temporary unilateral paralysis of the face and tongue, 1061
influence of food on, 228
length of life in, 544
Poehl's opocerebrin in, 774
serotherapy, 518
traumatic, 1065
Epilepsy, tendency to [illegible] 32
Epileptics, [illegible] asylum, home for, 999
[illegible] of, 96
in the Government Hospital for the Insane, 984
proposed home for, 80
Epiphysis, traumatic separation of the, in childhood, 36
Epispadias in hepato-cirrhosis with ascites, 965
Epistaxis, chronic, 13
Epithelioma and sycosis of the face, 117
cutaneous, treated by X rays, 246
of the scalp, 42
Sebaceous, in a dog, 146
[illegible] of the ovary, 886
Erysipelas, bacteriology of, 717
in Marburg, Md., 379
the negro, 243
not raging in Chicago, 156
Erythema induratum scrofulosorum, 102
nodular, of uremic origin, 247
Escherich, Professor, opening portion of, 484
Eshner, Augustus A., M. D. Two cases [illegible] in the case of [illegible] in which [illegible] 1021
Eskridge, Dr. J. T., 157, 421
Esophageal stricture, 314, 698
Esophagus, [illegible] and cardiospasm, 87
Esophagus, [illegible], 85
electrical stricture of the, 1021
paralysis of the [illegible], 371, 741, 745
spastic stenosis of the [illegible] in, 1148
ulcer of the, 429
Essential oil, the, forming the base of perfumes, 423
Ether, [illegible] and cupric bromide, 919
[illegible]
Evisceration in a 4 month fetus, 170
[illegible]
Expert testimony, 599
[illegible]
[illegible]
Eye, artificial, [illegible] of a gold [illegible] for holding artificial eye, 784
Eyeball, the, with [illegible] degeneration of the tissues, 581
preventing [illegible] in the, 1067
[illegible], 1021
Eyelids, plastic surgery of the, 566
[illegible] of the [illegible] and general [illegible]
Eye muscles, test of the equilibrium of the, 80
Eyes, hereditary syphilitic affection of the, in the second generation, 28
[illegible]
Facial [illegible], 34
[illegible] of, in [illegible]
[illegible]
[illegible] laws [illegible]
[illegible] the U. States, 1021
Fat, [illegible] of the
embolism after fracture, [illegible]
[illegible]
Fees, [illegible] of the, 96
Fermented [illegible] treatment with the [illegible] of [illegible] and [illegible], 1021
[illegible] and [illegible], 1021
Fetal [illegible], 97
Fever, [illegible] of, [illegible]
Fever, [illegible] of, 1021
Fever, [illegible], 1021
Fever, [illegible], 1021
Fever, [illegible],

Fitzgerald, Sir Thomas, 234
Flat-foot, device for determining, 645
Flick, Lawrence F., M. D. A Congress on Tuberculosis, 950
The implantation of the tubercle bacillus, 536
Flint murmur, the, 22
Florida in February notes and impressions of a brief midwinter tour, 61
State Board of Health, 422
Folie du doute, two cases of, 987
Folliculitis exulcerans serpinginosa nasi, 1047
Food factor, the, as a cause of health and disease in childhood, 202
preservatives, 1048
products from diseased animals, 15
the, in a Vienna restaurant, 1018
Foot and mouth disease of cattle, 514
Footwear, proper, for weakened and flat-feet, 166
Foreign bodies accidentally left in the abdominal cavity, 740
in the eye, 237
a new localizer for determining the position of, by the Roentgen rays, 213
results of X-ray diagnosis and of operation in injuries from, 208
tympanum, 21
body in the bronchus, 243
esophagus, 817
lung, 776
a case of, diagnosis confirmed by radioscopy, 803
nose, 113, 690
pharynx, 188
postnasal cavity, 1143
Foundling children of France, 472
Fourth disease, is there a? 415
"Fourth disease" of Dukes, with report of an atypical outbreak of scarlet fever, 938
Fowler's solution causing erythema, 253
Fox, L. Webster, A. M., M. D. A new localizer for determining the position of foreign bodies in the eye by Roentgen rays, 213
Fracture, effect of, upon circulation and temperature, 827
of the carpal end of the radius, 243
clavicle, 248
humerus, 917
left parietal bone, 170
metacarpal bone, 395
neck of the femur, 111, 915
semilunar cartilage, 778
skull, 696
without external wound, 458
Fractures of the clavicles, unsuspected symmetrical, 1048
vertebrae, 653
portable frames for treatment of, 63
unnoticed in children, 96
France, divorce in, 10
old people in, 236
population of, 10
Fredericksburg, Va., Mary Washington Hospital, 196
Free Hospital for Poor Consumptives, 19
French Guinea hospital, 953
Fresh air, 89
Friedreich's ataxia, 239
Funerals in Paris, 310
Furunculosis, etc., treated with staphylococcus vaccine, 689
Fussell, M. Howard, M. D. Osteitis deformans, 1135
Galway, Captain Sir T. J., K. C. N. G. C. B., 158
Galway County Hospital, 158
Gall-bladder and bile-ducts, surgical treatment of remote results of inflammation of the, 965
empyema of the, 865
hyatid disease of the, 472
surgery of the, 394
suturing the, 783
-stones, 917
the surgery of, 865
traumatic rupture of the, 429
Ganglion cells, morphology of the, in the rabbit, 318
Gangrene after scarlatina and other infectious diseases, 107, 1007
angiosclerotic, 429
dry, of the left leg, 683
following thrombosis of the abdominal aorta and its branches, 1147
moist, a case of; its treatment, 721
peripheral, in phosphorus poisoning, 649
primary, of the tonsils, 1146
spontaneous, of both lower extremities, 955
Gastralgia, the nature and anatomical seat of, 1076
Gastric acidity, 1092
atony, 250
conditions, some, as found in forty healthy persons, 1064
glands, peripheral reflex of the, 432
splashing, 115, 250
surgery, 135
ulcer, 387, 387
feeding in, 515
perforating, simulating appendicitis, 427
Gastritis, chronic hypertrophic, of syphilitic origin, 115
chronic nonalcoholic, 1002
pneumococcic, 779
Gastrocolic fistula, 20
Gastro-enterostomy with entero-enterostomy, 202
-intestinal diseases, 394
-jejunostomy, conditions found 6 years after, 431
Gastroptosis and gastric motor insufficiency, 174
Gastrostomy, 1048
a new method of performing, 458
Gastrotomy for removal of foreign bodies, 693
Gelatine as a nutriment, 825
effect of digestion of, on its styptic properties, 823
hemostatic qualities of, 20
Genital prolapse, 260
Genius and insanity, 1023
George, Jr., Conrad, A. B., M. D. The treatment of inoperable tumors, 64
Georgia Journal of Medicine and Surgery, 468
German citizens of Chicago, 467
universities, 310
Germicide, a new, 8
Germs in street cars, 861
on fruit skins, 732
Gersuny's paraffine injections, 739
Gestation, ectopic, remarks on early, 135
Gibney, V. P., M. D., LL.D. Diagnosis and management of some of the more common lesions of the adult knee, 829
Gift, a great, 52
to an infirmary, 686
Glanders in human beings, diagnosis, 254
New York, 601
Glandular secretions, internal, 871
Glaucoma and thrombosis of the retinal veins, 237
chronic, cases in which operation is not advisable, 162
operations, 788
resection of the cervical sympathetic for, 864
Gleason, John H., M. D. Abdominal hysterocolpectomy, a new operation for removal of cancer of the cervix uteri, 1123
Gleet, 164
Gliomatous change in the olfactory tract, 106
Glossitis, chronic, silver nitrate and chromic acid in, 1005
Glycogen, deposition in the liver of rabbits, 652
Glycolysis, 701, 918
Glycosuria, adrenalin, 240, 864
in life insurance, 21
suprarenal, 166
Goddard, Dr. Kingston, 155
Goiter, 915
acute exophthalmic, 605
exophthalmic, radical cure of, 1032
dislocation method, Woelfler's, modification of, 224
Goldsborough, Dr. Griffin Washington, 1113
Goltman, Abraham, M. D. The treatment of pneumonia in children, 949
Gonococci in the blood of gonorrheal polyarthritis, 650
Gonococcus, the diagnostic uses of, 1003
Gonorrhea, 112, 202, 378, 686, 779
Eucho in, 657
of the prostate, 781
the role of the prostate gland in, 74
urethral hemorrhage in, 1086
Gonorrheal infection of the prostate, 391
rheumatism, 870
Good, J. Lewis. The Philadelphia Board of Health, 1034
Gorgas, W. C., M. D. The propagation of yellow fever by mosquitoes, 25
Gout, acute, metabolism in, 570
spa treatment of, 130
Gouty albuminuria, 420
Government Insane Asylum, 9, 860
Governor, a wise, 193
Grant, Sir James, 157
Grateful patients, 680
Gratwick Laboratory, Buffalo, 343
Gravenhurst Consumptives' Hospital, 468
Gray hair and emotional states, 516
Great Britain, how will, deal with the invalid soldier? 4
"Green stone," operations upon the, 1014
Greenwich Isolation Hospital, 308
Gregory, Dr. E. H., 234, 344, 636
Griffith, Frederic, M. D. Two cases of hydrocele presenting unusual features, 1067
Griffith, J. P. Crozier, M. D. Rubella and the "fourth disease," 659
Gross, the Samuel D., surgical prize, 87
Groton, Mass., Old Ladies' and Children's Home, 948
Ground-itch and the larvae of the ankylostoma duodenale, 311
Guiana wood and gum, 921
Gumma of the frontal lobe with Jacksonian epilepsy, 260
Gummata, multiple nodular, of the palms, 801
Gunshot wounds of the knee joint, 959
small caliber, in the Boer war, 1045
Guy's Hospital, 198
Gynecological patients in general hospitals, 697
Hadra, B. E., M. D. Outline of the surgical treatment of acute pancreatic injuries, 140
Haeckel, Professor, a statue to, 424
Hagerstown, Md., Hospital, 196
Haines, the case of Mrs., 678
and the medicolegal relations of arsenic, 704
Hair, why it turns gray, 235
Hairpin, surgical uses of the, 644
Hallberg, C. S. N., Ph. G. Suicide in Chicago, 1034
Hand disinfection, alcohol in, 1044
Handkerchief, suppression of the, 167
Hannibal, O., new hospital at, 59
Harbin lectures, the, of the Royal Institute of Public Health, 346
Hare-lip, 971
Harland, W. G. B., M. D., and Charles H. Burnett, M. D. Somnolence caused by an ear lesion, 584
Harlingen, Arthur van, M. D. Remarks on vaccination in relation to skin diseases and eruptions following vaccination, 184
Hartford Hospital, 387
Harvard Medical School, 304, 386, 557, 776
University, 196, 233
Hatfield prize for original research, 232
Havana, health of, 416
International Sanitary Congress, 808
tuberculosis hospital, 235
Hay fever, suprarenal extract in, 1147
Hayden, James R., M. D. Venereal diseases, 510
Hayes, Dr. T. Heyward, 196
Headache relieved by correction of refraction error, 13
Health in the Philippines, 309
of the army, 685
reports, 42, 78, 146, 224, 300, 336, 378, 414, 478, 504, 548, 594, 630, 676, 722, 768, 806, 852, 898, 944, 990, 1036, 1106
service, an American international, 5
Heart dilatation of the, 746, 747
etc., as a result of rheumatism, 113
in children, 746
disease, congenital, 114, 605
valvular, during compensation, 960
with syphilis and gonorrhea, 693
hypertrophy and dilatation of the, 745
murmur and posture, 604
physiological, produced by the electric light bath, 643
neuroses of the, 960
of the child, 347
on the wrong side, 196
origin of the first sound at the base of the, 167
orthodiagraphic investigations upon the, 960
outline of the, 656
penetrating wounds of the, 190
prolonged action of the, maintained by artificial respiration without other signs in a newborn infant, 12
rupture of the, 49, 693
strain, 95
surgery of the, 43, 772, 790
suture again, 1030
the so-called fatty, 251
traumatic diseases of the, 1046

Heat from cold water, 513
Hedonal as an hypnotic, 118
Helmholtz, Hermann von, 431
the profession's debt to, 508
Hemagglutinins of normal serum, 703
Hematemesis, injection of normal salt solution, 687
Hematocele, suppurating, 112
Hematology, 110
Hematoma, retriperitoneal, resembling an ovarian cyst, 1047
retro-uterine, forming an obstacle to delivery, 17
Hematometra in the right horn of a uterus duplex, 526
Hematoporphyrinuria, 856, 882
Hematuria, 474, 737
congenital hereditary and family, 911
Hemicrelss, a, cromelic, 260
Hemiplegia, hysterical, 55
Hemoglobinometer, a new, 648
Hemoglobinuria, experimental, caused by a bacterial toxin, 12
Hemolysis in heterogenous serum, 250
produced by certain bacteria, 427
Hemolytic experiments, 427
substances, clinical use of, 694
Hemophilia, 776
treated with calcium chloride, 955
Hemorrhage treated with suprarenal capsule, 65
Hemorrhages, 690
Hemorrhoids, internal, 607, 783
Hemostasis, electrothermic, in vaginal hysterectomy for cancer, 961
Hepatic insufficiency, 491
Heredity, a study of, 1071
the question of, 251, 316
Hermaphroditism, lateral, 701
Hermophenyl, 481
Hernia, 516
bilateral inguinal, 922
diaphragmatic, a case of, 767
diverticular, 12
gangrenous, excision of the abdominal wall, 255
gastric, 971
inguinal, unusual complication of, 642
and femoral, 111
improvements in operations for, 1011
congenital, 714
interstitial, 749
the worsted truss for, 695
lateral abdominal, 254, 572
left cecal, 112, 477
lumbar, 250
obturator, of the bladder and Fallopian tube, 834
right cecal, 783
ruptured abdominal, 429
strangulated umbilical, 212
the congenital factor in, 1086
Heroic Irish doctors, 84
Herpes zoster, 117, 247, 548
and internal inflammation, 916
in tuberculosis, 548
ophthalmicus, a case of, 593
Hill, G. Everett. A criticism of Dr Baxton's paper on the bacterial purification of sewage, 994
Hingston, Sir William, 157
Hip luxation, congenital, 252, 482, 597, 824
sudden, in acute rheumatism, 458
traumatic perineal right, 312
Hirst, Barton Cooke, M. D. Results of operative treatment for the different forms of puerperal sepsis, 120
Hirsuteness, universal, 689
Histological specimens, rapid preparing, 39
Hilleary, J. G., M. D. The blessings of a state quarantine against tuberculosis in Colorado, 728
Hodgkin's disease, fever in, 58
Hoeftmann's clinic in Koenigsberg, report, 480
Holmes, Rudolph Wieser, M. D. A new method of tamponing the uterus post partum, 132
Homeopathy, none in Japan, 197
Homily, a short, 771
Honthin as an antidiarrheal drug, 1076
Hook worm, a new species of, 867
Hopkins, George G., A. M., M. D. Light and radiance in the treatment of disease. The treatment of carcinoma by Roentgen rays, 626
Hospital, a model, 12
a new, 8
floating, 907
contagion in typhoid fever, 77
dedicated, 684
frauds, 386
quarantined, 7
ship, a new, 1143
ships of the Metropolitan Asylum Board and smallpox, 472
Hospitals for the insane in New York, the proposed change in the administration of, 321
the liability of, for damages, 854
two big, 907
House of Delegates, the, 1078
Howe, Lucien, M. D. On the desirability of further data concerning the prevention of ophthalmia neonatorum, 140
Huber, Francis, M. D. A case of foreign body in the lung. Diagnosis confirmed by radioscopy, 803
Huger, William E., jr., M. D. The Justus test for syphilis, with report of cases, 849
Hughes, Alfred, memorial medal, 99
Hughes, D. E., M. D., and Elizabeth Lovelace, M. D. The use of methylene blue as a sedative, 732
Hugo prize, the, 198
Humanity, a crime against, 459
Humerus, suturing the head of the, to the acromion, 428
Hunsberger, J. Newton, M. D., and D. H. Bergey, M. D. An unusual case of diphtheria, 943
Hydramnios with twin pregnancy, 147
Hydroa gestationis due to staphylococcus albus, 199
Hydrocele, bilocular, 857
double, and an inguinal, 247
radical cure of, by carbolic acid injections, 698
two cases of, presenting unusual features, 1167
Hydrochloric acid curve, the influence of the, by the quality of the nutrition, 671
the formation of, in the human stomach, 417
Hydrogen peroxide in [illegible] tuberculous abscess, 47
surgical uses of, 793
Hydronephrosis, 1049
Hydrophobia, 197, 398, 820, 871
Hydrotherapy, 520
scientific, and water cure, 1145
Hygiene and theology, 994
public, 698
Hyperchlorhydria, 1148
Hypersecretion in chronic [illegible] hyperchlorhydria, 114.
Hypertrophy of the faucial and pharyngeal lymphoid [illegible] 1145
Hypnotics, 644
Hypnotism, 903
therapeutic value of, 79
Hypnotize to, degenerate [illegible] 52
Hypochondria, 283
Hypodermic injections, 240
Hysterectomy, 161, 165, [illegible]
electrothermic, 961
a correction, 456
supravaginal abdominal, 284
for fibroids, 349
vaginal, in early pregnancy, 697
Hysteria, 189
and insanity, 1051
and malaria, 724
in animals, 1141
physical and psychogenetic [illegible] ances in, 1066
the, of panic, 808
Hysterical pseudophthisis, 320

Ice-pack, the, and its defects, therapeutic advantages over other methods, 412
Identification of criminals through the fundus of the eye, 79
Idiocy, a case of profound, 854
Ileus, 224
Iliac arteries, internal, anatomy of, 90
Immigrants herring discussed, 867
discussed, 731, 1082
Immigration, the, of the [illegible] classes, 1011
the rising tide of, 811
Immortality of the soul, a physiological argument for, 340
Immunity, 260
in infectious diseases, Metchnikoff's theory of, 525
Incubation, etc periods of [illegible] tious diseases, 1067
Indianapolis Methodist Hospital, 92
Indians, killing the, 381
Indigestion, nervous, or gastric neurasthenia, 522
neuropathic, accidents of, 867
Inebriate women, help for, 731
Infant feeding, 1002
feeding and the albumin of cow's milk, 572
life, dietetic aphorisms for, 823
mortality, 732
excessive, society to prevent, 424
great, 310
in Russia, 248
St. Petersburg, 432
the premature, [illegible]
the smallest in New York, 1143
Infantile atrophy, raw milk in, 829
mortality statistics, 963
Infants, the care of, 1167
Infection carried in books, 468
from hearing memory, [illegible]
systemic, by the paracolon bacillus, 1002
Infections produced by the staphylococcus aureus and the streptococcus, 649
Infectious diseases, 460, 904, [illegible]
etiology of, 761
in York, 332
Inflammation, and sclerosis, 96
Influenza, abdominal type of, 399
in London, 469
some rarer complications of, 72
with measles, 253
Information wanted, 760
Inhalation apparatus of Wassmuth, 824
Inhibition, the role of [illegible]
Injury to the median nerve, 767
Innominate artery, ligature of the, 695
Inquest on a mummy, 811
Insane, autopsies on the, 466
care of the actually, 396
hospital new, 344
of St. Petersburg, 645
operative indications in the, 465
politics, 380
state care of the, 690
the in Wisconsin, 967
treatment of, in Philadelphia, 868
Insanity and divorce, 128
forms of, in India, 84
in twins, 1083
[illegible] treatment of, 948
[illegible] in treatment of, 868
syphilitic, 247
[illegible] of the defective, 835
Insufficientia pylori, a sequela of chronic [illegible] with report of 12 cases successfully treated, 1027
Insurance against disease and the physician, the
Internal [illegible] of the, 638
International Congresses of American States, second, 423
[illegible] for treating, 427
[illegible] on the, 1082
[illegible] of the, 867
[illegible] 871
bacteria giving the [illegible] reaction, 702
calculi, 171
[illegible]
fermentation in the [illegible] of bile upon the intestines, 77
[illegible] of, 171
[illegible] 72, 827
[illegible]
[illegible] a [illegible] band compressing the [illegible]
[illegible]
due to gall-stones, 313
[illegible] 288
following appendicitis, 741
successfully treated with [illegible] 836
[illegible] due to [illegible] 187
treated with atropine, 422, 1048
occlusion, 712
[illegible] of the, 574
[illegible] with [illegible] enteritis, 793
[illegible]
[illegible] 767
Intestine, [illegible] resection of, 636
[illegible] resection of the, 288
large, [illegible] with report of case, 474
small, [illegible] affecting the, 79
the, in the [illegible]
the small, the cause of death in strangulation of, 1167
Intestines, absorption of fat in the, 768
[illegible]
Information wanted, 383

Intracranial lesions, traumatic, 96
Intra-uterine injections, 248, 393
Intubation, prolonged, 686
Invagination, 424
Invalids, hotel for, in Chelsea, N. J., 195
Investigator, a disgusted, 635
Iodin, a reagent for recognition of, 784
reaction, in bacteriological diagnosis 562
Iodism, acute, resembling mumps, 224
Iodoform and carbolic acid poisoning, 697
Iodolen, therapeutic value of, 82
Ireland, the depopulation of, 90
Isodynamic law, the, 870
Jackson, Edward, M. D., the palpebral reaction of the pupil, 85
Thomas W., M. D. A case of bubonic plague, recovery, 627
Four cases of extra-cantonmal malarial infection at West Point, N. Y., 715
Traumatic meningitis with effusion cerebral convulsions double trephining, recovery, 899
Jacksonian epilepsy, the value of, in the topographical diagnosis of cerebral lesions, 457
Jacobi, Dr. Abraham, 844, 907
Japan's orphans, 9
Jarrett, Dr. James H., 776
Jaundice, 25, 112, 130, 286
Javal, Dr. E., 10
Jaw, upper, resection of the, 260
Jefferson Hospital, 307
Medical College, 88, 907, 1082
Jejunum, rupture of the, 516
Jenkins, Norburne B. Asthenopia, Graduated tenotomy, Prisms 836
Jez' antityphoid extract, 748
Johns Hopkins Hospital, 8, 196, 908
University, 387, 468, 861
Johnston, James C., A. B., M. D. Precancerous keratosis probably due to X-rays, 220
W. W., M. D., 557, 685
Joint derangement, 911
diseases, acute, of infancy, 781
Jopson, John H., M. D. Should we license training schools for nurses? 553
Journal of nervous and mental disease, 170
Journalistic enterprise, a word about, 1079
Jump, Henry D., M. D. Duration of immunity by diphtheria antitoxin, 69
Justus test, the, for syphilis, with report of cases, 849
value of, with report of cases, 846
Kankakee, Ill., Insane Asylum, 908
Keen, Dr. W. W., 155, 636
Keene, N. H., Elliott Hospital, 684
Kemper, G. W. H., M. D. What constitutes septic poisoning in accident policies, 328
Keratosis nigricans, 828
precancerous, probably due to X-rays, 220
Kidney, anchoring the, 866
bladder disease in infancy, 644
bilateral cystic, 567
heredity of, 1092
changes after laparotomy, 234
complications of typhoid fever, 844
disease and the cardiovascular system, 103
growths, 168
hypernephroid tumors of the, 1047
methods of incising, etc., 347
movable, 168, 347, 671
a cause of acute dyspepsia, 13
prolapsed, fixation of, 16
purulent infections of the, 820
surgery of the, 728
unilocular cyst of the, 254
Kidneys, dietetic treatment of diseases of the, 606
use of methylene blue in testing the functions of the, 742
Killbourn, Clarence L., M. D. Some reasons for considering the vermiform appendix as a gland 889
Kinyoun, Dr. J. J. 785, 984
King, Dr. Sterling H., 1037
King, the, and the crusade against consumption, 81
the illness of the, 1144
Knapp, Dr. Hermann, 556
Knapp, Mark L. Insufficiency pyloric, a sequela of chronic gastritis, with report of 12 cases successfully treated, 932
Knee joint, auscultation of the, 165
contractures and ankyloses of the, 771
internal derangement of, 160, 472, 696
Knee, the adult, diagnosis and management of some of the more common lesions of, 859
Koch, argument against, 383
the influence of, 881
the last blow to the theory of, 1149
the tuberculosis theory of, 130
Koch-Weeks bacillus and the influenza bacillus, 515
Koenig, Professor Franz, 559
Korsakow's psychosis [illegible], 369
Kraus case, the [illegible]
Kryptoscopy, a simple [illegible]
Kuester incision, the, 19
Kussmaul, Professor Adolf, 68, 136
Festschrift, 559
Labor, how to conduct normal [illegible]
in private practice [illegible]
Laboratory for the study of the abnormal classes, 960
Labyrinthine, suppurative [illegible]
Lachrymal apparatus, [illegible] of the, reflex, the, 861
Lactation, atrophy of the glands, 251
Lactose and glucose in the urine, 8
Laennec Hospital, Paris, the medical clinic at the, 834
Laminectomy, 459
Lancashire Lunatic Asylum, 188
Lane, Dr. C. L., 387
Lannelongue, Professor, honored, 31
Laparotomies, needless, 26
Laryngeal stenosis, 131, 703, 740
stridor, congenital, 700
Larynx, external operation on the, 816
Latah among South African natives, 240
Laval University, 631, 861
Lead poisoning, chronic, 921
experimental, cerebral lesions in, 560
in electricians, 1010
in Milton, Mass., 236
Le Breton, Prescott, M. D. A second contribution to the study of anesthesia by nitrous oxide gas and ether, 586
Leffmann, Henry, M. D. Food preservatives, 1068
The Hadden case and the medicolegal relations of arsenic, 704
Legal triumph, a, 991
Leonard, Charles Lester, M. D. The accuracy of the negative Roentgen diagnosis in case of suspected calculous nephritis and urethritis, 222
Leper, Chinese, cured, 998
colony at Guam, 969
family, spontaneous cure in a, 736
immigrant, a, 1036
island, the Philippine, 513
Lepers, national home for, 399
Leprosy, 731, 861, 910
and congenital symmetrical keratodermia, 311
anesthetic, 827
cause of, 603
cure which failed, 309
the Holy Land, observations on, 974
the United States, 603
new treatment for, 679
Lerch, Otto, A. M., M. D., Ph. D. Acquired pulmonary lues, 74
Letters on the breakfast table, 773
Leukemia, 428, 481
acute, 28
myelogenous, 1047
lymphatic, culminating in streptococcus infection, 152
splenic, and phthisis in the same subject, 958
the estimation of the, 1051
Leukocytes in disease, 899
Leukoencephalitis, epizootic, in horses, 974
Leukolytic serum from a case of lymphatic leukemia, 852
Leyden, von, in honor of, 586, 939
Levy, I. Harris, Ph. B., M. D. A case of intermittent claudication, terminating in disease, 661
Lewis, Dr. Louis, 386
Lewis, G. Griffin, M. D. Tricuspid atresia, 1163
Robert C., M. D. Intestinal calculi, 151
Library books baked, 791
Lichen planus hypertrophicus, 97
Liebig and Pasteur, 7
Light and radiance in the treatment of disease III. The treatment of carcinomatous growths by Roentgen Rays, 626
pressure of, 513
research and light therapy, 109
ultraviolet, 649
waves, 89
Lightning stroke in South Africa, 311
Linnean Society, gold medal of the, 1144
Lipoma, hard, in the pharyngolaryngeal region, 248
Liquid air as a freezing medium, 1001
Lithemia and uricemia, 656
in childhood, 828
Lithiasis, latent renal, 27
Lithium carbonate, the manufacture of, in the United States, 903
Lithotripsy in children, 11
Liver, acute abscess of the, 689
cancer, primary, in a patient with [illegible] cirrhosis, 789
changes following renal impermeability, 657
cirrhosis [illegible]
alcoholic, 523
in childhood, 969
cardiac, 478
fatal statistics of, 1091
hypertrophic, 331
in infants and adolescents, 373
floating, 911
injuries of the, 98, 749
percussion of lower border of the, 313
prolapsed, the case of the gall-bladder to restore, 609
rupture of the, 98
surgery of the, 782
testing of the function of the, 257
tumors of the, 315
Liverpool school of tropical medicine, 362, 469
University, the proposed, 686
Lloyd, James Hendrie, A. M., M. D., and T. Percival Jerson, M. D. A case of cerebellar tumor, 298
Lloyd, Samuel, M. D. The surgery of the spine, 290, 332, 374
Locomotor ataxia, the condition of the posterior ganglion in, 999
the return of walking in, with re-education, 1028
Loeb and the new biology, 531
the case of Professor, 633
Loftan, Lucien, A. B., M. D. A case of moist gangrene; its treatment, 721
London, health of, in 1901, 91
hospital, 770
St. Thomas Hospital, 198
the poor of, 744
Ont., Insane Asylum, 408
Long Island College Hospital, 972
Loomis, Bruce W., M. D. Rational Therapeutics, 719
Louisiana Leper Home, 196
Purchase Exposition, St. Louis, 254
Ludwig's angina, complicating typhoid fever, 16
Lues, acquired pulmonary, 74
Lumbar puncture in cranial injuries, 548
tuberculous meningitis, 117
region, topography of the, and lumbar puncture, 1050
Lunacy bill in New York, the, 365
commission, an omnibus, 220
20 years' war against, 1079
Lunatics, detention of, in workhouses, 94
diet for, 7
Lung development of the child, 1005
dilatation of the, 736
Lungs, auscultation of the, parallel and simultaneous, 118
Lupus erythematosus cured by X-rays, 176
institute for the treatment of, 759
vulgaris, X-rays and urea in, 562
with epithelioma, 658
Lymphadenoma fever in, 1053
Lymphangiectasis of filarial origin, 311
with enormous overgrowth, 687
Lymphangioma, congenital, 897
Lymphoid and extraction, tubercular 117
Lymphoid nodes, reaction of the, in children, 850
Lymphocytes, the active motion of, 573
Lymphocytosis without glandular enlargement complicated with pneumonia, 107
Lymphoma, malignant, 481, 826
Lysidonnate, 255, 256
Lysoform, 564
McBride, J. H., M. D. Exhaustion paralysis in cholera, 1117
MacCormac, Sir William, 779, 1041
McCarthy, D. J., M. D. The supra-orbital reflex, 389, 588
McCarthy, D. J., M. D., and A. P. Francese, M. D. Facial facial epilepsy, followed by temporary paralysis of the face and tongue 1079
McDonald, Carlos F., A. M., M. D., and Edward Anthony Spitzka. The trial, examination, autopsy and mental status of Leon F. Czolgosz,

[illegible] Fred Nieman, the assassin of President McKinley, 31
McClintock, Joseph M. D., Information wanted, 56
The pleasures of knowledge, concerning books and authors. A synoptical index of the literature of the past fifteen years, 529, 569, 605, 641, 682
McGill University, 51, 177, 468, 637, 952
McKinley's doctors' bills, 557, 860
Macclesfield Infirmary, 158
Madison, Wis., schools, 784
[illegible], Dr., [illegible]
[illegible], 727, 752, 785
[illegible] Imperial Army, term of, 752
Italian Society for the study of, 686
in Corsica, 562
Italy, 350
nephritis in, 16
pernicious, 521
prophylaxis of, 145
skin eruptions in, 567
to fight, 1083
[illegible] fever, 753, 801
in St. Lucia, 311
New Orleans method for the, 567
polyneuritis, 1008
[illegible] cholera in the, 799
[illegible], a successful, 631
Malignant growths, the theory of traumatic origin of, 561
Malnutrition, its showing in congenital syphilis, 761
Manchester, a visit to, 285
Manganese, the absorption of the, 573
Manhattan Maternity Hospital and Dispensary, 760
Manila, the sanitary census of, 788
Manley, Thomas H. P., Jr., M. D., A critical debate on scalp wounds and cranial and brain injuries, 285
Mann, Alfred M. D., A further report on cases of tuberculosis treated by intravenous injections of sodium cinnamate, 80
Man's original habitat, 908
Manual for prevention and prevalence, 467
Marine Hospital service, [illegible], 48, 49, 50, 88
appropriations, 637
at Buffalo, 263
Pittsburg, 49
Savannah, 122
Marrow- and spleen-cells and nucleoli, 780
Martinique, the disaster in, 824
the mode of death at, 880
Maryland Hospital for Consumptives, 196
the insane, 51
Massachusetts physicians, 1087
State vaccine, 208
Massage, 694, 880, 924
Mastoid [illegible] infection, [illegible], 921
suppuration, the necessity of [illegible] in, 392
Matchmakers, the care of the health of, 795
Maternal impressions, 928, 1008
Maternities and lying-in asylums, 160
Mattawa Hospital burned, 51
Maxillary antrum, chronic suppuration of the, 856
Mayor, a, quarantined, 50
of San Francisco, the, 683
Meacham, Dr., 752
Measles, 990
complications and sequelæ of, 912, 962
in Alaska, 364
Exmouth, 72
Flushing, L. I., 795
French army, 544
Norwood, Pa., 814
schools, 974
Wisconsin, 51
Woodbury, 750
not smallpox, 486
spread of, 732
Measure, a ridiculous, 727
Measurements of Chattanooga school children, 296
Meat differentiation with the aid of specific serums, 278
Mechanical support to weak ankles of children, 995
Meckel's diverticulum and ileus, 240
intussusception of, 872
Medals of honor in the United States army, 264
Medford detention hospital burned, 208
Medical developments announced in the daily press, 962
article, the, of the future, 1031
clinical instruction in the colleges, 4
Club, Pharmaceutical, 76
colleges, [illegible], 47
in St. Louis, 1003
corps of the army, vacancies in the, 784
[illegible], 400
[illegible] three years in Yale, 80
[illegible] study for [illegible], 240
department of the Buffalo Exposition, 147
director of the St. Louis World' Fair, 257
Directory of Nurse Associations, 736
education, 480
and the State, 644
in China, 961
[illegible] in [illegible], 80
[illegible] in Japan, 1003
[illegible] of [illegible], 47
inspection of schools, 736
Journal, [illegible], 1
legislation, 48
[illegible] from the United States Board, 310
[illegible], 1
[illegible] in [illegible], 1
[illegible] in Boston, The [illegible] of the, 1
[illegible] in the United States army, 257
[illegible] in China, 1
[illegible], 1
[illegible], 1
[illegible] and Surgical Society, 1
[illegible] and [illegible], 1
students' congress at Liege, 310
work in Labrador, 1
[illegible], 517
[illegible], 1, 1, 1, 1, 1, 1
Meeting, the at Saratoga, 1
[illegible] of the [illegible], 1
[illegible], 1
[illegible], 1
Melancholia and the hormone theory, 921
Melena neonatorum, [illegible] in, 1
Memorial hospital, 1
to the Empress of [illegible], 1
Memphis disease, [illegible], 1
Meningeal hemorrhage in hemophilia, 837
Meningitis, [illegible] in, 1
[illegible], 1
[illegible], 1
[illegible], 1
with [illegible], 1
[illegible], 1
delayed after skull injury, 1
[illegible], 1
tor, sensory and psychic disturbances, 232
[illegible] with [illegible], 1
[illegible] and [illegible] recovery, 1
[illegible], 1
[illegible], 1
Mental aberration, sudden and temporary, 1
[illegible] the responsible and punishment of the, 1
disease, 1
[illegible] progress of, 1
Meriden Hospital, [illegible], 1
Merchant's Marine Hospital, 1
Mercury and the native compounds of, in the [illegible] Study with a method of estimating, 747
recovery of from [illegible] tissue, 1
Mesenteric cyst, 521
Metabolism and light-therapy, 1
[illegible] of, 1
Metchnikoff, 1
Metrorrhagia, [illegible], 1
partial intestinal obstruction, with remarks on the use of [illegible] in intestinal [illegible], 1
Methylene blue, 1, 1
Metrodin, the smallest, 1
Microbes in the morning mouth, 792
Microscopic [illegible] the presence of [illegible] of the principal factors in, 1
Micturition, [illegible] as a cause of, 1
Milk, [illegible] on the [illegible] of pneumonic [illegible], 1
Microsporia, 571
Middeldorpf, [illegible] of [illegible] small prostate, 1
Midwifery, unnecessary antiseptic treatment in, 1
Migraine, [illegible], 1
Milk, [illegible], 1
and [illegible] supply, 1
and sanitary regulations for, in the District of Columbia, 1
certified, 1
diet in adult life, 1
[illegible], 1
[illegible], 1
[illegible], 1
[illegible] of [illegible] on the quality of, 1
pasteurization of, 1
[illegible], 1
[illegible], 1
soluble ferments in, 1
[illegible] of, in pneumonic [illegible], 1
[illegible] of [illegible] under possible temperatures, 1
[illegible], 1
[illegible] and [illegible], 1
Milk-sickness, 1
Milliener, Frederick H., M. D., [illegible] the [illegible] on the [illegible], 1
Miller, D. S., Miller, M. D., [illegible] of [illegible] ing acute croupous pneumonia, 186
Miller, J. [illegible], M. D., [illegible] Surgical [illegible], 1
[illegible], 1
Miller, Dr. [illegible], 1
Mills, Charles K., M. D., and G. E. Pfahler, M. D., [illegible], 1
Milwaukee Children's Hospital, 957
[illegible], 1
[illegible], 1
[illegible], 1
Minneapolis [illegible], 1
Minnesota Surgical Hospital, 1
Mirror, [illegible], 1
Mitral [illegible] complicating with intermittent [illegible], 1
obstruction, 1
[illegible], 1
Monuments and [illegible], 1
Mortality, [illegible], 1
[illegible], 1
[illegible] Board of Health, 345
[illegible], 1
[illegible], 1
[illegible], 1
[illegible], 1
[illegible] with [illegible], 1
[illegible], 1
[illegible], 1
Mount Sinai Hospital, 1
Mouth, [illegible], 1
Morphine [illegible], 1
Morrell, Harry, M. D., Puerperal myelitis [illegible] following abortion, 1
Morrison, [illegible], 1
[illegible] treated with hyoscine, 1
[illegible] treated with salt solutions, 1
Mortality in Nevada mining camps, 422
[illegible] the [illegible], 1
Moscow Pasteur Institute, 784
water, 1
Moser, W. M. D., A [illegible] discharging [illegible], 1
Mosquitoes, [illegible] the report of the, of New Jersey, 1
Mosquitoes, 1
[illegible], 792
[illegible], 1
[illegible], 1
[illegible], 1
[illegible], 1
[illegible], 1
[illegible], 1
[illegible], 1
Mulberries, 1142

in Brookline, Mass., 997
in Long Island to be exterminated, 692
New Orleans, 1143
music-loving, 508
plans for the extermination of, 750
Motor cranial nerves in the crus cerebri, 642
Mould fungi in the stomach, 18
Moulton, A. R., M. D. Attempted self-castration in an insane patient, 983
Mount Pocono Hospital, 256
Mouth and throat affections associated with the fusiform bacillus, 945
Movement, disturbances of, 602
Mucin in affections of the nose, throat and ear, 735
Muir, Dr. W. S., 657
Mundé, Dr. Paul F., 397
Muscle, striated, inhibition of the contraction of the, 342
Muscles, diseases of the, 70
paralysis of, the persistence of negative work in, 1050
Muscular dystrophy, two cases of progressive, in brother and sister, 1023
Myasthenia, 1038
gravis, 226, 278, 606, 1009
ophthalmoplegic, 1085
Myelitis following acute encephalomyelitis, 743
Myeloma, multiple, 654
Myelorrhaphy, Dr. Stewart's case of, 991
Myers traveling stewardship, 198
Myiasis intestinalis, 593
subcutaneous, 864
Myocardial lesions in uremia, 320
Myocarditis, chronic, 95
Myoma of the round uterine ligament, 319
Myomectomy, the indication for, in young married women, 475
Myopia, 1089
Myositis fibrosa, 477
ossificans, the role of the periosteum in, 652
so-called multiple progressive, ossifying, 480
Myotonia congenita, 435
Myxedema, 102

Nacher, George, 571
Nail, surgical removal of the, 917
Narcolepsy, 94
Narcosis, "Dropp", 18
Narcotics, the action of, 44
Nasal cavities, asymmetry of the, 24
chambers, osteomyites of the, 906
deformities, corrected by paraffine injections, 910, 913
obstructions, 817
polypi, suppuration of sphenoidal cells with, 917
septa, etiological factors in the production of deflected and deformed, 352
septum, deflections of the, 475, 816
operations for, 1005
sinusitis, 450
Nasopharyngeal gland, hemorrhages following removal of the, 647
National examiners, board of, a voluntary, 837
examining board, 991, 1012, 1087
health service, 156
Nations, the, in their cups, 278
Nausea and vomiting following ether anesthesia, prevention of, 792
Naval Hospital, Annapolis, 512
Needle forceps, 729
how to extract a, from the finger, 320
mania, the, 947
Negro question in Cuba, the, 725
Negroes going South, 71
Nencki, Marcel von, 571
Nentski, Professor M. V. Death of, 73
Nephrectomy, 344
indications for, 864
nephrolithomy and lithomy, 11
partial, 347
Nephritis, 1148
acute influenzal, 51
chronic, 568
early acute syphilitic, 967
etiology of, 1050
in certain of the specific fevers, 191
malaria, 16
Nephro-ureterectomy, 206
Nerve fiber stains, the preservation of, 1148
overirritation as a cause of autointoxication, 354
Nervous disorders and local disease, 608
toxic dosage in some, 865
Neuralgia, electric treatment of, 503
in Trenton, 88
Neurasthenia, 414
[illegible] 636, 757
prevention of, after [illegible] operations, 415
Nevrectomy for facial [illegible]
Neuritis and polyneuritis [illegible]
intracranial thrombosis [illegible] of optic, 688
multiple, 290
occupation, in the [illegible] process, 143
peripheral, tetanus [illegible] toxic serums upon, 156
Neuralgia, overgrowth of, 156
Neurological Department [illegible]
Symposium, a, 220
Neurologists, at the, 880
neuroses caused by [illegible] alcoholism, 196
Neurosis, autotoxemic [illegible] the, 315
pain in the, 657
Nevus verrucosus, 171
and complaints of [illegible]
New Brunswick, new [illegible]
department, a, for the [illegible] year, the, with its [illegible]
New York Polyclinic Hospital [illegible]
charity organizations of, 88
College of Physicians and Surgeons, 997
cosmopolitan character of, 396
General Memorial Hospital, 352
Harlem Hospital, [illegible]
Infant Asylum, 88, [illegible]
Juvenile Asylum, [illegible]
milk supply of, 196
Mount Sinai Hospital, 736
new Lying-in Hospital, 456
Ophthalmic and Aural Institute, 466
Orphan Asylum, 264
Post-Graduate Hospital, 88
private smallpox hospital, 344
St. George's Episcopal Home and Hospital, 602
St. Vincent's Hospital, 127, 776
Vital statistics of, 50
waifs, 456
Women's Hospital, 583
Newborn infant, the assimilation of the, 969
Newton, Mass., Hospital, 968
Nicaragua and Panama canals, the, 47
Nietert, H. L., M. D. The surgery of the heart. With presentation of a case, 590
Nitrogen, the fixation of, 1080
Noble Hospital, Westfield, Mass., 196
Noma, an epidemic of, 22
North Carolina Board of Public Charities, 9
Western Hospital, 70
University Medical School, 397
Norwegian Hospital, Brooklyn, 88
Nose, deformity of the, 454
diseases of the, 420
repair of defects of the alae of the, 917
Notes, 52, 197, 345, 469, 545, 557, 685, 792, 861
foreign, 91, 91, 235, 310, 909, 954
Nothing, if not critical, 1140
Nucleoproteids and nucleinic acid, 18
Nursemaids, school for, 196
Nurses and matrimony, 341
for lepers, 235
trained and untrained, 1
diploma mill for, 771
State control of, 470
training school for, [illegible]
of the colored home and hospitals, 220
the training of, 678
Nursing power, the, of the women of our time, 922
Nutritive preparations, some new, 825
Oakland, Cal., new hospital, 224
Obesity of adolescence, 108
Obituary, 10, 52, 90, 157, 197, 275, 309, 345, 423, 469, 544, 585, 661, 685, 732, 777, 845, 881, 969, 993, 1044, 1067, 1084, 1141
foreign, 72, 91, 91, 178, 198, 198, 236, 310, 310, 355, 423, 424, 47[illegible], 471, 559, 749, 804, 829, 886, 886, [illegible] 777, 816, 862, 954, 1008, 1084, 1144
Obscureness in science, 772
Obstetric forceps and tuberculous lungs, 196
the, 127
Obstetrics and surgery, 81
in England, 544
teaching of, in Paris, [illegible]
the future of, in America, 999, 1147
Ocular affections as [illegible] with glycosuria, 740
lesions associated with constitutional diathesis, 96
pain, 238
O'Hara, Dr. Michael, 691
Old people in the city, 198
Oliver monument, [illegible] 36
Ontario Board of Health, 157, 345, 731
Death Rate of, in 1900, [illegible]
Hospital Association, 743
Medical Library, 344
Operations, remarkable, 708
Operative medicine, the teaching of, in some American universities, 852
Ophthalmia neonatorum, 82, 664
caused by the Morax and Axenfeld diplobacillus, 906
in 5,061 schools, 881
on the desirability of further data concerning the prevention of, 140
Ophthalmic practice, ammonium chloride solution in, 692
Ophthalmoscopy, progress of, 259
Ophthalmoplegia, [illegible]
Ophthalmoscope, the, 108, 108, 450
the Thorner stereoscopic, 344
Opinions, on the [illegible]
Opsonins, Dr. Hedrich, 639
Oppenheimer, Dr. Seymour, 50
Orations, the shield, 1039
Orbital abscess, chronic, 1049
tumor, a rare, 636
Ord, Dr. William Miller, 999
Organotherapy, 818
Orthopedic cases, 353
operating table, 489
Osler, Wm. M. D. Note on the occurrence of ascites in solid abdominal tumors, 928
Osteitis deformans, 22, 301, 322, 789, 1135
of the knee, the effect of, on growth of the limb, 755
Osteoarthritis of the hip in children, 923
Osteomalacia, 274
of the vertebra, primary acute, 353
Osteomyelitis, 913, 1005
Osteopaths, a bill to license, 196
Osteopathy, 8
at the World's Fair, 637
defeated, 397
in Iowa, 636
Ohio, 770
Osteosarcoma of the inferior maxilla, 476
Osteosarcomata, 179
Otology, 79
Ovarian dystrophy, 739
preparations, effect of, 728
transplantations, 729
tumor with spontaneous rupture, 911
Ovariotomy in pregnancy, 55, 389
Owen's College, Manchester, 579
Oxalic acid, 573
excretory, the source and solubility in the urine of, 744
in human beings, 397
Oxford as a medical center, 724
Oxygen at Niagara Falls, 1082
Oysters, the infection of, by sewage, 726
Packard, Frederick A., M. D. On a possible cause of meteorism and partial intestinal obstruction, with remarks on the use of eserine in intestinal atony, 929
Paget, Sir James, Essays and addresses, 559
Palsy, cerebral bulbar a case of, with a study of the localization of the tongue and lip centers, 255
Panama and Nicaragua Canals, the, 55
Pan-American Exposition Hospital, 7
Pancreas, surgical treatment of injuries, etc., of, 372
Pancreatic cysts, 378
disease, 206, 131
organotherapy for the fatty stools of, 744
injuries, acute, outline of surgical treatment of, 140
Papilloma of the carunculae, 99
Paraffine, subcutaneous injections to correct nasal deformities, 910, 913
Paralysis agitans improved by hyoscine, 819
Brown-Sequard's, from stab-wound, 520
complete and temporary, of the limbs in a child, 108
crossed, in syphilis, 656
facial, 773
in diphtheria, 583
infantile pseudo bulbar, 20
myasthenic, following influenza, 827
of the internal and external branches of the spinal accessory nerve, 897
lower extremities, calling supports of the, 966

peripheral anesthesia, 318
facies, 677
progressive unilateral ataxia, 64
psychic, 65
spastic spinal, fourteen cases of, occurring in one family, 1149
toxemic cessation of general, 368
Paralysis, treatment of, 273
Paralytic apparatus for the, 645
Parasitic disease in horses, mules and cattle, 681
Paratyphoid, 203
Parenchymatous absorptions, 320
Paresis, 351, 392, 942, 951, 992
Paris doubtful ward, diseases observed in, 1158, 1155
Parisian American Hospital, 370
world, 363
Parkhill, Dr. Cleveland, 157, 331
Parotitis, epidemic, 250
Parturition injuries of, immediate repair of, 133
Pasteurelloses of the rabbit, 146
Patent medicines and their dangers, 386
Pathogenic germs transmitted by the common house fly, 914
Pathological exhibit, the, at Saratoga, 1141
Pathology from the clouds, 1079
sentimental, 850
Patrick case, the, 678
Patrol ambulance, the, 866
Pelvic arthritis of puerperal origin, 326
disease before and during labor, 351
prevention of, before and during puberty, 351
fracture during labor, 697
inflammatory diseases after marriage, prevention of, 351
suppuration, 428
Pelvis, contracted, premature delivery in, 923
the female, 565
Pemphigus, etc., 522
Penis, fracture of the, 432
plastic operations on, 254, 254
Pennsylvania Hospital, 532
for the Insane, 121, 412, 636
Medical Examination Board, 626
Penrose, Dr. Thomas Neilo, 363
Peptone in the urine, 570
Pericarditis, acute, 574
diagnosis of, 314
obliterative, report of a case of, with hepatic enlargement and ascites, 485
suppurative, following appendicitis, 696
surgical treatment of, 694
tuberculous, 146
Pericardium, healed fibrous adhesions of the, 916
Perihepatic suppuration, 1028
Perineal section, in stricture, 395
Perineum, tears of the, 14, 14, 14
Peritoneal cavity, natural method of draining the, 100
Peritoneum, black vomit in inflammation and injury of the, 317
Peritonitis, acute general, 431
diffuse, resulting from appendicitis, 206, 388, 446
monocellular septic, 969
perforative, in an infant, 897
pneumococcic in adults, 2
purulent and empyemal, 918
tuberculous, new treatment of, 189
Perityphlitis, 387
Pettenkofer memorial, a, 664
Pfahler, G. E., M. D. The bacteriology of erysipelas, 717
Phantom tumors, the diagnosis of, 14
Pharmacology, instruction in, 25
Pharmacopeia, U. S., digest of criticism of the, 24
Pharmacy, practical, for the physician, 963
Pharyngitis, acute primary infectious, 740
Phelps, Dr. Charles Seymour, and cavernous, 959
Phenylhydrazin, 257
Philadelphia Almshouse and Hospital for the Insane, 907
associated health officers and sanitary officers, 814
Board of Health, the, 163
Charity ball, 87
Children's Hospital, 556
contagious diseases in, 88, 601, 684
Episcopal Hospital, 192, 121
German Hospital, 332, 512
health of, 421, 450, 730, 775, 907, 957
Jewish Hospital, 962
Hospital, 76, 126, 195, 1103
Medico-Chirurgical Hospital, 811
Methodist Hospital, 155, 85
Municipal Hospital, 386, 907, 907, 907
city leper of, dead, 49
Orthopedic Hospital, 487
Pathological Society's exhibit, 147
Polyclinic Hospital, 126, 1145
Presbyterian Hospital, 75
Rush Hospital, 905
Samaritan Hospital, 195
Temple College of, Medical School, 421
Woman's Medical College, 987
Philippine army, the, 514
Philippines, health of the, 9, 350, 469
Philosophy and diet, 787
Phimosis, complications of, 1089
Phlebitis in syphilis, 1000
Phlegmon and fistula of the lower jaw, 317
Phloridzin diabetes, 920, 920
Phosphoric acid excretion in animals, 920
Phosphorus, indications, etc., 657
influence of, on organic substance in pills, 560
Phrenic nerve injury, 945
Phthisical patients, fecal examinations of, 700
Phthisis, activity of, accelerated by excision of [illegible], 578
hydrotherapy of, 1041
iodin in, 559
metabolism of [illegible] and magnesium in cases of, 1000
morbific, 734
prevention and cure of, 1000
rest and motion in, 1000
temperature in, 534
the mitigated-heat method of the treatment of, 1000
therapy, 955, 957
Phthisis pituitosa, etiology of, 1000
Physical Culture, a [illegible] examination of, 442
Physician a prime minister, 1038
an aged, 156, 602
and blackmail, 72
duty of the, to himself, 132
for 61, suit for, 1000
taxes of, in Virginia, 1000
the oldest in the United States, 59
the originality of, 1000
the Navy, 1, 99
with shell-lock, 1000
Physicians, foreign, at London, 123
in Siberia, 1038
want a new law, 1000
Pick, Professor A. The treatment of paralytic attacks, 273
Pickett, William A. M., M. D. Paresis, 951
Pineapple, the, in disease, 1084
Pinguecula, 499
Pittsburg Mineral Hospital, 748
Municipal Hospital, 1152
Pituitary body, the pressor substance of the, 447
Placebo, an account of, 1000
Placenta previa, 55, 1000, 1044
Plague, 196, 197, 574, 1000, 1000, 1000

Psychic phenomena, the study of, 227
Psychical conditions, abnormal in children, 778, 817, 863
Psychology of Ibsen, 733
Psychoses, the, and the genital sense in women, 228
Pubic joints, relation of the, during pregnancy, 58
Public health organizations in the United States, 94
Puerilism, paroxysmal mental, 524
Puerperal eclampsia, 199, 863, 957
venesection in, 957
hemorrhage, 957
infection, 739
insanity, 561, 605
myelitis, 79
report of a case following abortion, 138
patient, management of the, 24
sepsis, acute, 642
and antistreptococcus serum, 782
results of operative treatment for the different forms of, 120
toxemia, 957
Pulmonary circulation and variations in cardiac activity, 640
edema, acute suffocative, 200, 390
emboli, following operations for appendicitis, 825
embolism, 643
hemorrhage treated with injections of paraffine, 647
regurgitation, 312
Pulque for consumption, 558
Pulse curve, the, and the influence on color sensation, 697
during pregnancy, 251
frequency, change in the, from mechanical causes, 572
irregular, 741
method of counting, 167
Pupil, the palpebral reaction of the, 85
Pupillary reaction, the lid-closing, 825
Purgatives, direct introduction of, in operations for septic peritonitis, 92
Puro, 784
Pyelonephritis, nephrectomy for, 458
Pylorectomy for gastric cancer, 1009
Pyloric stenosis, 300, 961
Pylorus, cicatricial stenosis of the, 1048
Pyramids in man, the function of the, 572
Pyrogallic poisoning, 649
Quackery, an epidemic of, 89
and the missionaries, 856
at the fair, 680
Quacks and aristocrats, 634
in Germany, 599
Quarantine against Cuba, none, 811
Board's annual report, 87
regulations of the United States, 909
the study of, 606
Queen's University, Kingston, 88, 730
unsanitary residence, a, 1084
Rabies, 315
in Moscow, 9
vaccination against, in the Pasteur Institute, N. Y., 642
Race, the coming, 8
Rachicocainization, 78, 78, 78, 259
Racine, Wis., Hospital, 51
Radioscopy in interlobar pleurisy, 1092
Railway accidents in the United States, 731
Randolph, B. M., jr., M. D. The administration of anesthetics, 5
Raynaud's disease, 22, 241, 915
Reaction, a new, for some of the reducing substances in the organism, 697
Reciprocity in medicine, 308
Rectal valve, the, and obstipation, 474
Rectovaginal fistulae, new method of operating, 1088
Rectum, infection of the, 102
perforation of the, into the peritoneal cavity, 1041
Reed, Boardman, M. D. The place of drugs in the treatment of stomach troubles, 1067
Reeve, Dr. R. A., 861
Reflex frontal or supra-orbital, the, 312
Reflexes, cutaneous and tendon, 725
in childhood, 993
in the face and head, 612
the state of the, in total transverse lesions of the spinal cord, 770
Reflux after gastro-enterostomy, 355
Regenticides not abnormal as a class. A protest against the chimera of degeneracy, 261
Relapsing fever in Algiers, 1076
Remedial agents in use, need of more knowledge concerning, 1004
Remedy worse than the disease, 1081
Remittent or "Pretoria fever" so-called, 426
Renal calculus, some points relating to, 365
complications of acute diarrhea in childhood, 1088
disease and nervous affections, 568
electricity in, 164
function, the, 968
disturbed, influence of, on the bile, 999
insufficiency, 108
secretion in certain zymotic diseases, 168
Resolution to accept decorations, 308
Respiration, artificial, by intralaryngeal intubation, 166
case of exceedingly rapid and very slow, 1009
Respiratory failure, acute recurring, in the newborn, 113
gymnastics, 352, 432
methods, 567
tract, auscultation of the, 1043
medication of the, 521
the upper. A discussion of the morbid condition of, resulting from the infectious diseases, 940
Retina, the, of an anencephalus, 146
separation of the, 826
Retinal lesions of chronic interstitial nephritis, 349
Retinitis, albuminuric, 167
Retrodisplacement, the etiology of, 45
Revaccination, 423
susceptibility to, 200

REVIEWS.

Abel, Carl, M. D. Gynecological pathology, 232
Allchin, W. H., M. D., London. F. R. C. P., F. R. S. Ed. A manual of medicine, 86
American year book of medicine and surgery, 683
Anders, James M., M. D., Ph. D., LL.D. A text-book of the practice of medicine, 342
Baker, M. N., Ph. B. C. E. Municipal engineering and sanitation, 384
Budgett, Sidney P., M. D. Essentials of physiology, 49
Cabot, Richard, M. D. A guide to the clinical examination of the blood for diagnostic purposes, 231
Casson, Herbert N. The crime of credulity, 1035
Cheadle, Walter Butler, M. A., M. D. Some cirrhoses of the liver, 154
Chester, Frederick D., M. D. A manual of determinative bacteriology, 682
Climates and baths, the, of Great Britain, 858
Coblentz, Virgil, Ph. D., F. C. S. A manual of volumetric analysis, 86
Corlett, William Thomas, M. D., L. R. C. P., London. A treatise on the acute, infectious exanthemata, 48
Cotterel, Edward, F. R. C. S. The pocket Gray, or anatomist's vade mecum, 465
Craig, Charles F., M. D. The estivo-autumnal (remittent) malarial fevers, 193
Curschmann, Dr. H. Typhoid and typhus fevers, 995
Da Costa, John C., M. D. Clinical hematology, 555
Delafield, Francis, M. D., LL.D., and T. Mitchell Prudden, M. D., LL.D. A handbook of pathology, anatomy and histology, with an introductory section on post mortem examinations and the method of preserving diseased tissues, 600
De Laurance, L. W. Hypnotism, 906
De Meric, H. Syphilis and other venereal diseases, 6
Dickson, Charles R., M. D. First aid in accidents, 194
Doederlein, Dr. Albert. Leitfaden fuer den geburtshilflichen Operationskurs, 683
Dorland, W. A. Newman, A. M., M. D. Modern obstetrics: general and operative, 774
The American Illustrated Medical Dictionary, 154
Duenas, Dr. Joaquim L. Diagnostico de la fiebre amarilla, 859
Duerck, Privatdozent Dr. Hermann. Atlas and epitome of special pathologic histology, 951
Ellis, Havelock, L. S. A. Studies in the physiology of sex, 384
Enrico, Dr. Secreti. Infiammazioni e tumori, 560
Fischer, Louis, M. D. Infant feeding, in its relation to health and disease, 1036
Fox, Henry A., A. M., M. D. Photographic atlas of the diseases of the skin, 630
Fowler, George Ryerson, M. D. A treatise on appendicitis, 48
Gaylord, Harvey R., M. D. The principles of pathological histology, 464
Goodhue, E. S., M. D. Out of the pigeon hole, 1036
Gotthell, William S., M. D. Syphilis, its diagnosis and treatment, 47
Gradle, Henry, M. D. Diseases of the nose, pharynx and ear, 1081
Hardessy, Irving, Ph. D. Neurological technique, 861
Hektoen, Ludvig, M. D., and David Riesman, M. D. An American text-book of pathology, 995
Herter, C. A., M. D. Lectures on chemical pathology in its relation to practical medicine, 429
Hirst, Barton Cooke, M. D. A text-book on obstetrics, 6
Holmes, Edmund W., A. B., M. D. Outlines of anatomy, 601
International clinics, 85, 729
International Medical Annual, 859
Jennings, Oscar, M. D., M. R. C. S. On the cure of the morphia habit, 231
Jewett, Charles, A. M., M. D., Sc. D. Manual of childbed nursing, with notes on infant-feeding, 1036
Jewett, Charles, M. D. The practice of obstetrics by American authors, 774
Kelsey, Charles B., A. M., M. D. The surgery of the rectum, 956
Keysor, William W. A medico-legal manual, 554
King, Preston, M. D. Bath waters, 385
Kyle, T. Braden, M. D. A text-book of diseases of the nose and throat, 49
Lehmann, Prof. K. B., and Dr. R. O. Neumann. Atlas and principles of bacteriology and text-book of special bacteriologic diagnosis, 305
Lockwood, George Roe, M. D. A manual of the practice of medicine, 511
McDonald, Arthur. Criminology, 510
Marshall, John Sayre, M. D. Principles and practice of operative dentistry, 728
Mason, R. Osgood, A. M., M. D. Hypnotism and suggestion, in therapeutics, education and reform, 950
Medical Record visiting list, 48
Medicine series, a practical, of year books, 600
Mercier, Charles A., M. B., M. R. C. P., F. R. C. S. Psychology, normal and morbid, 996
Mitchell, S. Weir, M. D., LL.D. Circumstance, 153
Morton, Henry H., M. D. Genito-Urinary diseases and syphilis, 1082
Neff, M. I., A. M., M. D. A brief manual of prescription writing, 430
Nichols, John Benjamin, M. D. A manual of clinical laboratory methods, 153
Osler, William, M. D. Practice of Medicine, 1035
Palmer, Margaret D. Lessons on massage, 5
Park, Roswell, M. D. A treatise on surgery by American authors, 682
Peterson, Reuben, M. D., and Henry F. Lewis, A. B., M. D. Practical medicine series of year books, 996
Porter, William Townsend, M. D. An introduction to physiology, 951
Practical medicine series of year books, 859, 950, 996
Proceedings of the New York Pathological Society, 6
Washington Academy of Sciences, 48, 1036
Quain's dictionary of medicine, 951
Raymond, Joseph Howard, A. M., M. D. Human physiology, 306

Rabogliati, A., M. A., M. D., F. R. C. S. Aphorisms; definitions, reflexions and paradoxes, medical, surgical and obstetric, 549
Reference Handbook of Medical Sciences, 1082
Reid, G. Archdall, M. B. C. M., F. R. S. E. Alcoholism, 239
Riley, Cassius M., M. D. Toxicology, the nature, effects and detection of poisons, with the diagnosis and treatment, 635
Robinson, Byron, B. S., M. D. Landmarks in gynecology, 86
Savage, G. C., M. D. Ophthalmic myology, a systematic treatise on the ocular muscles, 813
Schaeffer, Dr. Oskar. Anatomical atlas of obstetrics with special references to diagnosis and treatment, 47
Schaeffer. Atlas and epitome of labor and obstetrics. Saunders' question compounds, 6
Schaefter, Dr. Richard. Haendedesinfectionsfrage, 86
Shoemaker, John V., M. D., LL.D. A practical treatise on diseases of the skin, 194
A practical treatise on materia medica and therapeutics, 342
Simon, Charles E., M. D. A manual of clinical diagnosis, by means of microscopical and chemical methods, 429
Sollmann, Torald, M. D. A text-book of pharmacology and some allied sciences, 341
Sternberg, George M., M. D., LL.D. A text-book of bacteriology, 419
Struempell, Dr. Adolf. Practice of medicine, 1035
Swan, John M., M. D. A manual of human anatomy, 690
Tallqvist, T. W. Hemoglobin scala, 814
Thornton, E. Q. Dose-book and manual of prescription writing with a list of the official drugs and preparations, etc., 87
Transactions of the American Microscopical Society, 6
Surgical Association, 194
Association of American Physicians, 601
Medical Society of California, 511
Georgia, 465
Texas, 385
Vermont State Medical Society, 1063
Vallery-Radot, Rene, the life of Pasteur, 813
Variola, vaccination, varicella, cholera, erysipelas, whooping cough, hay fever, 495
Walsh, David, M. D. The Roentgen rays in medical work, 859
Wheeler, Marianna. The baby; his care and training, 465
Williams, Francis H., M. D. The Roentgen Rays in medicine and surgery, 342, 1035
Zabludowsky. Technique of massage, 48
Zuckerkandl, Dr. Otto. Saunders' Medical Hand Atlas. Atlas and epitome of operative surgery, 1035
Rhein, John H. W., M. D. Two cases of folie du doute, 987
Rheumatic affections of the vertebrae, 897
disease of the maxillary joint, 113
fever and its counterfeits, 28
Rheumatism a cause of epistaxis in children, 472
acute articular, 239
with pyemic temperature treated with antistreptococcus serum, 1166
asbesto sheathing on warships to prevent, 513
chronic, 563
counterfeits of, 1
remedies, 776
tubercular, 355
Rhinitis, vasomotor, 573
Rhinoplasty, partial, 458
Rhodes, Cecil, and the University of Oxford, 727
benefactions, 681
was he a paranoiac? 724
will, 732
Rib resection in empyema, 783
Richardson, H., M. D. Hepatic insufficiency, 191
Richardson, Dr. Ida E., 860
Richmond Beach, Staten Island, 907
Rickets, the age of, 60
Riga's disease, 950
Right man, the, in the right place, 2
the, of a municipality to compel persons with infectious diseases to go to a hospital, 30
Rinehart, J. F., M. D. Treatment of epithelial skin cancers and sycosis nonparasitica with the X ray, 221
Ringworm, 239
Rio de Janeiro, sanitation of, 758
Rixey, Dr. Presley M., 267, 398
the successor of, 487
Roberts, John B., M. D. A case of adiposis dolorosa, 761
Robin, A., M. D. The young physician, 799
Rodman, William L., A. M., M. D. Voluntary board of assistant examiners, 807, 887, 1062
Roe, W. J., M. D., and Geo. W. Spencer, M. D. A case of ascites, due to hepatic cirrhosis, treated by transplanting the omentum between the peritoneum and abdominal wall, 409.
Roentgen diagnosis, negative, the accuracy of the, in case of suspected calculus, nephritis and urethritis, 999
of encephalic lesions, 225
therapy, 961
Roos, Lester L., M. D. The ice-pack and its definite therapeutic advantages over other methods, 342
Rosenberger, Randle C., M. D. The identification of the colon bacillus by reactions produced in culture media containing neutral red—Observations on reactions of other bacteria on the same media, 446
Royal Infirmary, Edinburgh, 514
visitor, another, 728
Rubella and the "Fourth Disease," 699
scarlatina and "Fourth Disease," 73
Rum drinking, decline in, 790
Rupture of the central tendon of the biceps, 673
traumatic, of the liver and spleen, 844
Rush Medical College, Chicago, 936
Russian Medical Society, 733, 1038
Russki Vratch, the, 77
Sachs, B., M. D. Scleroderma and sclerodactylia, 280
Sacrifice made by Chicago girls, 156
Saddle nose, 244
Sailer, Joseph, M. D. The relation of the tubercle bacillus to pseudoleukemia (Sternberg's disease), 615, 669
Salicylates, administration of the, 259
Saline solution, intravenous infusions of, 820
Salmon, D. E., D. V. M. Human and bovine tuberculosis, 812
Salt, something about, 10
Samaritan Hospital, 814
Sanatoria for narcotic and alcoholic patients, 286
public, 145
Sanatorium for disabled soldiers, national, 998
for medical missionaries, 234
Sanitation, administrative problems in, 826
in Japan, 706
Ohio, 234
our large cities, 732
municipal, some problems in, from an executive standpoint, 889
Sarcoma of the larynx, primary, 102
root of the tongue, 136
tail of the pancreas, 745
upper jaw successfully treated with the toxins of erysipelas and bacillus prodigiosus, 816
uterus, 783
wall of the thorax, 44
primary, of the esophagus and stomach, 316
omentum, the clinical report of a case, 1132
vagina, 427
recurrent, with apparently spontaneous cure, 349
report of a primary, of the small intestine, 896
Saratoga, 1079
Sarcosporidiosis in the mouse, 654
Scalp wounds, a clinical lecture on, and cranial and brain injuries, 881
Scarlet fever, 814
in Chicago, 234
Jackson, Pa., 155
jail, 308
Kenosha, Wis., 1050
Maryland, 238
Millville, N. J., 466
New York, 196
Philadelphia, 814
Rheims, 694
on a training ship, 569
the "Hohenzollern," 30
the supposed infectivity of desquamation in, 775
traumatic, 1059
to study, 70
Schamberg, J. F., M. D. An outbreak of chickenpox among children, evidencing the non-identity of varicella with smallpox, with remarks upon the relationship of these two diseases, 942
School children less acute in high classes, 556
examinations, 522
girls, health of, 690, 691, 691
hygiene, 986
diseases incident to, 200
sanitation and hygiene, 570
Schott, Max, M. D. A test for syphilis, 858
Schuh, Martin J., M. D. An extraordinary case of trauma in a pregnant woman, 774
Sciatica, surgical treatment of, 942
Science in America, 536
in the interest of, 422
Scleroderma and sclerodactylia, 280
Sclerotomy, anterior and posterior, 912
with iridectomy, 868
Scoliosis, 880
Scopolamine v. Morphia, 1065
Scotch kilt, the, for stomach troubles, 777
Scurvy, 20
on a raft in the Arctic, 991
on Alaska, 70
infantile and marasmus, 114
Sebaceous cysts, 197
Secretions, 271
Self-mutilation attempted in an insane patient, 881, 1064
Semon, Judge, test for, 15
Semilunar cartilage, forward dislocation, 344
Semmelweis, a memorial to, 694
Senn, Dr. N., gift of, 177
his work recognized, 656
Sensory areas, the, of the brain cortex, 226
Sepsis following abortion or labor, 967
Septic infection and resistance to poisons, 202
poisoning in accident patients, 2
wire sutures, 928
Septicemia, streptococcic, 481
Serum cure for scarlet fever, 998
human, for diseased animals, 782
Serumtherapy, principles of, 451
Sewage, disposal of, by irrigation, 1067
in relation to the Lake Michigan water supply, 404
report on the same, 404
the disposal of, 546
Sex in crime, 1017
Sexual abuse among school children, 17
Shumel, J. Y., M. D. Insufflation after suppuration, 152
Shelton, John T., M. D. Intestinal obstruction caused by a mesenteric band encircling the ileum, 349
Shoemaker, George Ellis, M. D. A case of amputation at hip-joint for osteosarcoma of femur, 481
Short, Dr., experiments of the, in bacteriology, 1038
Shumway, Edward A., M. D. Report of several cases of surgical complications of septicopyemia due to the Klebs-Loeffler bacilli, 705
Siamese twins, another example of, 70
now, 484
Sick soldiers in Manila, 51
Sidney, the, 474
Sigmoid flexure of the colon and rectum, congenital atresia of the, 97
Silver nitrate, a new substitute for, 85
Simmons, M. S., M. D. Vena, the Phoenix whiskey, 172
Sinkler, I. Wharton, M. D. Myasthenia gravis pseudo-bulbar paralysis, 578
Sinus thrombosis, operative treatment of ear disease, 759
Sinuses, accessory, partial, 652
Skeleton, articulated, in London, 468
Skin, a man's, bought, 284
diseases, the, 778
ultra-violet light on, 208
signs of the, in certain common diseases, 1021

Skull, the, of Sir Thomas Browne, 382
traumatic defects of the, 254
trephining, osteoplastic, for brain tumor, 1028
wound, perforating gunshot, recovery, 827
Sleeping sickness, the, 656
Smallpox at Charter house school, 603
Yale, 196
case of Dr. Immanuel Pfeiffer, 507
pay for a, 386
cases, difficulties in, 81
clinical instruction in, 423
contracted by antivaccinationists, 997
cure, a, 777
diagnosis, 201, 598
differential, 93
disinfecting after, 152, 153
ethics, 44
from London, 233
hospitals, spread infection, 863
in Arkansas, 308
Boston, 7, 196, 348
Bristol, 88
Camden, 7, 156, 233, 466
Chicago, 344
Elberton, Ga., 51
England, 310
during the last 50 years, 1050
Green Bay, Wis., 156
Hackettstown, N. J., 195
Hagerstown, Md., 51
London, 52, 90, 198, 777
Lincoln, Ill., 56
Maine, 386
Massachusetts, 88, 234
Montreal, 512
Nebraska, 557
New Hampshire, 8
New Haven, 776
New Jersey, 7, 50, 88, 343
New York, 7, 195, 307, 343, 466, 556
Norfolk, 637
Ontario, 344
Ottawa, 51
Pennsylvania, 49, 88, 155, 195, 423, 507
Philadelphia, 7, 49, 49, 87, 155, 195, 382, 385
cost of, 7
not alarming, 233
Quebec, 468, 637
Randsburg, Cal., 51
Rutland, Vt., 908
Sandhurst, 514
Saranac, 636
St. John, New Brunswick, 88
the Adirondacks, 156
United States, 51, 89, 309, 423, 514, 578
West, 234, 344, 387
Valencia, Spain, 236
Washington, 422
Williamsburg, Md., 1037
Wilmington, 860
Woonsocket, R. I., 386, 557
insuring against, 463
lock-and-key quarantine against, 304
measures against, 469
on a steamer from London, 157
shipboard, 466
the Riviera, 424
problem, the, 1003
prophylaxis in Baltimore, 9
quarantine, 341
sanitation and, 709
varieties, etc., of, 429
Smith, Allen J., M. D. Suggestions for certain cheap and convenient forms of apparatus for class work in the bacteriological laboratory, 1060
Smith, A. Lapthorn, B. A., M. D., M. R. C. S. A new and improved method of closing vesico-vaginal fistulæ, with report of a case, 327
The obstetrical forceps, 197
Smith, S. MacCuen, M. D. Some aural complications of influenza, 72
Smith, Dr. Theobald, on tuberculosis, 379
Smoke nuisance, the, 1033
Smoking, juvenile, in the Isle of Man, 310
Snake venom, and the coagulation of the blood, 191
the study of, 459
Snap diagnosis, a, 857
Sneezing during pregnancy, 60
Soap of lime and magnesia in the urine, 392
Social evil, the, 505

SOCIETY REPORTS.

American Academy of Medicine, 708, 1120, 1151
American Association of Genito-Urinary Surgeons, 572, 907, 924
of Pathology and Bacteriology, 102
of Urologists, 43
Chemical Society, 79
Climatological Society, 779
Congress on Tuberculosis, 777
Dermatological Association, 997
Gastro-enterological Association, 860, 878
Gynecological Society, 997
Laryngological Association, 907
Rhinological and Otological Society, 998
Medical Association, 601, 952, 997, 1097, 1120, 1143, 1150
Editors' Association, 907
Medico-Psychological Association, 513
Neurological Association, 1172
Orthopedic Association, 869, 1036, 1055, 1151
Pediatric Society, 684, 997
Roentgen Ray Society, 298
Surgical Association, 1056, 1153
Arkansas State Medical Society, 815
Association of American Medical Colleges, 814
American Physicians, 685, 829, 861, 873
Military Surgeons of the United States, 952, 998
Surgeons of the Southern Railway, 1036
the, of medical officers of the army and navy of the Confederacy, 602
Austrian Balneological Congress, 424
Baltimore and Ohio Railway Surgeons, 1082
Baltimore College of Physicians and Surgeons, 512
Berks County Medical Society, 155, 343, 907
Boston Academy of Medicine, 315
British Medical Association, 686
Medico-Legal Society, 777
Brooklyn Medical Society, 233
Bucks County Medical Society, 307
Canada Medical Association, 637
Cecil County Medical Society, 952
Chicago Academy of Medicine, 344
Congress of French Physicians of America, 513
Cincinnati Obstetrical Society, 776
the Medical Press, 639
Cumberland County Medical Society, 155
Deaver Surgical Society, 343
Delaware State Medical Society, 952
District of Columbia Medical Society, 196
French Alienists' and Neurologists' Congress, 639
and Foreign Anatomists, 686
Medical Congress, 6th, 10
German (So.) Congress of Laryngology, 733
Surgery (31st), 470, 834, 925
on Internal Medicine, 424, 777, 833, 879, 926, 972, 1010
Otological Association, 733
Surgical Association, 639, 787
Harrisburg Academy of Medicine, 232
International Association of Railway Surgeons, 815
International Congress for original medical and surgical investigations, 197
of Dermatology, 514
Medicine, 346
Red Cross Congress, 198
Sanitary Congress, 603
Italian Pellagra Congress, 346
Kansas City Academy of Medicine, 815
King's County Medical Society, 556
Lancaster City and County Medical Society, 636
Long Island College Hospital Medical Society, 815
Manhattan Dermatological Society, 88, 188, 437, 658, 788
Massachusetts Medical Society, 1083
Medical Society of the District of Columbia, 1037
of the Missouri Valley, 422
State of Alabama, 602
State of California, 815
West Virginia, 68
Metropolitan Medical Society, 7
Military surgeons, annual meeting, 54
Mills, Chas. K., Neurological Society, 213
Milwaukee Medical Society, 79, 156, 684
Mississippi Valley Medical Association, 198
Missouri State Medical Society, 68
National Conference of Charities and Correction, 396
New York Academy of Medicine, 7, 79, 236, 406, 575, 1049
City Eastern Medical Society, 288, 437
Neurological Society, 786, 971
Obstetrical Society, 119, 436, 575, 703, 877
State Medical Association, 343, 777
Northern (European) Congress on Internal Medicine, 247
Ohio Pediatric Society, 776
Ontario Medical Association, 637, 1083
Pennsylvania Society for the Prevention of Tuberculosis, 684
Pepper, William, Medical Society, 343
Philadelphia Academy of Surgery, 87
College of Physicians, 49, 195, 264, 482, 658, 684
County Medical Society, 155, 207, 233, 307, 385, 542, 556, 730
Medical Club, 512, 952, 1082
Society of Germantown, 601
Neurological Society, 343
Northwestern Medical Society, 506, 777
Obstetrical Society, 49, 601
Pathological Society, 730
Pediatric Society, 155, 466
Wiener Verein, 87
Rappahannock Valley Medical Association, 9
Rhode Island Medical Society, 1083
Richmond Academy of Medicine and Surgery, 9
Southwestern Medical Association of Manitoba, 345
Texas State Medical Association, 952
Toronto Clinical Society, 468, 953
Tri-State Medical Society of Alabama, Georgia and Tennessee, 952
of Iowa, Illinois and Missouri, 602
of the Carolinas and Virginia, 8
Western Ophthalmological and Oto-Laryngological Association, 557
Wisconsin State Medical Society, 998
Sodium chloride, the influence of, upon the excretory power of the kidney, 115
salicylate, 78
Softening of the frontal region with optic neuritis, 748
Solanum Carolinense, an investigation of, with reference to its special value in the treatment of epilepsy, 802, 851
Somalic cells, nongranular and granular, 475
Somnolence caused by ear lesions, 584
Sophomores in quarantine, 150
Sore throat, differential diagnosis between syphilitic and diphtheritic, 1137
ulcerated, 1087
Soxhlet's nutritive sugar, 1007
Sparham, Dr. Terrence, 151
Spasms nutans, 114
Specialization in medicine and surgery, 240
Spectacles in the British army, 777
Spermolysis, facts and theories concerning, 927
Sphincter ani, plastic operation for the restoration of the, 641
Sphincters, 695
Sphygmograph, the mechanism of the, 1007
Spiller, William G., M. D. Fourteen cases of spastic spinal paralysis occurring in one family, 1129
Spiller, William G., M. D. The sensory segmental area of the umbilicus as determined by a case of fracture of the tenth thoracic vertebra, with complete compression of the spinal cord and without knee-jerks and Babinski reflex, 293

Spiller, Wm. G., M. D. The importance of the lachrymal reflex in the diagnosis between organic and hysterical anesthesia of the face, 892
Spinal brain, 566, 1045
excision of a, 238
genesis of, 1168
Spinal cord, a case of severed, in which myelorrhaphy was followed by partial return of function, 1016
disease consequent on syphilis, 569
fractures, 475, 611
intramedullary glioma of the, 481
motor localization, 1148
Pneumatism and developing Brown-Séquard paralysis, 649
tumor of the, 500
ligaments, rupture of the, 57
localization, 865
metameres, 612
Spine, osteo-arthritis of the, 565
surgery of the, 200, 332, 374
Spitting nuisance, the, 283
Spitzka, Edward Anthony, Brain anatomy and "degeneracy" theories, 152
E. C., M. D. Recent articles not abnormal as a class. A protest against the chimera of "degeneracy," 261
Splanchnoptosis, 995
Spleen resection, steam as hemostatic in partial, 653
role of the, in infectious diseases, 319
Splenectomy in splenic anemia, 111
Splenomegaly, malarial, 430
Spondylitis deformans, 16
Spotted fever, 776, 968
Springfield Insane Asylum, 168
Sprue or psilosis in Manila, 521
Squint, appeal for early treatment of, 960
Squinting, secondary, 57
St. Francis Medical Association, 157
St. Louis Exposition, 422
not liable for damages, 557
St. Luke's and Sanitorium, Md., 1143
St. Petersburg new Nose, Throat and Ear clinic, 424
Pasteur Institute, 816
Stain, a panoptic triacid, 354
Stammering, hysterical, 530
Stamford Hospital, fire in a, 88
Stanford University, 344, 422
Starr, M. Allen, M. D., LL.D. Fibroma of the upper dorsal region of the spinal cord. Removal, death and autopsy, 288
Starvation and measles, 467
State Board examinations, 82
sanatorium for New Jersey, 509
Statistics of von Ziemssen's dispensary in Munich, 1043
Steele, J. Dutton, M. D. Gastroptosis and gastric motor insufficiency, 174
Stenocardia, peculiar form of, 105
Sterility, 572
Sterilization apparatus for local anesthetic solutions, 21
of rubber gloves, etc., 1092
Sternberg, Surgeon-General, 907
dinner to, 952, 1120
promotion bill, 952, 998
Stethograph, a double, 570
Stewart, Francis T., M. D. A case of severed spinal cord in which myelorrhaphy was followed by partial return of function, 1016
Stimulants, strange, 638
Stitch abscesses, 870
Stomach, chemistry of the, 567
curvatures, how to see the, with our naked eye, 393
evacuation of the, in various positions of the body, 651
outlining the, 1091
pathological anatomy of the, in ulcer and carcinoma, 169
perforation with general peritonitis, 968
roundcelled sarcoma, 690
surgery of the, 821
total contraction of the, 653
troubles, the place of drugs in the treatment of, 1067
tube, a guiding wire for the, 648
why does it not digest itself? 514
Stone in the female bladder, 1080
Strabismus, cosmetic considerations not the only ones in, 607
functional and paralytic, 820
Strauss, H. Privatdozent, M. D., on the so-called idiopathic dilatation of the esophagus, 171
Strawberries and gout, 733
Streptococcus epidemics, 785
Stridor, congenital, 970
Striped muscle, changes occurring in, near malignant tumors, 916
Strongylodes intestinales in the United States, 634
Strychnine, effect of subminimum doses of, in nephrectomized rabbits, 961
in the treatment of pulmonary tuberculosis, 80
Subphrenic abscess, 824
zone, suppuration of the, 1051
Sugar, new method of testing for, 869
production of, from fat, 920
Suicidal attempts, remarkable, 788
Suicide and lynching in the United States, 52
in Chicago, 94, 1034
in the United States, 90
Sulphur dioxide for disinfection, 89
Supra-orbital reflex, the, 588, 642
Suprarenal gland, the active principle of the, in genito-urinary work, 592
Surgeon-General, the new, 1139
Surgeon honored, 449
the, and the neurologist, 227
Surgeons, volunteer, appointment of, 317
Surgery, American, as it appears to an Englishman, 393
and obstetrics, 606
endovesical, 477
in the Angers Medical School, France, 91
meddlesome, 477
Surgical instruments, duty upon, 844
methods, progress of, 372
operations in the presence of glycosuria and diabetes, 992
price of, 684
suturing, an instrument for, 734
tendencies, some, from a medical point of view, 15
Sutton, Howard A., M. D. Smallpox quarantine, 241
Suture material, linen sewing machine thread as, 1041
sterilized, 60
Suturing bones, metallic cast for, 927
Swallowing, the mechanism of, 55
Swear not at all, 149
Sweating in electric light and hot air chambers, 196
Swedish emigration to America, 236
Sweet, William M., M. D. Results of X ray diagnosis and of operations in injuries from foreign bodies in the eye, 208
Swiss letter, 198
Symphysiotomy, 476
and Cesarean section, 189
Syncope of nervous origin, 561
Synovitis of the knee, simple traumatic, 564
Syphilides, palmar and plantar, 663
Syphilis, a test for, 858
bacillus, Lasker and Juliusz, 248
difficulty of diagnosis, 165
extragenital infection of, 678
gravity of, 145
hepatic, 164
modes of transmission, 747
of the nervous system, remarks on the treatment of, 296
pharynx, 992
treatment of, 163
Syphilitic infection, extra genital, 97
Syringomyelia, 481
bladder complication of, 655
Systole blocked at the auriculo-ventricular junction, 170
Tabes, Argyll Robertson pupil in, 571
etiology of, 630
infantile, due to congenital syphilis etc., 92
juvenile, 253
origin of, 748
recalcitration of the body in, 677
superior, 1030
Tachycardia, an interesting phenomenon in, 976
Tainted descendants, seven hundred, 972
Talbot, Eugene S., M. D. A criticism, 84
Talipes, paralytic, 22
Tallest man, the, 963, 758
men, the height of the, 309
Talley, James Ely, M. D. The kidney complications of typhoid fever, 843
Tamponing the uterus post partum, a new method of. The Wood-Holmes introducer, 132
Tarnowsky, George de, M. D. Diabetes insipidus, twin pregnancy, polyhydramnios and post partum hemorrhage, 887
Temple College Medical Department, 7
Tendo achillis, ruptured, 56
Tendon plastic, an experimental foundation for, 634
transplantations, 867, 965, 997, 998
Test serum in rabbits, the production of, 782
Testes, descent of the, 868
the imperfectly descended, 705, 760
Testicle, a new operation on the, 1045
Testicular neuralgia, bilateral, 1049
Tetanus, 192, 557, 827
antitoxin, 455
cases in St. Louis, the medico-legal aspect of the, 602
epidemic of, 1133
following gelatine injections, 532
revaccination as the reg. in
vaccinia, 868
in Baltimore, 196
intoxication and muscular rigidity [illegible]
investigation in St. Louis, 3
toxin, the, 829
treated by intraspinal injection of antitoxin serum, 68
Tetanus [illegible] forms of, 227
with malaria, 1067
Texas [illegible]
Therapeutic [illegible]
Therapeutics and the drug manufacturer, 866
personal elements of error, 59
[illegible]
rational, 719
Therapeutic clinical history of the [illegible]
Therapeutics, Cuba, 479
Therapeutical, 724
Thorax, [illegible]
[illegible]
Throat, [illegible]
Tuberculosis [illegible]
[illegible]
Thrush, M. [illegible] F. M. M. D. A [illegible]
Thymus gland, the, and rachitis, 1043
Thyroid [illegible] of the root of the tongue, 1
extract and iodine, 868
[illegible]
Tic [illegible]
Tinnitus [illegible]
Tobacco and strychnine, 753
[illegible]
Tongue, [illegible]
Tonsillar and post-nasal [illegible]
[illegible]
Tonsilitis [illegible]; 71, 42
Tonsillotomy, fatal hemorrhage following, 1007
Tonsils, do they [illegible]
the [illegible]
Topics, two important, 538
Torticollis, congenital, 20
muscular, 48
[illegible]
Tracheal injection in the treatment of bronchial and lung diseases, 1
Tracheotomy, technique of, 1087
Trachoma, the, and [illegible]
Trauma as a frequent woman as extra-ordinary case of, 772
Treatment, several parts of, other than by single drugs, 563
Trephine, a new, 1
Trichinosis, [illegible]
Tricuspid valve, relative insufficiency of, 18
Triumphs of civilization, the, in a long [illegible]
Trophoneurosis [illegible] the hair, 7
Tuberculosis, [illegible]
Privat-docent, 867
Tumor, 727
Tuberculosis, [illegible]

Tubercle bacilli, agglutination of, 726
point of entrance and their localization, 196
bacillus, eggs as a medium for cultivation, 644
implantation of the, 536
relation of the, to pseudo-leukemia (Sternberg's disease), 615, 631, 669
the human and bovine, 1049
virulence of the bovine, 58
Tubercular glands, treatment of, 1049
peritonitis, 352
in children, 653
poisons, action of ferments and diastases upon, 146
sputum, disinfection of, 647
Tuberculin as a remedy in tuberculosis, 1145
diagnostic value of, 739
test of dairies, compulsory in Syracuse, N. Y., 204
treatment and sanatoria, 788
present position of the, 826
use of, 316
Tuberculosis, a further report on cases of, treated by intravenous injections of sodium cinnamate, 449
among merchant seamen, 169
and its bacillus, 868
antitoxin, a, 386
blessings of a State quarantine against, in Colorado, 728
Canadian Association for the Prevention of, 531
chronic hyperplastic, of the intestine, 654
congress on, 902, 959
cow's milk and infant tuberculosis, 263
discussion on, in Baltimore, 398
domestic animals, 1060
experiments to ascertain whether human, affects, animals, 8
French Commission on, 3
Society for the Treatment of, 533
genital, 572
guarding against, 328
heredity of, 433
hospital, a bill for a, 398
human and bovine, 434, 471, 641, 812, 813, 847, 862, 923
relationship between, 356
in Algiers and Tunis, 511
children, following intubation or tracheotomy, 260
China, 338
France, 11
France and Belgium, the fight against, in, 694
infancy and childhood, 435
state institutions, 165
Sweden, 515
the Middle States, 15
influence of temperature variations, 378
inoculated himself with, 1144
institutions, State and municipal, 907
King's hospital for, 1084
fund, 1084
local, 895
municipal control of, 315
sanatoria for the treatment of, 297
no quarantine against, in Colorado, 463
notes on the British Congress on, 390
observations on, 16
of both kidneys, 997
the ankle, 254
bladder, 522
conjunctiva, 910
eye, 317
female internal genital organs, 113
heart, 94
larynx, 20
lymphglands, 652
portio vaginalis and cervix injury, 23
testicles, 1049, 1147
tonsils and adenoid vegetations, 103
patient, against, 234
crusade against, 50
regulations for the complete cure of, 744
persoline in the anorexia of, 320
primary, intestinal, in children, 434
pulmonary, 429, 477
and altitudes, 240
general hospitals, 471
associated with endocarditis, 246
climatic treatment, 294
cure of, outside of closed sanatoria, 96
early, 647
diagnosis, 647
fever in, 647
forced feeding, 471
hemorrhagic purpura in, 1097
in children, fluctuations of temperature, 130
mensuration as an aid to diagnosis, 1006
plea for an accepted nomenclature, 391
purpura hemorrhagica in, 648
sanatorium treatment, 11, 810
statistics, 999, 1036
strychnine in, 89
temperature after exercise, 647
raw beef and experimental, 705
sanatorium prices, English, 197
serum diagnosis of, 479, 1041, 1045
surgical, 526
the role of the bacilli-containing excreta of cows, 154
nasal fossae in, 677
war against, 594, 724, 862
in New York, 1143
treatment of, 1095
urethral and peri-urethral, 465
urogenital in a girl of eleven, 767
vaginal, 919
Tuberculous animals, meat and milk from, 396
condition of the larynx and pharynx, 391
diseases, administrative control of, 1145
farm colonies and tent life for the, 262
joint disease, 765
patients, the state of the nervous system of, 1155
salpingitis, 867
teachers, sanatoria and dispensaries for the treatment of, 604
temperature elevation in the following slight exercise, 870
Tubo-ovarian cyst, recurring, 154
Tucker, Henry, M. D. Value of the Justus test, with report of cases, 846
Tumor, malignant ovarian, 479
of the cerebral cortex, 561
left pretrolateral lobe removed by operation, 389
pons, 640
spinal cord, a case of successful removal of a, 1031
superior worm of the cerebellum, 61
Tumors, 426, 471
abdominal and pelvic, 691
inoperable, 64
involving the corpus callosum, 252
of the central nervous system, 350
Fallopian tubes, 355
nose and nasopharynx, 918, 977
upper jaw, 653
origin of, 60
Turks, the, and the Jews, 392
Two bites to a very bad cherry, 83
Tympanites, 825
Typhoid bacilli excreted in the urine, 257
excretion of, by the kidneys during and after typhoid fever, 944
bacillaria, effect of urotropine on, 921
bacillus isolated from unusual localizations, 351
in the sputum of typhoid fever patients, 1047
isolation of the, 640
morphology of the, 250
cholecystitis, 24
epidemic, 422
fever, 317, 521, 738, 779, 852, 910, 974
a peculiar symptom, 781
airborne, 425
and salt, 514
unfiltered water, 553
bacteriological diagnosis, 95
case of perforation in, 981
complicated by a thrombophlebitis of the long saphenous vein, 610
differential diagnosis, 914
early diagnosis of relapse in, 806
epidemic at the Iowa State Agricultural College, 295
eye, ear and throat sequelæ of, 393
hemorrhagic, 206, 829
in armies, 926
Philadelphia, 195, 232, 463
South Africa, 248, 425, 544
syphilitics, 686
the inoculated, 199
warfare, difficulty in preventing, 605
inoculation statistics, 911
milk and whey in, 686
near Pittsburg, 132
perforation in, 107, 241, 245
serum therapy in, 259, 607
some observations of, 698
surgical complications, 607
to be reported, 157
treated by the evaporation bath method, 1148
typhoid bacilli in the feces, a diagnostic test of, 607
ulcer, perforating of the intestine, recovery, 112
Typhus fever in Mexico, 1037
Tyson, James, M. D., and Alfred C. Croftan, M. D. A case of hematoporphyrinuria, 882
Ulcer, malignant, of the breast, cured appareatly by oophorectomy, 518
tuberculous of the bladder, 688
of the larynx, 134
Ulcerous cancer, prepyloric, 435
Umbilical cord, management of the, 782
Umbilicus, the sensory segmental area of the, 293
University notes, 10, 158, 423, 559, 686, 733, 805, 1047, 1144
of California, 602, 908, 1036
Iowa, 776
Maryland, 1143
Nebraska, 997
Pennsylvania, 87, 195, 307, 814, 1082
Medical Laboratory, 343, 556
School, 556
Uncinariasis, 245
Urea examination, 522
Uremia, 904
acute, with meningeal hemorrhage, 1039
fatal intestinal hemorrhage in, 77
stow, of bulbar type, 119
Uremic aphasia, 1080
conditions, 256
stomatitis, 1051
Ureteral surgery, 244
Ureters, catherization of the, 16
Urethra, prolapse of the, in a 5-year-old girl, 870
the caliber of the, etc., and vesical tone, 1148
Urethral strictures treated by electricity, 696
Urethrotomy, internal and external, 522
Uric acid, 859
and antiseptic action, 179
and xanthin bases, the relation of, to gout and the so-called uric acid diathesis, 794
excretion of, the influence of pharmacological preparations on, 573
in the urine, simple method for the immediate quantitative estimation of, 744
the relations of, to disease, 857
Urinary deposit, an undescribed, 911
staining with sodium alizarin sulfonate, 747
coagum-like bodies in the, 612
Urine, action of dinitrobenzene on the, 1001
analysis in diseases of nutrition, 961
cold water accountable for turbidity of, 351
peculiar condition of, in uremia, 1042
separation of the, from the two kidneys, 657
total suppression of, due to ureteral obstruction by calculi, 640
Urobilin in the ascitic fluid, 60
Urticaria produced by bird mites, 870
of the upper respiratory tract, 473
Uteri procidentia, 96
Uterine anomalies, 694
appendages, suppuration of the, 611
fibroma with parovarian cyst, 1049
fibromyoma, 693
growth, faulty, 350
myomata, 14
Utero-ovarian artery, the genital circle of the, 477
Uterus and vagina, prolapse of the, in nulliparous women, 945
atony of the, as a cause of external hemorrhage during utero-gestation, 168
bisecting the, 782
cancer of the, 161
abdominal hysterectomy for, 562
successfully treated with caneroin, 348
curettage of the puerperal septic, 203
diadelphys, 696
inversion of the, 250, 1001
lactation atrophy of the, 824
movable retroversion of the, 391
plastic use of the, in cystocele operation, 96
premature senility of the, 1001
retrodisplacement of the, 699
round ligament ventrosuspension of the, 56
rupture of, during labor, 98
rupture of the, 966

Vaccination, 248, 668
a new method of dealing with, 382
Vaccination and common sense, 862
conscience, 423
revaccination in the French army, 838
smallpox, 241
census of opposed by teachers, 422
compulsory, 586, 666, 736
in Boston, 386
Cambridge, 466
Montreal, 952
Rhode Island, 386
Spain, 382
concerning, 506
expenses, 601
fatal, resembling appendicitis, 58
from the surgeon's standpoint, 915
in Alaska, 469
Massachusetts, 509
modern methods of, 54
remark on, in relation to skin diseases and eruptions following vaccination, 184
results, 735, 784, 825
value of, 468
state control, 1005
various methods of, and their results; with a suggestion as to best methods, 541
Vaccinators beware, 340
Vaccine virus, etc., 204
Vagina, congenital malformations of, 98
chorio-epithelioma, malignant of the, 117
Vaginismus and pruritus vulvae, 1048
Vagus reflex, the, 165
Valerian preparation, a new, 527
Vanderbilt Hospital, the, 8
Van Zandt, J. L., M. D. Information wanted, 509
Vanity, the, of some scientists, 903
Variation, 193
Varices, lymphatic, following erysipelas, 187
Varicose ulcer, 870
veins of the leg, 690
Vasa deferentia, the severing of the, 474
Vascular system, the state of the, after death, by asphyxia and cardiac failure, 734
Vassar, new biological laboratory, 88
Veins, accidental (nonoperative) injuries to the, 478
Venereal diseases, 1090
directions to patients, suffering from, 1025
Venom and antivenene, progress of knowledge concerning. A synoptical review of the literature of the past 15 years, 329, 369, 403, 450, 492
Ventilation of ships, 1146
Ventrofixation, 428
etc., effects of, on subsequent pregnancy and labor, 98
Venous thrombosis, unilateral right-sided, 392
Verdict, an outrageous, against a physician, 419
Vertebral column, rigidity of the, 1045
Vesical capacity, gauging the, 316
diverticula, 548
Vesicovaginal fistula, 1000
a new and improved method of closing the, with report of a case, 927
perforation, caused by dermoid cyst, 919
Vessels from yellow fever ports, treatment of, 314
Veterinary medicine and public health, 220
Vienna letter, 53
"Vino," the Philippine whiskey, 151
Virchow, Professor R., 73, 198, 346
Virginia State Hospital destroyed, 51
Viscera, postoperative prolapse, 479
Visual test in the British army, 641
Vivisection, human, self-indulgence in, 1141
Voit, Carl von, 60
Volcanic blasts, theories about, 946
Volcanoes and earthquakes from a medical standpoint, 900
Vomiting with acetonemia, 171
Vulva, neoplasms of the, 695
Vulvovaginitis gonorrheal, 97
Wages for a hospital, 50
Wales, Dr. John P., 637
Walser, Dr. Theodore, 776
Ward, Miss J. M., 684
Washington State Medical Board, 156
Water bottles for urological purposes, 824
natural iron, biological investigations of, 670
the contamination of, 117
Watertown, N. Y., Hospital, 602
We also agree, 949
Wenman, Dr. W. Murray, 343
Welch, Dr. W. H., 466
Welch, William M., M. D. Disinfection after smallpox, 136
Westminster Hospital, 686, 777
Westphal Piltz pupillary phenomenon, the, 198
Weyanwega, W. Va., Insane Hospital, 468
Whiskey, injurious constituents in, and their relation to flavor, 1146
Whitehaven Sanatorium for poor consumptives, 775
Whittier, Dr. Edward N., 1083
Whooping cough, 574
Widal reaction, the, 481, 608
Widener Memorial Training School for Crippled Children, 512
Wilcox leper bill, 469
Williams, J. J. Gurney, M. D., dysmenorrhea, 1166
Wills' Eye Hospital, 512, 1082, 1143
Wilson, Charles Meigs, M. D., 7
J. C., M. D. A case of osteitis deformans, 322
a correction, 509
President's address at the Association of American Physicians, 857
Reynolds, M. D. Ophthalmia neonatorum, 695
Wink, speed of a, 10
Wirgman, Dr. Charles, 730
Wisconsin State Medical Examining Board, 156
Woman ambulance surgeon, 776
doctor, the first, in Germany, 424
foreign university for, 558
physicians, 733, 999
president, a, 909
's Medical College, 952
Wood, F. M., M. D. The various methods of vaccination and their results; with a suggestion as to best methods, 541
Woodward, William C., M. D. Some problems in municipal sanitation from an executive standpoint, 885
Word blindness, 389
Working hours in harmful industries, 645
Wounds, drainage of, 987
Wright, Hiram A., M. D. A study of heredity, 1071
X-light, notes on, 203, 782
X-ray burns, 415
and their treatment, 1024
a study of the cases of accidental, to prevent, 1143
hitherto recorded, 438, 499
diagnosis, 59
literature, 189
pictures from a medicolegal standpoint, 206
X-rays, the, 58, 161
and photographic technique, 636
curative effect of the, on callous sinuses of the abdominal wall, 1085
in determining the [illegible] sinus, 566
cancer and other diseases, 362
diagnosis of intrathoracic tumors, 604
renal and ureteral calculi, 349
epithelioma complicating burns, new use of the, 977
erythematosis, 910
fractures, 332
internal medicine, 571, 648
pulmonary disease, 820
so-called sprains, 206
the treatment of cancer of the breast, 346
disease, 691
herpes, tonsurans and favus in children, 698
malignant growths, 422
recurrent carcinoma, 487
rodent ulcer, 778
sarcoma, 166
locating foreign bodies, 718
pictures, 564
some odd effects of the, 381
therapeutic employment of, 1087
tissue changes caused by, 968
Yeasts, sterilization of, on bacteria, 250
Yellow fever, 325, 683, 998
and the culex mosquito, 770
are vessels infected with? 783
expedition in Brazil, 1
Finlay's, Dr., discovery of the transmissibility of, 2
in Costa Rica, 176
Cuba, the stamping out of, 724
French Guiana, 685
Havana, No. 1
Rio de Janeiro, 558
the infectious agent of, 477
propagation of, by mosquitoes, 25
transmission by vessels, 18
Young James K., M. D. Orthopedic cases, 373
Ziemssen, Hugo Wilhelm von, 158

Department for Co-operation and Original Research

Alimentary tract, diseases of the, by D. L. Edsall, M. D., 33
Anatomy, recent literature on, by J. M. Swan, M. D., 61
Anesthesia, review of some recent literature on, by James W. Macintosh, M. D., 35
Bacteria, pathogenic, by A. Robin, M. D., 55
Bloodpressure, by W. B. Stanton, M. D., 89
Carcinoma, recent studies upon the etiology of, by Joseph Sailer, M. D., 81
Cardiovascular diseases, summary of, by T. L. Coley, A. M., M. D., 57
Chemistry, physiological, by D. L. Edsall, M. D., 5
Cerebrospinal fluid, chemical composition in the molecular concentration of the, 64
Constitutional diseases, by D. L. Edsall, M. D., 26
by W. B. Stanton, M. D., 34
Cypridopathies and tuberculosis, 16
Decisions, a summary of recent, affecting the medical profession, by William Lloyd, jr., Esq., 51
Infectious diseases, by Joseph Sailer, M. D., 1
Kidney diseases, recent literature on, by J. M. Swan, M. D., 5
Knee deformity following tubercular osteo-arthritis, 32
Kyphosis, the effect of [illegible] on the pelvis, 90
Laryngology, rhinology and otology, by Francis R. Packard, M. D., 29
Liver, diseases of the, and experimental study of its functions, by Robert N. Willson, M. D., 95
Lumbar puncture, diagnostic elements obtained by, 64
Metabolism, diseases of, by Alfred C. Croftan, M. D., 25, 42, 72, 87
Muscles, diseases of the, by D. J. McCarthy, M. D., 75
Neurasthenia, is it hereditary? 36
Nervous system, diseases of the, by Joseph Sailer, M. D., 2
Obstetrics and gynecology, by W. A. N. Dorland, M. D., 45
Oculogy, by Francis R. Packard, M. D., 79
Pancreas, the relations of the, to diabetes, by John Dutton Steele, M. D., 23
Parasitology and preventive medicine, by A. Robin, M. D., 27
Pediatrics, by [illegible], 48
Pediatrics, by Maurice Ostheimer, M. D., 4, 39, 69
Pelvis, contracted, by W. A. N. Dorland, M. D., 61.
Pneumonia, acute, by [illegible], 48
Progress, [illegible] by W. A. W. Dorland, M. D., 30
Pseudo-hermaphrodites and the law, by William H. L[illegible], Esq., 84
Respiratory system, diseases of the, by J. M. Swan, M. D., 17, 65
Spinal cord, affections of the, by D. J. McCarthy, M. D., 4
Suprarenal capsules, the, and diabetes, by J. [illegible] Stewart, M. D., 67
Surgery, general, by John H. Gibbon, M. D., 9, 41, 57
[illegible] surgery, by Charles T. Stewart, M. D., 22, 42, 58, 74, 87
orthopedic, by Maurice Ostheimer, M. D., 38
Tuberculosis, strychnine in the treatment of, 80
Typhoid fever, by Maurice Oppenheimer, M. D., 38, 82
Urine, the, by Henry K. Pancoast, M. D., 54
Uterus, fibroid tumor of the, by W. A. N. Dorland, M. D., 71

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